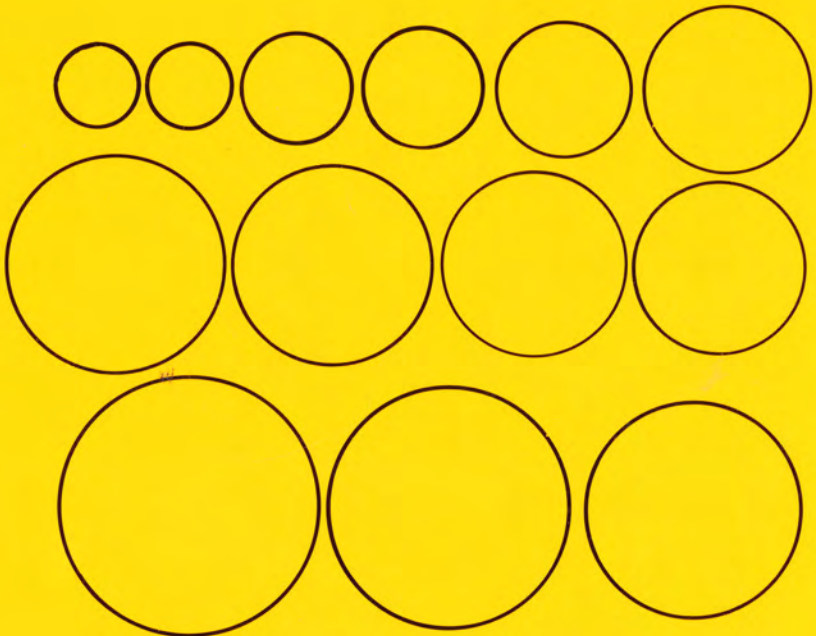


STERNKREUZ



R 19

Kleinhuhrgläser rund



Contents

	Page
Introduction	7– 11
Snap-in Glasses	12– 29
Top Glasses	30– 45
Armoured Glasses	46– 65
Capsules	66
Underlaid Glasses	67– 69
Formproof Glasses	70–143
Mineral Glasses	144–151
Mineral Glasses Imitations	152–153
LCD-Glasses	154–155
LED-Glasses	156–158
Pocket Watch Glasses	159–160
Key to Brands and Calibres	161–165
Fitting Tools	166–177
Cabinets	178–181
Gaskets	182–183
Watch Glass Adhesives	184–187
Eyepieces	188–189
Work Surfaces	190–191
Transparent plastic boxes	190–191
Copying-machine Verapid	192



Introduction

For 50 years STERNKREUZ Clock and Watch Glasses have been produced in Germany. For 50 years, a specialized company in the field of clock and watch manufacture has provided an excellent service in order to support the wholesale and retail trade in their own service to the customer.

Outstanding quality from the basic raw material to the finished product; a wide range of products, and fast delivery, are the distinguishing features which make STERNKREUZ Quality Clock and Watch Glasses indispensable.

STERNKREUZ catalogues are one of the special services of our company. In this catalogue R 19, covering round watch glasses, we have compiled the round standard and special shapes into groups. For every group we show you the most important applications, and give you hints on how to determine the right glass.

The STERNKREUZ system of symbols and colours has over the years become a classical standard, and, despite a number of attempts to copy it, has proved to be unequalled. STERNKREUZ packaging with the use of a colour code allows for a continuous and fast check on the glass stock. For a large stock, the glasses are sorted according to the type, i.e. the colours. For smaller stocks the various types of one size are kept together so that one can use a similar type of one particular size if need be. The lettering system is used for fast and easy ordering. The size is always expressed in tenths of millimetres. On request, we can print the corresponding American sizes on the bags containing the glasses. The measurements on the packing always correspond with the actual measurements of the glass, plus or minus the usual production tolerances. This catalogue gives you an idea of the large number of round glasses that can be supplied in a wide range of sizes. It also shows you the development of more and more complicated glasses – a few hundred special shaped round glasses are now available in addition to our standard range.

You will find this STERNKREUZ catalogue R 19 an indispensable help with all your queries regarding Clock and Watch Glasses. STERNKREUZ Catalogue F 18 deals with the special shaped watch glasses available, and our technical advice in connection with these.

STERNKREUZ Glasses give your clocks and watches the perfect finish.

Snap-in glasses

Verres à poser sous tension

Einsprenggläser

Cristales colocados a presión

Inpressglas

(GB)

Fitting with removal of movement

The term snap-in refers to all those glasses which are subjected to bending while being fitted. This causes the diameter of the glass to decrease, and when the strain of bending is released the glass expands and snaps into its groove. To bend the glass it is placed between two so-called pressure plates, one curved inwards (concave) and the other outwards (convex). The low priced fitting device for snap-in glasses is the fitting device with pliers. The handy, specially designed pair of pliers is used to hold the pressure plates.

When fitting a watch glass it is important that the correct pressure plates are selected. The concave pressure plate should be selected as large as possible.

The rubber pressure plate should be approximately half the size of the concave pressure plate.

If the correct pressure plate is selected the entire surface of the glass is bent and the strain therefore only minimal. If unbreakable glasses are subjected to too much pressure, fine hair-line cracks appear on the surface. The incorrect selection of pressure plates in particular is one of the main causes of such cracks. Details of suitable combinations of pressure plates are supplied with every fixing device.

Fitting without removal of movement

Circular snap-in glasses can be fitted and removed by using special tools without disturbing the movement. This process with closed cases is not only important for the glass replacement but also for work on the hands and dial, saving

(F)

Pose des verres après déboitage du mouvement

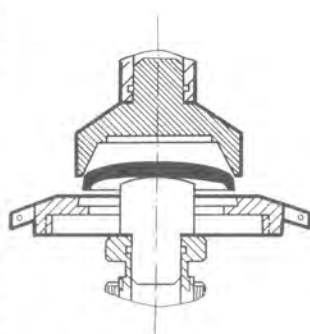
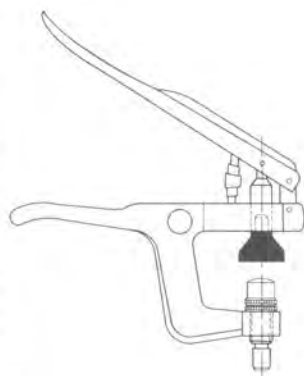
La catégorie des verres à poser sous tension comprend tous les verres dont la fixation est obtenue par cambrage. En cambrant le verre on diminue son diamètre permettant ainsi de le positionner dans le cran de glace et en le laissant se détendre le diamètre du verre augmente et s'engage dans le cran de glace où il reste fixé par tension.

Pour cambrer le verre, on a besoin de deux tasseaux, l'un concave, l'autre convexe, qu'il importe de choisir judicieusement: le tasseau concave devant être le plus grand possible, le tasseau convexe en gomme devant être environ de moitié plus petit. En respectant ce principe le verre sera cambré sur toute sa surface et peu sollicité. Dispositif de pose bon marché pour verres à poser sous tension: une pince maniable et de construction appropriée permet de fixer les tasseaux.

En cambrant trop les verres incassables. Ils ont tendance à présenter de fines fissures (girvage) qui proviennent en particulier d'un mauvais choix des tasseaux.

Pose des verres sans déboitage du mouvement

On peut enlever et poser les verres de cette catégorie sans avoir à déboiter la montre. Cette méthode de travail, boîtier fermé, permet non seulement de remplacer un verre mais aussi d'effectuer des opérations sur les aiguilles et le cadran et de gagner du temps. Il est donc rationnel de travailler avec cette méthode „directe“ et de ne déboîter le mouvement que dans le cas où une intervention sur ce dernier est nécessaire. Pour



Snap-in glasses

Verres à poser sous tension

Einsprenggläser

Cristales colocados a presión

Inpressglas

(GB)

valuable labour and time. Wherever possible, one should use this direct method and only in exceptional circumstances remove the movement to work on the glass.

There are various tools for changing these snap-in glasses without disturbing the movement. Claw type tools can be used which grip the glass with their very fine teeth when turned by means of a screw. There are many such tools on the market and the lightest in weight are the best.

Such tools must be used very carefully as there is a danger of the tension on the glasses being too great causing the surface to crack.

General advice

The glasses should be stored at normal room temperature of approximately 20° C. If they come from a very cold room they may be difficult to fit. The groove of the case must be absolutely clean to ensure a tight seal between bezel and glass. The angle of the bevel of the glass is designed in such a way that the sharp edge of the bevel fits securely, and seals the case against dust and humidity. The excellent resilience of the glass gives the necessary force to ensure a firm seal between glass and bezel.

To determine the correct size of glass the diameter of the bezel should be determined first with the aid of a slide caliper rule. Only a top quality slide caliper rule should be used.

The snap-in glass must be 0,2/0,5 mm larger than the diameter of the bezel. Please observe the following rules for the selection of the correct oversize:

More oversize:

when the glass is big (Gentlemen's wristwatch), the bezel is deeply cut, the glass is bowl-shaped.

Less oversize:

when the glass is small (Ladies' wristwatch), the glass is thick

(F)

remplacer les verres fixés sous tension sans déboîter le mouvement, un outil à griffes est nécessaire. Les griffes, actionnées par une vis et un cône, compriment le verre, diminuant son diamètre permettant ainsi de le poser ou de le retirer. Le poids de l'outil, la forme des griffes doivent être particulièrement étudiés. Il faut veiller à ne pas serrer les griffes d'une manière excessive afin d'éviter de provoquer le phénomène de givrage cité plus haut.

Conseils généraux

Les verres doivent être entreposés de préférence dans un local tempéré (environ 20°) car, s'ils viennent d'un local très froid, ils sont plus fragiles et l'opération de pose devient délicate. Le cran de glace doit être bien nettoyé afin d'assurer une bonne étanchéité entre le verre et la boîte. L'angle du verre est conçu de manière telle que l'arête du cran de glace vient s'y appuyer ce qui a pour effet, sous la force élastique du verre, de rendre sa fixation solide, étanche à la poussière et à l'humidité.

Le diamètre du cran de glace doit être mesuré au moyen d'un bon pied à coulisse pour pouvoir déterminer exactement la dimension du verre.

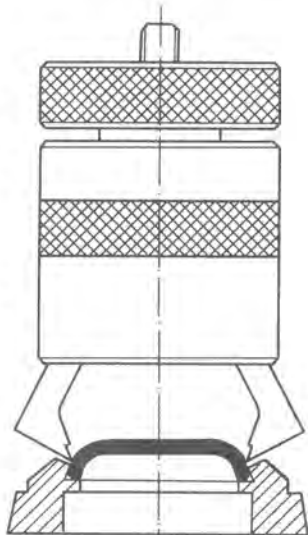
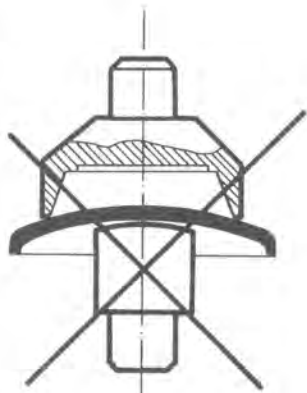
Le verre à poser sous tension doit être choisi 0,2 à 0,5 mm plus grand que le cran de glace. Consultez le tableau qui suit pour choisir exactement l'écart de dimension.

L'écart de diamètre sera plus grand lorsque:

- le verre est grand (montre bracelet pour homme)
- le cran de glace est profond
- le verre est bombé

L'écart de diamètre sera plus petit lorsque:

- le verre est petit (montre bracelet pour dame)



Snap-in glasses

Verres à poser sous tension

Einsprenggläser

Cristales colocados a presión

Inpressglas

(GB)

(C-glasses), the bezel is shallow, the edge at the bevel is at a steep angle. Careful selection of the glass dimensions determines the durability of the glass. Good quality watch glasses are not sensitive to petrol, oil or grease. There are, however, in the watchmaker's workshop and in daily life a few agents which attack the watch glass, for example benzene or benzene/petrol mixture, also trichloroethylene known as „Tri“. Chemical agents and cosmetic products containing acetone are also dangerous. Watch glasses should therefore be kept away from these.

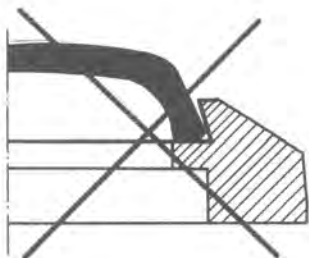
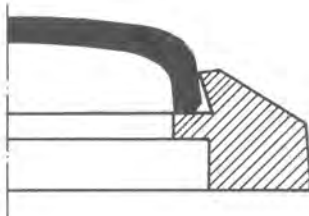
(F)

- le verre est épais
- le cran de glace est peu profond
- le verre présente un angle droit

Le choix judicieux et précis de la dimension des verres déterminera leur longévité.

Les verres de montres sont insensibles à l'action de la benzine, de l'huile ou de la graisse. Mais il existe dans l'atelier d'un horloger et dans la vie quotidienne des substances qui corrodent le verre de montre, par exemple le benzol ou aussi un mélange de benzène et de benzol, le trichloréthylène (appelé tri). Le „Sidel“ et les substances contenant de l'acétone présentent également des dangers.

Les verres de montres ne doivent donc pas entrer en contact avec de telles substances.



Snap-in glasses
Verres à poser sous tension
Einsprenggläser
Cristales colocados a presión
Inpressglas

N · HW · HWS · HH · M



All numbers
Tous les numéros
Alle Nummern
Todos los números
I alla nummer

N



Lentilles ordinarily domed
Lentille bombée normale
Lentille normalgewölbt
Lentille normalmente abombado
Lentille normalvälvt

N 95 – N 160 ○

N 162 – N 500 □

Color-System:
black, noir, schwarz, negro, svart

HW



Empire étanche highly-domed, extra strong
Empire étanche bombé très épais
Empire étanche hochgewölbt extra stark
Empire étanche muy abombado, reforzado
Empire étanche högvälvt vattentätt

HW 120 – HW 140 ○

HW 142 – HW 400 □

Color-System:
red, rouge, rot, rojo, röd

HWS



Empire étanche highly domed, with step
Empire étanche bombé a talon
Empire étanche hochgewölbt mit Stufe
Empire étanche muy abombado, escalonado
Empire étanche högvälvt vattentätt med ansats

HWS 120 – HWS 140 ○

HWS 142 – HWS 400 □

Color-System:
red, rouge, rot, rojo, röd

HH



Punaise extremely highly domed
Punaise haut
Punaise überhoch gewölbt
Punaise extra abombado
Punaise extra-högt, välvt

HH 250 – HH 340 □

Color-System:
violet, violet, violett, violeta, violett

M



Miconcave slightly domed
Miconcave bombé
Miconcave Schalenform flachgewölbt
Miconcave poco abombado
Miconcave lagvälvt

M 164 – M 500 □

Color-System:
grey, gris, grau, gris, grå

NB · HB · SAV · C · CG

- All even numbers
Tous les numéros pairs
Alle geraden Nummern
Todos los números pares
I alla jämna nummer

Snap-in glasses
Verres à poser sous tension
Einsprenggläser
Cristales colocados a presión
Inpressglas

NB



Lentille bombé ordinarily domed
Lentille bombée étanche
Lentille bombé Schalenform normalgewölbt
Lentille bombé normalmente abombado
Lentille bombé normalvälv

NB 140 – NB 340

Color-System:
orangé, orange, orange, anaranjado,
orange

HB



Empire bombé highly domed
Empire bombé haut
Empire bombé Schalenform hochgewölbt
Empire bombé muy abombado
Empire bombé högvälv

HB 240 – HB 340

Color-System:
dark blue, bleu foncé, dunkelblau, azul
oscuro, mörkblå

SAV



Hunter extra-thin for hunter calibres
Savonnette extra mince destiné
aux montres-savonnette
Savonnette extra dünn für Sprungdeckeluhren
Savonnette super-delgado para relojes con tapa
extra tunt Savonnette för Fickur med springlock

SAV 200 – SAV 500

Color-System:
light green, vert clair, hellgrün, verde claro,
ljusgrön

C



Genève Concave round flat top
Genève Concave rond
Genève Konkav rund
Genève Ginebra redondo cóncavo
Genève Plankonkavt, runt

C 95 – C 160
C 162 – C 220

Color-System:
dark green, vert foncé, dunkelgrün, verde
oscuro, mörkgrön

CG



Genève Concave round extreme ly flat
Genève Concave rond extra mince
Genève Konkav rund extra flach
Genève Ginebra redondo cóncavo, extra plano
Genève Plankonkavt, runt lågt

CG 180 – CG 340

Color-System:
dark green, vert foncé, dunkelgrün, verde
oscuro, mörkgrön

Snap-in glasses
Verres à poser sous tension
Einsprenggläser
Cristales colocados a presión
Inpressglas

CP · CPB · CPR

○ All numbers
Tous les numéros
Alle Nummern
Todos los números
I alla nummer

□ All even numbers
Tous les numéros pairs
Alle geraden Nummern
Todos los números pares
I alla jämna nummer

CP



Sapphire round
Saphir rond
Saphir
Zafiro redondo
Safirslipat

CP 110 – CP 160 ○

CP 162 – CP 190 □

Color-System:

dark green serrated, vert foncé dentelé,
dunkelgrün gezackt, verde obscuro den-
tado, mörkgrön, tandat

CPB



Sapphire brilliant
Saphir brillant
Saphir brillant
Zafiro brillante
Safirslipat, högre

CPB 110 – CPB 160 ○

CPB 162 – CPB 210 □

CPB 314 – CPB 322 □

Color-System:

dark green serrated, vert foncé dentelé,
dunkelgrün gezackt, verde obscuro den-
tado, mörkgrön, tandat

CPR



Sapphire for cases with reflectors
Saphir tronçônique
Saphir für Gehäuse mit Reflektor
Zafiro para cajas con reflector
Safirslipat för boetter med reflektor

CPR 110 – CPR 160 ○

CPR 162 – CPR 210 □

CPR 312

Color-System:

dark green serrated, vert foncé dentelé,
dunkelgrün gezackt, verde obscuro den-
tado mörkgrön, tandat

CL/CLH

Available sizes.
Dimensions livrables.
Lieferbare Größen.
Cantidades en que se surten los pedidos.
Leverbara storlekar.

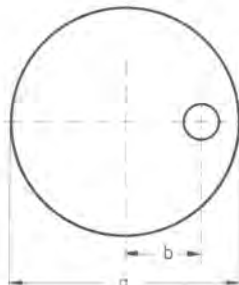
Snap-in glasses
Verres à poser sous tension
Einsprenggläser
Cristales colocados a presión
Inpressglas

CL + CLH

Calendar Round glass with magnifying lens
Calendrier rond avec loupe
Kalender Rundglas mit Lupe
Cristal redondo Calendario con lente de aumento
Kalender Rundglas med lup

Color-System:
red with lens mark, rouge avec signe de
loupe, rot mit Lupenmarkierung, rojo con
marca de lente, rød med lupmarkering

a = 1st. measurement : outside diameter
a = 1. Dimension: Ø extérieur
a = 1. Maß: Außendurchmesser
a = 1. Medida: Diámetro exterior
a = 1. Måttet: Utvändigt mått



b = 2nd. measurement: Diameter of step
b = 2. Dimension: La distance du centre du verre au centre
de la loupe
b = 2. Maß: Abstand der Lupenmitte zur Glasmitte
b = 2. Medida: Distancia del centro de la lupa al centro del cristal
b = 2. Måttet: Avstånd från lupens centrum till glasets mitt

The necessary distance of the lens is measured with the lens gauge.
On mesure la position de la loupe au moyen de la jauge.
Den notwendigen Lupenabstand mißt man mit der Lupenlehre.
Las distancias de la lupa se miden con la regla para lupas.
Lupavståndet mätes enklast med Lupmått.



Snap-in glasses
Verres à poser sous tension
Einsprenggläser
Cristales colocados a presión
Inpressglas

Available sizes.
 Dimensions livrables.
 Lieferbare Größen.
 Cantidades en que se surten los pedidos.
 Levererbara storlekar.

CL/CLH

CL	192/055	CLH	266/070	CLH	280/070	CL	290/105
CLH	200/055	CLH	266/075	CL	280/075	CLH	290/105
CLH	202/055	CLH	266/080	CL	280/085	CL	290/110
CLH	204/055	CLH	268/067	CLH	280/090	CL	292/067
CLH	234/067	CLH	268/070	CL	280/095	CL	292/070
CL	236/067	CLH	268/075	CL	280/105	CLH	292/070
CL	236/075	CLH	268/085	CL	280/110	CL	292/075
CL	238/067	CL	268/095	CL	282/067	CL	292/080
CL	238/075	CLH	268/095	CLH	282/070	CLH	292/085
CL	240/067	CL	268/105	CL	282/075	CL	292/095
CL	240/075	CLH	270/067	CL	282/085	CLH	292/095
CLH	242/067	CLH	270/070	CL	282/095	CL	292/100
CL	242/085	CLH	270/075	CL	282/105	CL	292/105
CLH	244/067	CLH	270/095	CL	284/067	CLH	292/105
CLH	244/075	CL	270/100	CLH	284/070	CL	292/110
CL	248/085	CL	270/105	CLH	284/075	CL	294/067
CL	250/070	CLH	272/067	CL	284/085	CLH	294/070
CLH	252/045	CL	272/085	CLH	284/095	CL	294/075
CL	252/067	CLH	272/095	CL	284/100	CL	294/080
CL	252/070	CL	272/105	CL	284/105	CL	294/085
CLH	254/045	CLH	274/067	CL	286/067	CLH	294/095
CL	254/067	CL	274/070	CLH	286/070	CL	294/100
CL	254/070	CL	274/085	CLH	286/075	CL	294/105
CL	254/075	CL	274/095	CL	286/085	CL	294/110
CLH	256/045	CL	274/100	CLH	286/095	CL	294/115
CL	256/067	CL	274/105	CL	286/100	CL	296/067
CL	256/070	CLH	276/067	CL	286/105	CLH	296/070
CL	256/075	CL	276/070	CL	288/067	CL	296/075
CL	258/070	CL	276/075	CLH	288/070	CL	296/080
CLH	260/067	CL	276/085	CLH	288/075	CL	296/085
CLH	260/070	CLH	276/090	CL	288/080	CL	296/090
CLH	260/075	CL	276/095	CLH	288/085	CL	296/095
CLH	262/067	CL	276/100	CLH	288/095	CL	296/100
CLH	262/070	CL	276/105	CL	288/100	CL	296/105
CLH	262/075	CLH	278/067	CLH	288/105	CL	296/110
CLH	262/080	CL	278/070	CL	290/067	CL	298/067
CLH	262/095	CL	278/075	CL	290/070	CLH	298/070
CLH	264/067	CL	278/085	CLH	290/070	CL	298/075
CLH	264/070	CLH	278/090	CLH	290/075	CL	298/080
CLH	264/075	CL	278/095	CL	290/080	CL	298/085
CLH	266/065	CL	278/100	CLH	290/095	CL	298/095
CLH	266/067	CL	280/067	CL	290/100	CL	298/100

CL/CLH

Available sizes.
Dimensions livrables.
Lieferbare Größen.
Cantidades en que se surten los pedidos.
Levererbara storlekar.

Snap-in glasses
Verres à poser sous tension
Einsprenggläser
Cristales colocados a presión
Inpressglas

CL	298/105	CL	302/115	CL	310/085	CL	316/095
CLH	300/067	CLH	304/067	CL	310/095	CL	316/100
CLH	300/070	CL	304/090	CL	310/100	CL	316/110
CL	300/075	CL	304/095	CL	310/105	CL	316/115
CL	300/085	CL	304/100	CL	310/110	CLH	318/095
CL	300/090	CL	304/105	CL	310/115	CL	318/100
CL	300/095	CL	304/110	CL	312/067	CLH	318/105
CL	300/100	CL	304/115	CL	312/085	CL	318/115
CL	300/105	CLH	306/067	CL	312/095	CL	320/100
CL	300/110	CL	306/095	CL	312/100	CL	320/115
CLH	302/050	CL	306/100	CL	312/105	CLH	322/095
CLH	302/067	CL	306/105	CL	312/110	CL	322/100
CLH	302/070	CL	306/110	CL	312/115	CL	324/100
CL	302/075	CL	306/115	CL	314/085	CLH	326/095
CL	302/090	CL	308/095	CL	314/095	CLH	330/115
CL	302/095	CL	308/100	CL	314/100	CLH	330/105
CL	302/100	CL	308/105	CL	314/105	CLH	344/095
CL	302/105	CL	308/110	CL	314/110	CLH	362/085
CL	302/110	CL	308/115	CL	314/115	CLH	362/095

Any other sizes with round lenses can be supplied at a small surcharge.

D'autres dimensions avec loupes rondes peuvent être livrées moyennant une majoration.

Andere Abmessungen mit runden Lupen können gegen Mehrpreis von der Fabrik hergestellt werden.

Otras medidas de lupas redondas pueden ser producidas por la fábrica bajo diferentes precios.

Andra Lupavståndet kan levereras med rund lup mot pristillägg.

Special snap-in glasses
Verres spéciaux à poser sous tension
Einsprengglas Sonderformen
Cristales especiales colocados a presión
Special Inpressglas

X

Ordering number
Numéro pour la commande
Bestellnummer
Numero para el pedido
Nummer för beställningen

X 315 .025 I

The glasses are in order of their outside diameters.
Les verres sont classés en fonction du diamètre extérieur.
Nach dem Außendurchmesser sind die Gläser geordnet.
Los cristales están clasificados de acuerdo al diámetro exterior.
Glasen är ordnade efter ytterdiameter.

Current number
Numéro courant
Laufende Ordnungsnummer
Numero corrido
Löpande nummer

Price group
Groupe de prix
Preisgruppe
Grupo de precios
Prisgrupp

Below the illustrations you can find references to suitable cases.
Sous chaque cliché sont indiquées les références des boîtes correspondantes.
Unter den Bildern finden Sie Hinweise auf passende Gehäuse.
Bajo los dibujos se encuentran las instrucciones para las cajas apropiadas.
Under bilden finnes hänvisningar till passande boett.

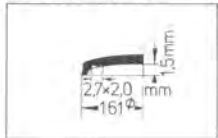
Please note the key to brands and calibres on page 160.
Tenez compte que le classement est fait par calibre et par marque page 160.
Bitte beachten Sie den Marken- und Kaliberschlüssel auf Seite 160.
Por favor tome en cuenta las marcas y número de calibre en la pág 160.
Se märkes och referenstabell på sidan 160.

Diameters are expressed in terms of tenths of millimetres.
Tous les diamètres sont donnés en 1/10 de mm.
Alle Durchmesser sind in Zehntelmillimeter angegeben.
Todos los diámetros están dados en decimas de milímetro.
Alla diametrar angives i tiondels millimeter.

X 161 - 280 Ø

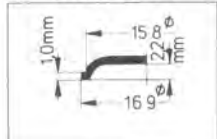
Special snap-in glasses
Verres spéciaux à poser sous tension
Einsprengglas Sonderformen
Cristales especiales colocados a presión
Special Inpressglas

→ X 161.046 I

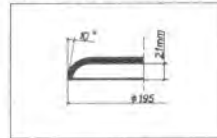


Provi ta

X 169.042 I

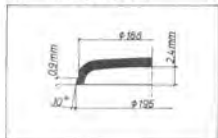


X 195.023 I



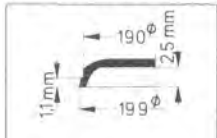
Kienzle 09 12/16
15 12/16

X 195.001 I

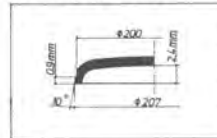


Zentro

X 199.043 I

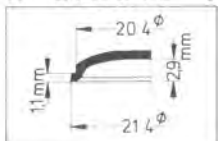


X 207.002 I

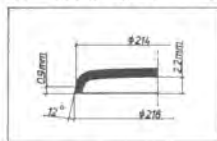


Zentro

X 214.044 I

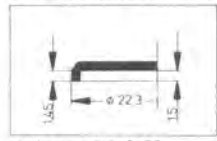


X 218.014 I



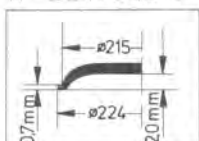
Laco 261/71/4

X 223.057 I



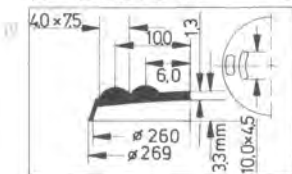
Citizen 85-2139

X 224.049 I



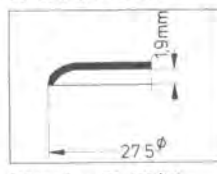
Diehl 42 197-0563

X 269.047 I



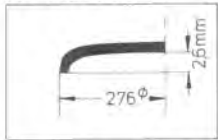
Westend Modell 64

X 275.039 I



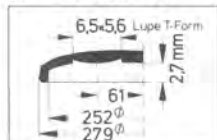
Kienzle 01 52/56

X 276.035 I



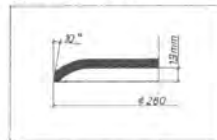
for Rolex Tropic 26

X 279.048 I



Westend Modell 1974

X 280.024 I

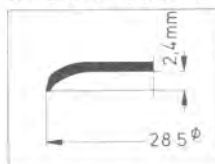


Kienzle 08 13/17

Special snap-in glasses
 Verres spéciaux à poser sous tension
 Einsprengglas Sonderformen
 Cristales especiales colocados a presión
 Special Inpressglas

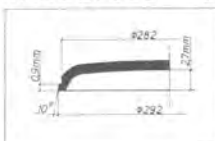
X 285 - 318 Ø

→ X 285.038 I



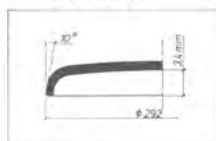
Kienzle 08/41

X 292.003 I



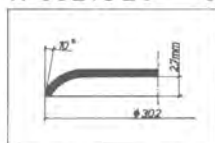
Zentra

X 292.021 I



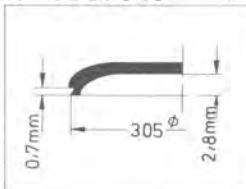
Kasper Cal. 901

X 302.020 I

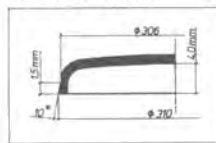


Kienzle 01/42,01/32

X 305.045 I

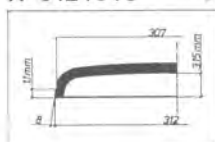


X 310.028 I



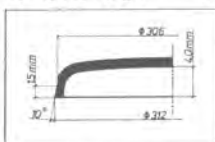
Junghans 93/1954

X 312.013 I



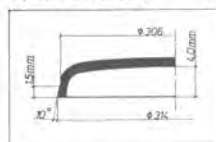
Aristo

X 312.027 I



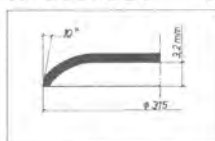
Junghans 93/1954

X 314.006 I



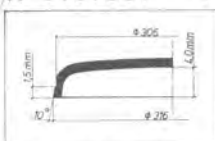
Junghans 93/1954

X 315.025 I



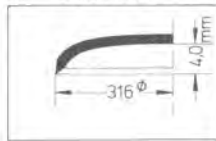
Kienzle 08 62/66

X 316.007 I

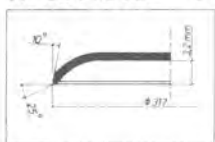


Junghans 93/1954

X 316.034 I

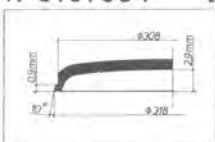


X 317.015 I



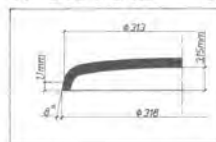
Kienzle 051/N/52,53

X 318.004 I



Zentra

X 318.012 I



Aristo

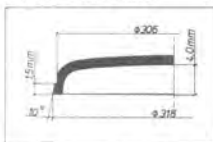
X 318 - 322

Special snap-in glasses
Verres spéciaux à poser sous tension
Einsprengglas Sonderformen
Cristales especiales colocados a presión
Special Inpressglas

→ X 318.036 I

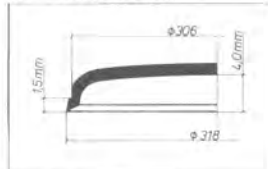


X 318.008 I



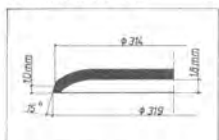
Junghans 93/1954

X 318.040 I



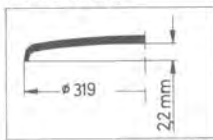
Junghans

X 319.010 I



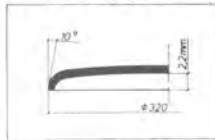
Laco electric

X 319.058 I



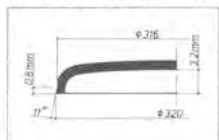
Seiko 318 N 02 AN

X 320.009 I



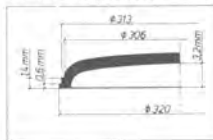
Porta 261

X 320.029 I

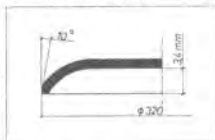


Oscó S

X 320.030 I

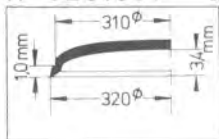


X 320.032 I



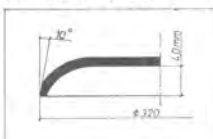
Kienzle 840 4700

X 320.037 I



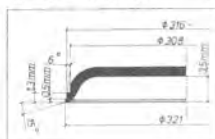
Junghans

X 320.026 I



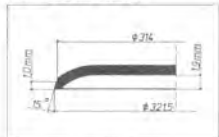
Kienzle 08 42,46

X 321.016 I



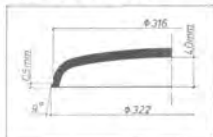
Arctos

X 322.011 I

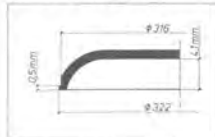


Laco electric

X 322.022 I



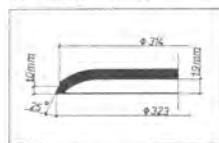
X 322.033 I



Special snap-in glasses
Verres spéciaux à poser sous tension
Einsprengglas Sonderformen
Cristales especiales colocados a presión
Special Inpressglas

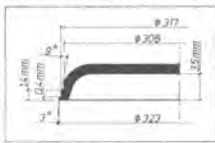
X 323 - 422 Ø

→ X 323 .019 I



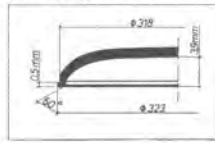
Laco 870

X 323 .017 I

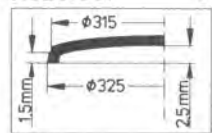


Arctos

X 323 .031 I

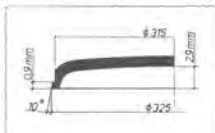


X325.051 I



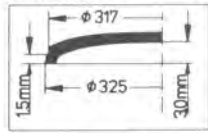
JUNGHANS 0872.
0836, 0837

X 325 .005 I



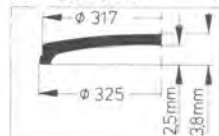
Zentra

X 325 .050 I



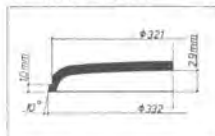
JUNGHANS 0879

X 325 .054 I



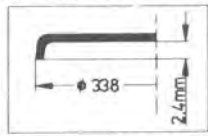
Junghans 42 197-0836

X 332 .018 I



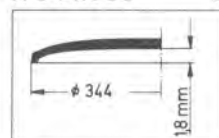
Laco Mechanic

X 338 .052 I



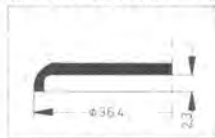
SEIKO 338 NO 1AN

X 344.059 I



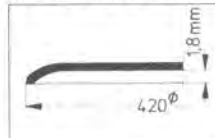
Seiko 340 N 05 AN

X 364 .056 I



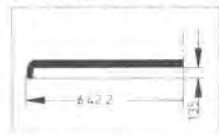
Maurice Guerdat
No 32 58 / 3

X 420 .041 I



Kienzle 146 / 30

X 422 .055 I



Maurice Guerdat
No. 32 59 / 4

Special snap-in glasses
Verres spéciaux à poser sous tension
Einsprengglas Sonderformen
Cristales especiales colocados a presión
Special Inpressglas

Top glasses Verres à jupe Stülpgläser Cristales ajustables Stolpglas

(GB)

Top glasses

Top glasses are clamped between two metal rings. The bottom of the watch case usually forms the inner metal ring and the case the outer, which often means that the glass holds the upper and lower parts of the watch together. When using top glasses accurate measuring is very important – this determines the correct glass. Top glasses are usually fitted in the following order: put the glass on the bottom part of the case, then fit the top of the case on to the glass.

Top glasses with shoulders are pressed in from above either into a groove in the case or between the top and bottom parts of the case.

To fit top glasses you need a solidly built fitting device with a precise symmetry of the axes, and with the jaws fixed completely parallel. Both a screw press and a lever press are suitable – the former gives you more „feel“ when you are fitting the glasses, the latter allows you to work faster.

To be able to press the rings past the top glasses one ought to use a set of metal pressure plates with a wide range of diameters, including rather large diameters. The faces of the pressure plates are appropriately slanted. If the number of pressure plates on hand is large enough, the case can usually be centred with the help of another pressure plate. A few examples of possible applications are illustrated in the margin. The tools that can be supplied are listed at the end of this catalogue.

(F)

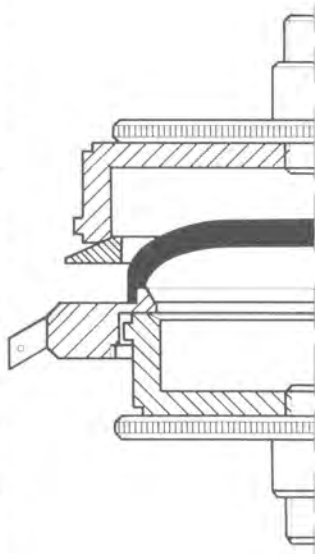
Les verres à jupe et à collerette

Ils sont serrés entre deux bagues métalliques. Le plus souvent la carrure de la boîte constitue la bague intérieure et la lunette celle de l'extérieur. Ainsi, il arrive souvent que le verre soit l'élément qui assemble la carrure et la lunette de la boîte. Pour déterminer le choix du verre à jupe, il importe de mesurer exactement les parties de la boîte. C'est ainsi que vous déterminerez le verre à choisir. Généralement on pose les verres à jupe dans l'ordre suivant: le verre sur la carrure de la boîte puis la lunette sur le verre.

Les verres à collerette sont chassés par le haut dans une rainure de la boîte ou entre la carrure et la lunette de la boîte.

Pour la pose des verres à jupe il faut une presse solide dont les axes sont parfaitement alignés et les tasseaux bien fixés parallèlement. Une presse à vis offre plus de sensibilité dans la pression par contre une presse à levier permet de travailler plus rapidement. Les deux sont utilisables.

Un professionnel devra avoir un jeu de tasseaux concaves dans toutes les dimensions y compris les grands diamètres afin de pouvoir chasser les lunettes par dessus les verres à jupe. Pour atteindre ce but il faut que la partie des tasseaux en contact avec la lunette soit bien centrée. Si on a assez de tasseaux sous la main, la boîte peut être centrée dans un deuxième tasseau. Quelques exemples des cas possibles sont illustrés ci-contre. À la fin de ce catalogue vous trouverez des indications relatives à ces outils.



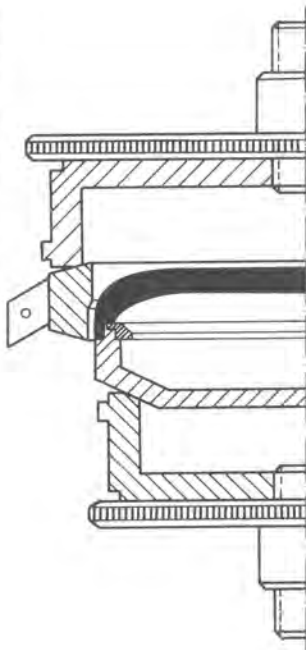
Top glasses
Verres à jupe
Stülpgläser
Cristales ajustables
Stolpglas

(GB)

The width of the base is important for the perfect fit of a top glass. The size of a top glass is therefore determined by its outside and inside diameters. For normal top glasses please note that for certain cases there are glasses with differing widths of the base, e. g. different outside diameter for the same inside diameter, and vice versa. It is also possible that the replacement of a glass for a top quality watch has to have a wider base than the original glass because the tension ring has expanded slightly.

(F)

Pour un bon ajustement des verres à jupe, la largeur de la base est importante. Pour cette raison les verres à jupe sont définis par leurs diamètres extérieur et intérieur. Tenez compte que dans les verres à jupe courants, il existe, pour différents types de boîte, des verres dont la largeur de base est différente. Par exemple, pour le même diamètre intérieur, il existe différents diamètres extérieurs ou vice versa. Il peut arriver aussi, dans des montres de grandes marques, que le verre de remplacement demande une base plus large que le verre original parce que la bague de serrage s'est agrandie.



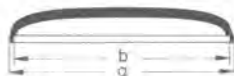
Top glasses
Verres à jupe
Stülpgläser
Cristales ajustables
Stolpglas

Technical Explanations.
Explication technique.
Technische Erläuterungen.
Explicaciones técnicas.
Tekniska förklaringar.

ST · STa

ST

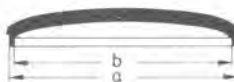
Topglass, without shoulder
Verres à jupe, sans épaulement
Stülpgläser ohne Stufe
Cristales ajustables sin reborde
Stolpglas utan ansats



Color-System:
blue, bleu, blau, azul, blå

STa

Topglass with shoulder
Verres à collerette
Stülpgläser mit Stufe
Cristales ajustables con reborde
Stolpglas med ansats



Color-System:
blue, bleu, blau, azul, blå

a = 1st. measurement: Outside diameter
a = 1. Dimension: Diamètre extérieur
a = 1. Maß: Außendurchmesser
a = 1. Medida: Diámetro exterior
a = 1. Måttet: utvändigt mått

b = 2nd. measurement: Inside diameter.
b = 2. Dimension: Diamètre intérieur.
b = 2. Maß: Innendurchmesser.
b = 2. Medida: Diámetro interior.
b = 2. Måttet: Innerdiameter.

With top glasses, the thickness of the base determines the tight fit in the case.

Pour les verres à jupe l'épaisseur de la base $([a - b] : 2)$ est importante pour la tenue dans la boîte.

Bei Stülpgläsern ist die Fußstärke $([a - b] : 2)$ entscheidend für den festen Sitz im Gehäuse.

En los cristales ajustables, el espesor de la pared de la caja $([a - b] : 2)$ es decisivo para la sujeción con la caja.

Stolpglasen har olika kantjocklekar $([a - b] : 2)$ för bättre passning till boeterna.

Please note that there are different inside diameters (i. e. different thicknesses of the base) for one and the same outside diameter.

Tenez compte qu'il y a pour quelques diamètres extérieurs différents diamètres intérieurs, autrement dit qu'il existe différentes épaisseurs de base.

Beachten Sie bitte, daß es zu konstanten Außendurchmessern verschiedene Innendurchmesser (also verschiedene Fußstärken) gibt.

Deberá tomarse en cuenta que para diámetros exteriores normales, existen diferentes diámetros interiores (así como diferentes espesores de la pared de la caja).

Observera att de gängbaraste ytterdiametrarna har olika innerdiameter (Olika kantjocklekar).

ST· STa

Available sizes.
Dimensions livrables.
Lieferbare Größen.
Cantidades en que se surten los pedidos.
Levererbara storlekar.

Top glasses
Verres à jupe
Stülpgläser
Cristales ajustables
Stolpglas

ST	182/171	ST	271/255	ST	288/272	ST	301/288
ST	184/173	ST	272/256	ST	289/273	ST	301/285
ST	194/184	ST	273/257	ST	289/276	ST	302/288
ST	195/185	ST	274/258	ST	290/278	ST	304/292
ST	215/204	ST	275/259	ST	290/282	ST	304/288
ST	217/206	ST	275/262	ST	290/280	ST	305/285
ST	218/207	ST	276/267	ST	290/274	ST	306/295
ST	218/206	ST	277/266	ST	291/275	ST	307/295
ST	219/209	ST	277/261	ST	291/280	ST	309/293
ST	230/220	ST	279/263	ST	292/280	ST	310/294
STa	243/230	ST	280/264	ST	292/276	ST	310/297
ST	246/236	ST	280/265	ST	293/280	ST	310/295
ST	248/232	ST	282/266	ST	293/282	ST	310/296
ST	250/234	ST	282/271	ST	293/281	ST	311/295
ST	257/249	ST	282/270	ST	294/281	ST	311/295
ST	259/248	ST	282/266	ST	295/283	ST	312/300
STa	260/248	ST	283/271	ST	295/282	ST	315/299
ST	260/249	ST	284/268	ST	295/285	ST	316/305
ST	260/248	ST	285/271	ST	296/286	ST	317/308
ST	260/252	STa	285/271	ST	296/288	ST	319/303
ST	260/250	ST	285/273	ST	297/284	ST	320/308
ST	261/248	ST	285/272	ST	297/286	ST	322/309
STa	263/250	STa	285/275	ST	298/286	ST	322/310
ST	268/252	ST	286/273	ST	299/283	ST	330/318
ST	270/254	ST	286/270	ST	300/285		

Special top glasses
Verres à jupe spéciaux
Stülpglas Sonderformen
Cristales ajustables especiales
Special Stolpglas

XS

Ordering number
Numéro pour la commande
Bestellnummer
Numero para el pedido
Nummer för beställningen

XS 319. 416 II

The glasses are in order of their outside diameters.
Les verres sont classés en fonction du diamètre extérieur.
Nach dem Außendurchmesser sind die Gläser geordnet.
Los cristales están clasificados de acuerdo al diámetro exterior.
Glasen är ordnade efter ytterdiameter.

Current number
Numéro courant
Laufende Ordnungsnummer
Numero corrido
Löpande nummer

Price group
Groupe de prix
Preisgruppe
Grupo de precios
Prisgrupp

For the correct choice of top glass one has to measure the appropriate inside diameter carefully.

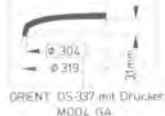
Pour bien choisir le verre à jupe il convient de tenir compte avec précision non seulement du diamètre extérieur mais aussi du diamètre intérieur.

Für die richtige Auswahl von Stülpgläsern müssen Sie zusätzlich den notwendigen Innendurchmesser genau messen.

Para elegir correctamente un cristal ajustable, deberá necesariamente medir con precisión el diámetro interior.

För den riktiga passningen av stolpglasen måste ni alltid uppgiva den nödvändiga innerdiametern.

XS 319 416 II



Below the illustrations you can find references to suitable cases.

Sous chaque cliché sont indiquées les référence des boites correspondantes.

Unter den Bildern finden Sie Hinweise auf passende Gehäuse.

Bajo los dibujos se encuentran las instrucciones para las cajas apropiadas.

Under bilden finnes hänvisningar till passande boett.

Diameters are expressed in terms of tenths of millimetres.

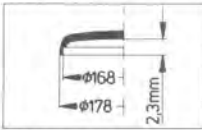
Tous les diamètres sont donnés en 1/10 de mm.

Alle Durchmesser sind in Zehntelmillimeter angegeben.

Todos los diámetros están dados en decimas de milimetro.

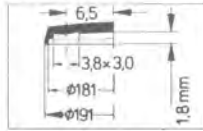
Alla diametrar angives i tiondels millimeter

→ XS 178.198 II



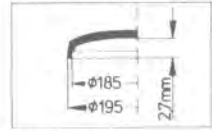
ROAMER X 7184

XS 191.186 II



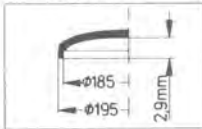
SEIKO 190 W01 AL

XS 195.414 II



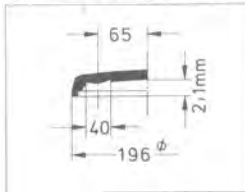
ROAMER X 7149

XS 195.415 II



ROAMER X 7161

XS 196.136 II



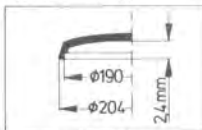
Seiko 195 W01 ALO

XS 201.406 II



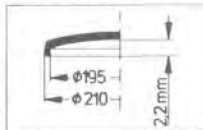
SEIKO 200 W0 1AN

XS 204.419 II



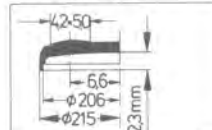
ORIENT OS-711 OS-718
FY001 GA

XS 210.421 II



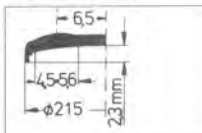
ORIENT OS-729 FY002GA

XS 215.428 II



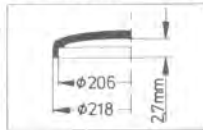
for Rolex CYCLOP 101

XS 215.429 II



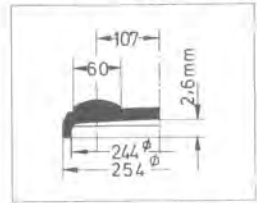
for ROLEX CYCLOP 129

XS 218.411 II



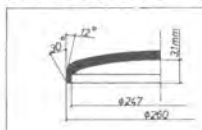
ROAMER X 7100

XS 254.129 II



for Rolex Cyclop 104,105

XS 260.100 II

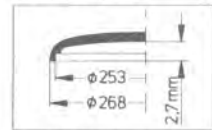


Roamer X 7103

XS 260.116 II

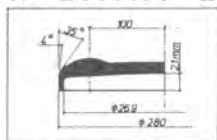


XS 268.410 II



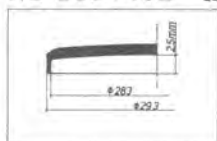
SEIKO 266 W0 1AN

→ XS 280.101 II



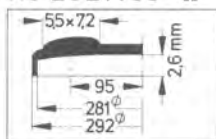
for Rolex Cyclop 107

XS 293.102 II



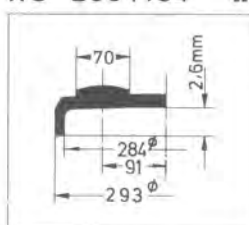
for Rolex Tropic 14

XS 292.155 II



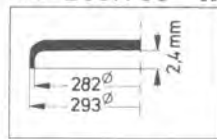
for Rolex Cyclop 108

XS 293.134 II



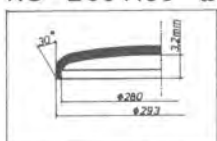
for Rolex Cyclop 111

XS 293.156 II



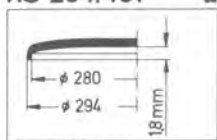
for Rolex Tropic 12

XS 293.103 II



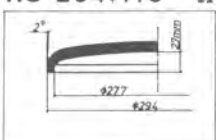
Roamer X 7132
X 7106

XS 294.431 II



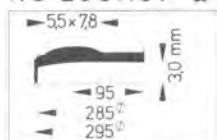
Mikado 4G 4005

XS 294.110 II



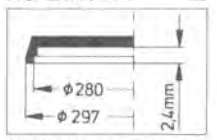
Citizen 51-102

XS 295.157 II



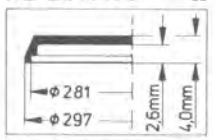
for Rolex Cyclop 117

XS 297.174 II



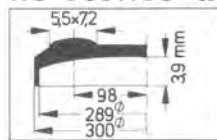
ORIENT OS-346 m. Drucker
M 008 6A

XS 297.175 II



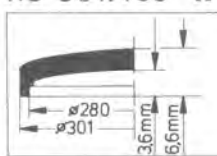
ORIENT OS-342 m. Drucker

XS 300.158 II

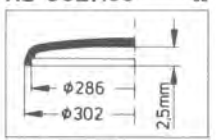


for Rolex Cyclop 116

XS 301.165 II

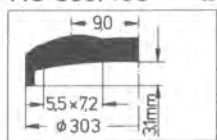


XS 302.196 II



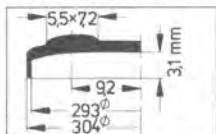
ORIENT 16-983

XS 303.430 II



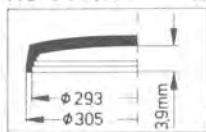
for ROLEX CYCLOP 127

→ XS 304.154 II



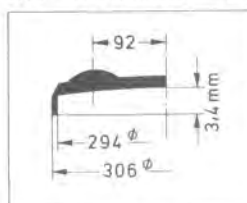
for Rolex Cyclop 114

XS 305.199 II



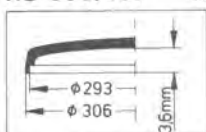
ROAMER X 7183

XS 306.133 II



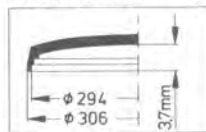
for Rolex Cyclop 118

XS 306.401 II



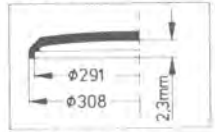
ROAMER X 7186

XS 306.402 II



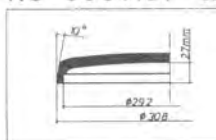
ROAMER X 7167

XS 308.194 II



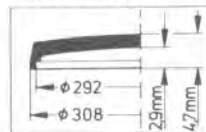
ORIENT 16-265 16-1059

XS 308.107 II



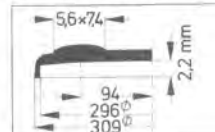
Citizen 31-201

XS 308.176 II



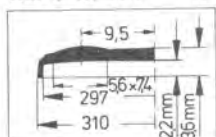
ORIENT OS-215, M001 6A

XS 309.164 II



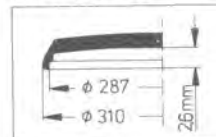
Ricoh 038.104

XS 310.427 II



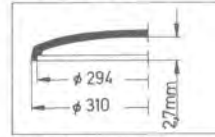
Ricoh 038.104

XS 310.426 II



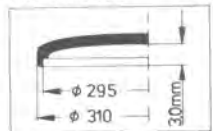
CITIZEN 54-0153

XS 310.435 II



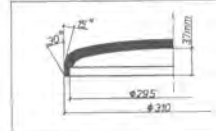
Seiko 308 W03 AN

XS 310.412 II



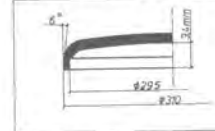
ROAMER X 7108

XS 310.104 II



Roamer
X 7156, X 7125, X 7136

XS 310.109 II



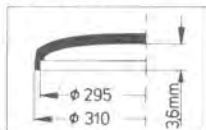
Citizen 51-201

Special-top glasses
 Verres à jupe spéciaux
 Stülpglas Sonderformen
 Cristales ajustables especiales
 Special Stolpglas

XS 310 - 314 Ø

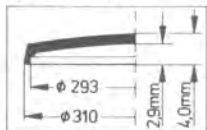


XS 310.413 II



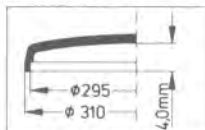
ROAMER X 7147

XS 310.177 II



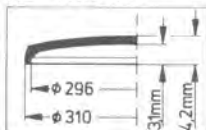
ORIENT OS-212 m.u.o. Dr
 MOO1 GA

XS 310.403 II



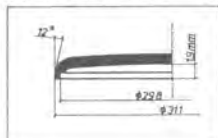
ROAMER X 7148

XS 310.178 II



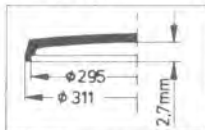
ORIENT OS-217, MOO1 GA

XS 311.111 II



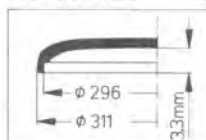
Citizen

XS 311.191 II



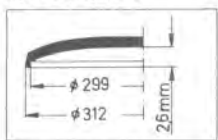
ORIENT 16-420 16-239

XS 311.423 II



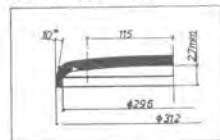
CITIZEN 54-00200

XS 312.436 II



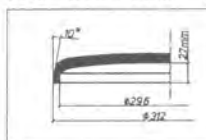
Seiko 310 W01 AN

XS 312.108 II



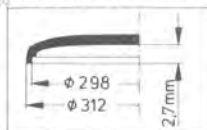
Citizen 51-203

XS 312.106 II



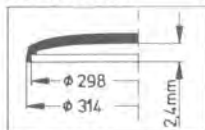
Citizen 51-201

XS 312.408 II



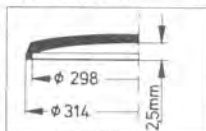
SEIKO 310 WQ 4 AN

XS 314.417 II



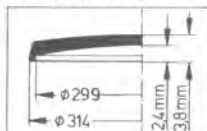
ORIENT OS-305 OS-308 OS-309
 m.Dr. OS-319 m.u.o. Dr. MOO2 GA

XS 314.179 II



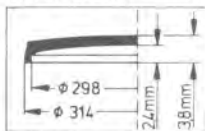
ORIENT OS-326 m. Drücker
 MOO2 GA

XS 314.180 II



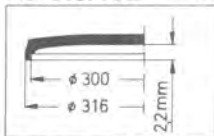
ORIENT OS-310 m. Drücker
 MOO2 GA

XS 314.181 II



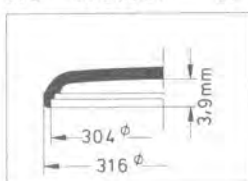
ORIENT OS-238, OS-326
 MOO2 GA

→ XS 316.432 II



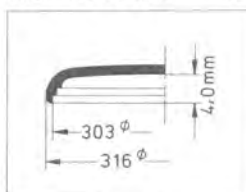
Mikado 4G 4011

XS 316.131 II



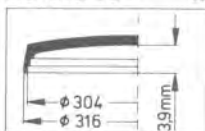
Roamer

XS 316.130 II



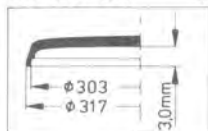
Roamer

XS 316.404 II



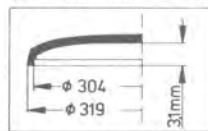
ROAMER X 7170

XS 317.407 II



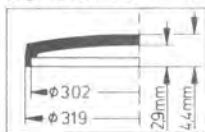
SEIKO 315 W0 2AN

XS 319.416 II



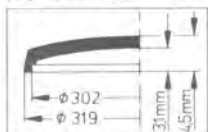
ORIENT OS-337 mit Drucker
M004 GA

XS 319.183 II



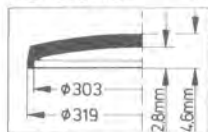
ORIENT OS215.OS252.OS322
m. Drucker, M004 GA

XS 319.182 II



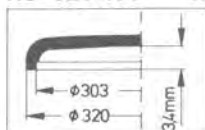
ORIENT OS-329.OS-318
m. Drucker, M004 GA

XS 319.184 II

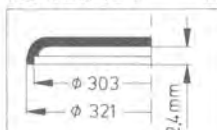


ORIENT OS217.OS227.OS541
m. Drucker, M004 GA

XS 320.189 II

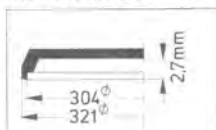


XS 321.424 II

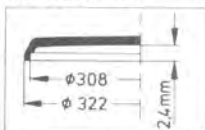


CITIZEN 54-0046

XS 321.159 II

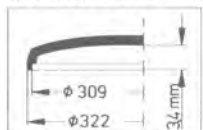


XS 322.409 II



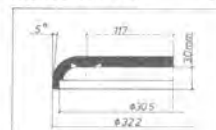
SEIKO 320 W0 3AN

XS 322.422 II



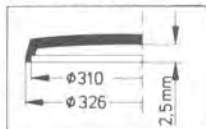
SEIKO 320 W0 SAN

XS322.114 II



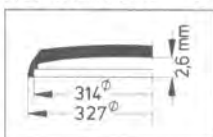
Seiko 45120 555

→ XS 326.192 II



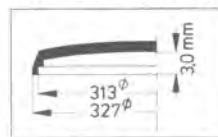
ORIENT 16-419 16-985

XS 327.161 II



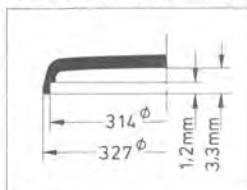
Seiko 325 W 05 AN

XS 327.160 II



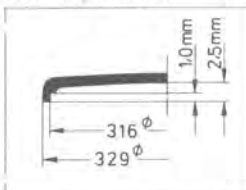
Seiko 325 W06 AN

XS 327.125 II



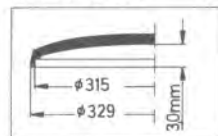
Seiko 325 W04 AN

XS 329.126 II



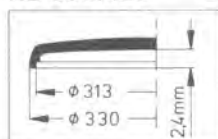
Seiko 327 W08 AN

XS 329.437 II



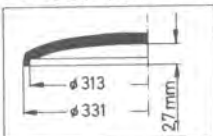
Seiko 327 W01 AN 00

XS 330.425 II



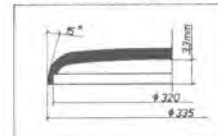
CITIZEN 54-0054

XS 331.438 II



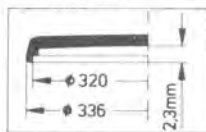
Seiko 329 W01 AN00

XS 335.113 II



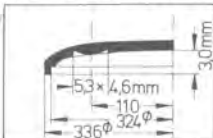
Orient 16-418

XS 336.195 II



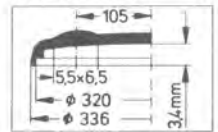
ORIENT 16-966

XS 336.118 II



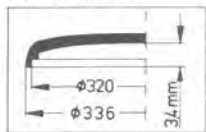
W

XS 336.197 II



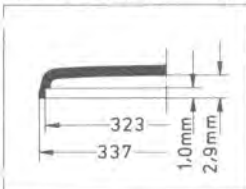
ORIENT 16-959

XS 336.418 II



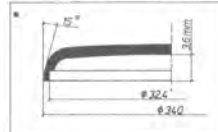
ORIENT 16-991

XS 337.127 II



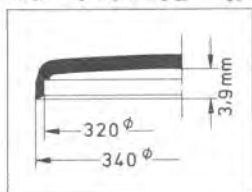
Seiko 335 W01 AN

XS 340.112 II



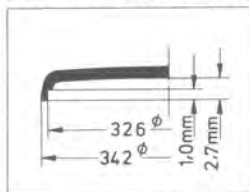
Orient 16-924

→ XS 340.132 II



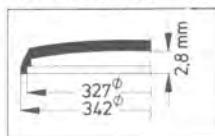
Roamer

XS 342.128 II



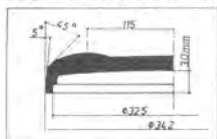
Seiko 340 W02 AN

XS 342.162 II



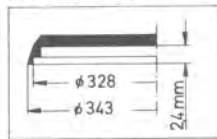
Seiko 340 W06 AN00

XS 342.105 II



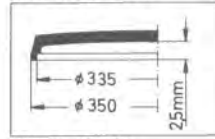
Citizen 55-513

XS 343.439 II



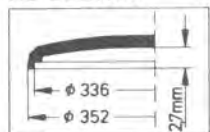
Seiko 341 W02 AN

XS 350.433 II



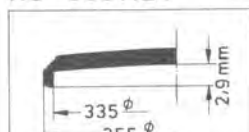
Mikado 4G 4014

XS 352.188 II



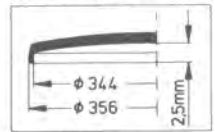
RICOH

XS 355.124 II



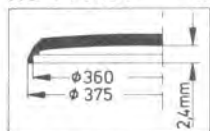
Seiko

XS 356.405 II



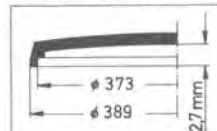
ROAMER X 7318

XS 375.190 II



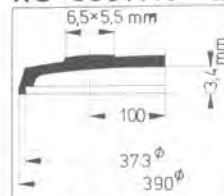
ORIENT 16-244

XS 389.434 II



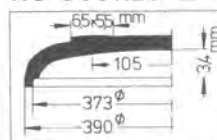
Mikado 4G 4016

XS 390.119 II



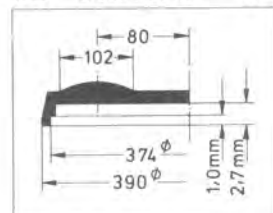
Orient 16-916

XS 390.123 II



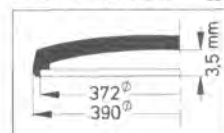
Orient 16-870

XS 390.135 II



Orient 16-017

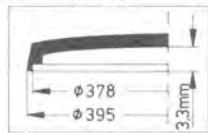
XS 390.163 II



Orient 16-974

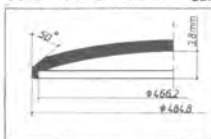


XS 395.193 II



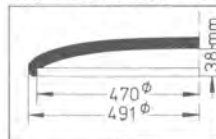
ORIENT 16-478

XS 485.115 III



Hanhart Kal. 1022

XS 491.121 III



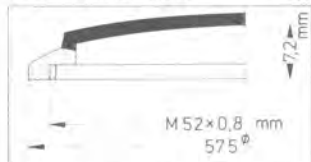
Hanhart Kal. 1012

XS 538.122 III



Hanhart

XS 575.120 III



Hanhart Kal. 1021

Special-top glasses
Verres à jupe spéciaux
Stülpglas Sonderformen
Cristales ajustables especiales
Special Stolpglas

Armoured glasses

Verres avec bagues

Armierte Gläser

Cristales armados

Armerade glas

(GB)

Armoured glasses

The bezel for armoured glasses is cut vertically and its upper edge is rounded. The armed glass has a small chamfer.

The glass is pressed into the bezel similar to the pressing of a stone into a borehole.

The seal is obtained by the metal ring in the glass stopping the glass becoming smaller. It is, therefore, of the utmost importance that the ring is an exact fit for the glass. The ring itself must not undergo any changes. Even more important than with the snap-in glass is the fact that the correct measurements must be taken with an accurate measuring tool. The armoured glass must not be more than 0.1 mm larger than the bezel – which is exactly one size. Armoured glasses are manufactured within a tolerance of $+ - 0.03$ mm in diameter.

The universal pressure plate is only used for cases made in one piece, where because of the particular construction of the tool, the use of the concave part as the lower pressure plate is not possible. The bottom of the case, however, has to be flat and sufficiently thick.

A good quality screw press is required to fit armoured glasses (the same advice that was given in connection with top glasses on page 30 applies here). Pliers and plastic pressure plates are not suitable because they have too much play and one cannot centre the glasses to the fine degree that is necessary. Fitting armoured glasses also requires high pressure which is provided by the special presses available at your specialist tool shop.

(F)

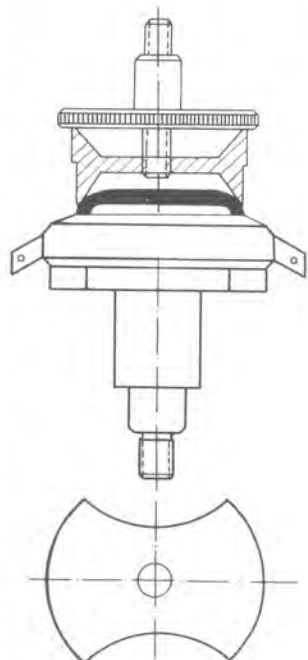
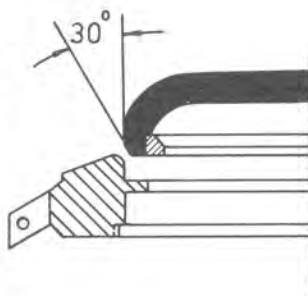
Verres avec bagues

Pour les verres armés, le cran de glace est vertical et son arête légèrement arrondie. Le base du verre armé est légèrement anglée. Cela permet de la chasser comme on le fait d'une pierre à trou dans son logement.

L'étanchéité est assurée par la bague métallique qui, située à l'intérieur du verre, l'empêche de diminuer de diamètre. Il est donc particulièrement important que cette bague s'insère parfaitement dans le verre et qu'elle ne soit pas modifiée. Ce qui est plus important encore que dans le cas des verres à poser sous tension, c'est de mesurer exactement le diamètre du cran de glace au moyen d'un appareil précis. Le verre armé doit être seulement 0,1 mm plus grand que le cran de glace, autrement dit exactement un numéro. La tolérance d'usinage d'un verre armé de qualité est de $+ ou - 0.03$ mm.

On emploie le tasseau universel seulement pour les boîtes d'une seule pièce pour lesquelles la disposition des cornes ou anses ne permet pas l'utilisation des tasseaux concaves à la partie inférieure, et cela lorsque le fond de la boîte est plat et assez épais.

Pour la pose des verres armés il faut une bonne presse (à volant). Pour cela il faut se référer à ce qui est dit pour les verres à jupe page 30. Pince et tasseaux en plastique ne conviennent pas car ils ont trop de jeu et n'offrent pas la précision indispensable. Il faut, pour la pose des verres armés, une grande pression, pour cette raison le commerce spécialisé offre des presses conçues à cet usage.



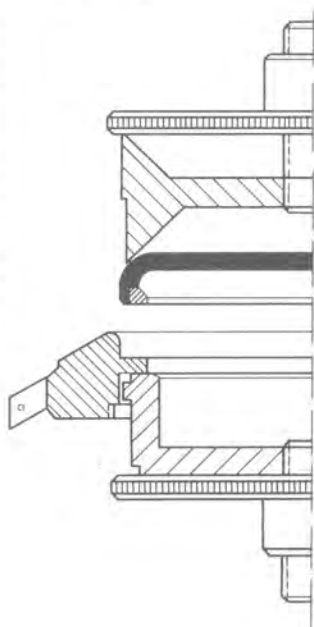
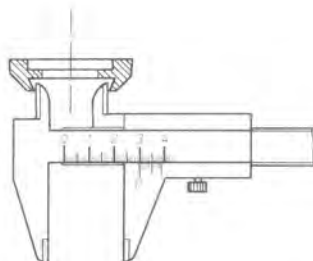
Armoured glasses
Verres avec bagues
Armierte Gläser
Cristales armados
Armerade glas

(GB)

From the many concave metal pressure plates one chooses the one which goes as far as possible over the edge of the armoured glass so that the pressure causes the glass to decrease in diameter. The case is centred from below with the help of another concave pressure plate. This can be done with the case open or closed. If one is worried about the possibility of damaging any parts of the watch because of the high pressure that is applied, it might be advisable to remove also as a rule, the top of the case can be more easily centred after removal of the works than a closed watch. The flat universal pressure plate is only used for cases made in one piece where because of particular construction of the tool, the use of the concave part as the lower pressure plate is not possible. The bottom of the case, however, has to be flat and sufficiently thick.

(F)

L'assortiment de tasseaux métalliques concaves doit comprendre toutes les dimensions. Parmi ces tasseaux, il faut rechercher celui qui appuie sur le verre le plus extérieurement possible pour que la pression exercée sur le verre diminue au moment où il entre dans le cran de glace. La boîte sera centrée par dessous avec un autre tasseau concave. Cette opération peut s'effectuer boîte fermée ou ouverte. Pour éviter les risques d'écrasement provoqués par les très fortes pressions on peut déboîter la montre. En règle générale, il est plus facile de centrer la carrure de la boîte lorsque celle-ci est sans mouvement que lorsque la montre est complète. On emploie le tasseau universel seulement pour les boîtes d'une seule pièce pour lesquelles la disposition spéciale des cornes ou anses ne permet pas l'utilisation des tasseaux concaves à la partie inférieure et cela lorsque le fond de la boîte est plat et assez épais.



(W)

Armoured glasses
Verres avec bagues
Armierter Gläser
Cristales armados
Armerade glas

DIA-G · DIA-GF · ATG · ATGH
DIA-C · DIA-CF · ATC · ATCH

G = with golden ring, avec bague dorée, mit Goldring, con arillo dorado, med gul ring.

DIA-G/C



Diaplan glass, armoured, patented
Genève rond plat armé, brevet déposé
Diaplanglas armiert, patentrechtlich geschützt
Cristal diaplán armado, patentado
Armerat diaplánglas (patenterat)

DIA-G/C 160 – DIA-G/C 230 ○

DIA-G/C 268 – DIA-G/C 352 ○

Color-System:
gold/silver, or/argent, gold/silber, dorado/
plateado, guld/silver

DIA-GF/CF



Diaplan glass, armoured low patented
Genève rond plat armé mince brevet déposé
Diaplanglas armiert, flach, patentrechtlich geschützt
Cristales diaplán armado, extra plano, patentado
Armerat diaplánglas, lågt (patenterat)

Color-System:

gold/silver, or/argent, gold/silber, dorado/
plateado, guld/silver

DIA-GF/CF 180 – DIA-GF/CF 352 ○

Diaplan glasses are suitable to replace mineral glasses
Verres Diaplan peuvent remplacer de verres minéraux
Diaplan-Gläser sind zum Ersatz von Mineralgläsern geeignet
Cristales Diaplan son apropiados para reemplazar cristales minerales
Diaplánglas kan ersätta mineralglas

ATG/C



round armoured
Armées
Armiert
Cristal redondo armado
Armerade glas

ATG/C 141 – ATG/C 373 ○

Color-System:
gold/silver, or/argent, gold/silber, dorado/
plateado, guld/silver

ATGH/CH



Armoured extremely high
Armées haut
Armiert extra hoch
Armado extra alto
extra-högt

ATGH/CH 270 – ATGH/CH 336 ○

Color-System:
gold/silver breakdown, or/argent interrom-
pu, gold/silber unterbrochen, dorado/pla-
teado discontinuo, guld/silver avbruten

ATGR · ATGB · AGL ATRC · ATCB · AGL · ATCT

C = with chrome ring, avec bague chromée, mit Chromring,
con arillo cromado, med kromring.

Armoured glasses
Verres avec bagues
Armiertere Gläser
Cristales armados
Armerade glas

ATGR/CR

Armoured with step
Armé avec bague revidée
Armierter mit revediertem Ring
Armado con arillo verificado
Armerat, reviderad ring

ATGR/CR 170 – ATGR/CR 206 ○

ATGR/CR 269 – ATGR/CR 333 ○

Color-System:
gold/silver, or/argent, gold/silber, dorado/
plateado, guld/silver

ATGB/CB

Armoured, with wide ring
Armé avec bague large
Armierter mit breitem Ring
Armado con arillo ancho
Armerat, bred ring

ATGB/CB 284 – ATGB/CB 343 ○

Color-System:
gold/silver, or/argent, gold/silber, dorado/
plateado, guld/silver

AGL/CL

Armoured with lens
Armé avec loupe
Armierter mit Lupe
Armado con lupa
Armerade glas med lup

AGL/CL 280 – AGL/CL 335 ○

Color-System:
brown with lens mark, brun avec signe de
loupe, braun mit Lupenmarkierung, casta-
no con marca de lupa, brun med lupmar-
kering

ATCT

Armoured for divers watches
Armé pour montres de plongée
Armierter für Taucheruhren
Armado para relojes de bolsa
Armerat för dykarur

ATCT 180 – ATCT 352 ○

Color-System:
silver, argent, silber, plateado, silver

Armoured glasses can be supplied in steps of one tenth of a millimetre.

Tous les verres armés sont livrables tous les 1/10 mm.

Il faut faire attention de mesurer exactement le diamètre du cran de glace.

Alle armierten Gläser sind in Zehntelmillimeterabstand lieferbar.

Beachten Sie, daß Sie den Glasfalz genau messen.

Todos los cristales armados se surten con medidas en décimas de mm.

Tome en cuenta que la medida de la ranura o caja debe ser exacta.

Alla armerade glas är levererbar på varje tiondelmillimeter.

Märk att glasfalsen noggrant måste uppmätas.

Special armoured glasses
Verres avec bagues spéciales
Armierte Gläser Sonderformen
Cristales armados especiales
Special Armerade glas

XAG/C

Ordering number
Numéro pour la commande
Bestellnummer
Numero para el pedido
Nummer för beställningen

XAG 320 . 502 III

XAG: with yellow ring – avec bague dorée – mit Goldring – con arillo dorado – med gul ring.

XAC: with white ring – avec bague chromée – mit Chromring – con arillo cromado – med kromring.

XAO: Provision for armoured ring – but supplied without the ring.
Prévu pour recevoir une bague métallique mais livré sans bague.
Für Armierungsring vorgesehen – aber Lieferung ohne Ring.
En caso de que ya se tengen los arillos, estos pueden surtirse sin el arillo.
Ej angiven armeringsring – leverans utan ring.

The glasses are in order of their outside diameters.
Les verres sont classés en fonction du diamètre extérieur.
Nach dem Außendurchmesser sind die Gläser geordnet.
Los cristales están clasificados de acuerdo al diámetro exterior.
Glasen är ordnade efter ytterdiameter.

Current number
Numéro courant
Laufende Ordnungsnummer
Numero corrido
Löpande nummer

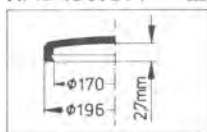
Price group
Groupe de prix
Preisgruppe
Grupo de precios
Prisgrupp

Diameters are expressed in terms of tenths of millimetres.
Tous les diamètres sont donnés en 1/10 de mm.
Alle Durchmesser sind in Zehntelmillimeter angegeben.
Todos los diámetros están dados en decimas de milimetro.
Alla diametrar angives i tiondel millimeter.

XAG/C 196 - 279 Ø

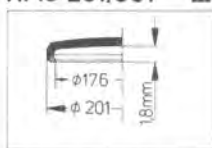
Special armoured glasses
 Verres avec bagues spéciales
 Armierte Gläser Sonderformen
 Cristales armados especiales
 Special Armerade glas

→ XAC 196.574 III



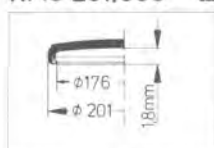
SEIKO 195 07 ANSO

XAC 201.587 III



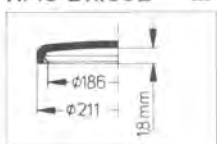
CITIZEN 54-04201,54-04202

XAG 201.606 III



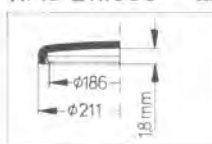
CITIZEN 54-04201,54-04202

XAG 211.602 III



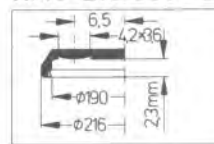
CITIZEN 54-05142, 54-05141

XAC 211.603 III



CITIZEN 54-05142, 54-05141

XAG 216.599 III



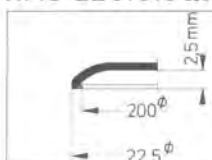
SEIKO 215 T 13 AEGO

XAC 225.551 III



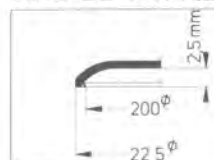
Omega 5116

XAG 225.513 III



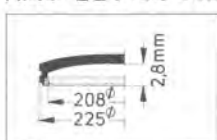
Kienzle 059 11/25

XAC 225.514 III



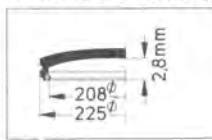
Kienzle 059 11/25

XAG 225.550 III



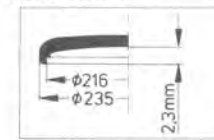
Omega 5117

XAC 225.555 III



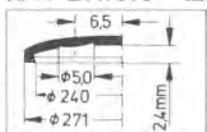
Omega 5117

XAO235.581 III



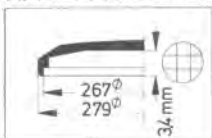
ENICAR 771.14.01 ohne Ring

XAC 271.570 III



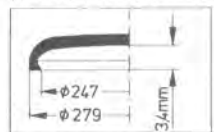
ORIENT 15-121

XAO-FAC 279.138 III



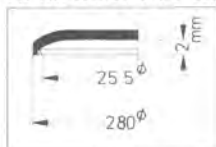
Omax

XAC 279.573 III



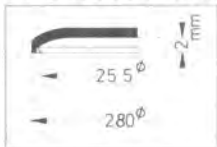
REAL 812-6079-2

→ XAG 280.509 III



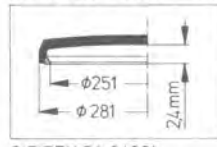
Kienzle 08 13/17

XAC 280.510 III



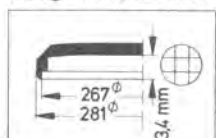
Kienzle 08 13/17

XAC 281.604 III



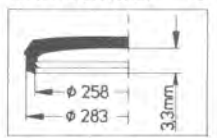
CITIZEN 54-04281

XAO-FAC 281.137 III



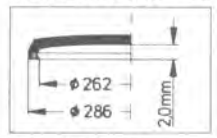
Omax

XAC 283.584 III



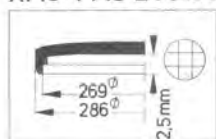
CITIZEN 54-04801

XAC 286.586 III



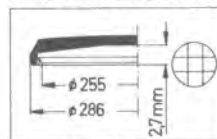
CITIZEN 54-0408

XAO-FAC 286.139 III



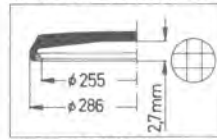
Omax

XAG-FAC 286.609 III



Mikado 4G 3006 , Omax

XAC-FAC 286.610 III



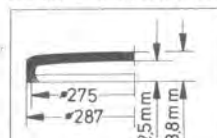
Mikado 4G 3006 , Omax

XAC 287.600 III

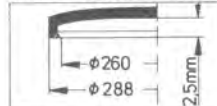


DUGENA I 4180 058

XAC 287.567 III

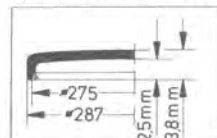


XAC 288.590 III

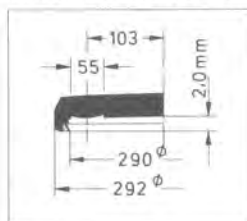


DUGENA-MONZA

XAG 287.566 III

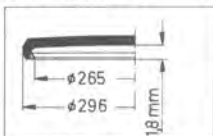


XAC 292.508 III



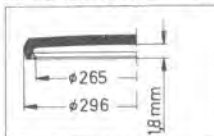
Junghans

→ XAG 296.611 III



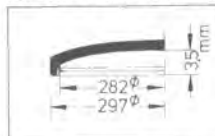
Mikado 4G 3008

XAC 296.612 III



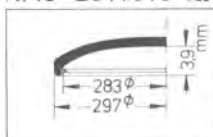
Mikado 4G 3008

XAC 297.518 III



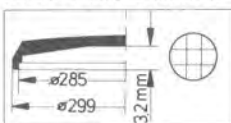
Certina 982/1 295 -3/5

XAG 297.519 III



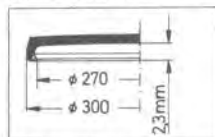
Certina 982/1 295-31

XAO-FAC 299166 III



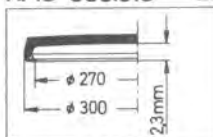
Ricoh

XAG 300.614 III



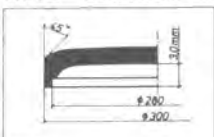
Mikado 4G 3009

XAC 300.615 III



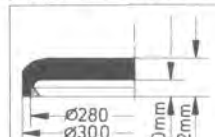
Mikado 4G 3009

XAC 300.506 III



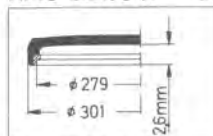
R. Pfisterer

XAC 300.563 III



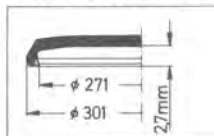
Porta E-Nautic 060 165

XAC 301.641 III



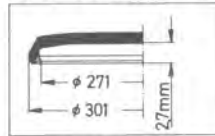
Seiko 300 T03 ANG

XAG 301.620 III



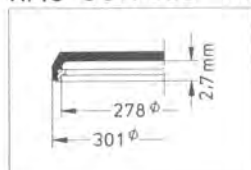
Seiko 300 T15 ANG

XAC 301.621 III



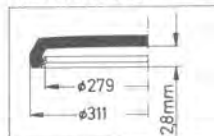
Seiko 300 T15 ANG

XAG 301.532 III



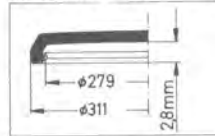
Seiko 300 T03 ANG

XAG 301.618 III



Seiko 300 T10 ANG

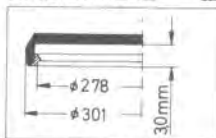
XAC 301.619 III



Seiko 300 T10 ANG

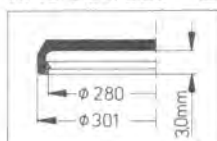


XAG 301.642 III



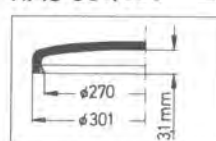
Seiko 300 T20 ANG

XAC 301.598 III



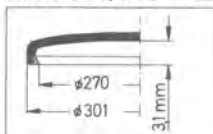
SEIKO 300 T 20 ANS

XAG 301.639 III



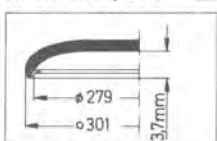
Seiko 300 T 07 ANG

XAC 301.640 III



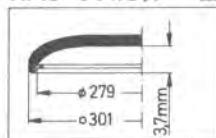
Seiko 300 T 07 ANS

XAG 301.616 III



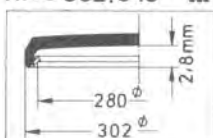
Seiko 300 T04 ANG

XAC 301.617 III



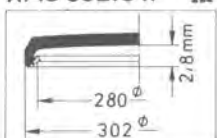
Seiko 300 T04 ANS

XAG 302.540 III



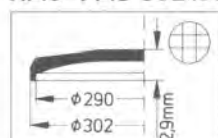
SEIKO 300T 12 ANG

XAC 302.541 III



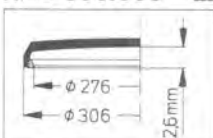
SEIKO 300 T 12 ANS

XAO-FAC 302.185 III



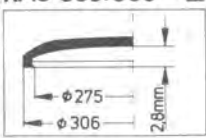
RICOH

XAC 306.605 III



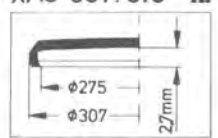
CITIZEN 54-0385

XAC 306.568 III



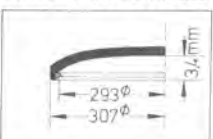
ORIENT OS-327 OS-345
 mit Drucker, M006 GA

XAC 307.578 III



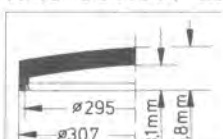
ORIENT 15-057

XAC 307.516 III



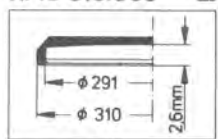
Certina 982/1 30,5-7

XAC 307.561 III



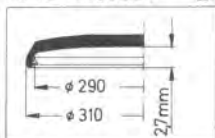
BWC 953011

XAC 310.583 III



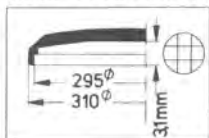
SEIKO 310 T 19 ANS

→ XAG 310.627 III



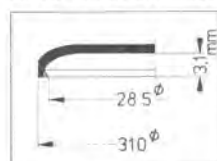
Seiko 310 T19 ANG

XAO-FAC 310.141 III



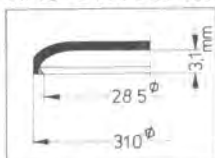
Ricoh 61.293 A

XAG 310.511 III



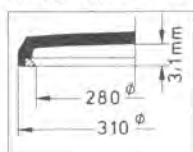
Kienzle 060.11/21

XAC 310.512 III



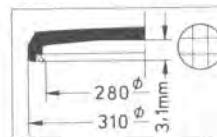
Kienzle 060.11/21

XAC 310.538 III



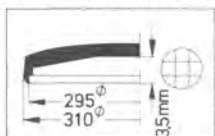
Citizen

XAC-FAC 310.539 III



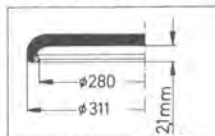
Citizen mit Dachflächen

XAO-FAC 310.142 III



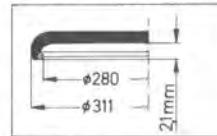
Ricoh 61.264

XAG 311.623 III



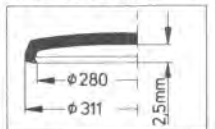
Seiko 310 T11 ANG

XAC 311.624 III



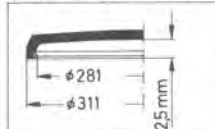
Seiko 310 T11 ANG

XAC 311.585 III



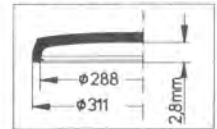
CITIZEN 54-03961

XAG 311.613 III



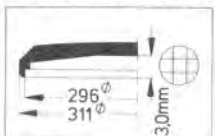
Citizen 54 3961
Mikado 4G 3010 C

XAC 311.588 III



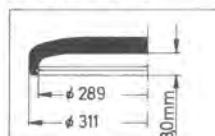
CITIZEN 54-03421

XAO-FAC 311.143 III



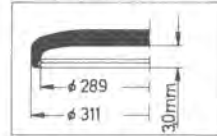
Ricoh

XAG 311.625 III



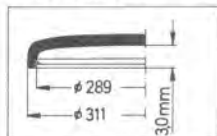
Seiko 310 T14 ANG

XAC 311.626 III



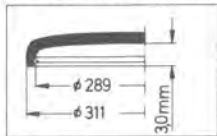
Seiko 310 T14 ANG

→ XAG 311.628 III



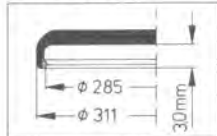
Seiko 310 T25 ANG

XAC 311.629 III



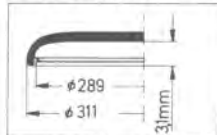
Seiko 310 T25 ANS

XAC 311.601 III



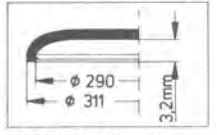
DUGENA J 3747, 718

XAC 311.608 III



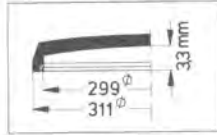
Seiko 310 T04 ANS

XAG 311.582 III



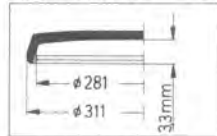
SEIKO 310 T04 ANG

XAC 311.558 III



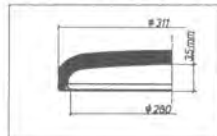
Seiko 310 T08 ANS

XAG 311.643 III

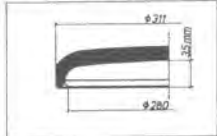


Seiko 310 T08 ANG

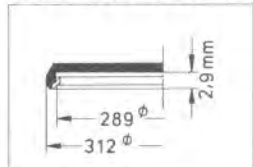
XAG 311.507 III



XAC 311.527 III

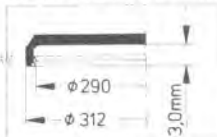


XAG 312.530 III



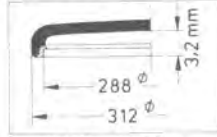
Seiko 310 T 16 ANG

XAC 312.569 III



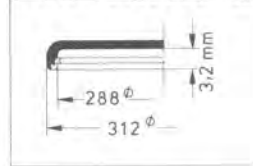
SEIKO 310 T16 ANS

XAC 312.523 III



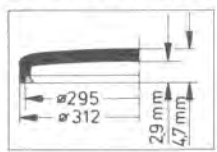
SEIKO 310 T 10 ANS

XAG 312.531 III

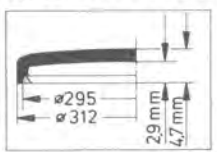


Seiko 310 T10 ANG

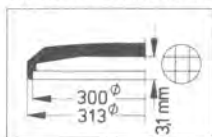
XAG 312.564 III



XAC 312.565 III



→ XAO-FAC 313.144 III



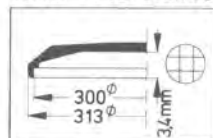
Ricoh 61.277 A

XAO-FAC 313.145 III



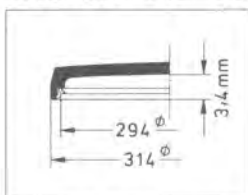
Ricoh

XAO-FAC 313.146 III



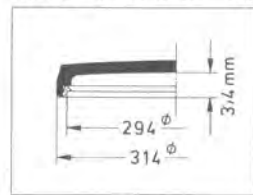
Ricoh 61.248

XAG 314.542 III



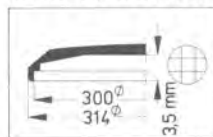
Seiko 313 T01 ANG

XAC 314.543 III



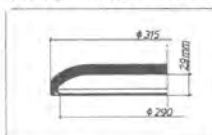
Seiko 313 T01 ANS

XAO-FAC 314.147 III



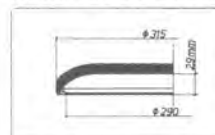
Ricoh 61.248

XAC 315.501 III



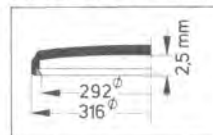
Kienzle 08/27.08 32/36

XAG 315.500 III



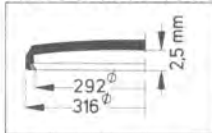
Kienzle 08/27.08 32/36

XAG 316.548 III



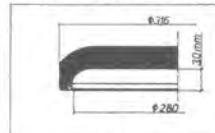
Omega 5200 und
Tissot 10283-3

XAC 316.549 III

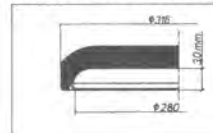


Omega 5200 und
Tissot 10283-3

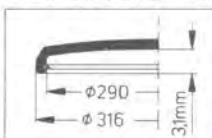
XAG 316.504 III



XAC 316.505 III

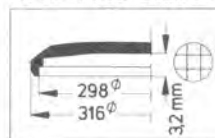


XAC 316.595 III



OMEGA 5137, 5142

XAO-FAC 316.140 III



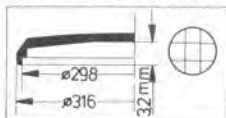
Omax

XAO-FAC 316.149 III



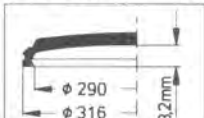
Ricoh 61.247

→ XAO-FAC 316.167 III



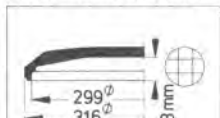
Ricoh

XAC 316.593 III



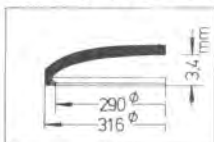
OSCO 233/13, 64/581,
64/593, 64/611

XAO-FAC 316.148 III



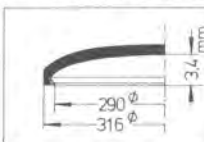
Ricoh Crys 9

XAG 316.521 III



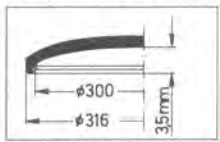
Tissot

XAC 316.522 III



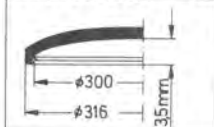
Tissot

XAG 316.630 III



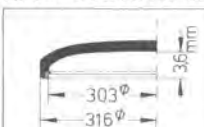
Seiko 315 T04 ANG

XAC 316.631 III



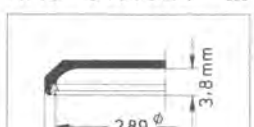
Seiko 315 T04 ANS

XAC 316.515 III



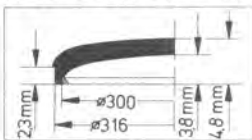
Certina 982/1 315-9

XAC 316.524 III



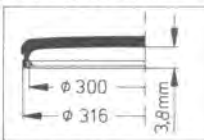
Seiko 315 T08 ANS

XAC 316.560 III



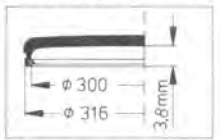
Junghans 42.756-0234
Dugena 512.013

XAC 316.597 III



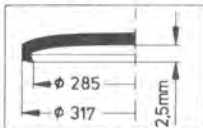
OMEGA 5072

XAG 316.607 III



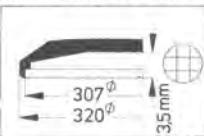
OMEGA 5072

XAC 317.579 III



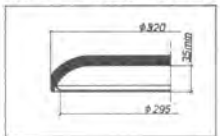
ORIENT 15-993

XAO-FAC 320.150 III



Ricoh

XAG 320.502 III

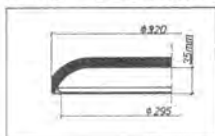


Kienzle

XAG/C 320 - 322 Ø

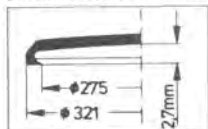
Special armoured glasses
Verres avec bagues spéciales
Armierter Gläser Sonderformen
Cristales armados especiales
Special Armerade glas

→ XAC 320.503 III



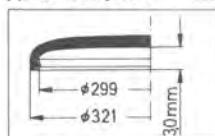
Kienzle

XAC 321.577 III



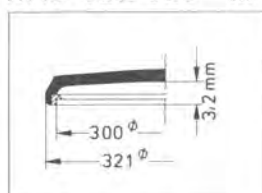
ORIENT 15-055

XAC 321.638 III



Seiko 320 T04 ANS

XAC 321.528 III



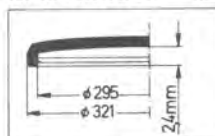
Seiko 320 T01 ANS

XAO-FAC 321.151 III



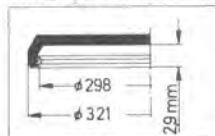
Ricoh 61.123

XAC 321.634 III



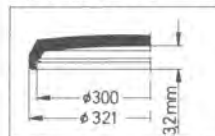
Seiko 320 T15 ANS

XAG 321.632 III



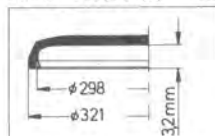
Seiko 320 T02 ANG

XAG 321.635 III



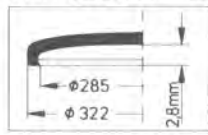
Seiko 320 T21 ANG

XAG 321.644 III



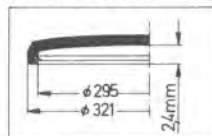
Seiko 320 T01 ANG

XAG 322.571 III



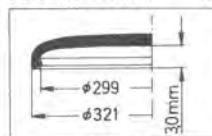
JUNGHANS 0807

XAG 321.633 III



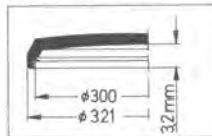
Seiko 320 T15 ANG

XAG 321.637 III



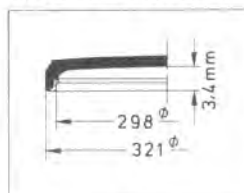
Seiko 320 T04 ANG

XAC 321.636 III



Seiko 320 T21 ANS

XAC 321.525 III



Seiko 320 T02 ANS

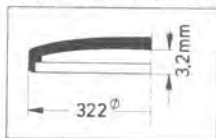
XAC 322.572 III



JUNGHANS 0805

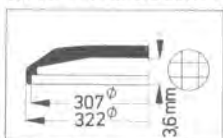


XAO 322.554 III



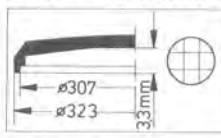
BWC 953004 und Tissot 850
 für Sonderring

XAO-FAC 322.152 III



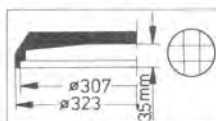
Ricoh 61,243

XAO-FAC 323.169 III



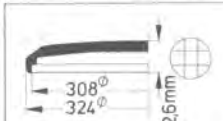
Ricoh 061248

XAO-FAC 323.168 III



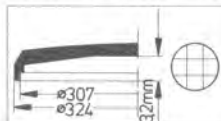
Ricoh 061123

XAO-FAC 324.153 III



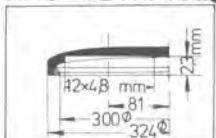
Ricoh 909

XAO-FAC 324.170 III



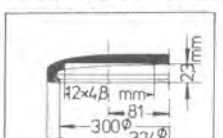
Ricoh 909-619909

XAG 324.546 III



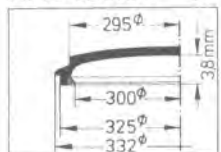
Aristo mit Langlupe

XAC 324.547 III



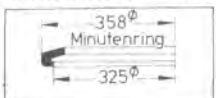
Aristo mit Langlupe

XAC 325.517 IV



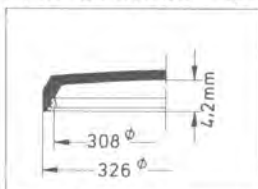
Aristo T 25...36,37 für
 Minutenring X 358:520

X358.520 IV



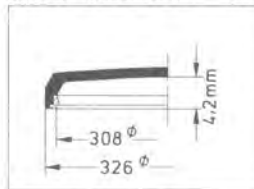
für Aristo XAC 325.517

XAG 326.533 III



Seiko 325 T 02 ANG

XAC 326.534 III

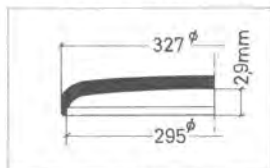


Seiko 325 T 02 ANS

XAG/C 327 - 336 Ø

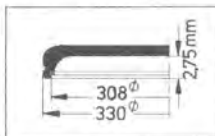
Special armoured glasses
Verres avec bagues spéciales
Armierte Gläser Sonderformen
Cristales armados especiales
Special Armerade glas

→ XAO 327.400 III



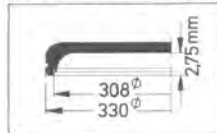
Junghans für Minutering

XAC 330.552 III



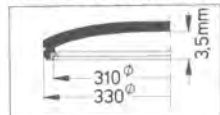
Omega 5083

XAG 330.556 III



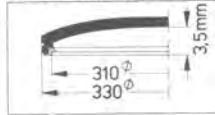
Omega 5083

XAC 330.553 III



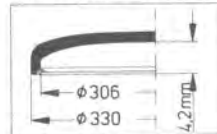
Omega 5123

XAG 330.557 III



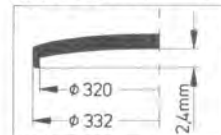
Omega 5123

XAC 330.591 III



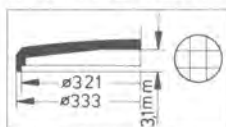
R.PFISTERER 3/2/6

XAO 332.580 III



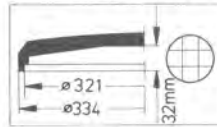
ENICAR 160.71.01 ohne Ring

XAO-FAC 333.171 III



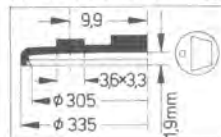
Ricoh

XAO-FAC 334.172 III



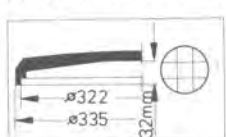
Ricoh 61202A

XAC 335.576 III



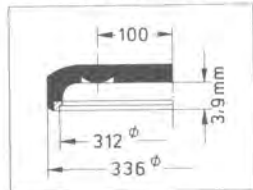
CANDINO

W XAO-FAC 335.173 III

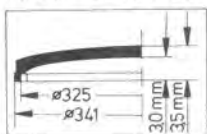


Ricoh

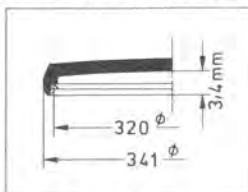
XAC 336.535 III



→ XAC 341.559 III

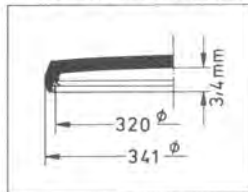


XAG 341.544 III



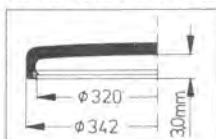
Seiko 340 T06 ANG

XAC 341.545 III



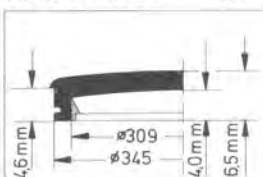
Seiko 340 T06 ANS

XAC 342.594 III



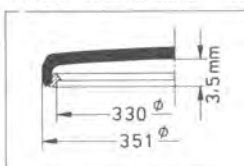
OMEGA-SPEEDMASTER 5077

XAC 345.562 III



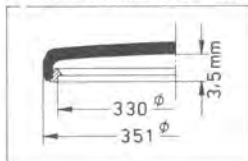
Orient 429-16240

XAG 351.536 III



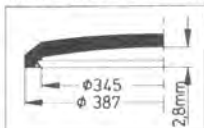
Seiko 350 T02 ANG

XAC 351.537 III



Seiko 350 T02 ANS

XAC 387.575 III



Special armoured glasses
Verres avec bagues spéciales
Armierter Gläser Sonderformen
Cristales armados especiales
Special Armerade glas

Capsules
Verres Cache-poussière
Kapseln
Capsulas
Kapselglasen

XX

(GB)

Capsules are watch glasses which reach over the sides of the case and have holes for the winder or press-button. They can only be used for the specific case they have been designed for. They are usually fitted by hand.

(F)

Verres cache-poussière
 Ces verres de montres cache-poussière entourent le mouvement en le protégeant et comportent un tube fraisé pour le passage de la tige de remontoir. Ils sont toujours destinés à une seule boîte pour laquelle ils sont conçus. Le montage s'effectue à la main.

(D)

Kapseln sind Uhrgläser, die gleichzeitig ganz über das Gehäuse herüberfassen und für die Aufzugswellen oder Drücker entsprechende Bohrungen aufweisen. Sie sind immer nur für das eine Gehäuse verwendbar, für welches sie konstruiert wurden. Der Einbau geschieht in der Regel von Hand.

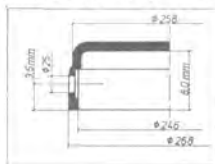
(E)

Las Cápsulas son cristales para reloj que se montan totalmente por encima de la caja del reloj y que cuentan con sus perforaciones correspondientes para lograr la tracción o compresión de los cristales. Estos mismos son adaptados y solamente se podrán utilizar en la caja para la cual fueron hechos. La fabricación de estos cristales es por lo general hecha en forma manual.

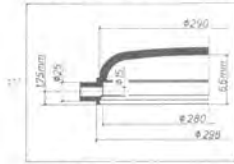
(S)

Kapselglasen är alltid utformade för speciella boetter. Glaset täcker som regel även verkens sidor och har ofta urtag eller hål för uppdragsaxlar och eventuella sidtryck. Glasen monteras i allmänhet för hand.

XK 268.300 III

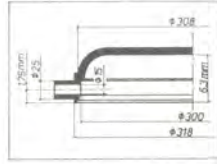


XK 298.303 III



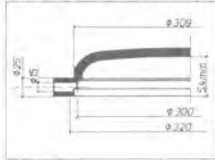
JP 2D 2

XK 318.302 III



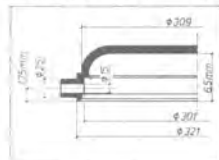
JP 2D 1

XK320.305 III



JP 2D 6

XK 321.304 III



JP 2D 4

GB

Round Underlayered Glasses are inserted from the rear into the top part of the case, followed by the movement with dial and hands (sometimes a gasket is put in between the two). Finally the movement is screwed in through the base. There are a two other ways of fitting underlayered glasses but all of these can be done by hand.

F

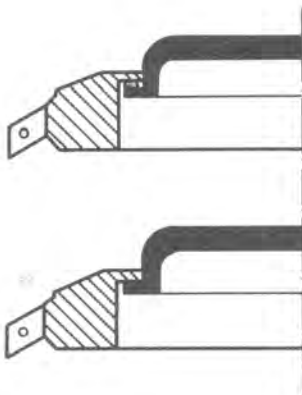
Verres à talon
Les verres ronds à talon sont insérés par l'intérieur dans la lunette de la boîte, ensuite on place le mouvement avec son cadran et ses aiguilles parfois en intercalant un joint d'étanchéité, enfin on fixe le fond. Il se présente encore d'autres constructions de ces verres mais dans la plupart des cas ils se posent à la main.

D

Runde Unterleggläser werden von hinten in das Gehäuseoberteil eingelegt, dann folgt das Werk mit Zifferblatt und Zeigerwerk, manchmal auch noch unter Vorlage eines Dichtungsringes. Schließlich wird das Werk durch den Boden festgeschraubt. Auch andere Konstruktionen kommen mit diesen Gläsern vor. Meistens ist jedoch der Einbau von Hand möglich.

E

Cristales de asiento
Los cristales de asiento redondo se insertan por detrás de la parte superior de la caja, luego sigue el mecanismo del reloj con carátula y manecillas, utilizando algunas veces también una junta de empaque. Finalmente se atornilla el mecanismo por medio de la base. Existen también otras construcciones con respecto a este cristal y la mayoría de las veces su colocación se puede realizar en forma manual.



S

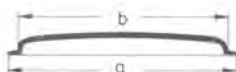
Runda underläggsglas lägges underifrån i boettens överdel, sedan följer verket med tavla och visare. Ibland erfordras även en packning varefter boetten tillslutes. Även andra konstruktioner förekommer med dessa glas men i regel kunna glasen monteras för hand.

Underlayed glasses
Verres à talon
Unterleggläser
Cristales de asiento
Underläggsglas

Available sizes.
 Dimensions livrables.
 Lieferbare Größen.
 Cantidades en que se surten los pedidos.
 Levererbara storlekar.

U

U



Underlayed glass
 Rond à talon
 Unterlegglas
 Cristal de asiento
 Underläggsglas

Color-System:
 yellow, jaune, gelb, amarillo, gul

a = 1st. measurement: Outside diameter

a = 1. Dimension: Diamètre extérieur

a = 1. Maß: Außendurchmesser

a = 1. Medida: Diámetro exterior

a = 1. Måttet: utvändigt mått

b = 2nd. measurement: Inside diameter = Determining measurement.

b = 2. Dimension: Diamètre intérieur = Dimension Fonctionnelle.

b = 2. Maß: Innendurchmesser = Funktionsmaß.

b = 2. Medida: Diámetro interior = Medida funcional.

b = 2. Måttet: Innerdiameter = Funktionsmått.

U	186/165	U	235/217	U	252/228	U	280/260
U	190/175	U	240/215	U	258/225	U	280/265
U	210/190	U	240/218	U	259/248	U	302/278
U	214/193	U	244/228	U	263/240	U	324/290
U	224/200	U	248/229	U	267/240	U	327/300
U	231/216	U	248/232	U	267/248	U	344/310
U	235/215	U	248/234	U	277/255	U	350/320
						U	362/325

XU 292 - 340 Ø

Available sizes.
Dimensions livrables.
Lieferbare Größen.
Cantidades en que se surten los pedidos.
Levererbara storlekar.

Special underlayed glasses
Verres à talon spéciaux
Unterlegglas Sonderformen
Cristales de asiento especiales
Special Underläggsglas

Ordering number
Numéro pour la commande
Bestellnummer
Numero para el pedido
Nummer för beställningen

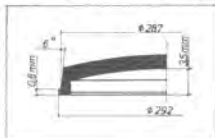
XU 314.201 III

The glasses are in order of their outside diameters.
Les verres sont classés en fonction du diamètre extérieur.
Nach dem Außendurchmesser sind die Gläser geordnet.
Los cristales están clasificados de acuerdo al diámetro exterior.
Gläsen är ordnade efter ytterdiameter.

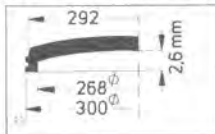
Current number
Numéro courant
Laufende Ordnungsnummer
Numero corrido
Löpande nummer

Price group
Groupe de prix
Preisgruppe
Grupo de precios
Preisgrupp

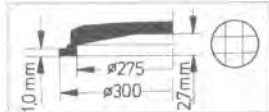
→ XU 292.203 III



XU 300.205 III

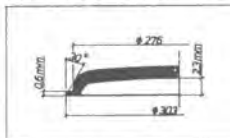


XU-FAC 300.213 III

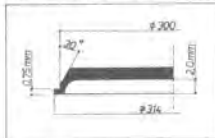


Orient / Dachflächen

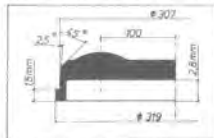
XU 303.200 III



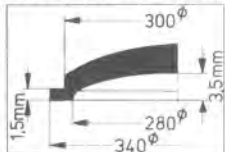
XU 314.201 III



XU 319.202 III



XU 340.204 III



Flanged-glasses

Verres de forme relief

Formproofgläser

Cristales formproof

Formproof glas

(GB)

Flanged-glasses

Formproof glasses are round watch glasses the base of which is very often used to seal the watch case. Since only the top part of the glass protrudes from the case, it gives the impression of an ordinary watch glass. Formproof glasses can be supplied with and without armouring rings.

Glasses without armouring rings can only be fitted watertight into a suitable case with a tightly fitting O-shaped ring.

Armoured Formproof glasses can only be fitted with a very precise fitting tool which does not have any play in the axes (see page 168). To fit the glass, it is pressed into the case from below with pressure plates which are specially made for Formproof glasses. They are graduated in such a way that there is pressure only on the rim of the glass and not on the armouring ring. The case is supported in special plastic pressure plates which leave enough room for the glass when it is being fitted.

These special pressure plates for Formproof glasses are available for both screw presses and lever presses. For details see the end of this catalogue.

Before looking up a particular Formproof glass in this catalogue, please note the detailed instructions on how to measure the case to find the right glass.

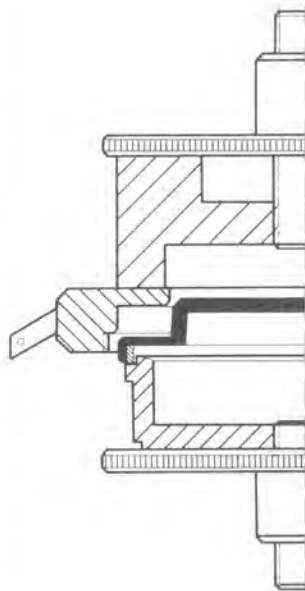
(F)

Verres de forme relief

Les verres de forme relief sont des verres dont la base ronde assure l'étanchéité dans la plupart des cas. La partie en relief sort de la boîte et cette partie visible donne l'impression d'un verre de forme. Les verres de forme relief sont ou ne sont pas équipés d'une bague métallique. Les verres non armés ne peuvent assurer l'étanchéité que si la boîte a été conçue pour recevoir un joint O-Ring bien ajusté. Les verres de forme relief armés ne peuvent être posés qu'avec une presse très précise sans aucun jeu axial (page 168). Le verre se fixe en le chassant à l'intérieur de la boîte. Pour cela il faut utiliser des tasseaux créés spécialement pour ces verres. Ces tasseaux présentent une creusure calculée de telle manière que la pression s'exerce sur le bord du verre et non sur la bague métallique. La boîte est soutenue par des tasseaux en plastique fraisés spécialement. Cela est nécessaire pour que, lorsqu'on chasse le verre, sa partie relief puisse sortir librement de la boîte.

Les tasseaux spéciaux pour la pose des verres de forme relief sont livrables pour les presses à levier comme pour les presses à vis. Vous en trouverez les détails à la fin du catalogue.

Avant de chercher un verre de forme relief dans ce catalogue, il faut mesurer la boîte puis tenir compte des instructions de classification pour découvrir le verre.



F Formproof · Forme-relief

ordering-number
 numéro pour la commande
 Bestellnummer
 número para el pedido
 beställningsnummer

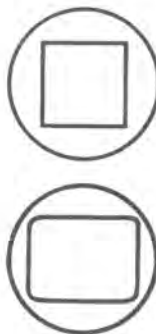
Identification letters for the part of the form
 Lettre d'identification designant la forme
 Kennbuchstaben für den Formteil
 Letras de identificación para la parte de forma
 Bokstavsbezeichnungar för formdelar



FO

round
 rond
 rund
 redondo
 rund

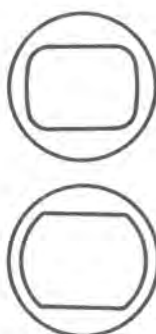
74



FR

Rectangular shape
 Forme rectangulaire
 Rechteckform
 Forma rectangular
 Rektangelform

74

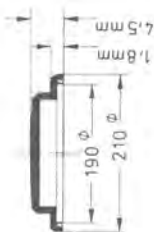
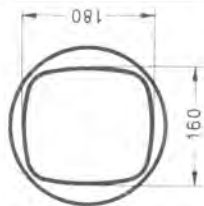


FT

Barrel shape
 Forme tonneau
 Tonnenform
 Forma de barril
 Tunntorm

77

2 sides bended, 2 sides straight – 2 côtes cambrés, 2 côtes droites – 2 Seiten gebogen, 2 Seiten gerade, 2 lados curvos, 2 lados planos – 2 sidor vârl-da, 2 sidor raka

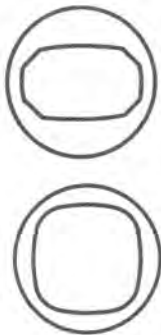


FBA 210.951

Page
 Page
 Seite
 Pagina
 Sidan

A with ring
 avec bague
 mit Ring
 con arillo
 med ring

FB

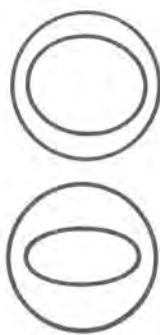


Alli 4 sides bended – les 4 côtes cambrés – alle 4 Seiten gebogen – todos los 4 lados encorvados – alle sidor vâlvda

- Bale shape
- Forme balle
- Ballenform
- Forma de fardo
- Ballenform

97

FE



- Elliptical shape
- Forme elliptique
- Ellipsenform
- Elíptico
- Ellipsform

129

FH



- Horseshoe and other shapes
- Forme fer à cheval et autres formes
- Hufeisen- und sonstige Formen
- Forma de herradura y otros formas
- Hov- och övriga former

142

Within one form the glasses are classified according to the outside diameter

A l'intérieur d'une même forme les verres sont classés d'après les diamètres extérieurs

Innerhalb einer Form sind die Gläser nach dem Außendurchmesser geordnet

Dentro de una forma, los cristales se ordenan de acuerdo a su diámetro exterior

Glasen med samma former är ordnade efter ytterdiameter

Within one diameter the glasses are classified according to the maximum size of the part of the form

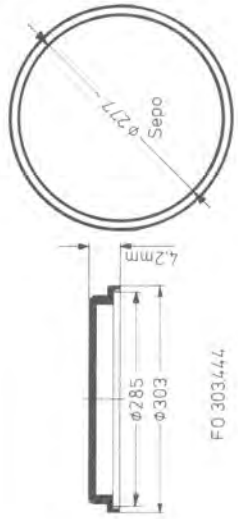
A l'intérieur d'un même diamètre les verres sont classés d'après la plus grande dimension de la forme

Innerhalb eines Durchmessers sind die Gläser nach dem Größtmaß des Formteils geordnet

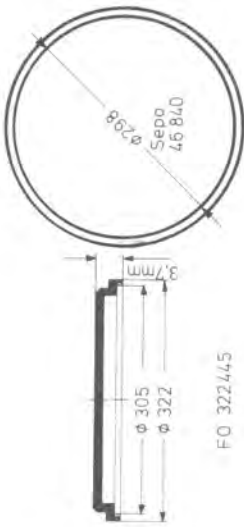
Dentro de un diámetro, los cristales se ordenan de acuerdo a la medida mayor de la forma

Invändig diameter ordnade efter största mått

FO

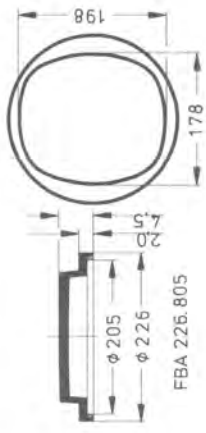


FO 303.444

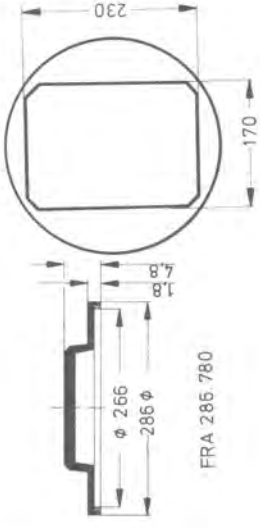


FO 322.445

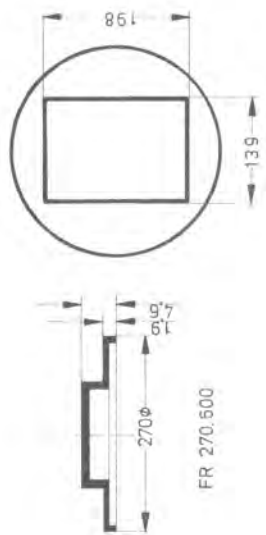
FR ↓



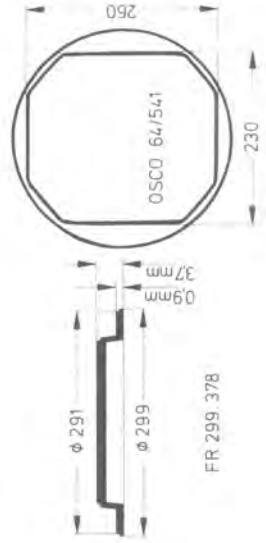
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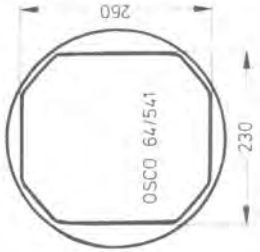
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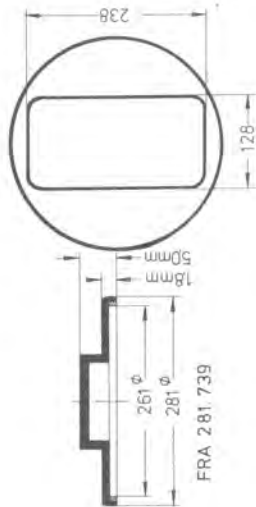
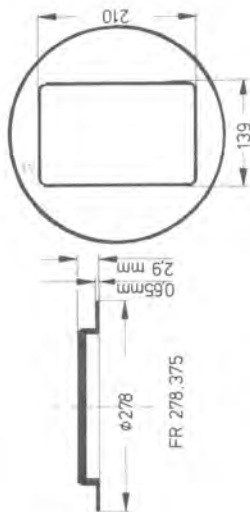
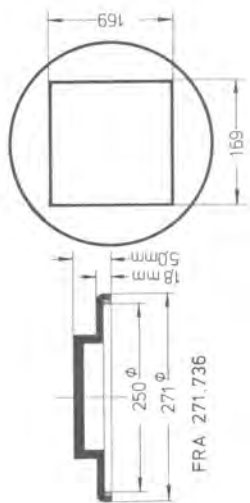
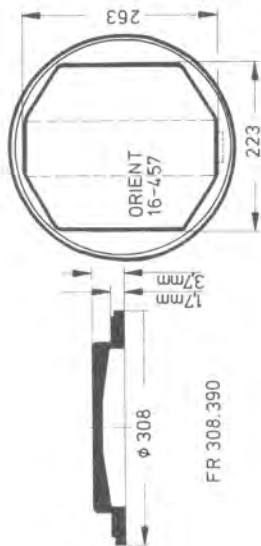
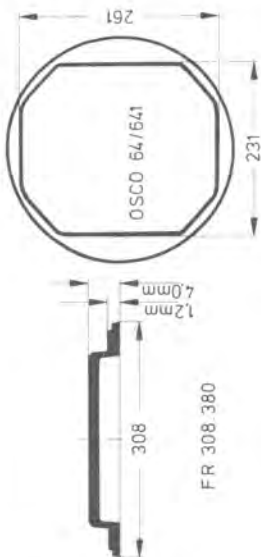
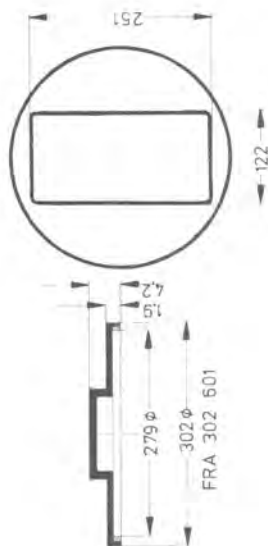
FR 270.500



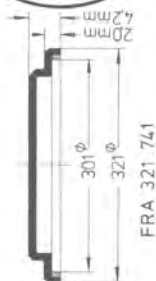
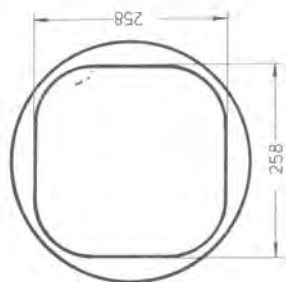
FR 299.378



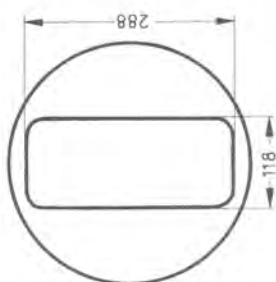
OSCO 64/15.41



A = with ring – avec bague – mit Ring – con arillo – med ring

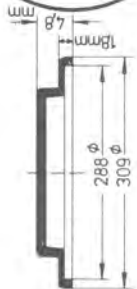
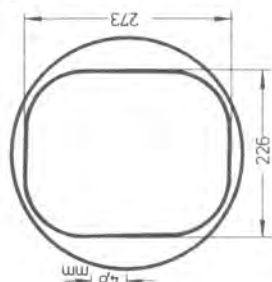


FRA 321.741

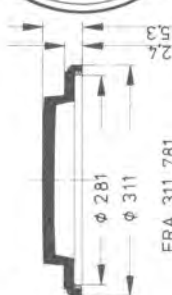
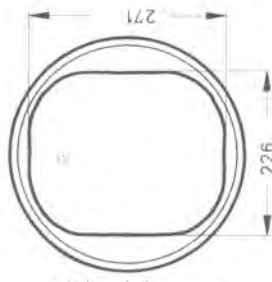


FRA 321.782

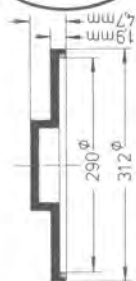
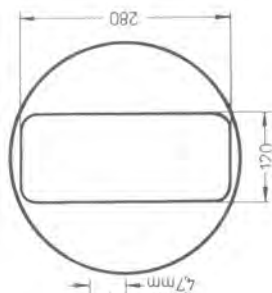
FR ↓



FTA 309.715



FRA 311.781

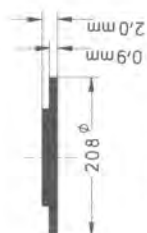
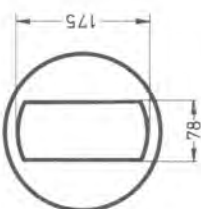


FRA 312.742

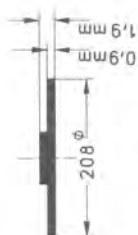
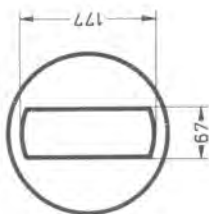


FT ↓

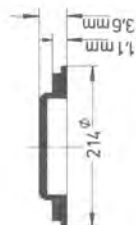
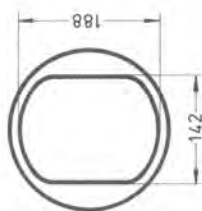
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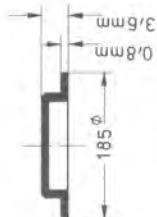
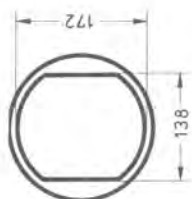
FT 208 945



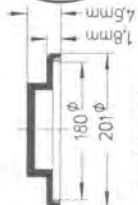
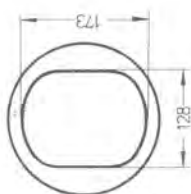
FT 208 941



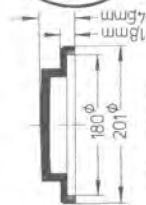
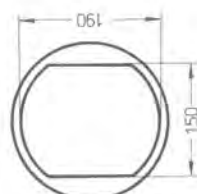
FT 214 757



FT 185 946

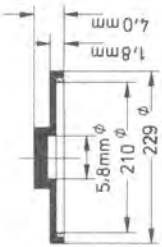
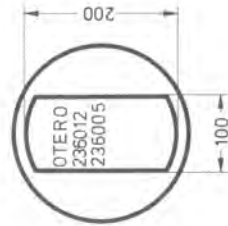
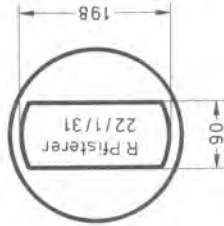
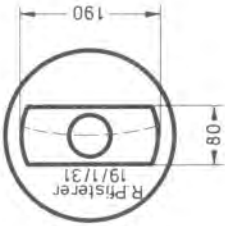


FTA 201.733

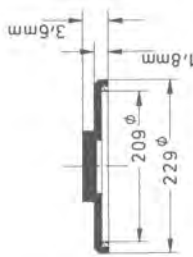


FTA 201.720

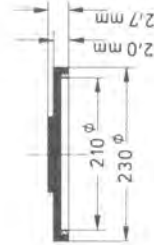
A = with ring – avec bague – mit Ring – con arillo – med ring



FTA 229.963

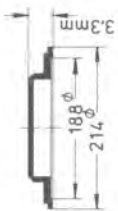
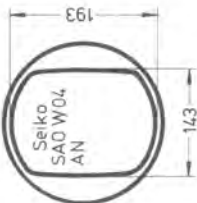


FTA 229.971

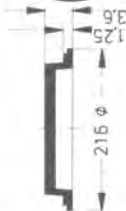
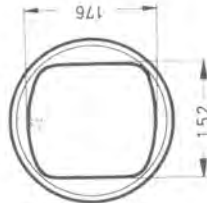


FTA 230.939

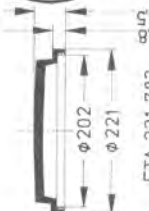
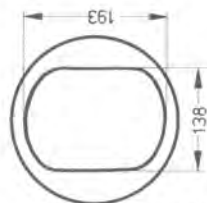
FT ↓



FB 214.302

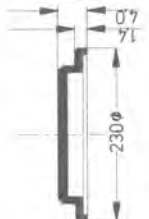
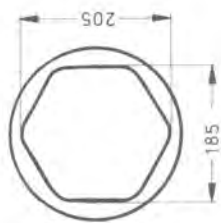


FT 216.414

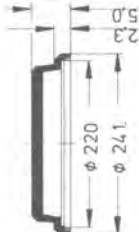
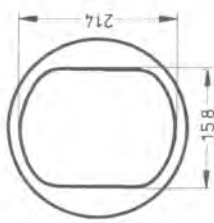


FTA 221.783

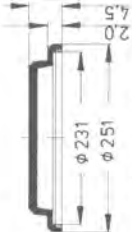
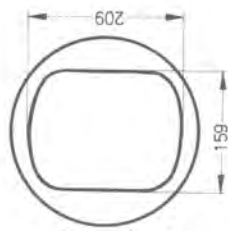
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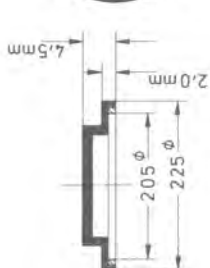
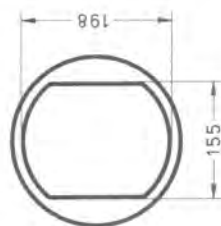
FT 230 403



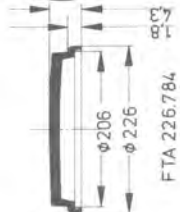
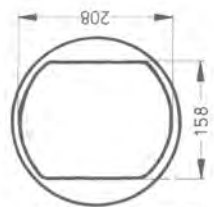
FTA 241 785



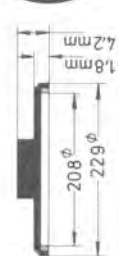
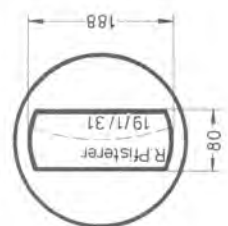
FTA 251 786



FTA 225 955

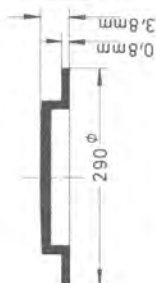
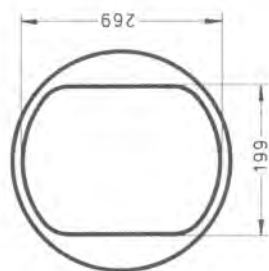


FTA 226 784

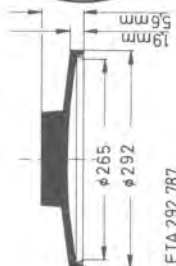
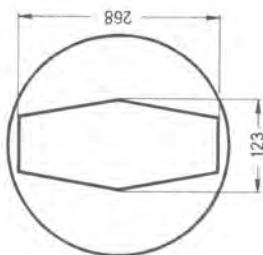


FTA 229 949

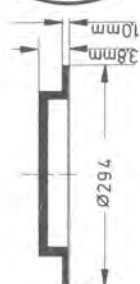
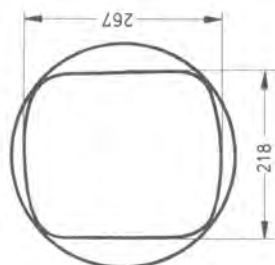
A = with ring – mit Ring – con anello – med ring
 = avec bague – mit Ring – con anello – med ring



FT 290.771

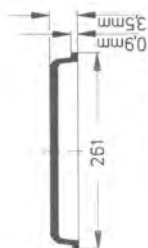
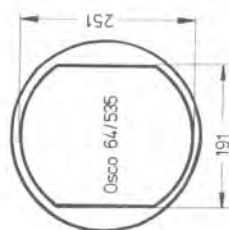


FTA 292.787

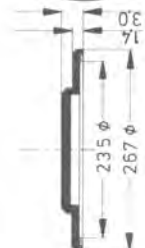
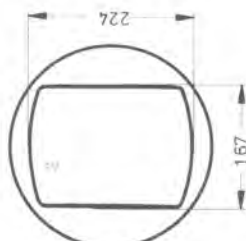


FT 294.341

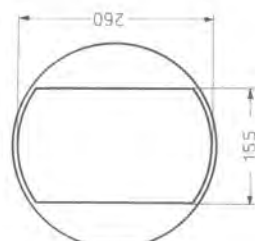
FT ↓



FT 261.376

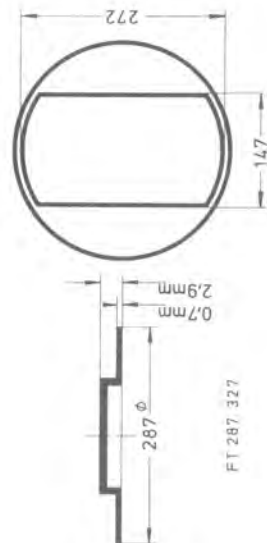
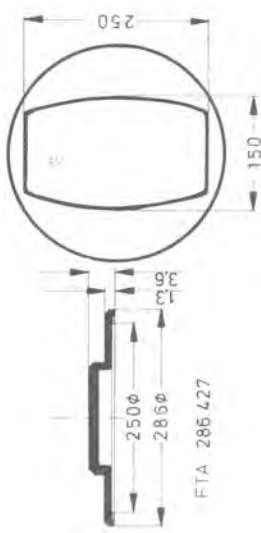
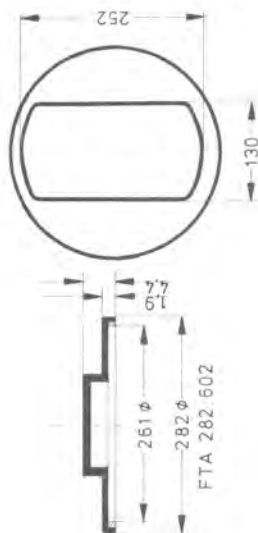
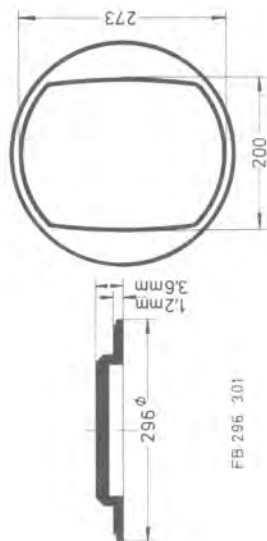
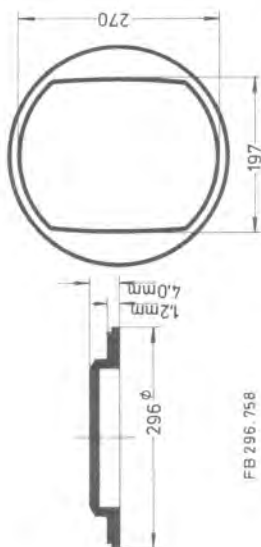
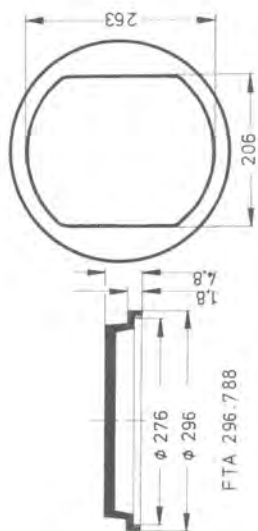


FTA 267.425

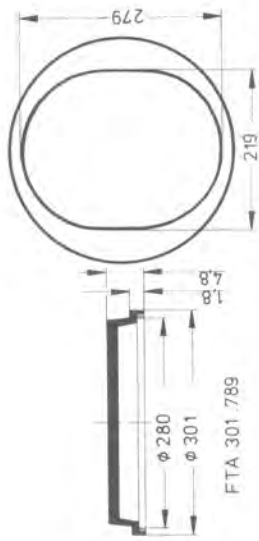
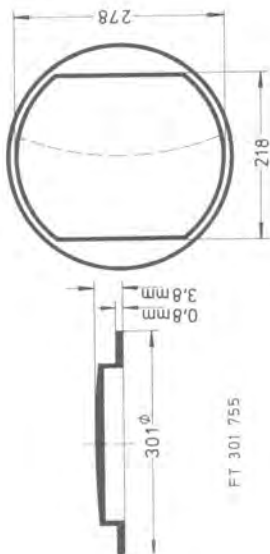
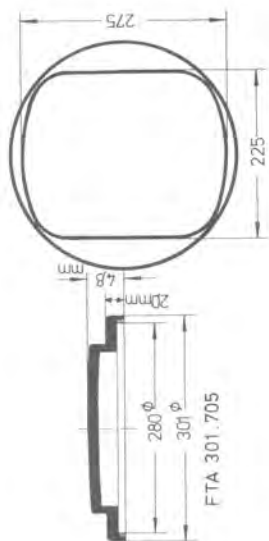


FT 271.433

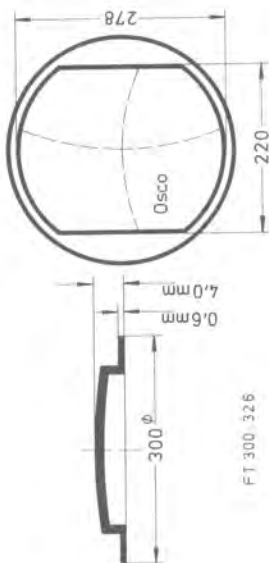
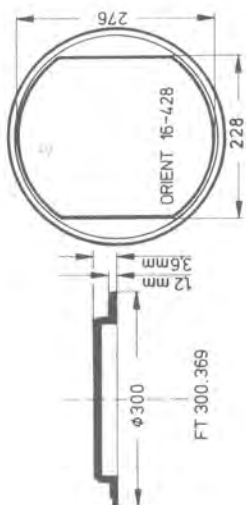
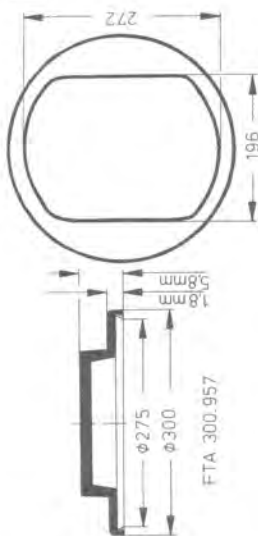
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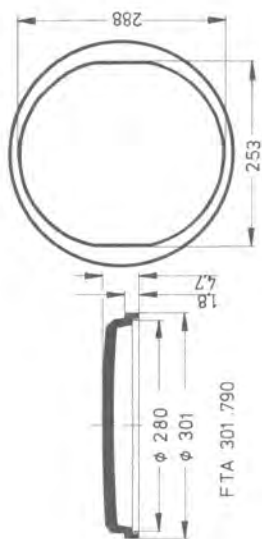
A = with ring – avec bague – mit Ring – con anillo – med ring



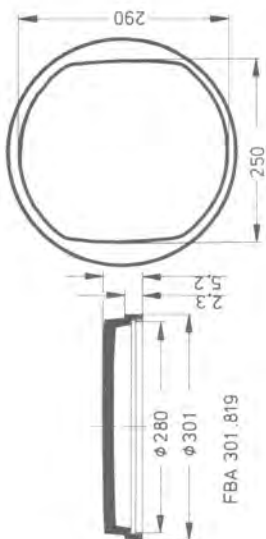
FT ↓



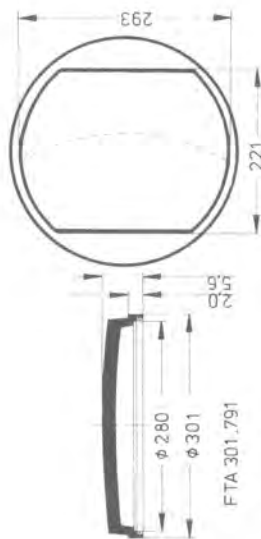
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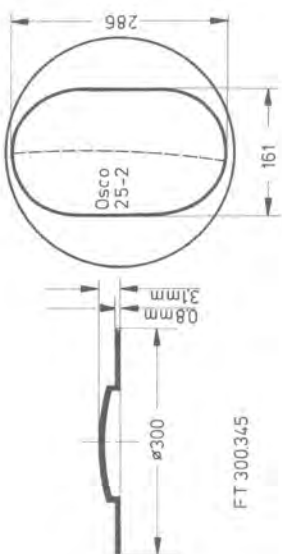
FTA 301.790



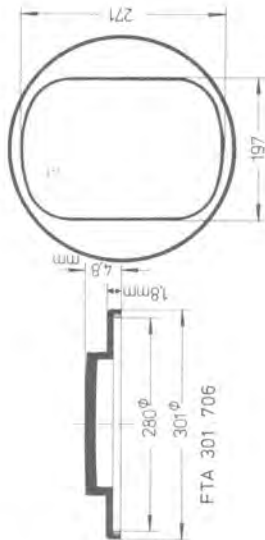
FBA 301.819



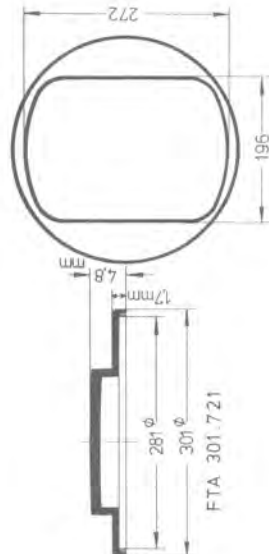
FTA 301.791



FT 300.345

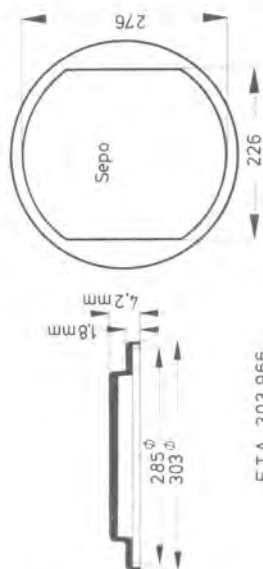


FTA 301.706

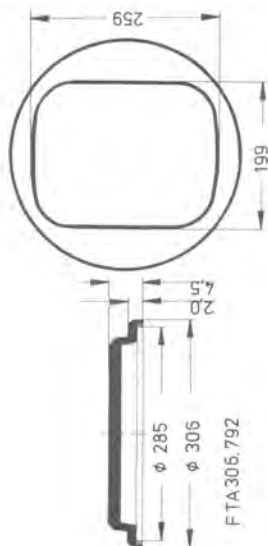


FTA 301.721

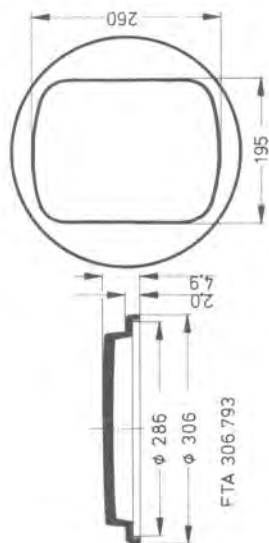
A = with ring – avec bague – mit Ring – con anillo – med ring



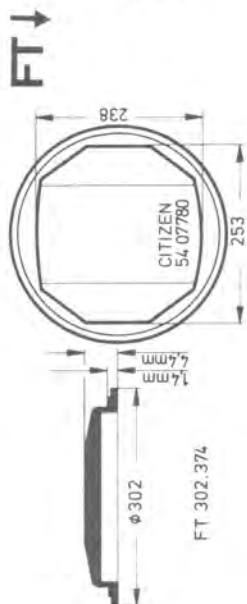
FTA 303.966



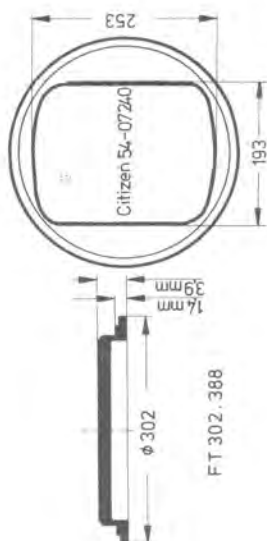
FTA 306.792



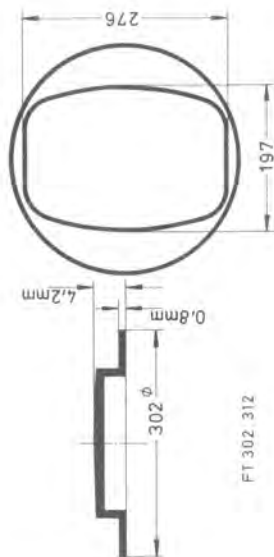
FTA 306.793



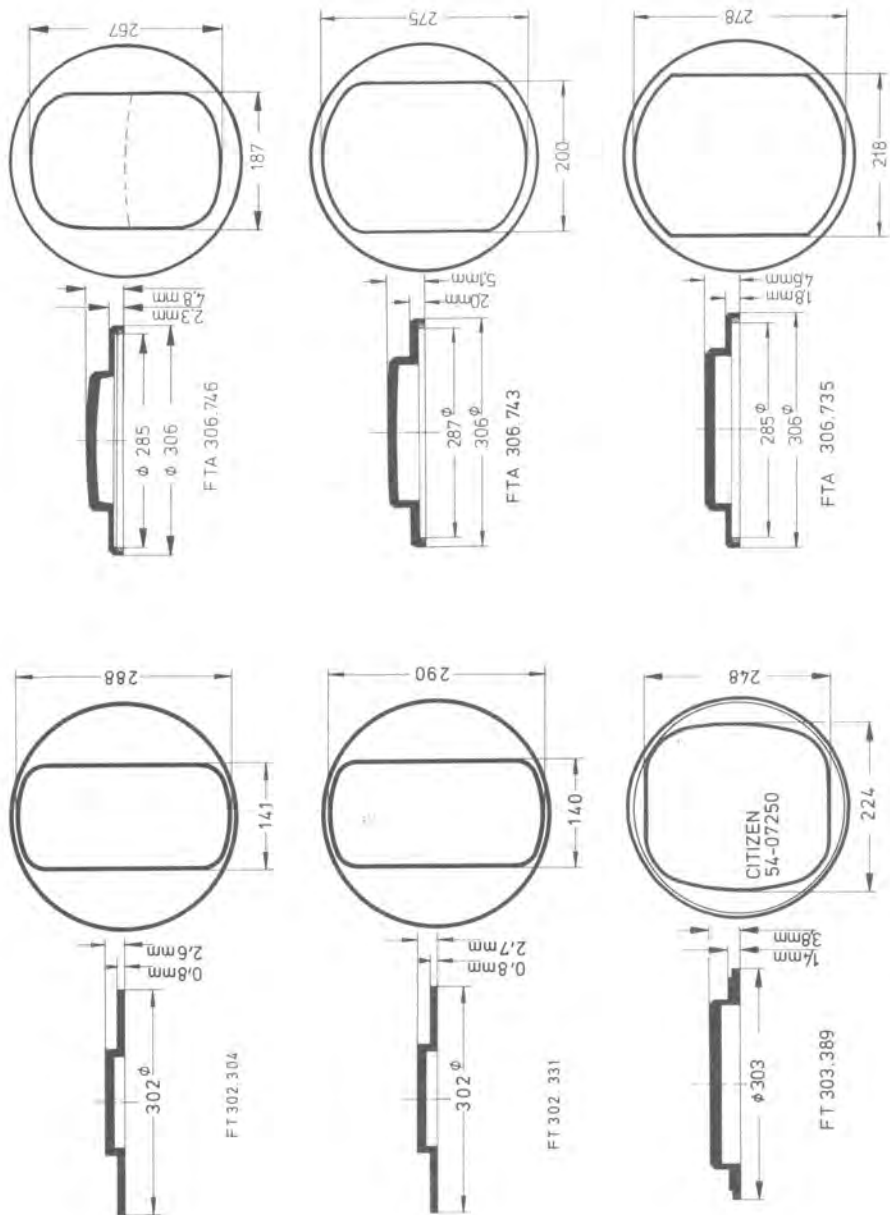
FT 302.374



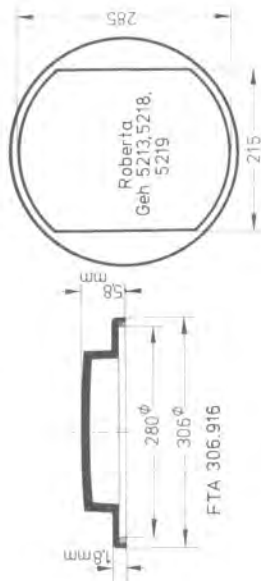
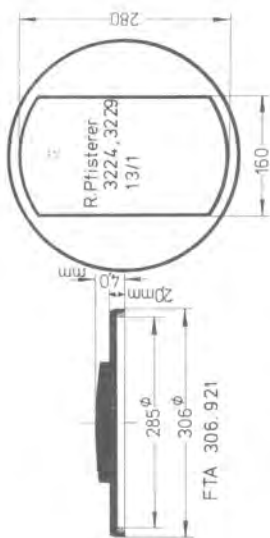
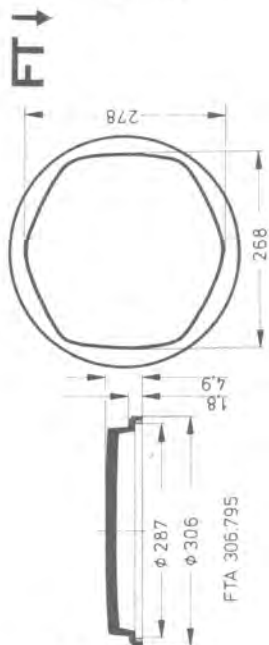
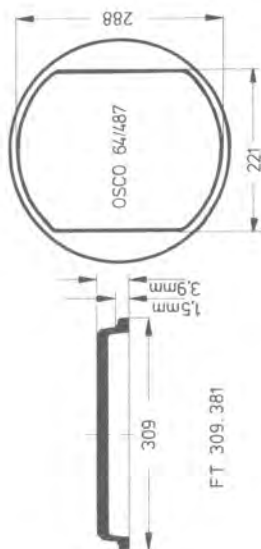
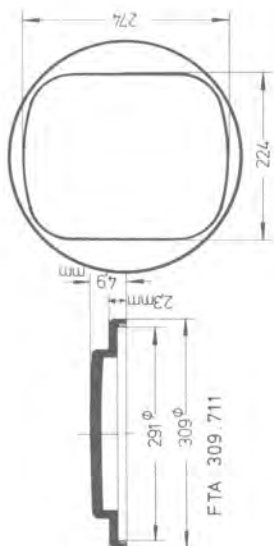
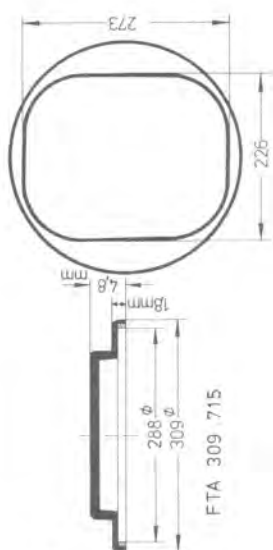
FT 302.388



FT 302.312

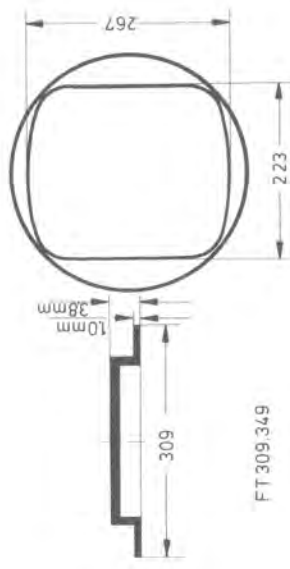
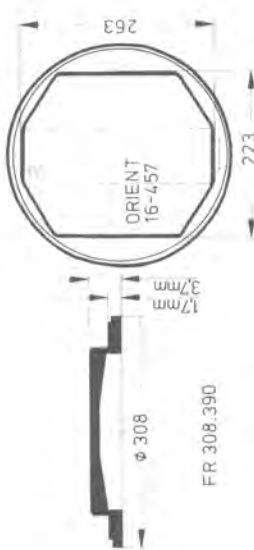
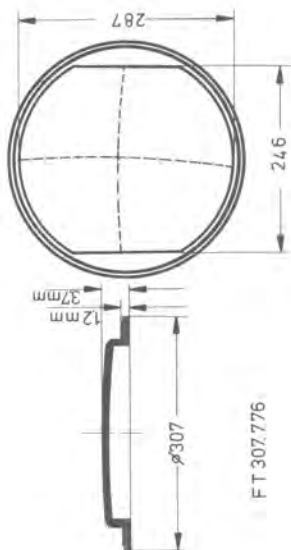
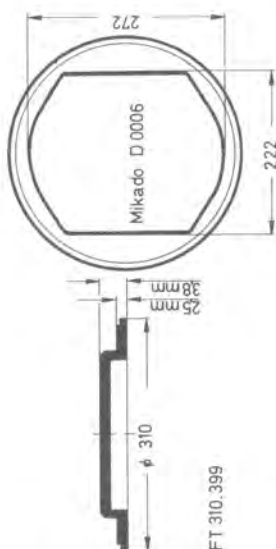
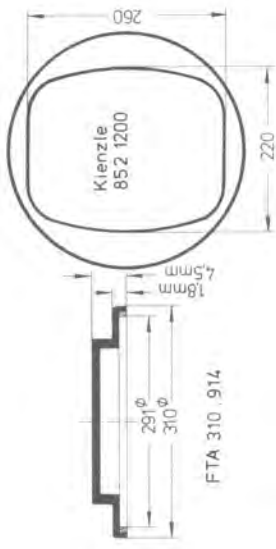
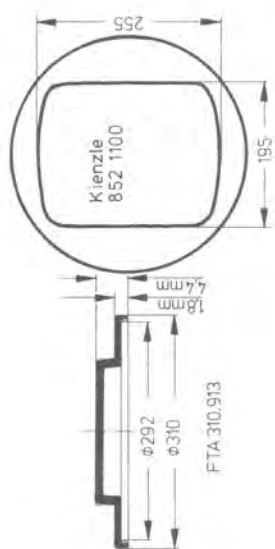


A = with ring – avec bague – mit Ring – con arillo – med ring

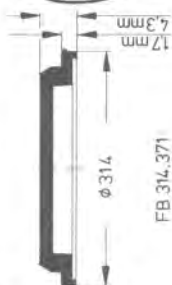
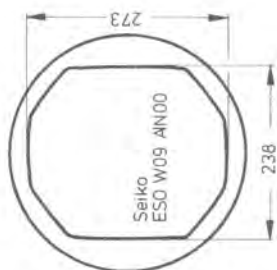


FT ↓

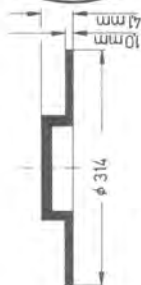
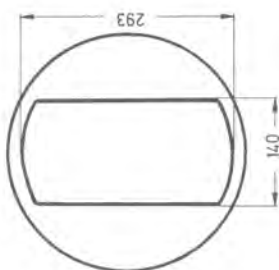




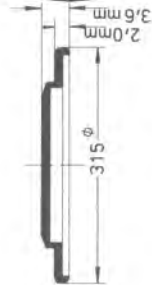
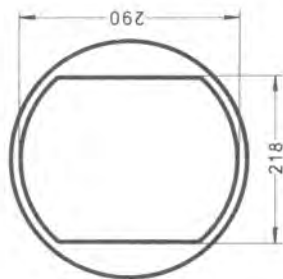
A = with ring – avec bague – mit Ring – con arillo – med ring



FB 314.371

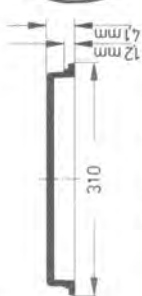
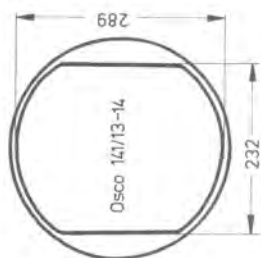


FT 314.338

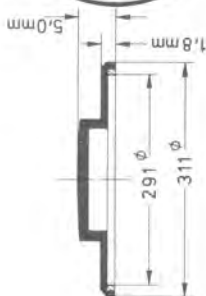
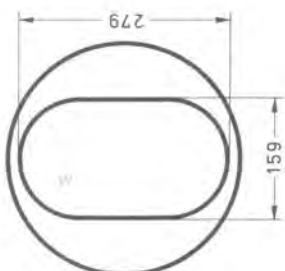


FT 315.334

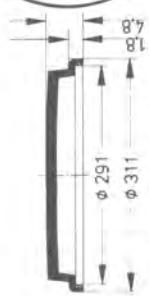
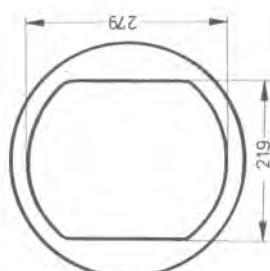
FT ↓



FT 310.382

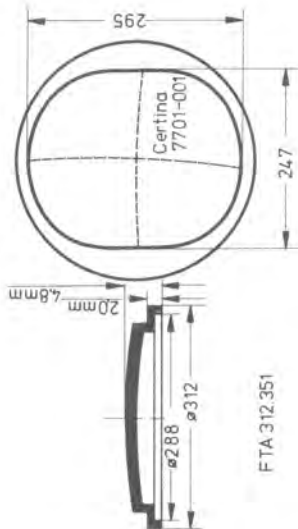
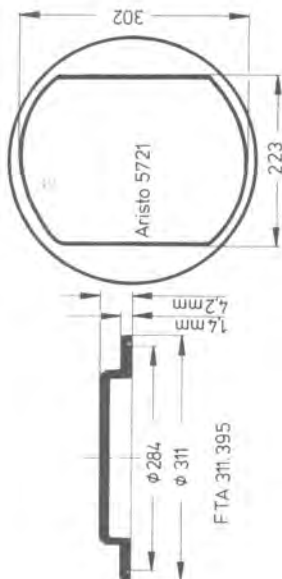
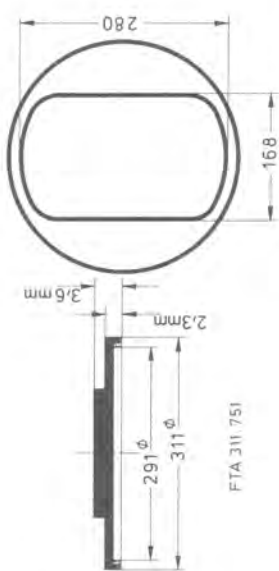
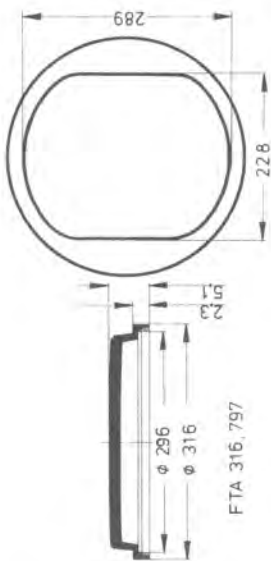
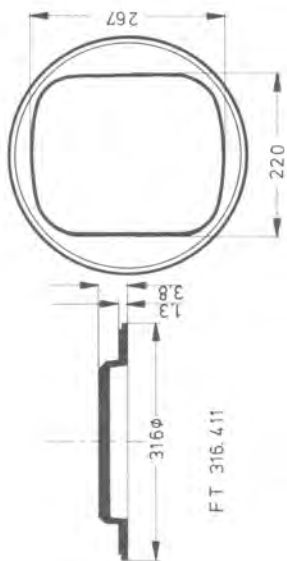
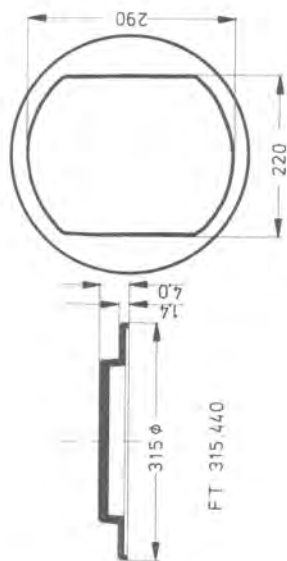


FTA 311.775

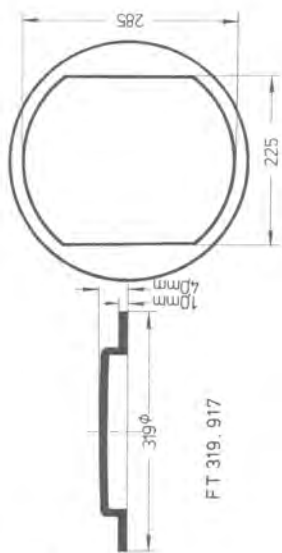


FTA 311.796

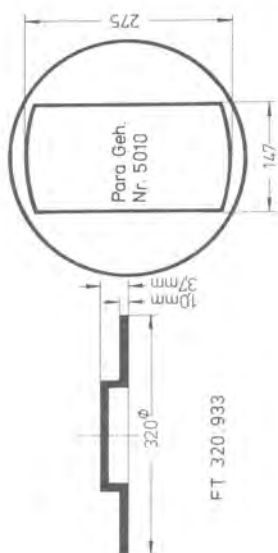
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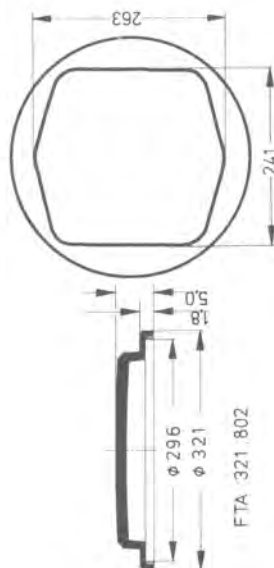
A = with ring – avec bague – mit Ring – con arillo – med ring



FT 319.917

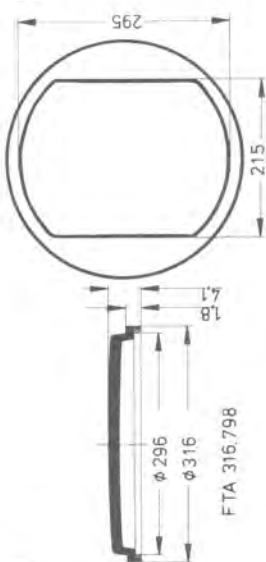


FT 320.933

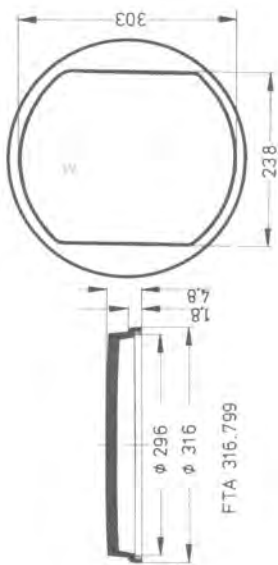


FTA 321.802

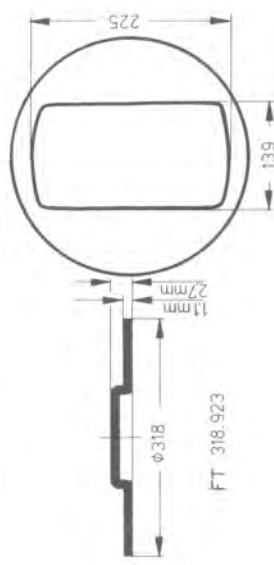
FT ↓



FTA 316.798

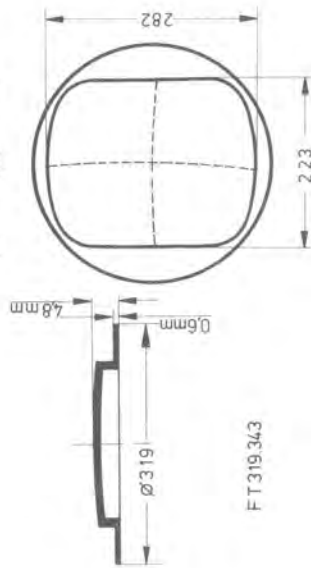
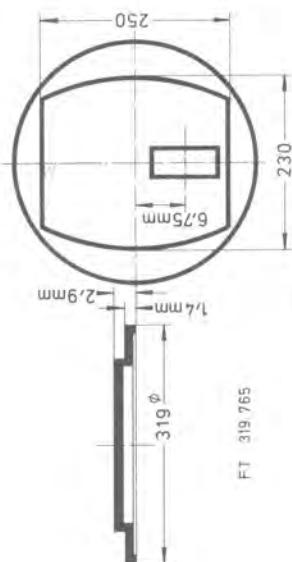
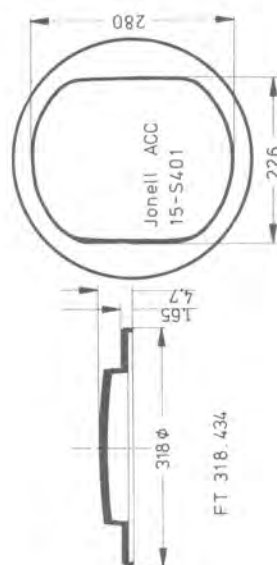
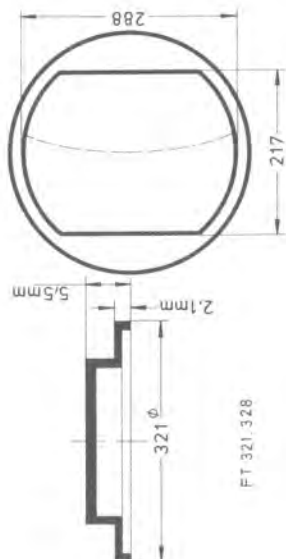
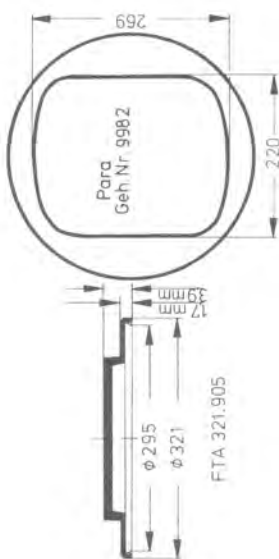
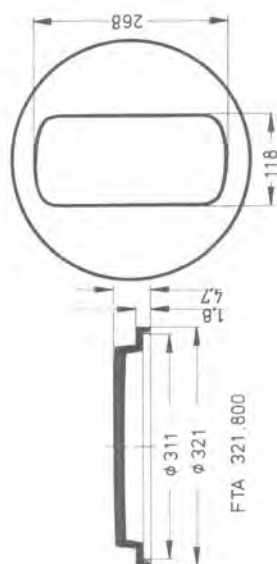


FTA 316.799

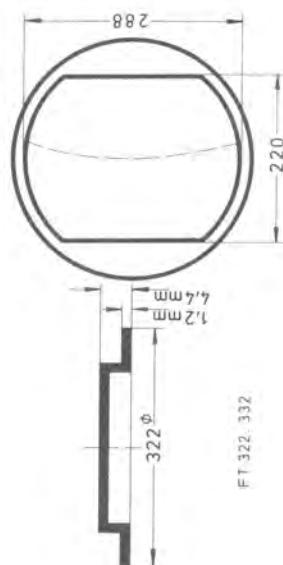
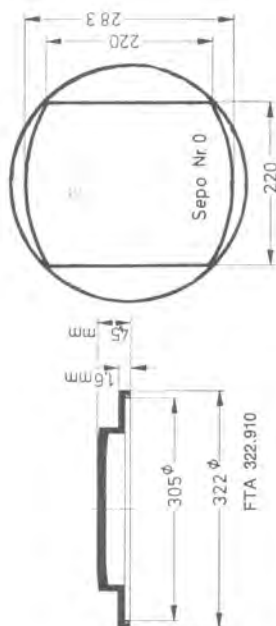
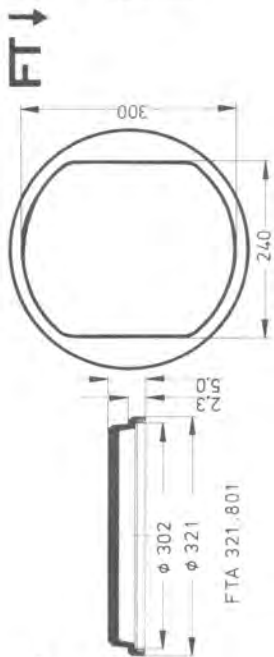
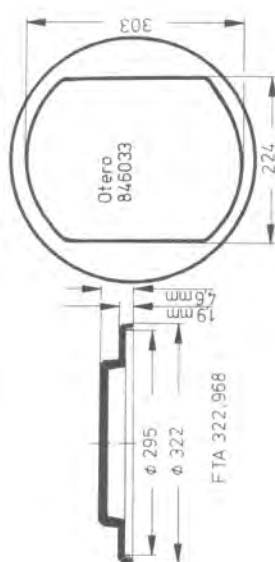
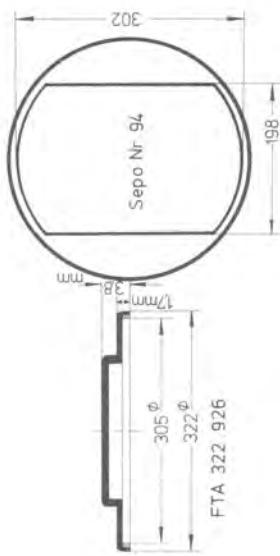
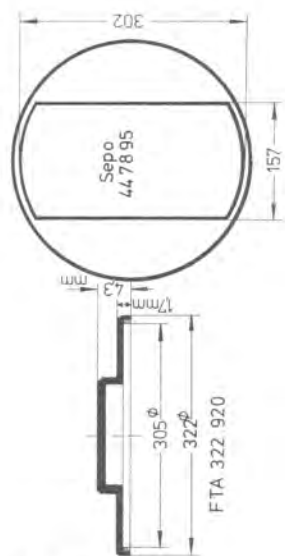


FT 318.923

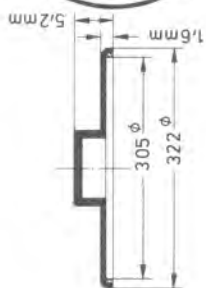
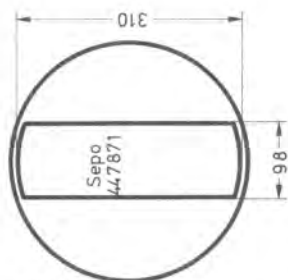
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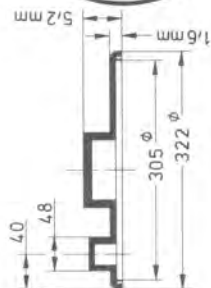
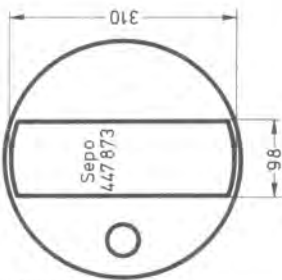
A = with ring – avec bague – mit Ring – con arillo – med ring



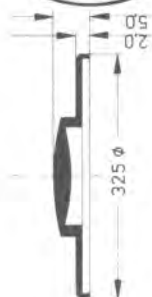
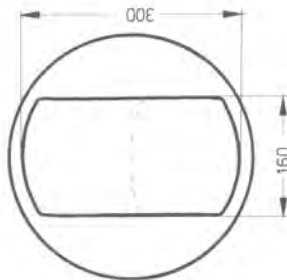
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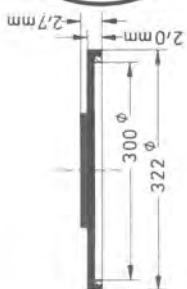
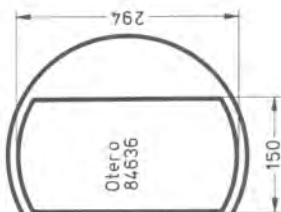
FTA 322.952



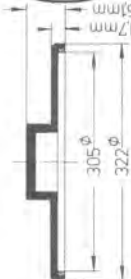
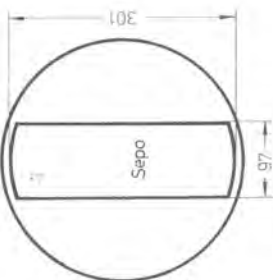
FTA 322.956



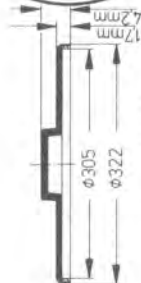
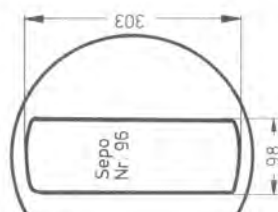
FT 325.419



FTA 322.940

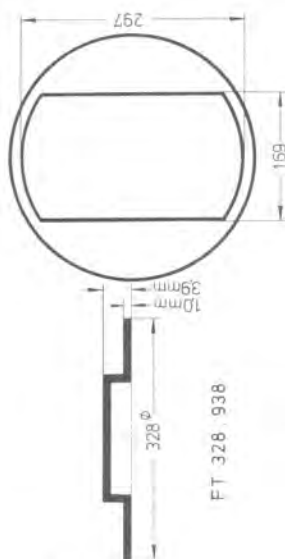


FTA 322.929

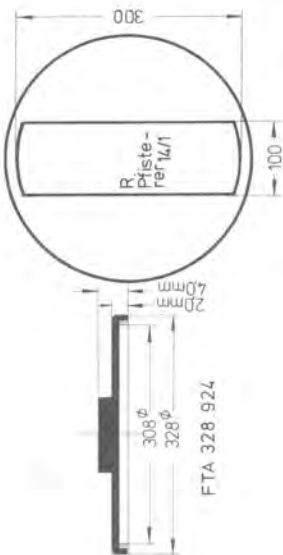


FTA 322.928

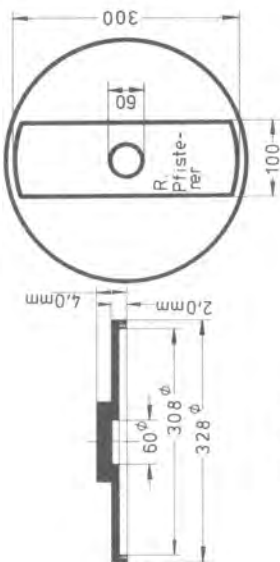
A = with ring – avec bague – mit Ring – con arillo – med ring



FT 328 938

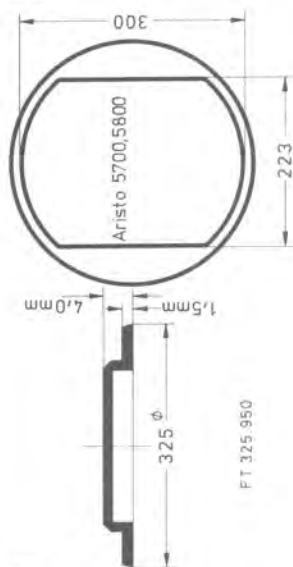


FTA 328 924

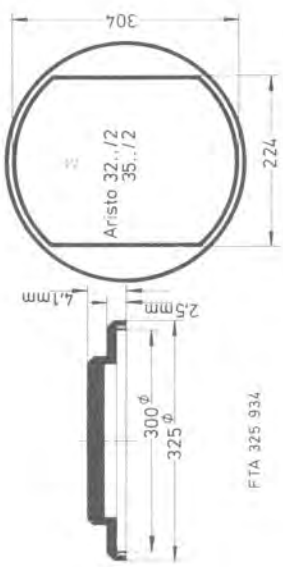


FTA 328 962

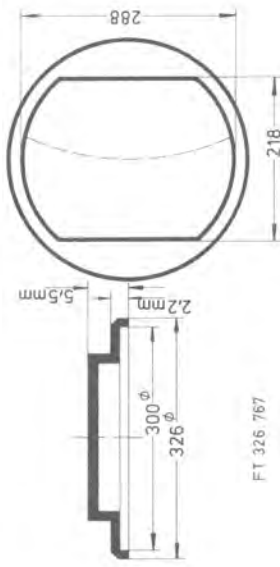
FT ↓



FT 325 950

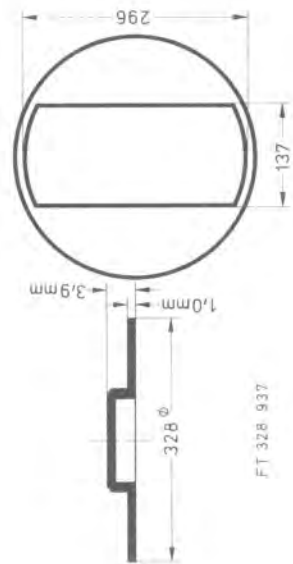
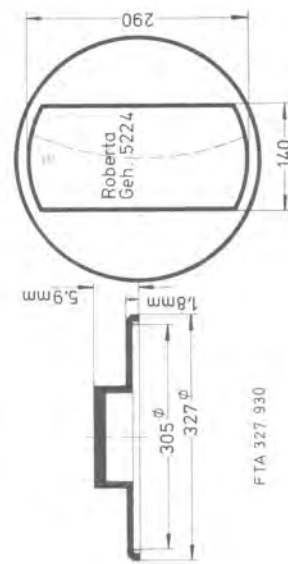
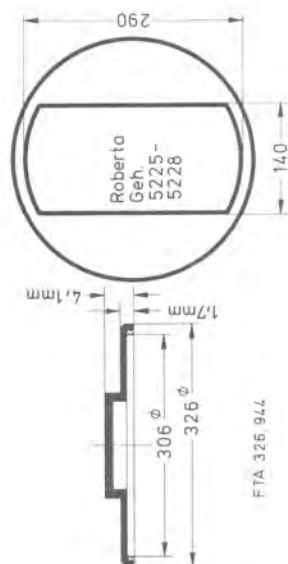
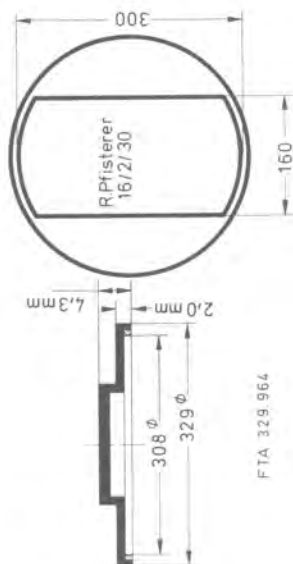
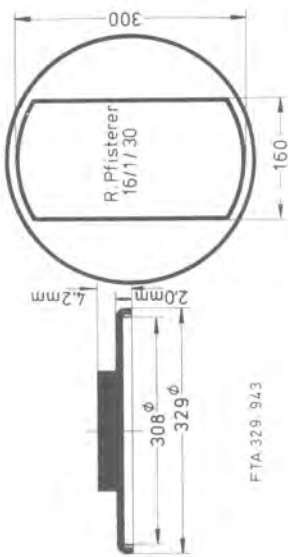
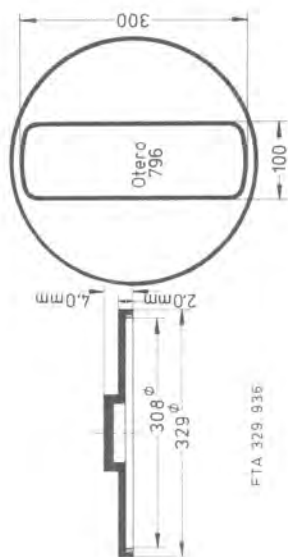


FTA 325 934

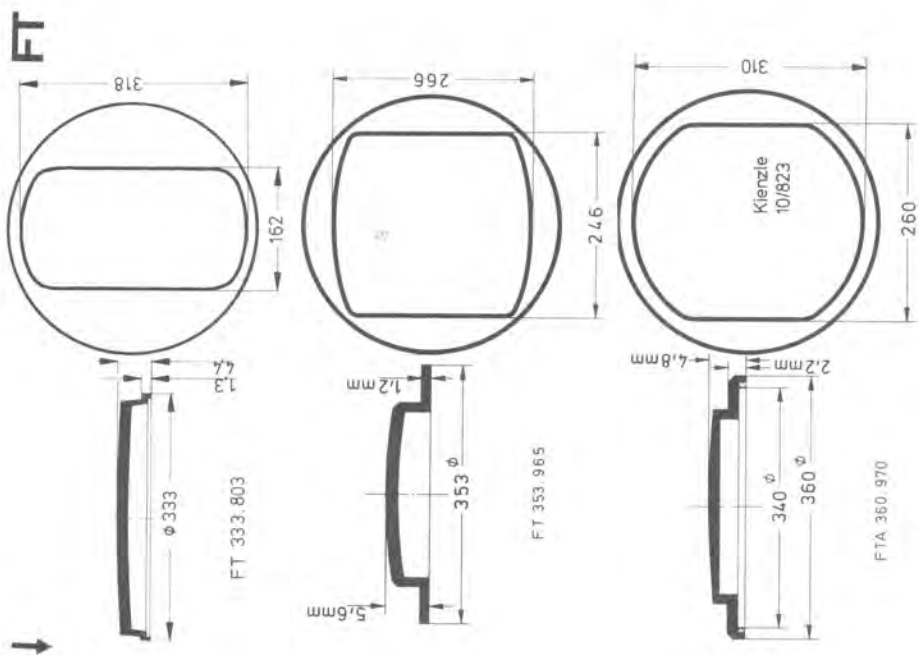


FT 326 767

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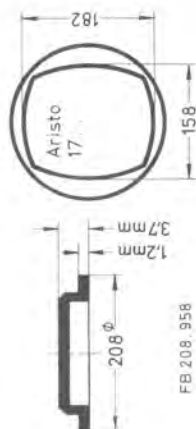
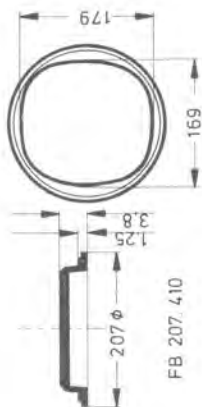
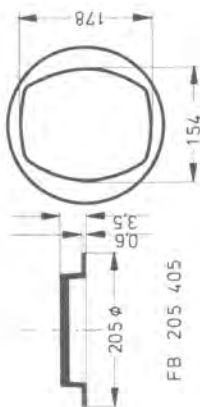
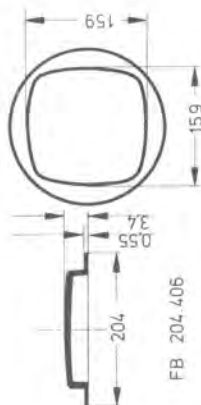
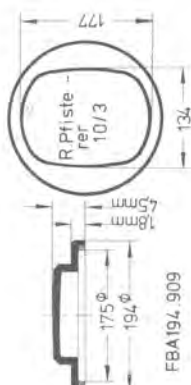
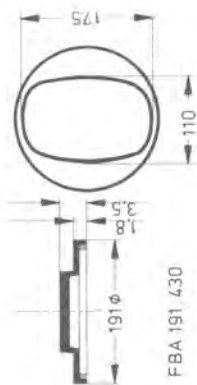


A = with ring – avec bague – mit Ring – con arillo – med ring

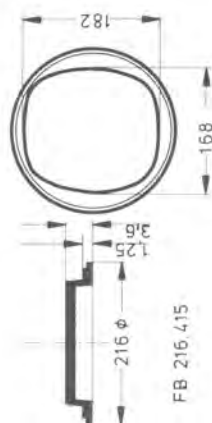


Some forms of glasses, which are to classify with difficulties, are illustrated twice, but always under one designation.
 Quelques formes de verres, qui sont difficilement à classer, ont été représentées deux fois, mais toujours sous la même désignation.
 Einige Glasformen, die schwer einzuordnen sind, wurden zweimal abgebildet, aber immer nur mit einer Bezeichnung.
 Algunas de las formas de cristales difíciles a clasificar fueron representadas dos veces, pero siempre con una sola designación.
 Vissa glas är svåra att formbestämna, varför de kan avbildas på olika ställen, men har alltid samma beteckning.

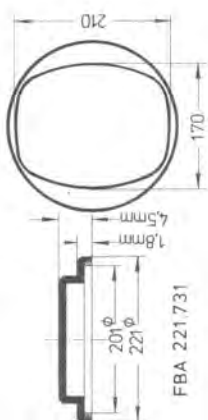
FB ↓



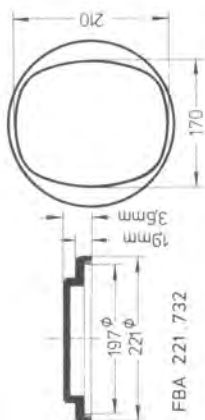
A = with ring – avec bague – mit Ring – con arillo – med ring



FB 216.415

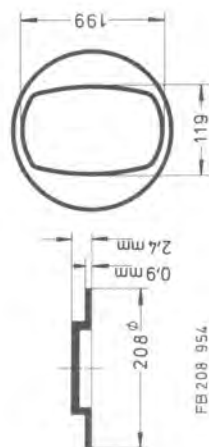


FBA 221.731

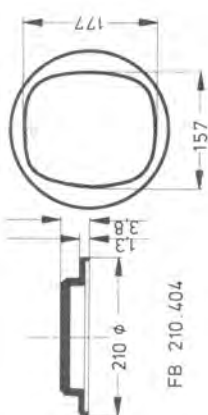


FBA 221.732

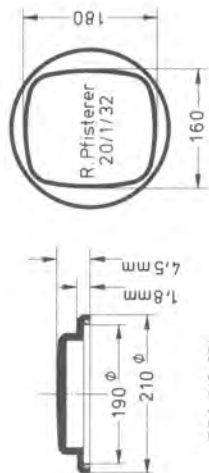
FB ↓



FB 208.954

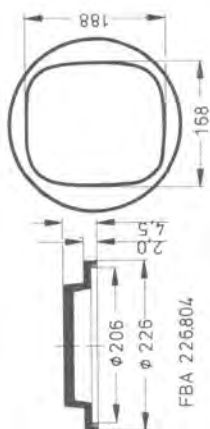


FB 210.404

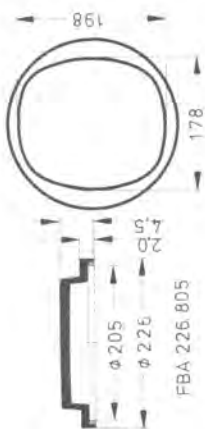


FBA 210.951

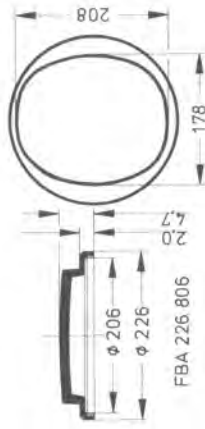
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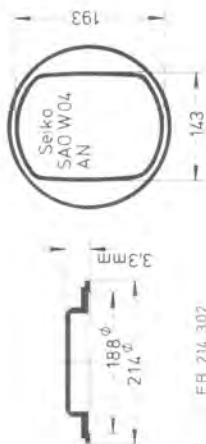
FBA 226.804



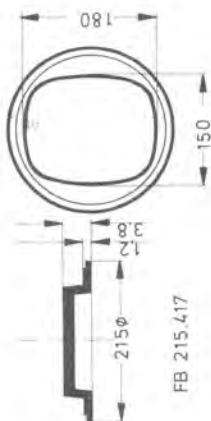
FBA 226.805



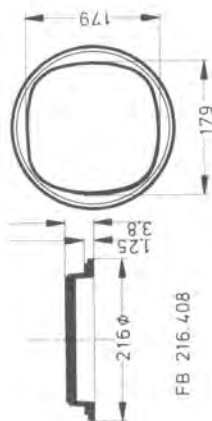
FBA 226.806



FB 214.302

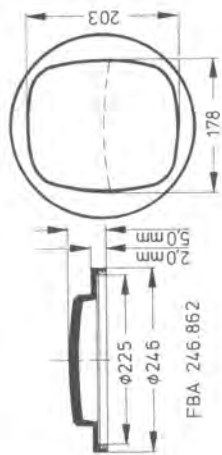
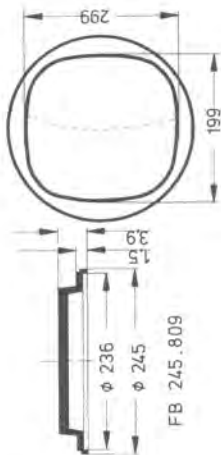
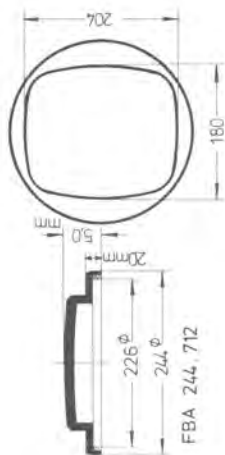


FB 215.417

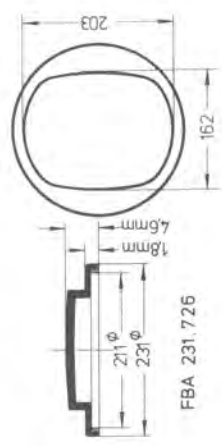
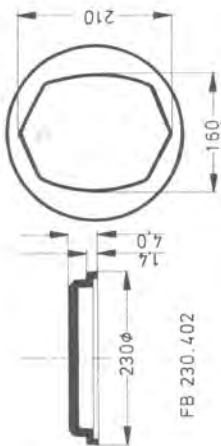
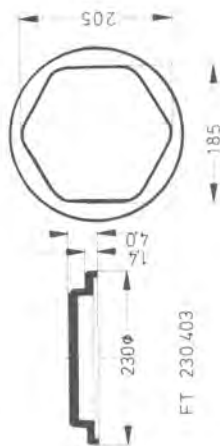


FB 216.408

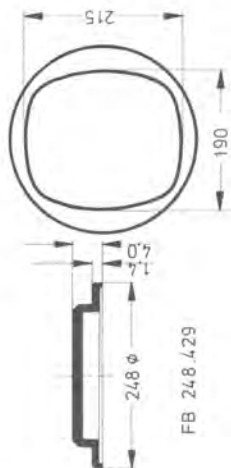
A = with ring – avec bague – mit Ring – con arillo – med ring



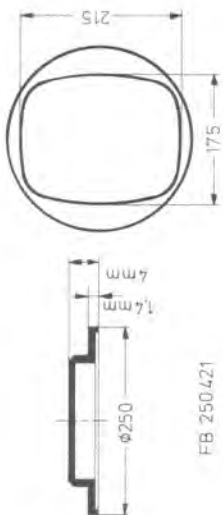
FB ↓



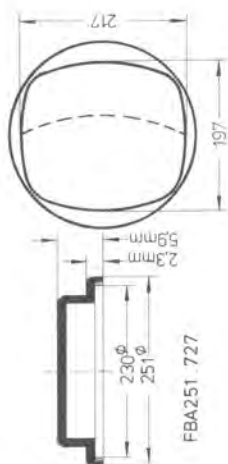
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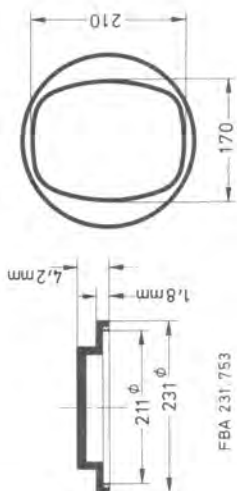
FB 248.429



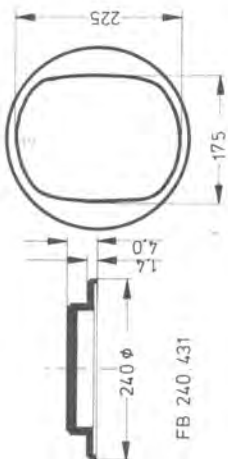
FB 250.421



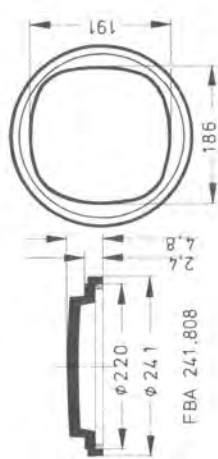
FBA251.727



FBA 231.753

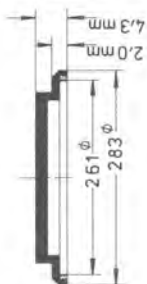
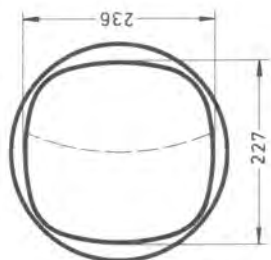


FB 240.431

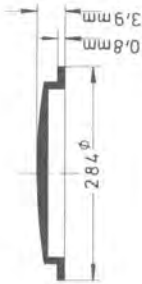
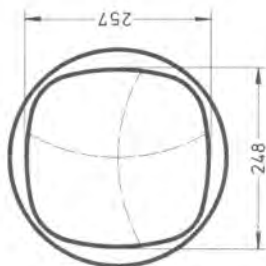


FBA 241.808

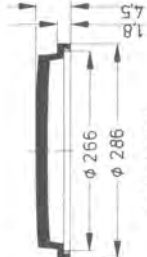
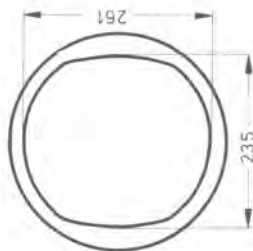
A = with ring – avec bague – mit Ring – con arillo – med ring



FBA 283.307

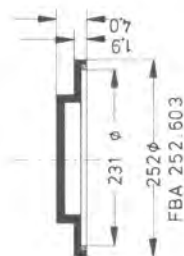
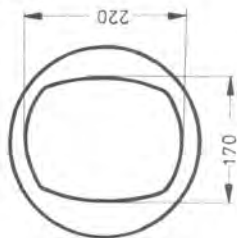


FB 284.309

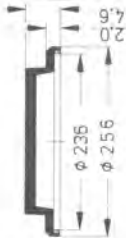
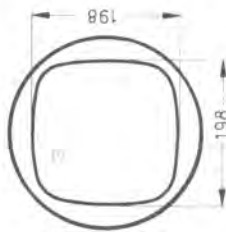


FBA 286.812

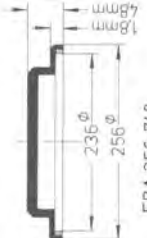
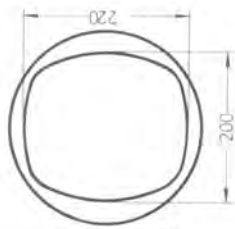
FB ↓



FBA 252.603

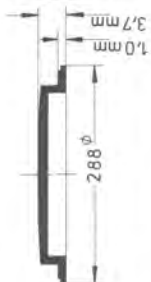
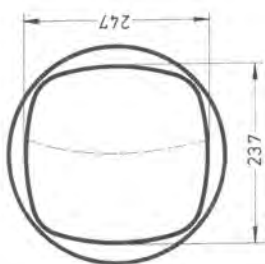


FBA 256.810

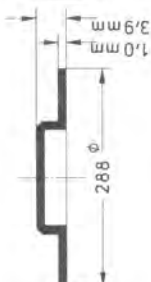
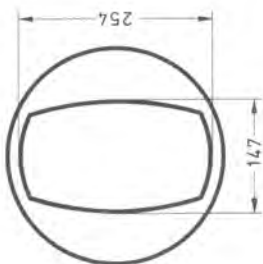


FBA 256.748

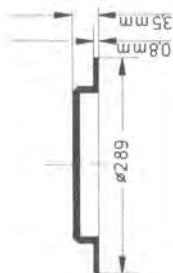
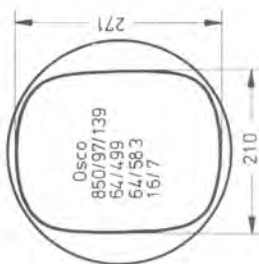




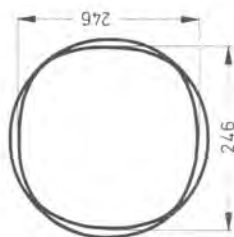
FB 288.305



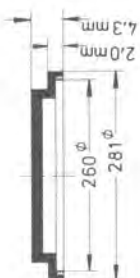
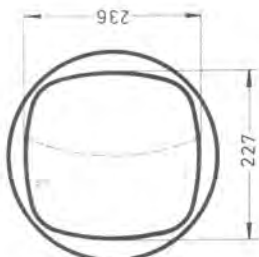
FB 288.953



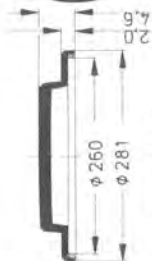
FB 289.346



FB 270.391

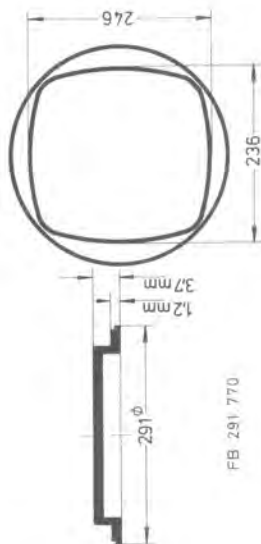
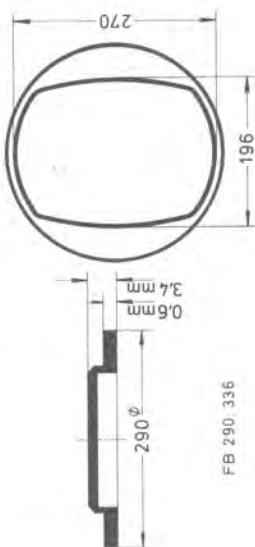
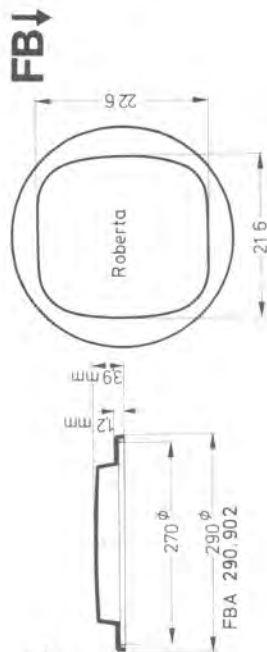
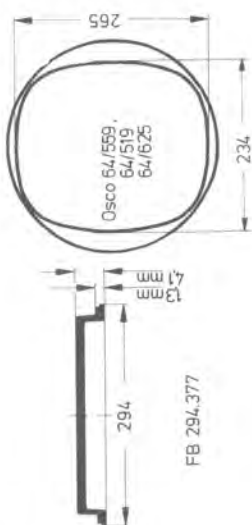
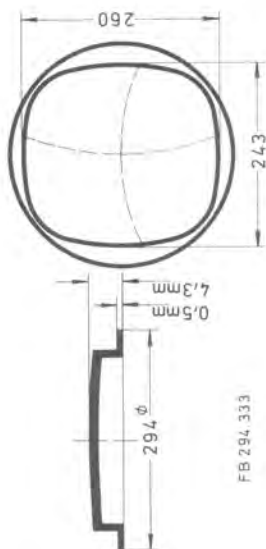
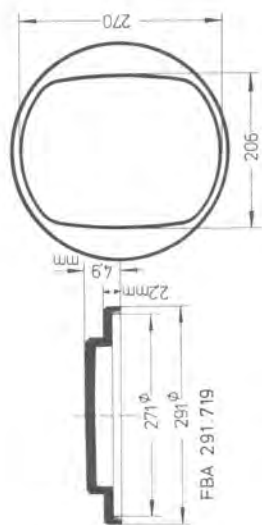


FBA 281.762



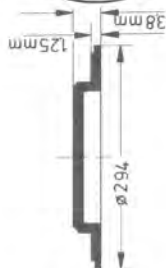
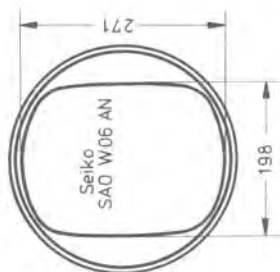
FBA 281.811

A = with ring – avec bague – mit Ring – con arillo – med ring

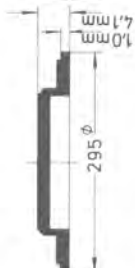
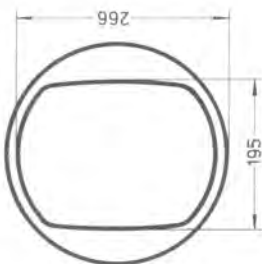


FB ↓

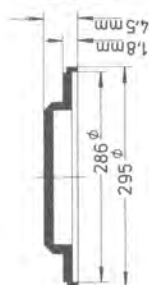
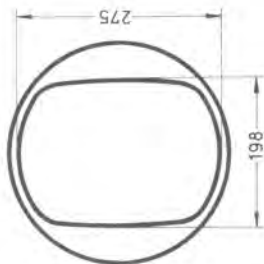




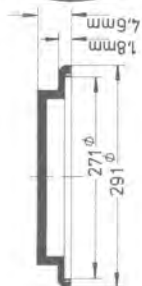
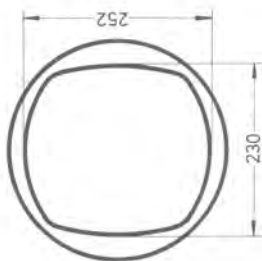
FB 294.350



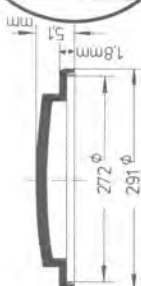
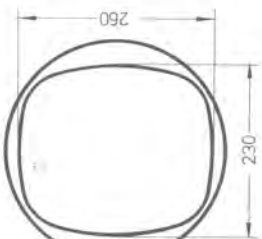
FB 295.335



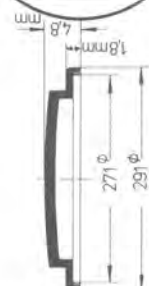
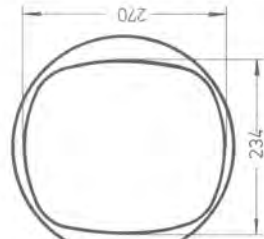
FB 295.761



FBA 291.749

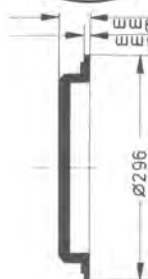
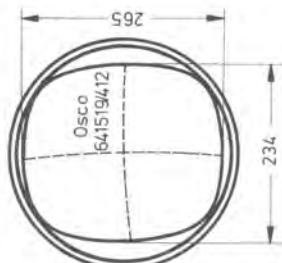
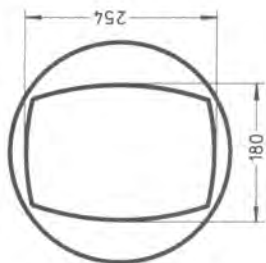
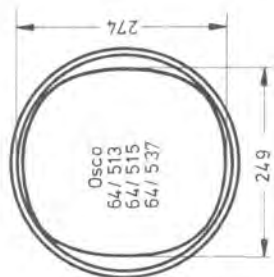


FBA 291.703



FBA 291.714

A = with ring – avec bague – mit Ring – con arillo – med ring

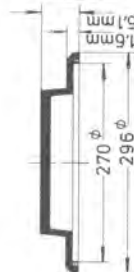
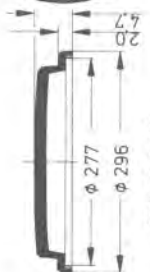
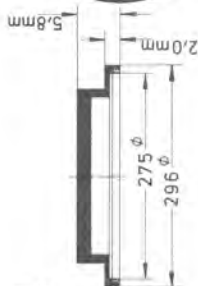
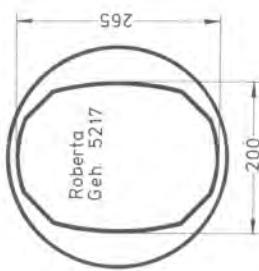
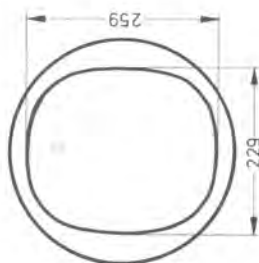
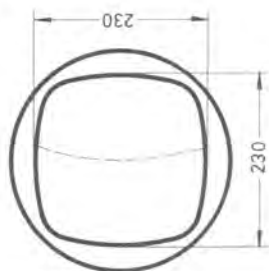


FB 296.342

FB 297.310

FB 298.344

FB ↓

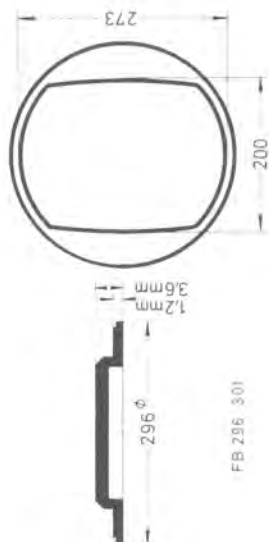
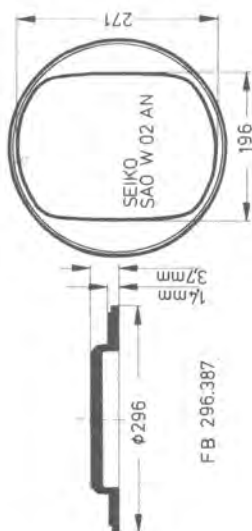
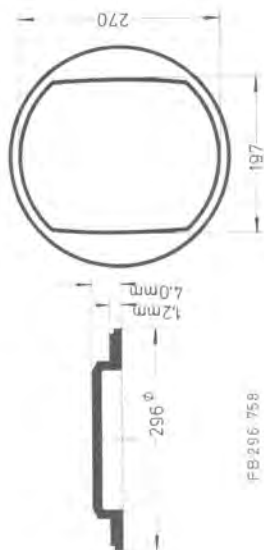
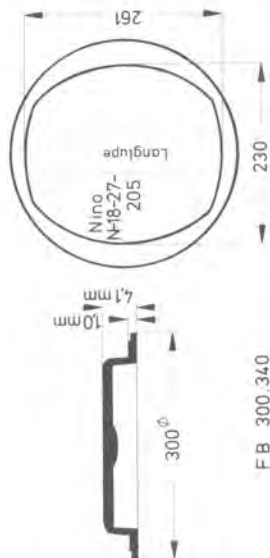
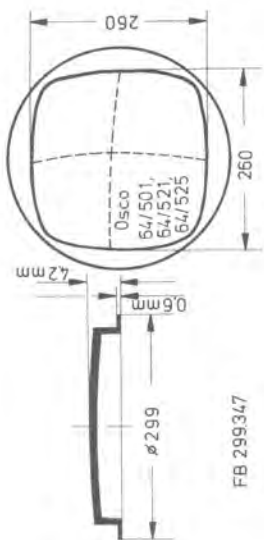
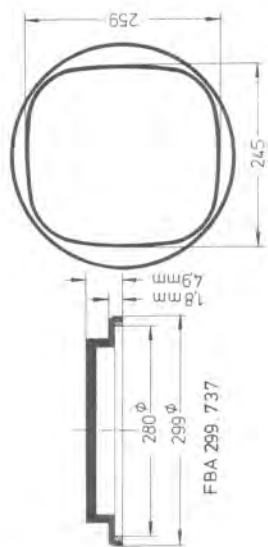


FBA 296.773

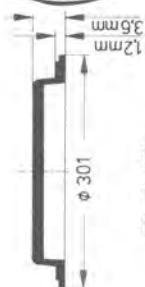
FBA 296.813

FBA 296.903

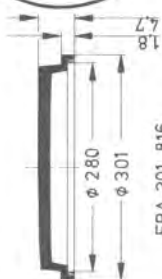
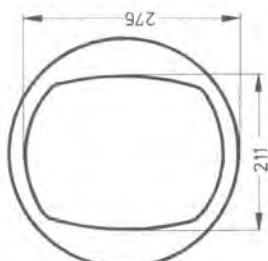




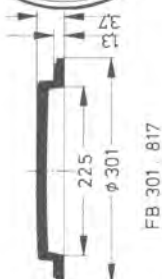
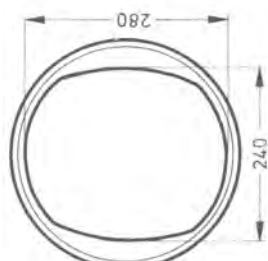
A = with ring – avec bague – mit Ring – con arillo – med ring



FB 301.379

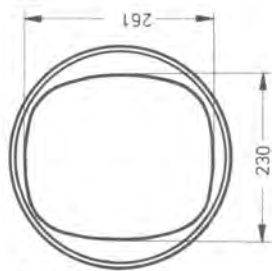


FBA 301.816

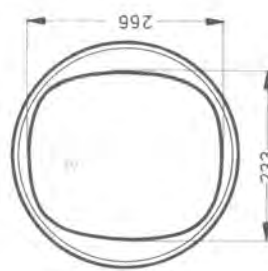


FB 301.817

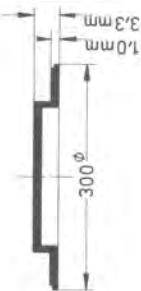
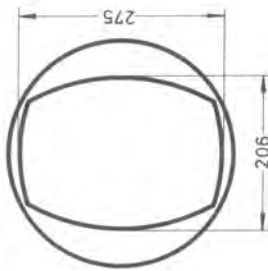
FB ↓



FB 300.777

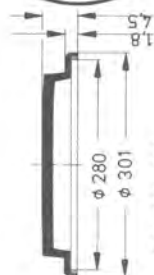
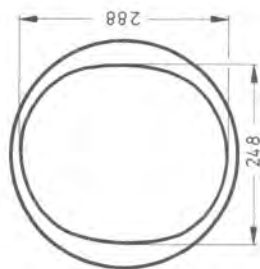


FB 300.416

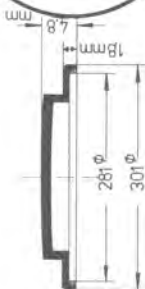
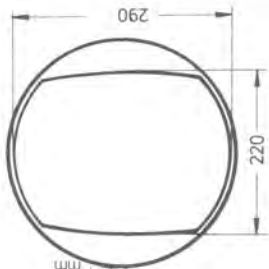


FB 300.311

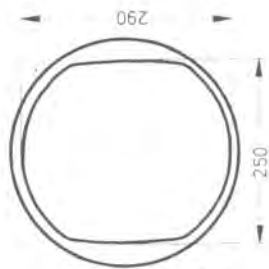
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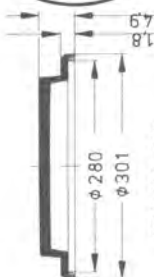
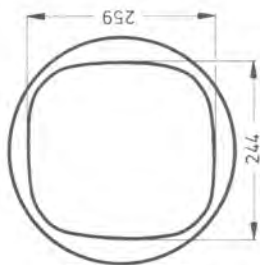
FBA 301.818



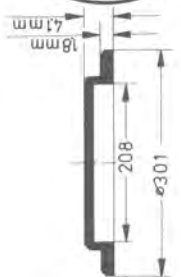
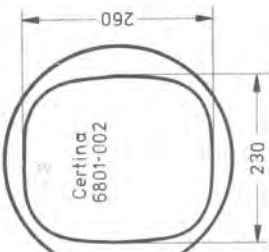
FBA 301.713



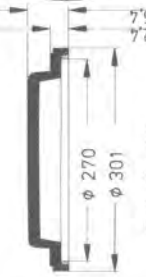
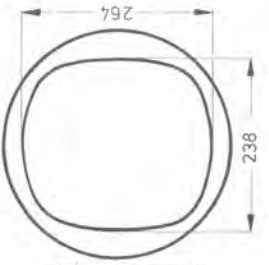
FBA 301.819



FBA 301.814

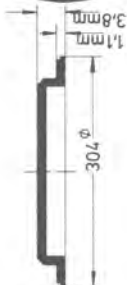
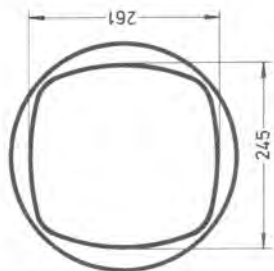


FB 301.355

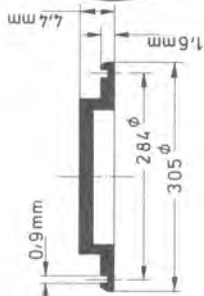
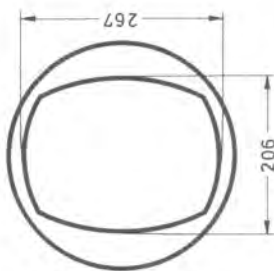


FBA 301.815

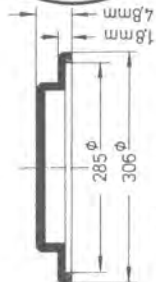
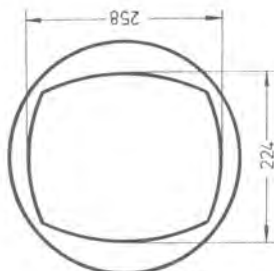
A = with ring – avec bague – mit Ring – con arillo – med ring



FB 304,760

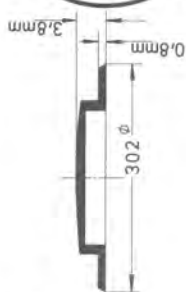
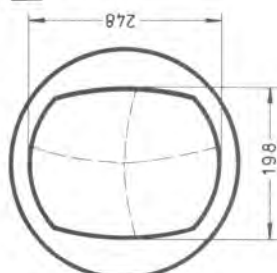


FB 305,337

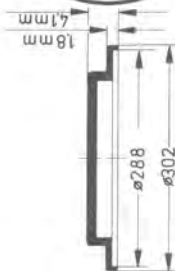
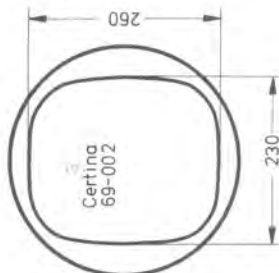


FBA 306,745

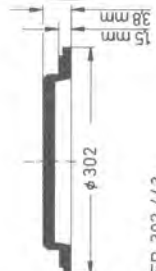
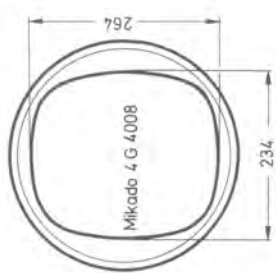
FB ↓



FB 302,318

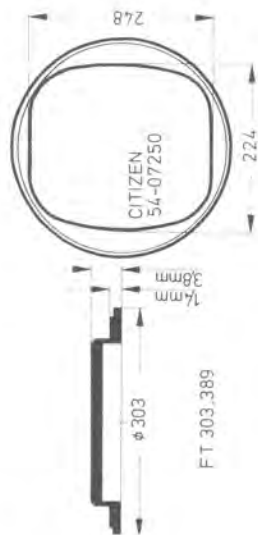
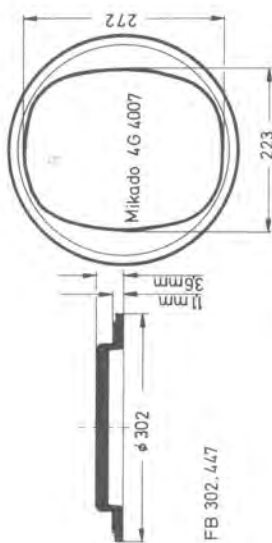
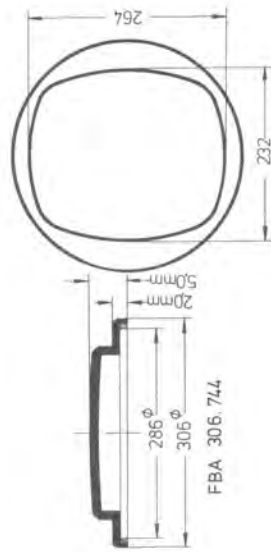
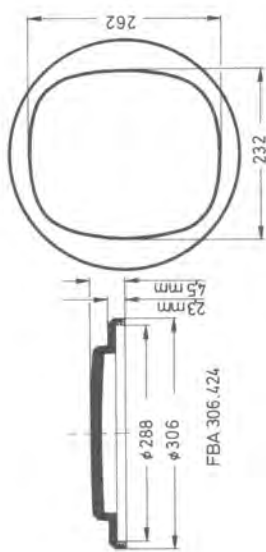
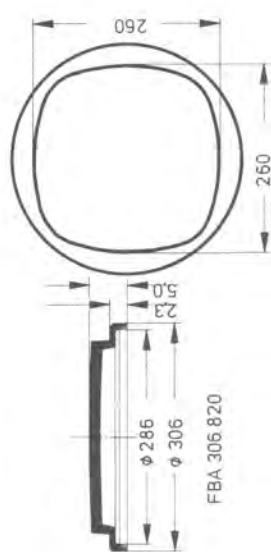


FB 302,354



FB 302,443





FBA 306.820

FBA 306.424

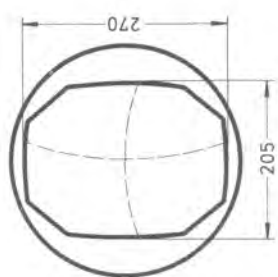
FBA 306.744

FB 302.764

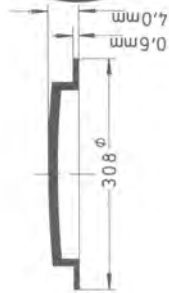
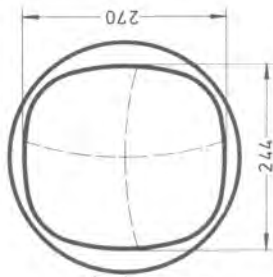
FB 302.447

FT 303.389

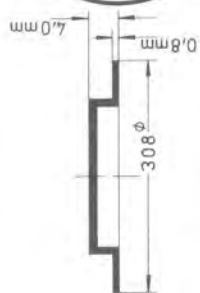
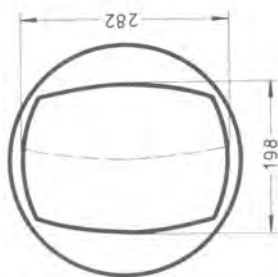
A = with ring – avec bague – mit Ring – con arillo – med ring



FB 307.329

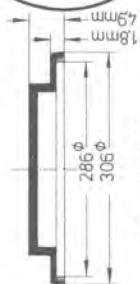


FB 308.325

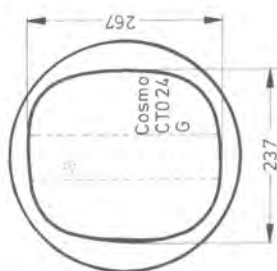


FB 308.320

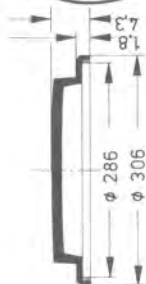
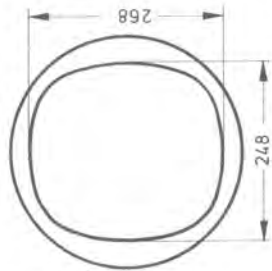
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FBA 306.729

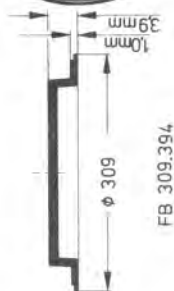
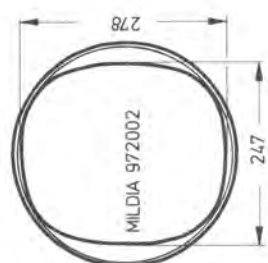


FBA 306.437

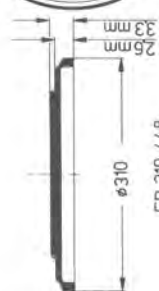
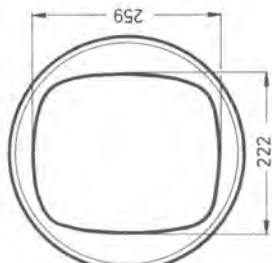


FBA 306.821

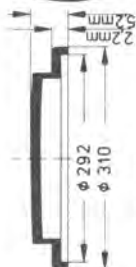
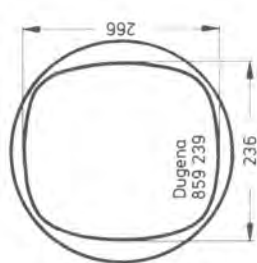
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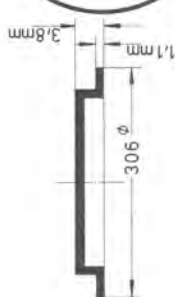
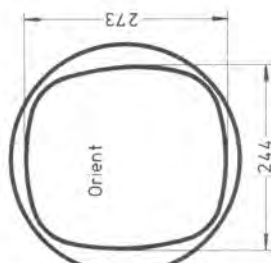
FB 309.394



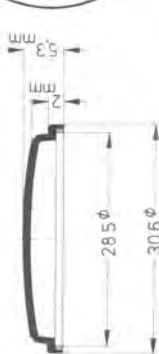
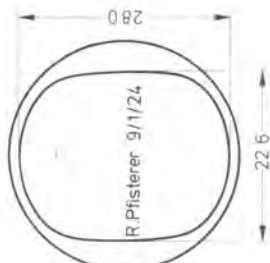
FB 310.448



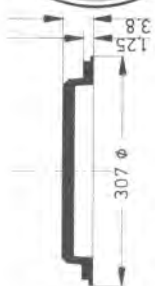
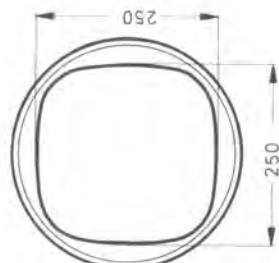
FBA 310.373



FB 306.315

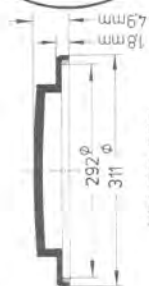


FBA 306.904

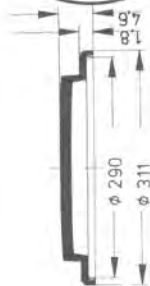
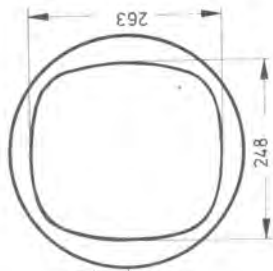


FB 307.407

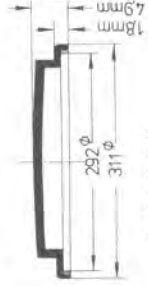
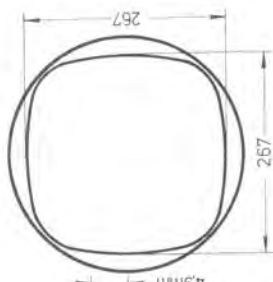
A = with ring – avec bague – mit Ring – con arillo – med ring



FBA 311.728



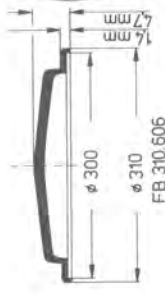
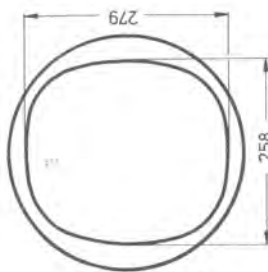
FBA 311.823



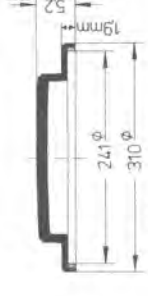
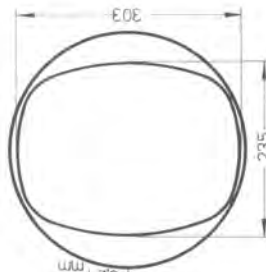
FBA 311.725



FB 310.372



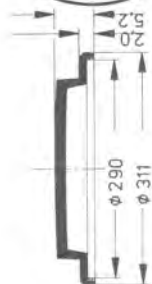
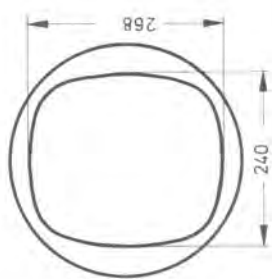
FB 310.606



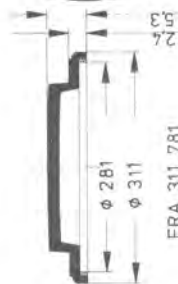
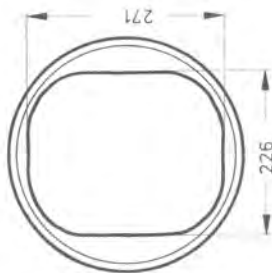
FBA 310.716

FB ↓

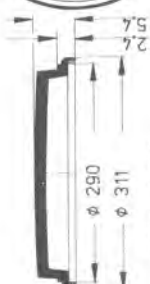
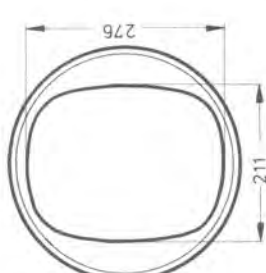




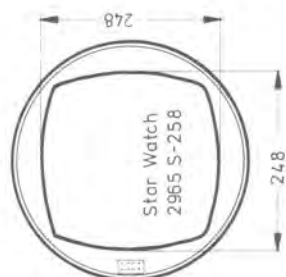
FBA 311.824



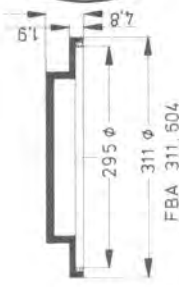
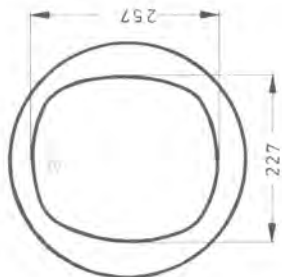
FRA 311.781



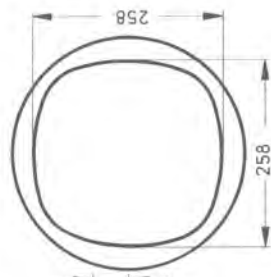
FBA 311.825



FB 311.442

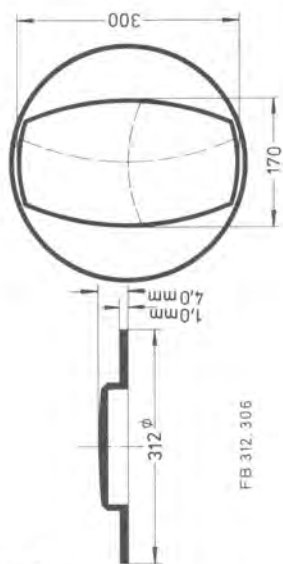


FBA 311.604

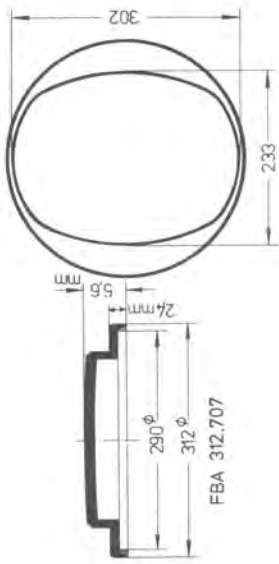


FBA 311.822

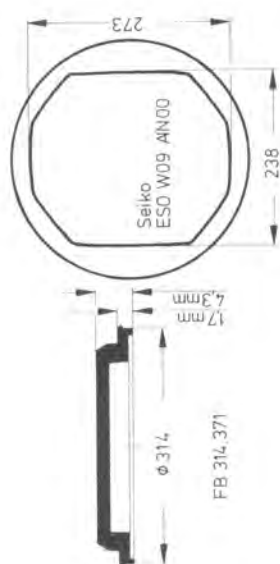
A = with ring – avec bague – mit Ring – con arillo – med ring



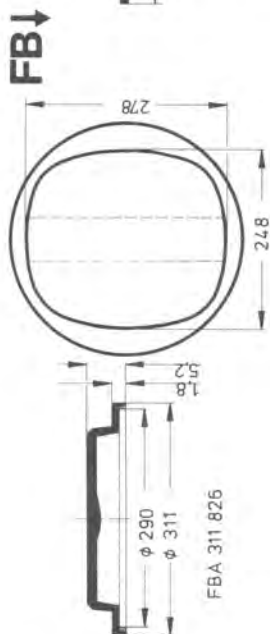
FB 312.306



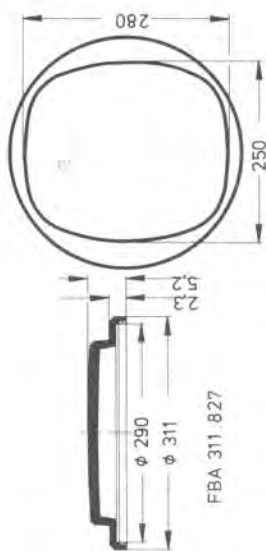
FBA 312.707



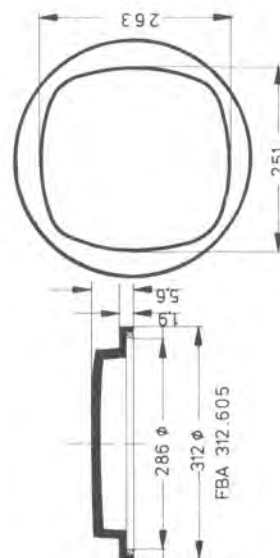
FB 314.371



FBA 311.826



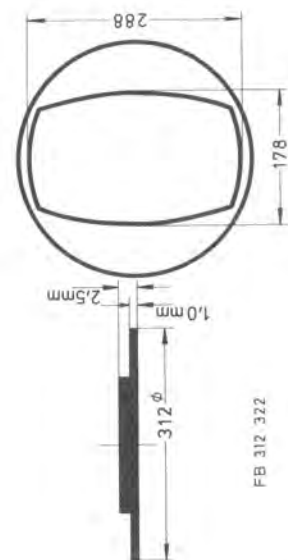
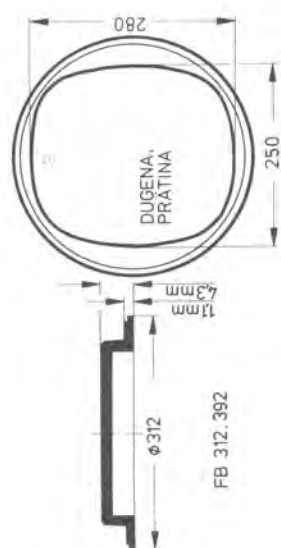
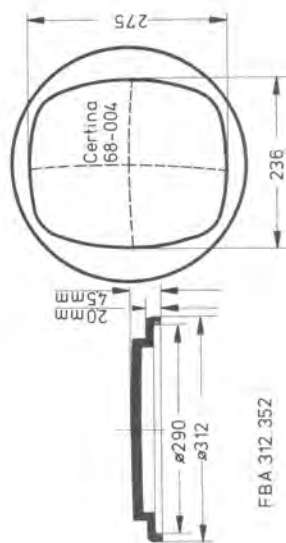
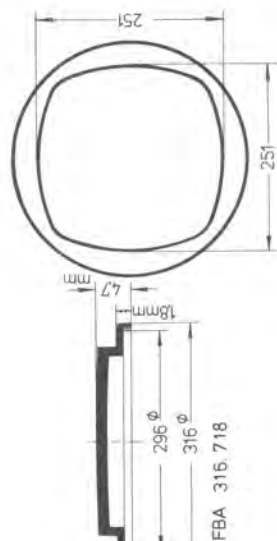
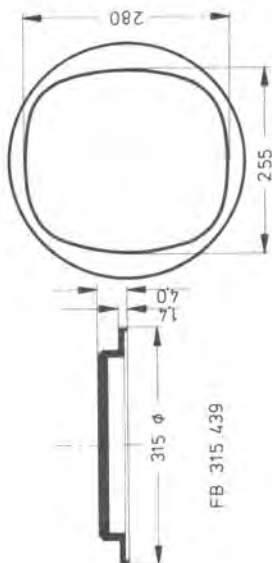
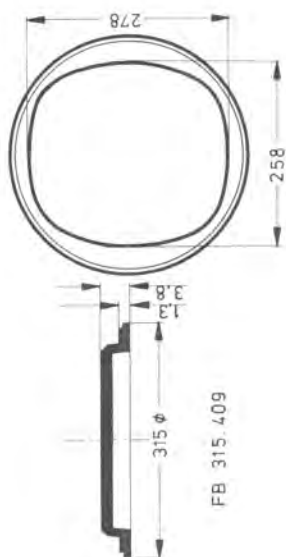
FBA 311.827



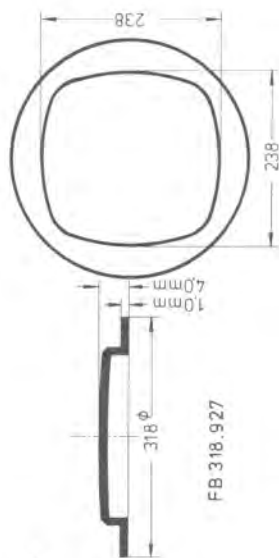
FBA 312.605

FB ↓

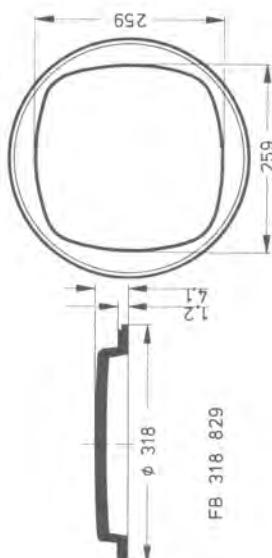




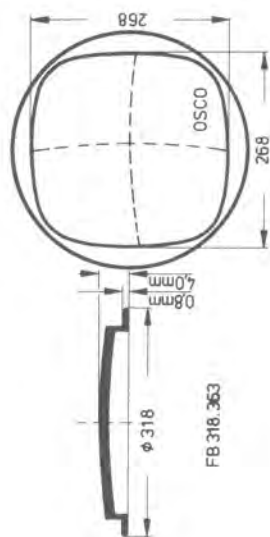
A = with ring – avec bague – mit Ring – con arillo – med ring



FB 318.927

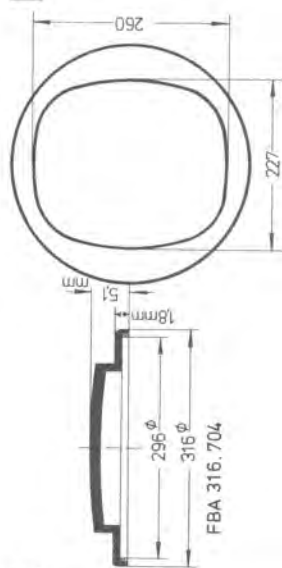


FB 318.829

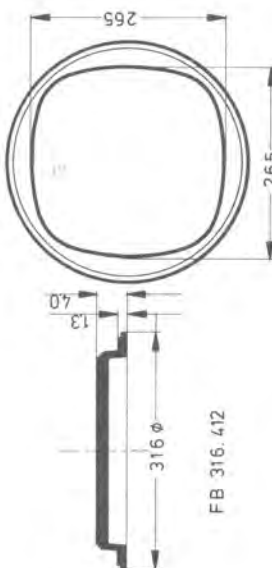


FB 318.363

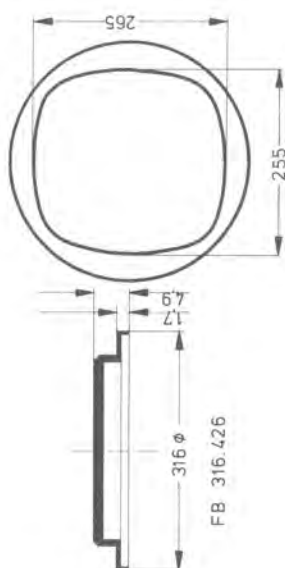
FB ↓



FBA 316.704

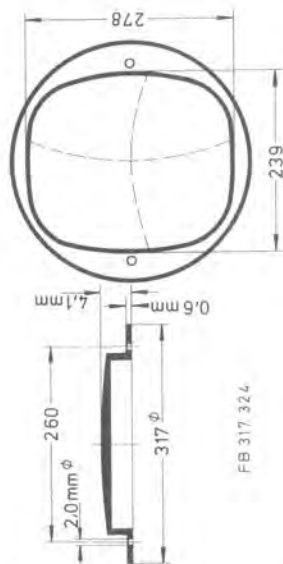
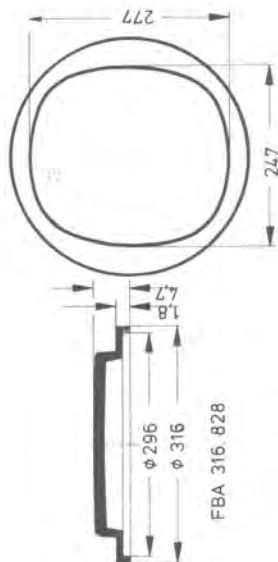
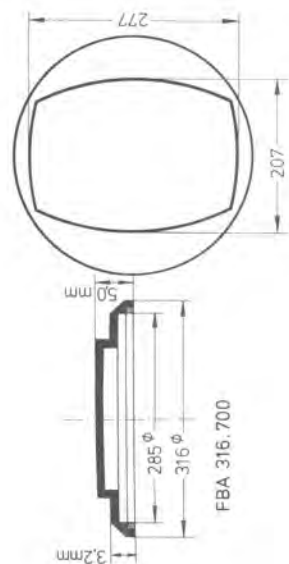
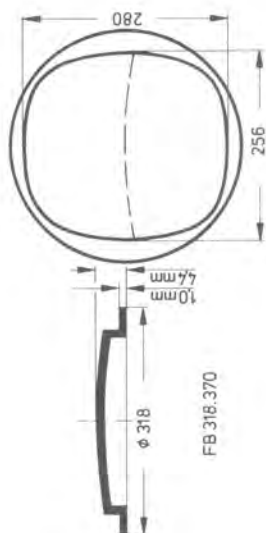
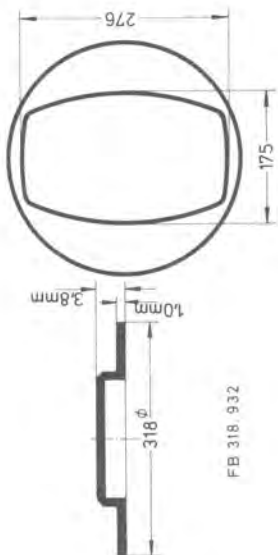
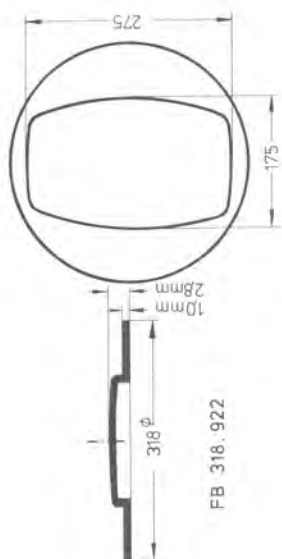


FB 316.412

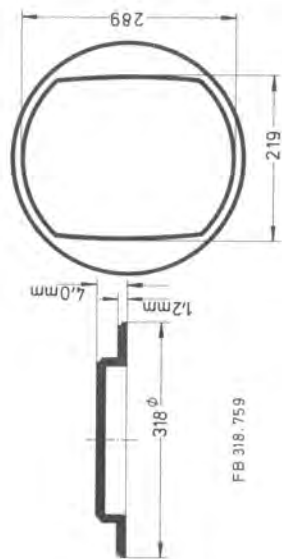
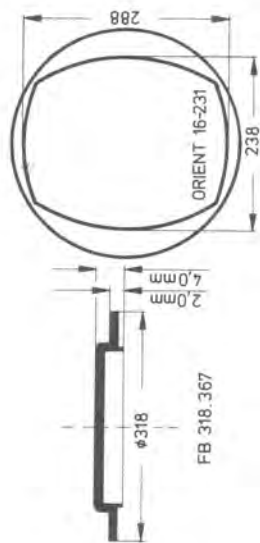
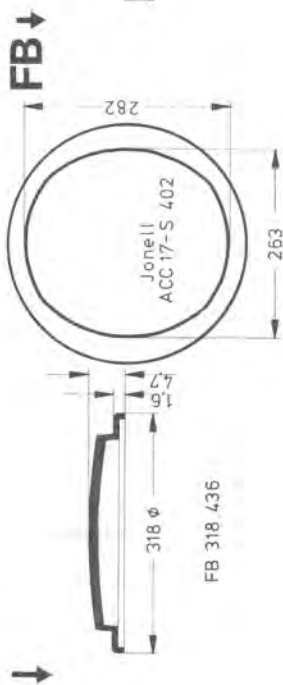
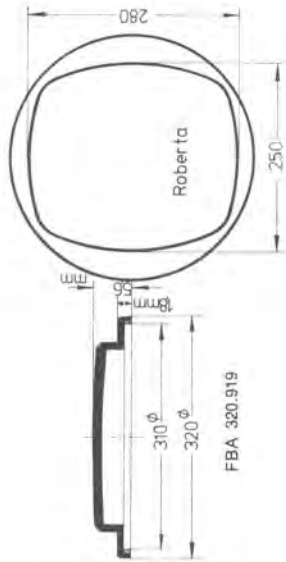
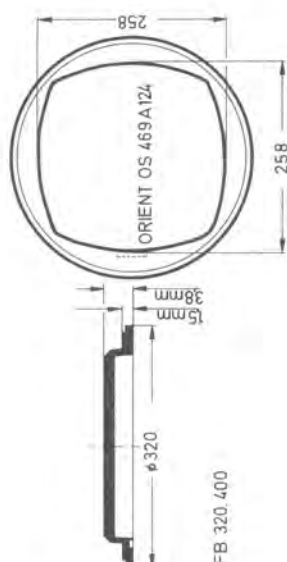
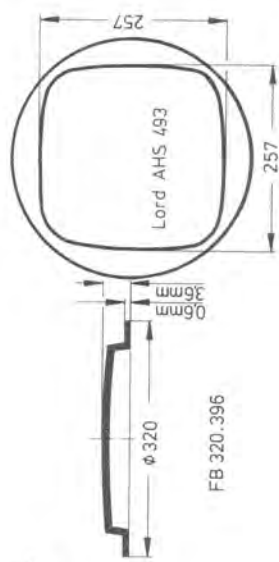


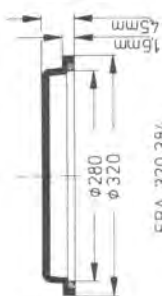
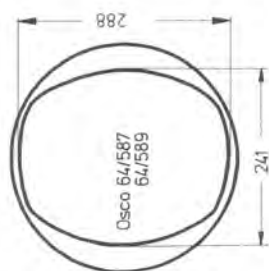
FB 316.426

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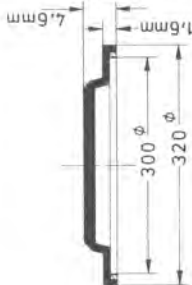
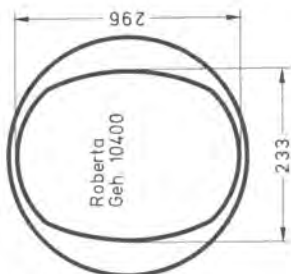


A = with ring – avec bague – mit Ring – con arillo – med ring

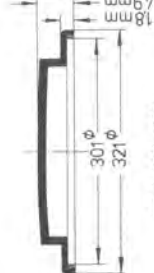
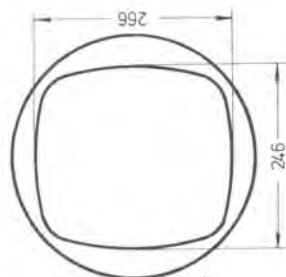




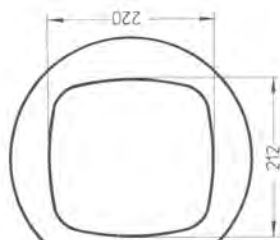
FBA 320.384



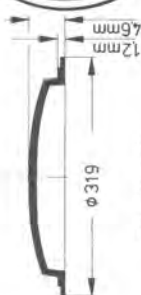
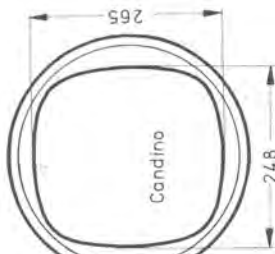
FBA 320.972



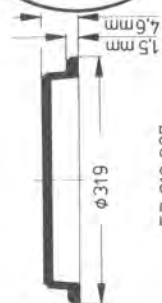
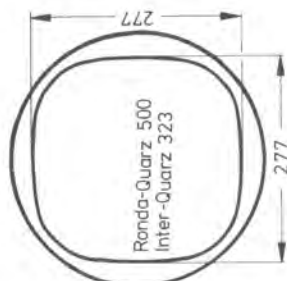
FBA 321.723



FB 319.918

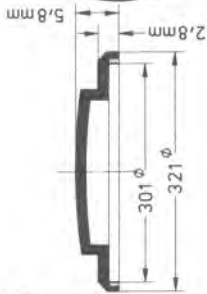
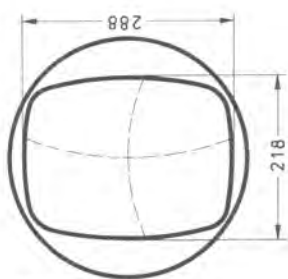


FB 319.393

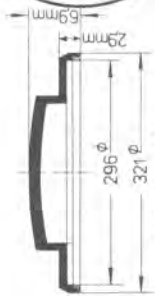
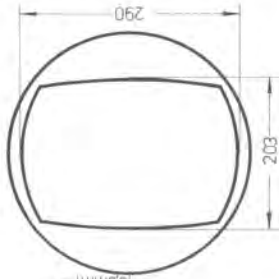


FB 319.397

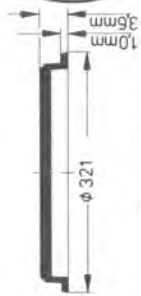
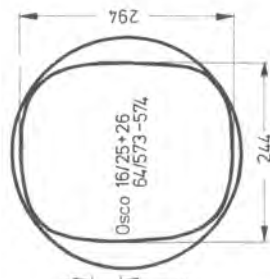
A = with ring – avec bague – mit Ring – con arillo – med ring



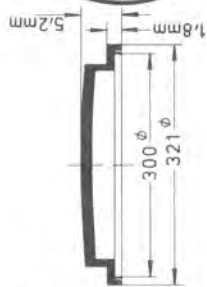
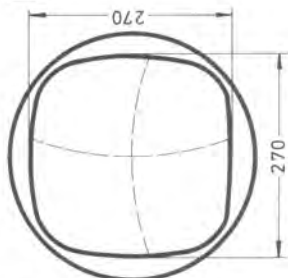
FBA 321.754



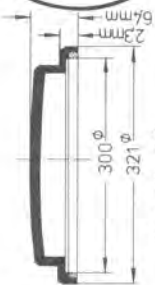
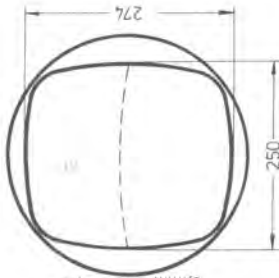
FBA 321.701



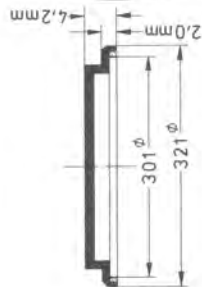
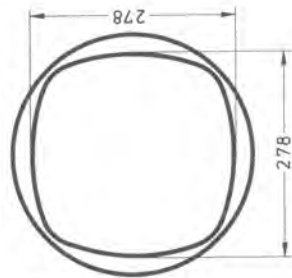
FB 321.385



FBA 321.321



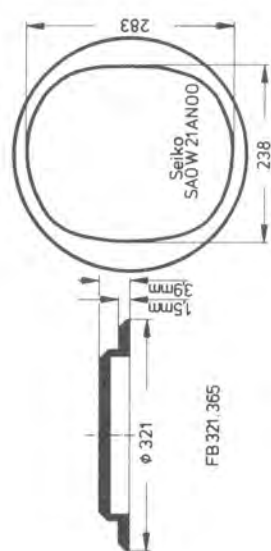
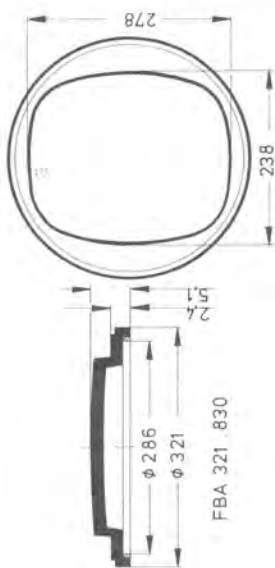
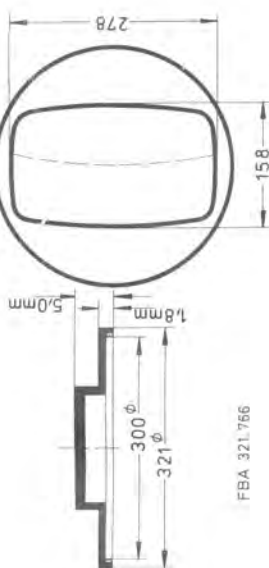
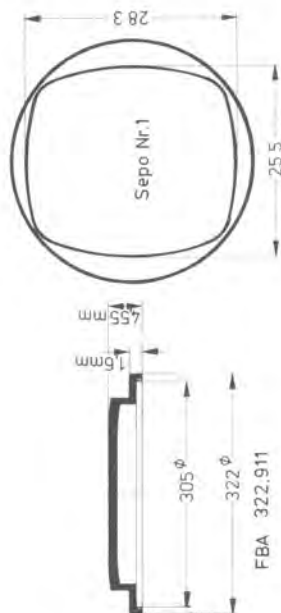
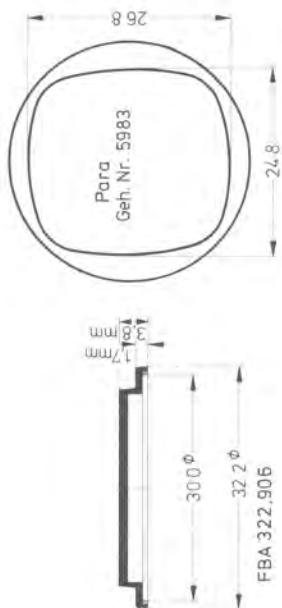
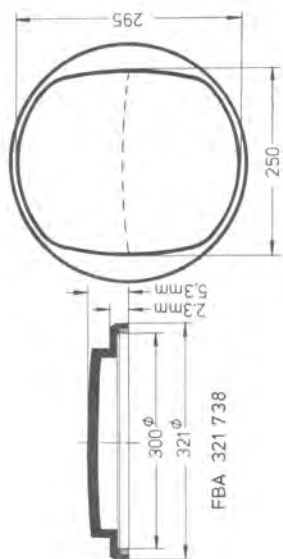
FBA 321.740



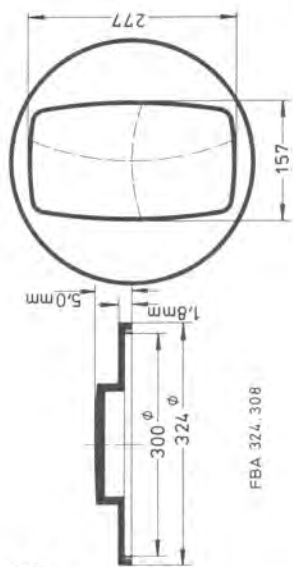
FBA 321.752

FBI ↓

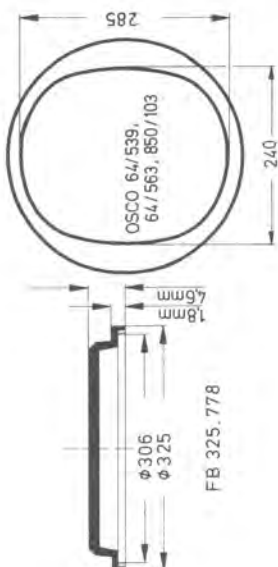
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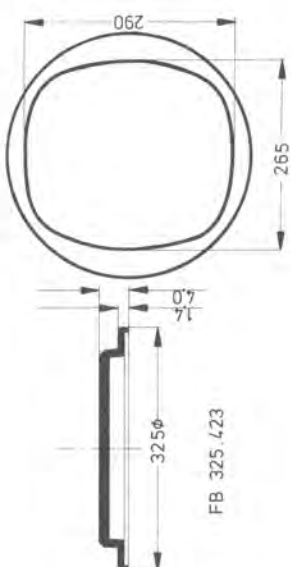
A = with ring – avec bague – mit Ring – con arillo – med ring



FBA 324.308

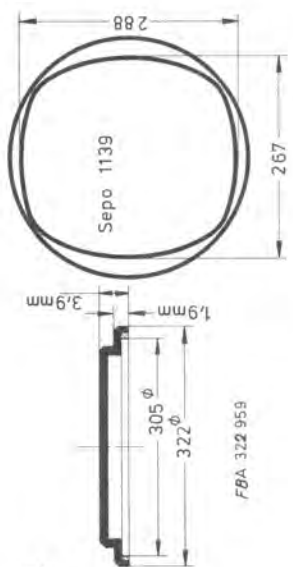


FB 325.778

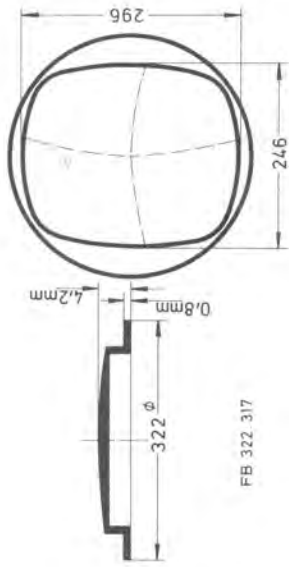


FB 325.423

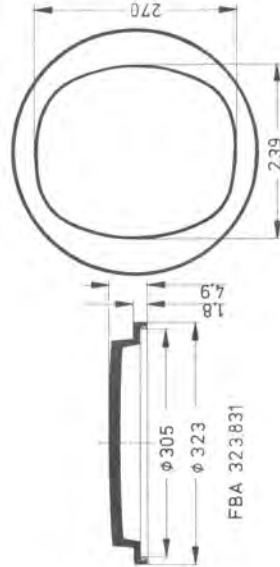
FB ↓



FBA 322.959

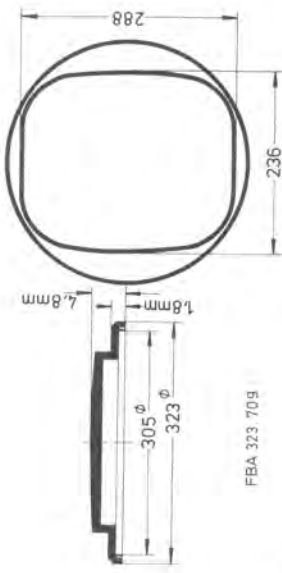
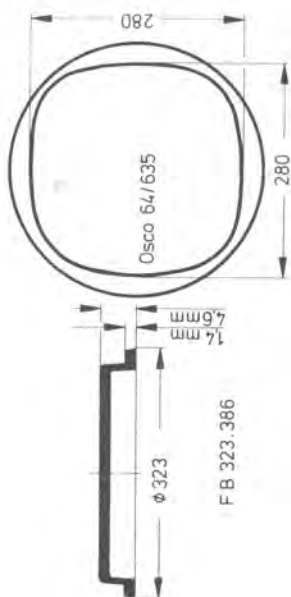
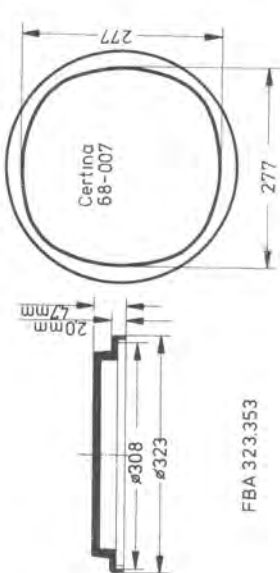
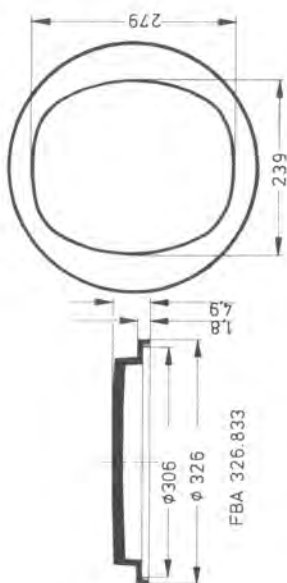
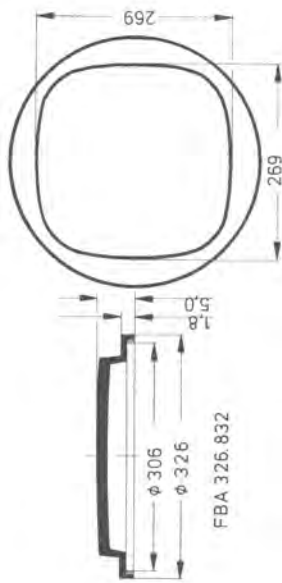
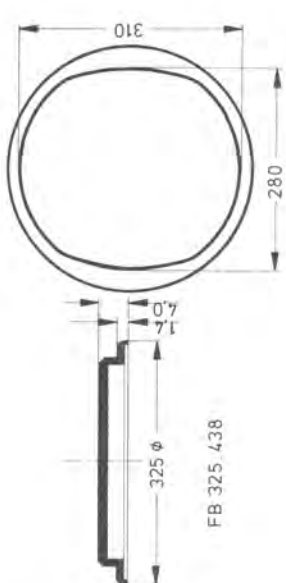


FB 322.317

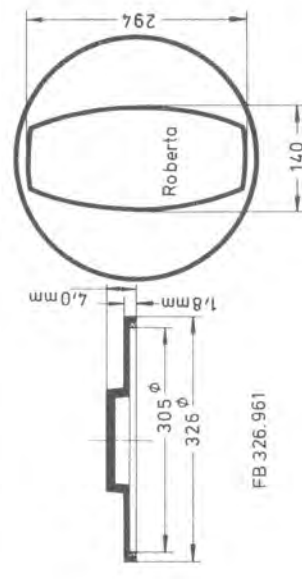
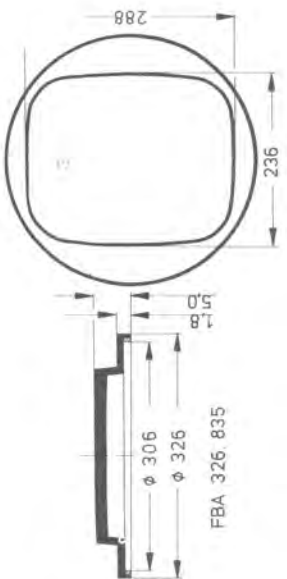
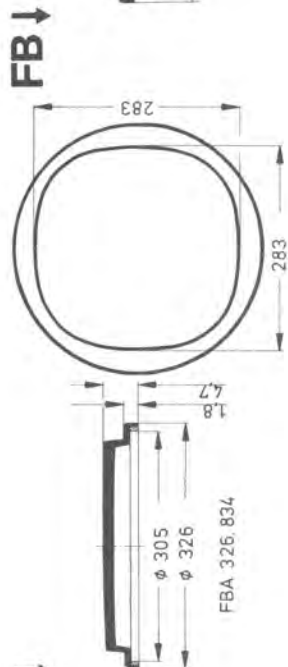
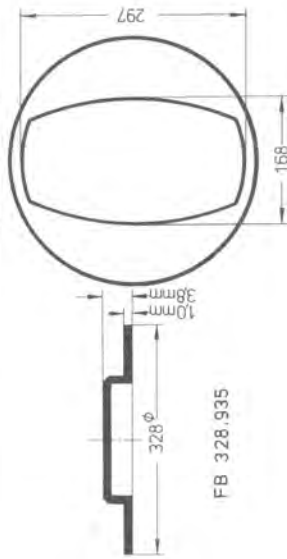
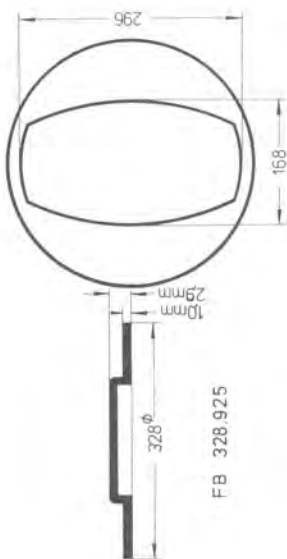
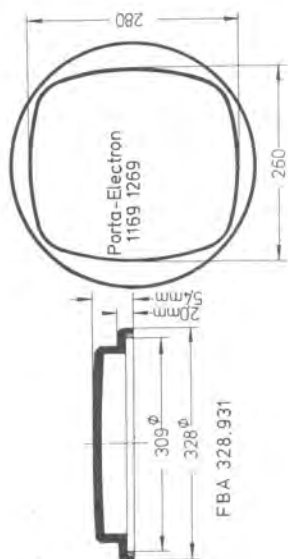


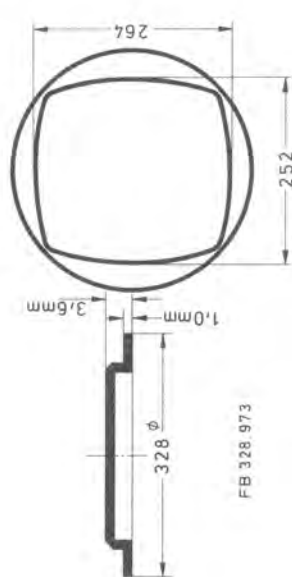
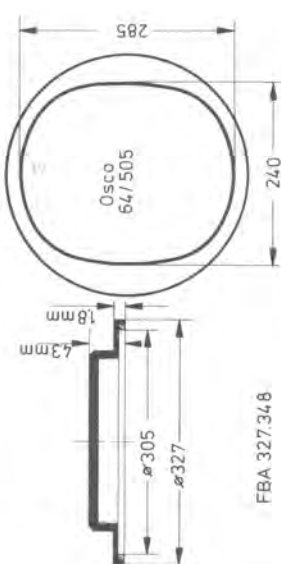
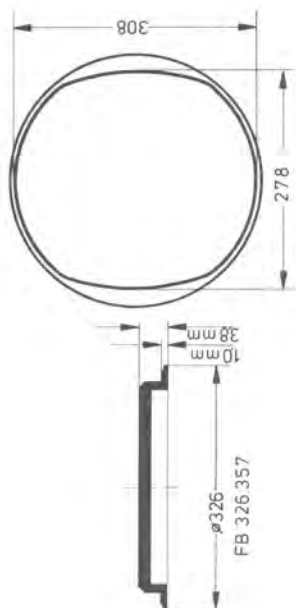
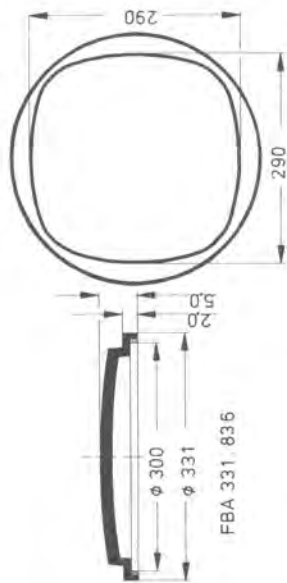
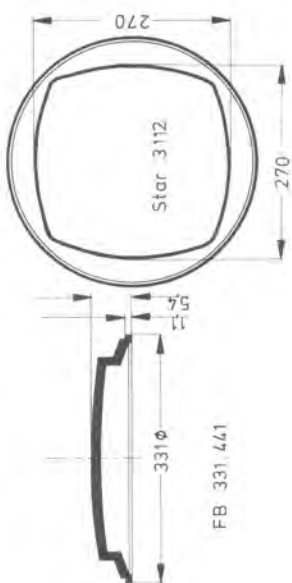
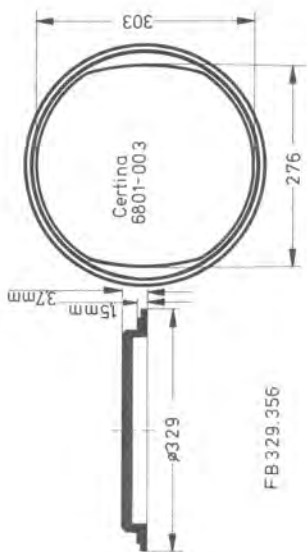
FBA 323.831

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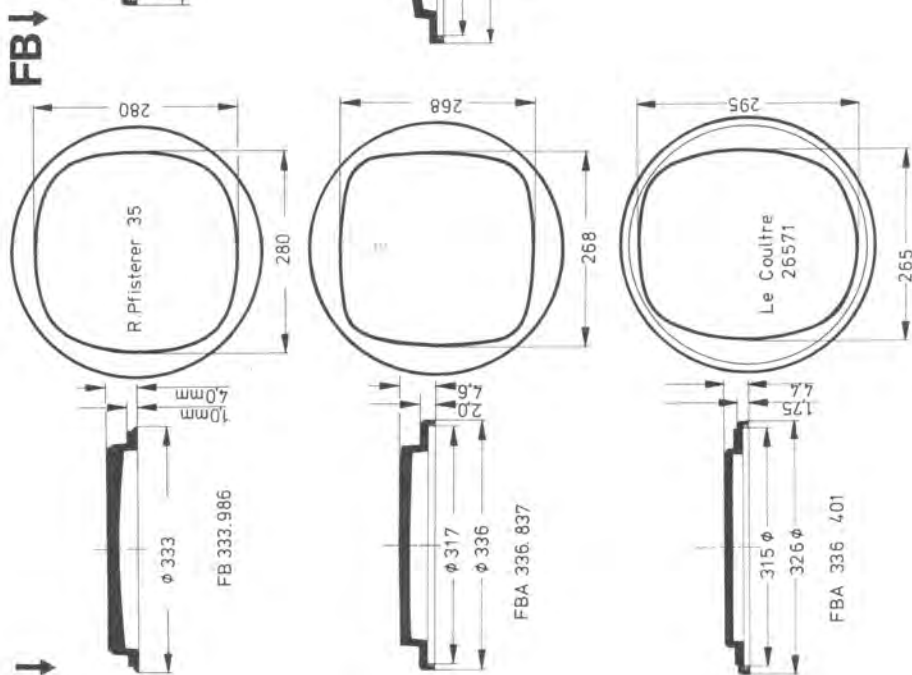
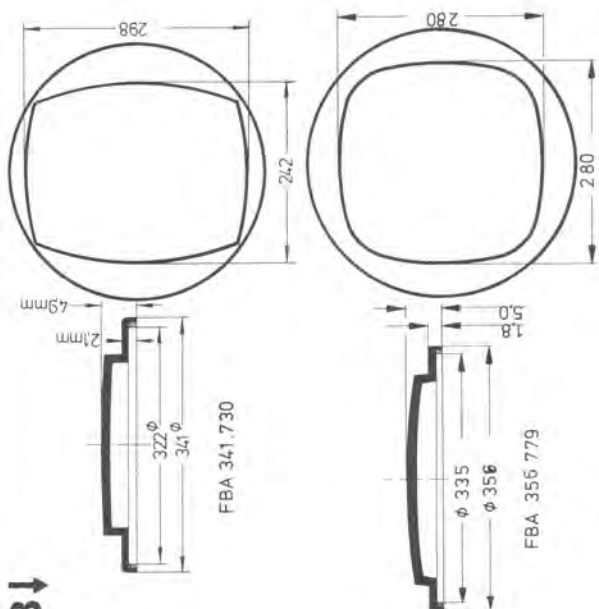


A = with ring – avec bague – mit Ring – con arillo – med ring

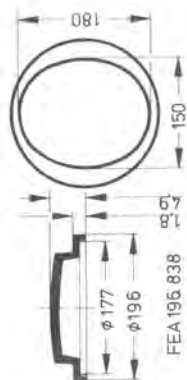
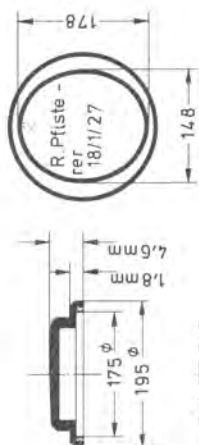
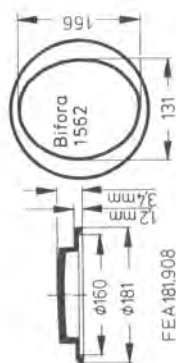
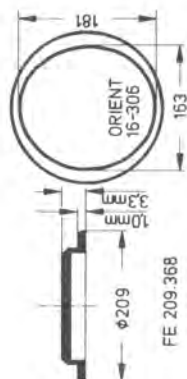
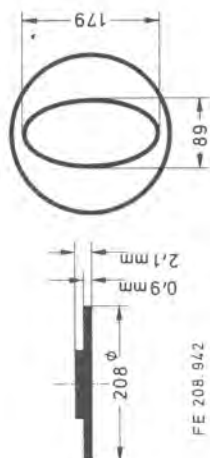
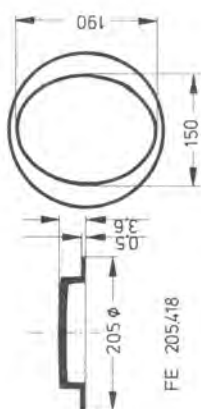




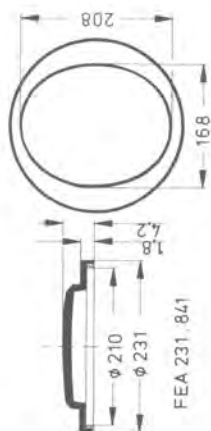
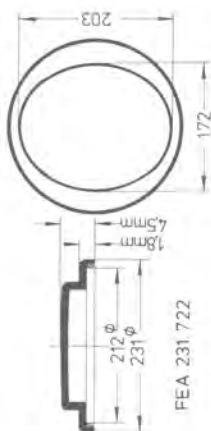
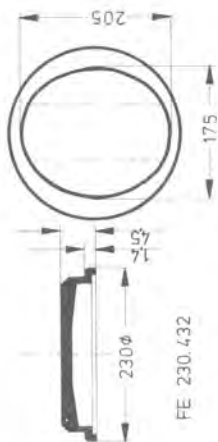
A = with ring – avec bague – mit Ring – con arillo – med ring



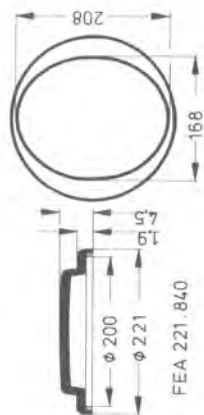
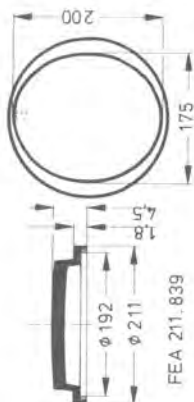
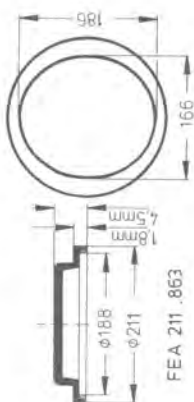
FE ↓



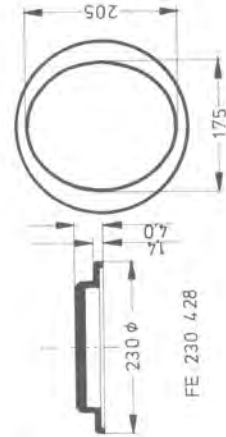
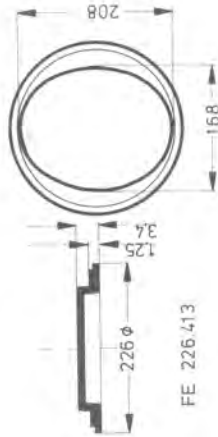
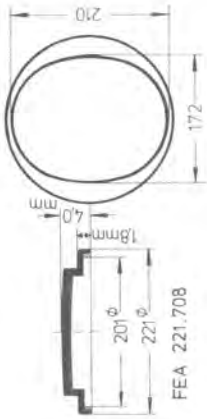
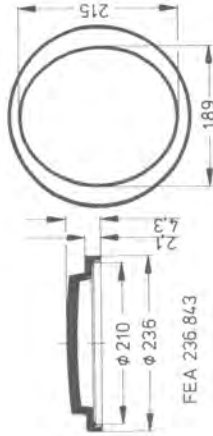
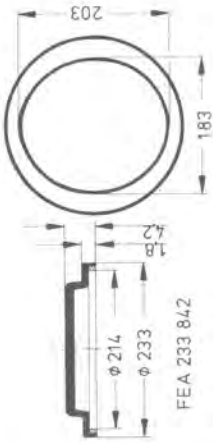
A = with ring – avec bague – mit Ring – con arillo – med ring



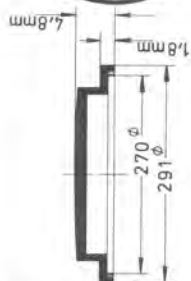
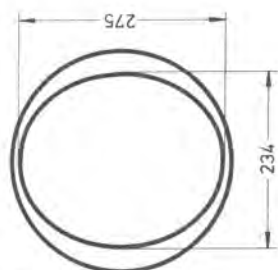
FE ↓



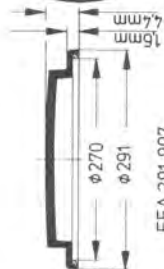
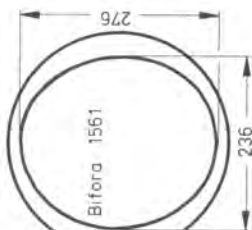
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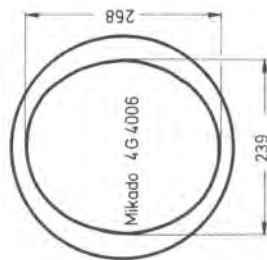
A = with ring – avec bague – mit Ring – con arillo – med ring



FEA 291.763

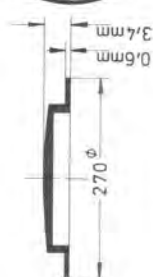
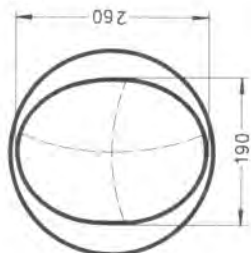


FEA 291.907

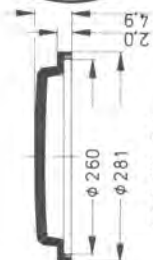
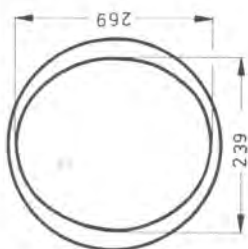


FEA 295.446

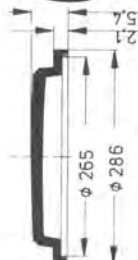
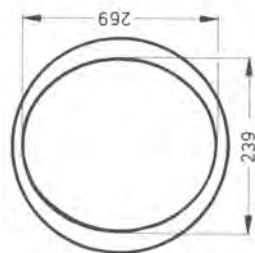
FE ↓



FE 270.323

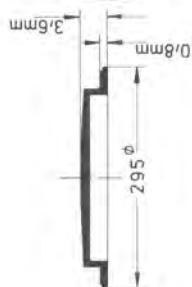
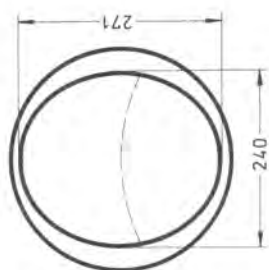


FEA 281.844

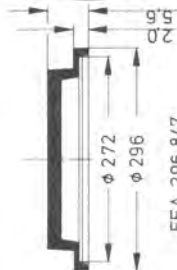
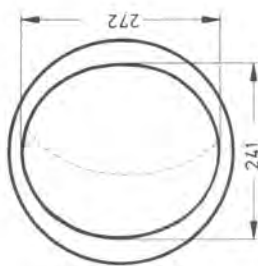


FEA 286.845

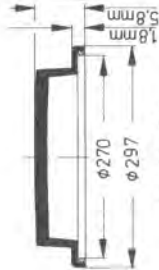
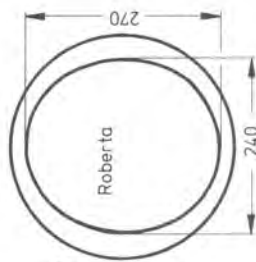
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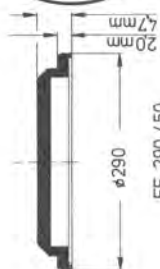
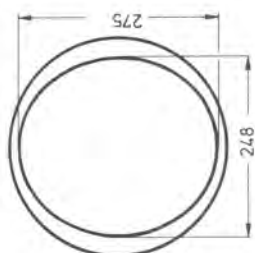
FE 295.313



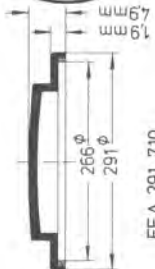
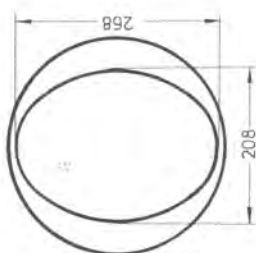
FEA 296.847



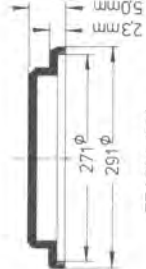
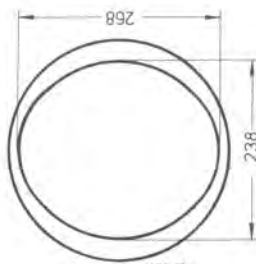
FEA 297.901



FE 290.450

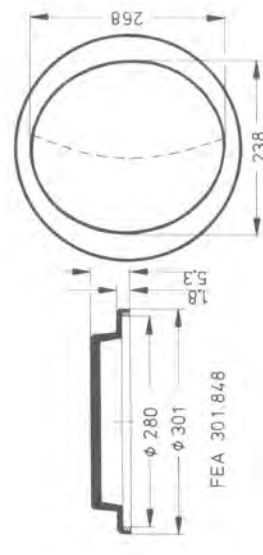
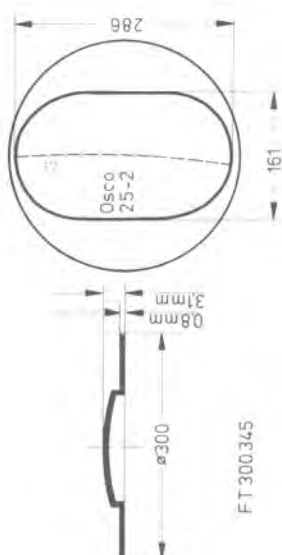
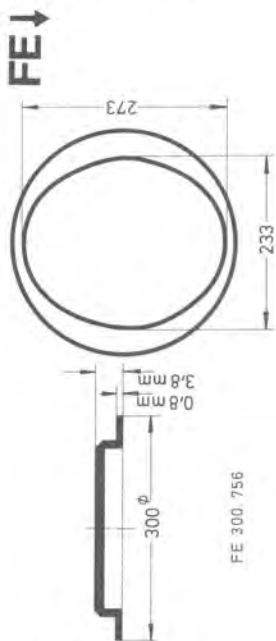
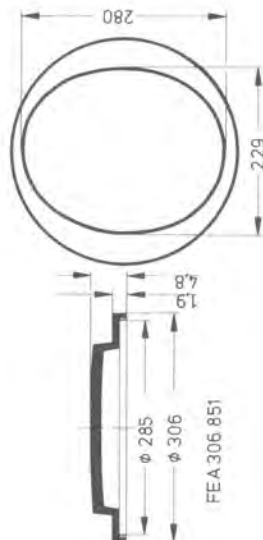
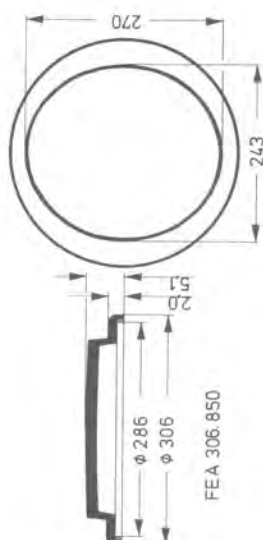
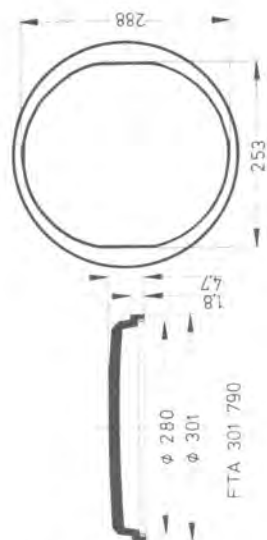


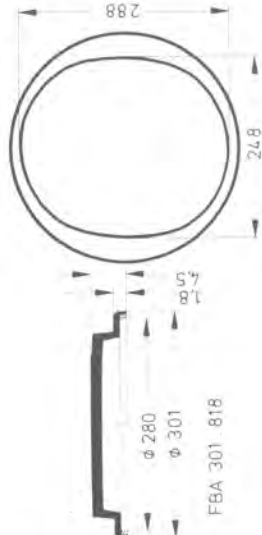
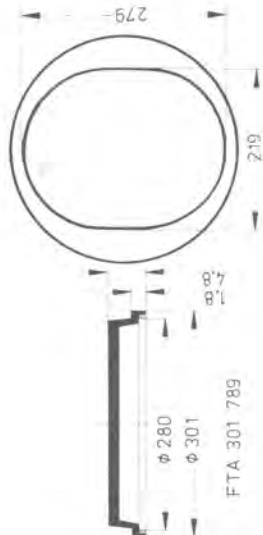
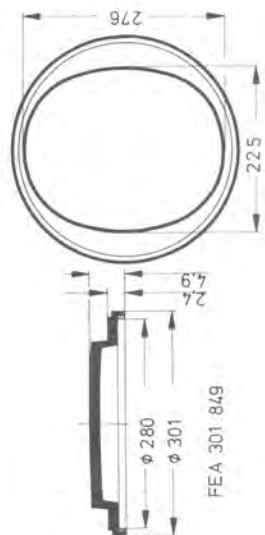
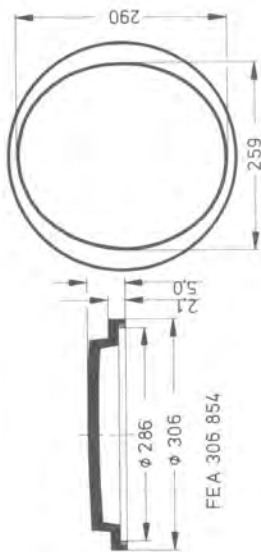
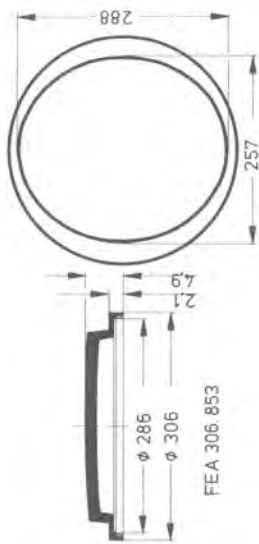
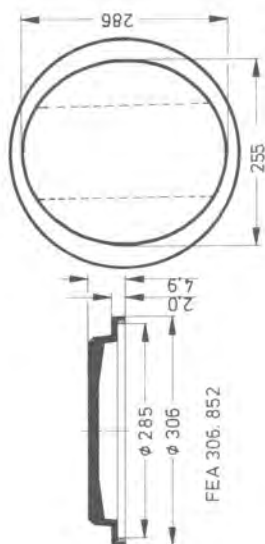
FEA 291.710



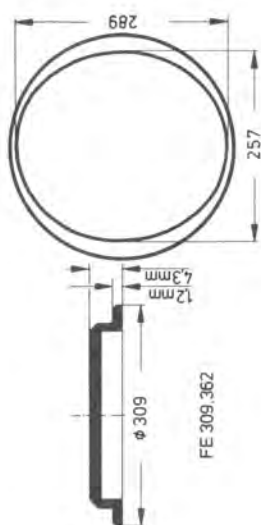
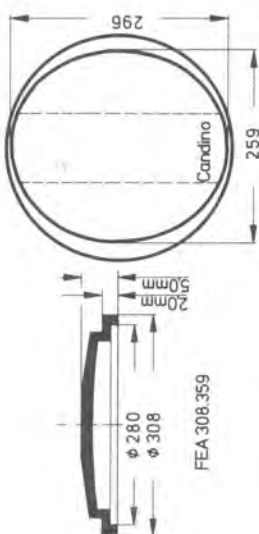
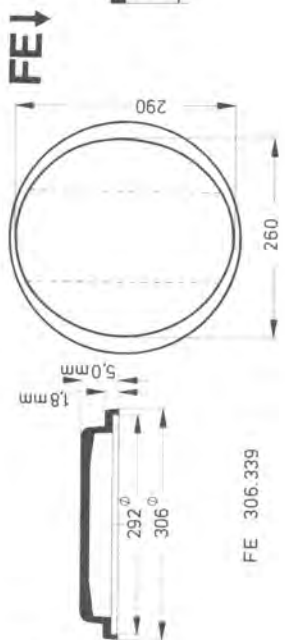
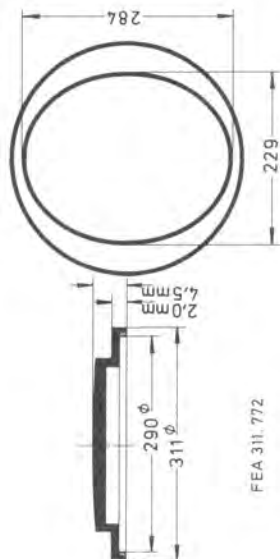
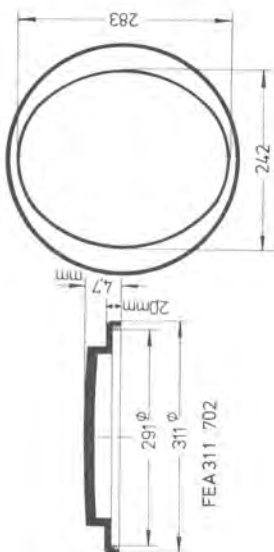
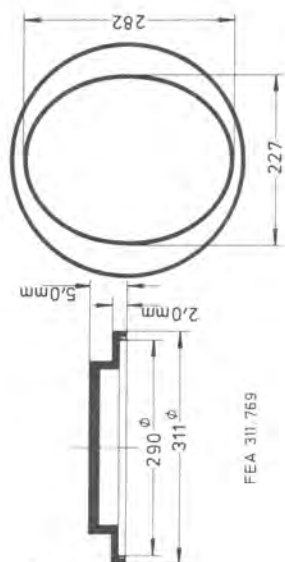
FEA 291.734

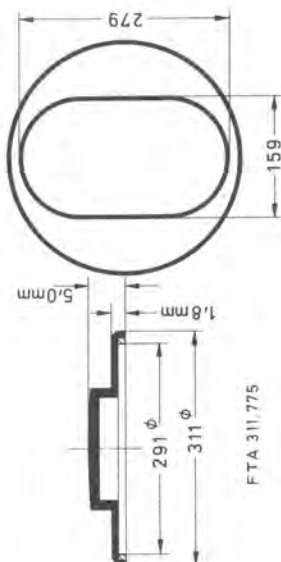
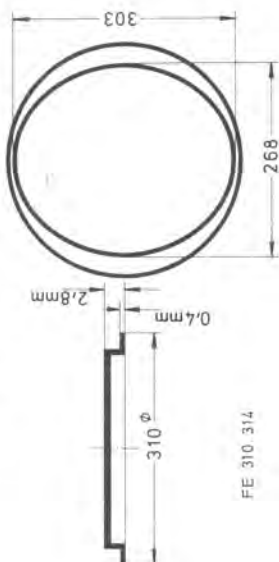
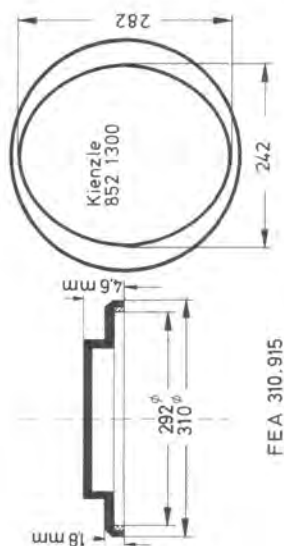
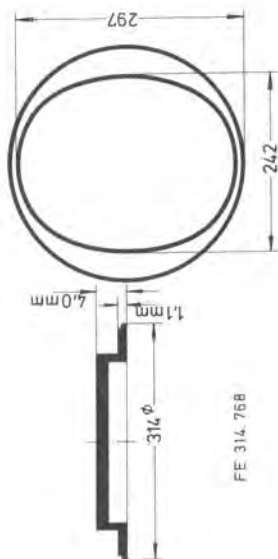
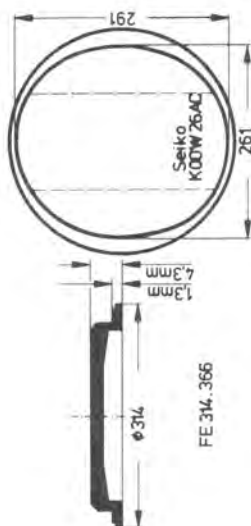
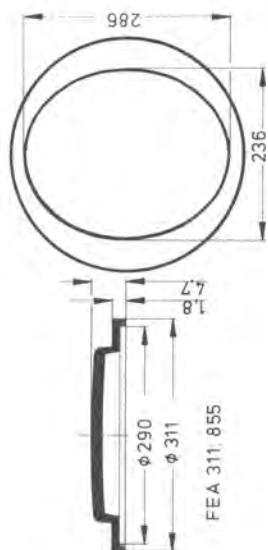
A = with ring – avec bague – mit Ring – con arillo – med ring



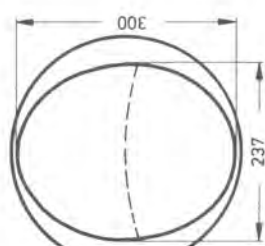


A = with ring – avec bague – mit Ring – con arillo – med ring

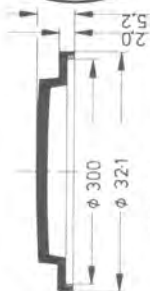
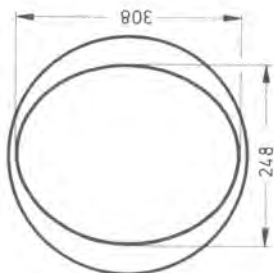




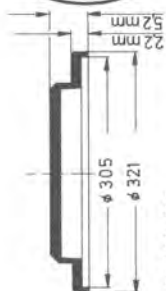
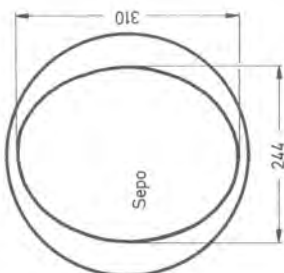
A = with ring – avec bague – mit Ring – con arillo – med ring



FE 319.358

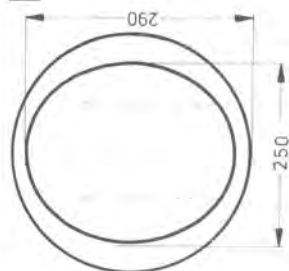


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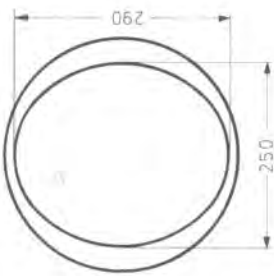


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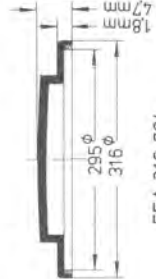
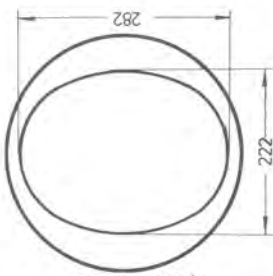
FE ↓



FE 315.420

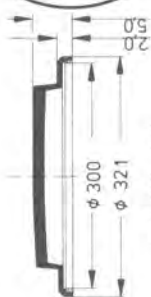
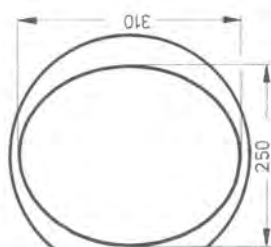


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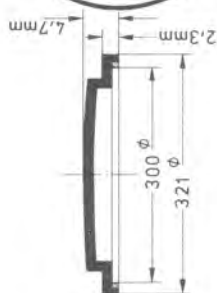
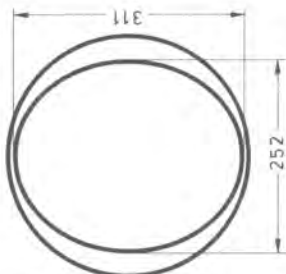


FEA 316.724

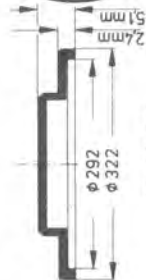
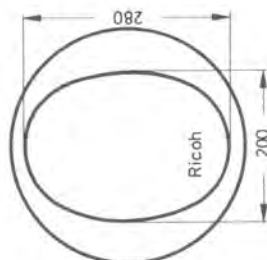
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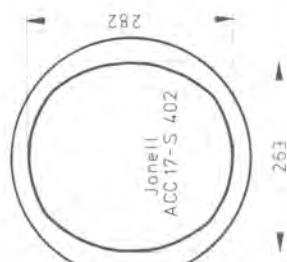
FEA 321.858



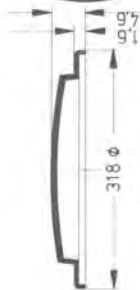
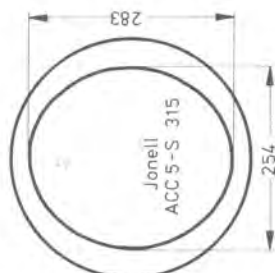
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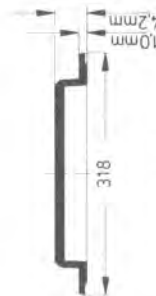
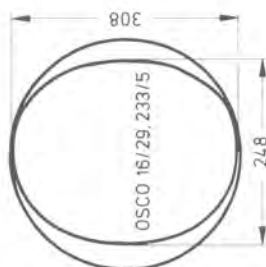
FEA 322.360



FB 318.436

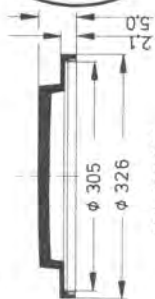
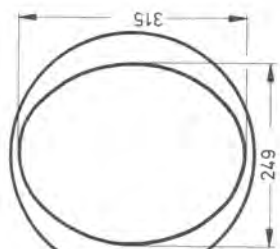


FE 318.435

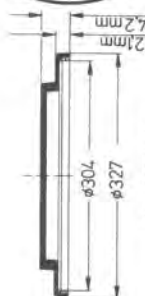
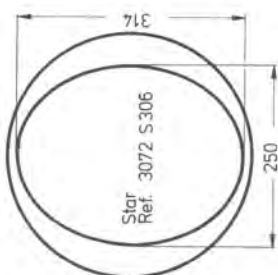


FE 318.383

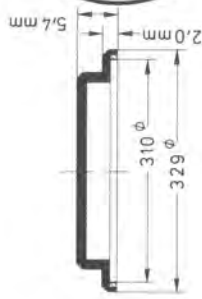
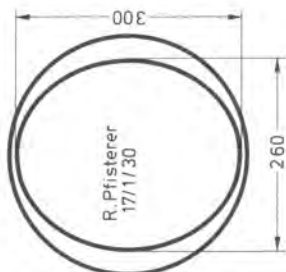
A = with ring – avec bague – mit Ring – con arillo – med ring



FEA 326.860

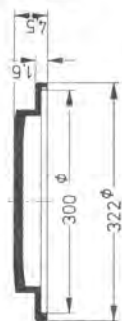
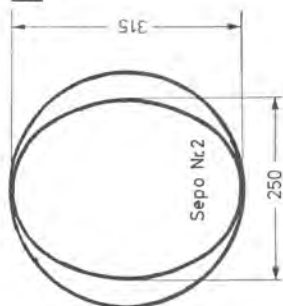


FEA 327.449

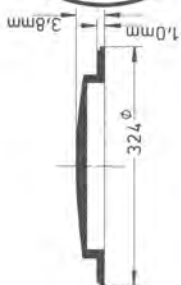
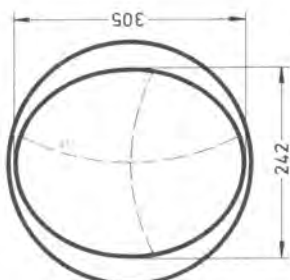


FEA 329.947

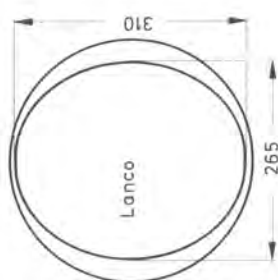
FE ↓



FEA 322.912

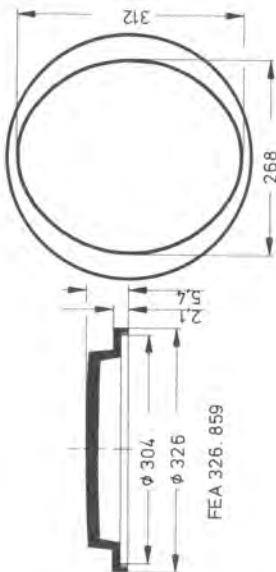
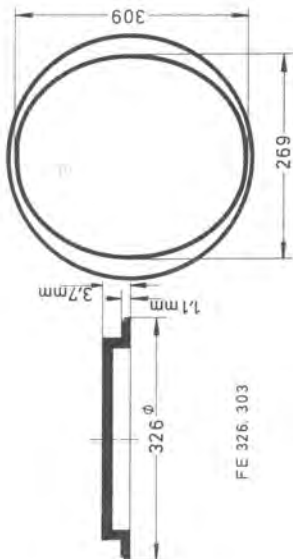
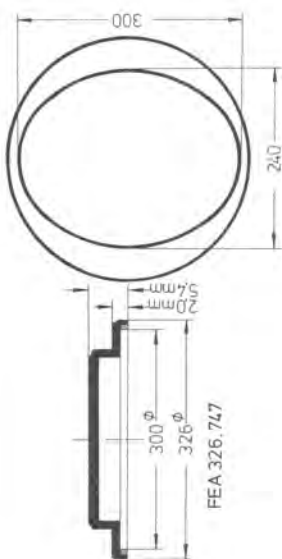
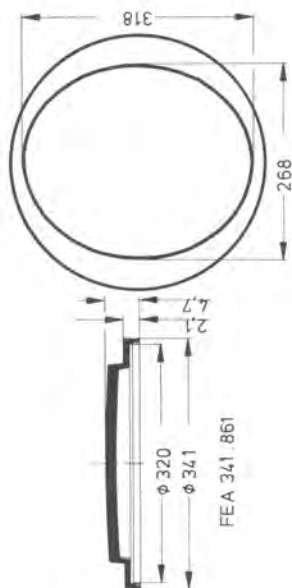
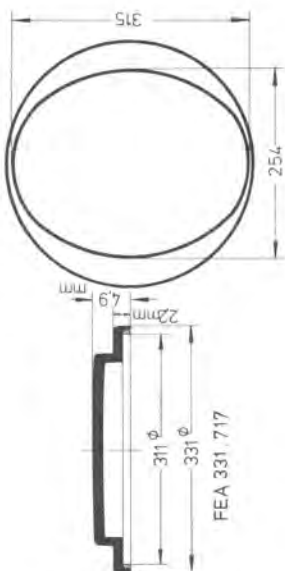
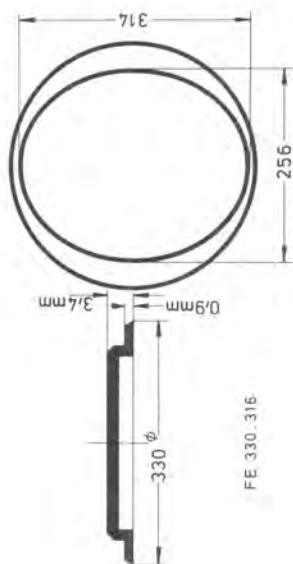


FE 324.319

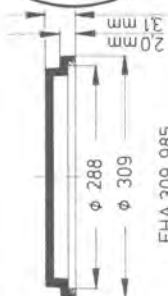
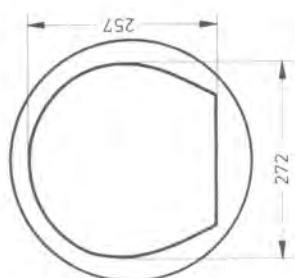
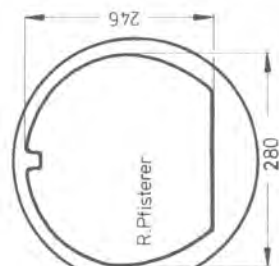


FEA 325.960

→



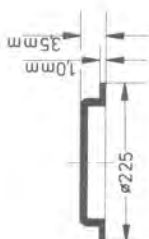
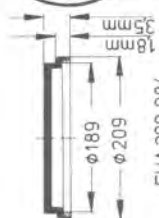
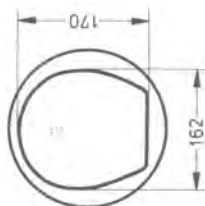
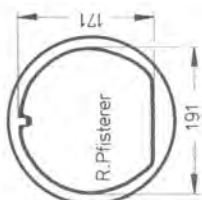
A = with ring – avec bague – mit Ring – con arillo – med ring



FHA 309.985

FH 316.982

FH ↓



FHA 209.984

FH 225.983

↓

Some forms of glasses, which are to classify with difficulties, are illustrated twice, but always under one designation.

Quelques formes de verres, qui sont difficilement à classer, ont été représentées deux fois, mais toujours sous la même désignation.

Einige Glasformen, die schwer einzuordnen sind, wurden zweimal abgebildet, aber immer nur mit einer Bezeichnung.

Algunas de las formas de cristales difíciles a clasificar fueron representadas dos veces, pero siempre con una sola designación.

Vissa glas är svåra att formbestämma, varför de kan avbildas på olika ställen, men har alltid samma beteckning.

Mineral glasses

Verres minéraux

Mineralgläser

Cristales minerales

Mineralglas

(GB)

Mineral glasses

Mineral Glasses are watch glasses that are made of glass, which is also referred to as „inorganic glass“, „genuine glass“ or „silicate glass“. However, watch glasses must be of a better quality than ordinary window glass.

One has therefore to distinguish between mineral glasses and plastic watch glasses, as well as between mineral glasses and synthetic sapphires (which are made from aluminium oxide by high pressure and high temperatures). The difference between the latter two can be told by their respective prices, the price for synthetic sapphires is many times higher than the price of mineral glasses.

The special feature of mineral glasses is their scratch resistance but because of their physical structure, they have a tendency to break when exposed to pressure. To avoid this, the glasses are hardened. All mineral glasses in this catalogue are being subjected to this hardening process.

There are many methods of fitting mineral glasses, some of which are patented.

First it has to be established whether the old glass had been glued in; the same method can therefore be used for the new glass. Because of the fast development of the various glues and the many brands available we will restrict ourselves to the main points that have to be considered:

(F)

Verres minéraux

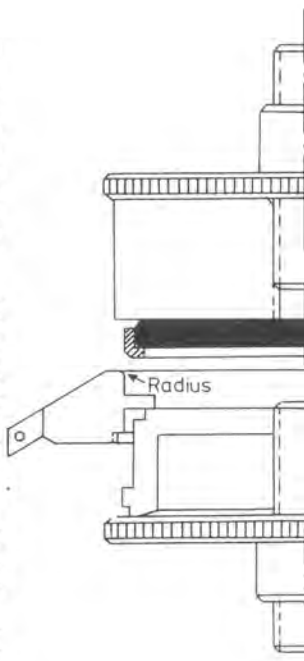
Les verres minéraux sont aussi appelés „verres anorganiques“ ou „vrais verres“ ou „verres de silicate“. Ce verre pour montre exige évidemment des qualités supérieures à celui du verre à vitre. Il faut aussi faire la différence entre le verre minéral et le verre synthétique. Cette distinction n'est pas facile à faire car plusieurs matières synthétiques portent le complément „verre“.

Il faut aussi différencier les verres minéraux des saphirs synthétiques qui sont des oxydes d'alumine (bauxite) portés à haute température et sous forte pression. Mais on les distingue facilement par leur prix qui est beaucoup plus élevé pour les saphirs synthétiques que pour les verres minéraux.

La résistance des verres minéraux aux égratignures est l'indice particulier de qualité mais ces verres ont tendance à se briser en raison de leur structure sous l'effet d'une forte pression. Pour éviter cette rupture le verre est durci.

Tous les verres minéraux de ce catalogue sont soumis à ce procédé de durcissement.

Il existe plusieurs procédés pour fixer le verre minéral à la boîte, quelques uns sont même brevetés. Il faut d'abord vérifier si le verre minéral a été collé, l'horloger pourra à son tour coller le verre de remplacement. En raison du développement rapide des différents types de colle et des nombreuses sortes qui sont offertes, nous ne mentionnons ci-dessous que les points les plus importants:



Mineral glasses
Verres minéraux
Mineralgläser
Cristales minerales
Mineralglas

(GB)

- a) Easy to work with (i. e. without being stringy)
- b) Must not fade even in ultra-violet light (bright sunshine)
- c) Volatilization of the solvents within the time of hardening to avoid changes at later stages
- d) No solvent that react aggressively to metal or plastic parts.

If the top edge of the bezel is rounded, the glass had been fitted with a sealing ring, in most cases with an L-shaped ring.

Flat round glasses are supplied with L-shaped rings so that they can be fitted easily. For this purpose one use a fitting press with special chucks for mineral glasses.

One example is illustrated

A certain type of curved mineral glasses is held in the case by steadyrests. These glasses usually have an O-shaped ring under their bases. The steadyrests are pressed on with pressure plates like the rings of top glasses. For this type of glass we can also supply mineral glass imitations made of plastic (see page 152).

Care has to be taken when replacing flat mineral glasses by plastic glasses. Because of their elasticity, plastic glasses very often bend slightly, whereas the original mineral glasses are absolutely flat.

(F)

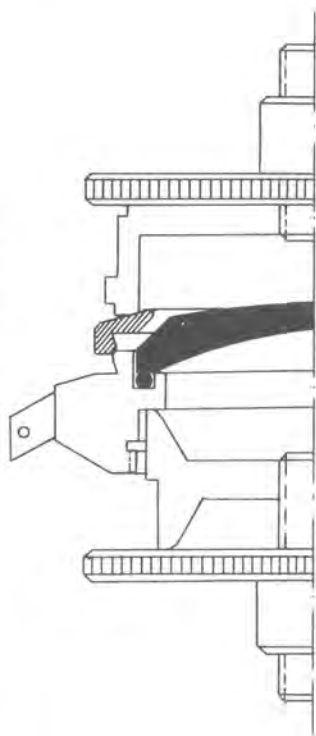
- a) Utilisation facile (qui ne file pas)
- b) Pureté de couleur, même aux rayons ultra-violet (lumière du soleil)
- c) Evaporation des solvants le temps du durcissement et sans modification ultérieure
- d) Solvants qui ne soient pas agressifs aux métaux ni aux parties synthétiques.

Si le bord du cran de glace est arrondi, il y avait à l'origine un verre minéral avec joint, le plus souvent un joint L.

Nos verres minéraux ronds plats sont équipés de joints L de sorte qu'ils peuvent être posés sans difficulté. Pour cela on utilise les tasseaux spéciaux pour verres minéraux.

Un exemple est illustré.

Un certain groupe de verres minéraux bombés se fixe dans la boîte par la lunette. En général il y a un joint O-Ring sous la base du verre. Les lunettes sont fermées par pression au moyen d'une presse et de tasseaux comme pour les verres à jupe. Voir aussi page 152 notre offre de verres imitation minéral en plastique. Il faut faire attention lorsqu'on désire remplacer un verre minéral plat par un verre plastique. Fréquemment il en résulte des modifications dans les proportions car les verres plastiques se bombent en raison de leur élasticité tandis que les verres minéraux originaux conservent leur planéité absolue.



Mineral glasses
Verres minéraux
Mineralgläser
Cristales minerales
Mineralglas

MFO · MF

All numbers
Tous les numéros
Alle Nummern
Todos los números
I alla nummer

All even numbers
Tous les numéros pairs
Alle geraden Nummern
Todos los números pares
I alla jämna nummer

MFO



Mineral flat, thin
Minéral plat, mince
Mineral flach, dünn
Mineral plano, delgado
Mineral plant, tunnt

MFO 180 — MFO 351

Color-System:
blue on yellow, bleu sur jaune, blau auf gelb,
azul sobre amarillo, blå på gul

MF



Mineral flat with L gasket
Minéral plat avec joint 'L'
Mineral flach mit L-Dichtung
Mineral plano con junta L
Mineral, plant med L-packning

MF 176 — MF 340
MF 350,
MF 360 — MF 366

Color-System:
green on yellow, vert sur jaune, grün auf
gelb, verde sobre amarillo, grön på gul

Mineral glasses can be supplied in steps of one tenth of a millimetre.

Tous les verres minerales sont livrables tous les 1/10 de mm.
Il faut faire attention de mesurer exactement le diamètre du cran de glace.

Alle Mineralgläser sind in Zehntelmillimeterabstand lieferbar.
Beachten Sie, daß Sie den Glasfalz genau messen.

Todos los cristales minerales se surten con medidas en décimas de mm.
Tome en cuenta que la medida de la ranura o caja debe ser exacta.

Alla Mineralglas är levererbär på varje tiondelsmillimeter.
Märk att glasfalsen noggrant måste uppmätas.

Mineral glass imitation of plastics on page 152 and DIA-GF respectively
DIA-CF page 50

Imitation en plastique des verres minéraux page 152 et DIA-GF respectivement
DIA-CF page 50

Mineralglas-imitation aus Kunststoff siehe Seite 152 und Sorte DIA-GF bzw.
DIA-CF Seite 50

Cristal mineral-imitaciones de plástico en la pag. 152 y calidad DIA-GF o bien
DIA-CF página 50

Mineralglas-imitation av plast på sidan 152 och DIA-GF samt DIA-CF på sidan 50

Ordering number
Numéro pour la commande
Bestellnummer
Numero para el pedido
Nummer för beställningen

XM 185.823

The glasses are in order of their outside diameters.
Les verres sont classés en fonction du diamètre extérieur.
Nach dem Außendurchmesser sind die Gläser geordnet.
Los cristales están clasificados de acuerdo al diámetro exterior.
Glasen är ordnade efter ytterdiameter.

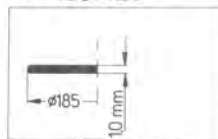
Current number
Numéro courant
Laufende Ordnungsnummer
Numero corrido
Löpande nummer

Below the illustrations you can find references to suitable cases.
Sous chaque cliché sont indiquées les référence des boites correspondantes.
Unter den Bildern finden Sie Hinweise auf passende Gehäuse.
Bajo los dibujos se encuentran las instrucciones para las cajas apropiadas.
Under bilden finnes hänvisningar till passande boett.

Please note the key to brands and calibres on page 160.
Tenez compte que le classement est fait par calibre et par marque page 160.
Bitte beachten Sie den Marken- und Kaliberschlüssel auf Seite 160.
Por favor tome en cuenta las marcas y número de calibre en la pág 160.
Se märkes och referenstabell på sidan 160.

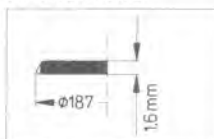
Diameters are expressed in terms of tenths of millimetres.
Tous les diamètres sont donnés en 1/10 de mm.
Alle Durchmesser sind in Zehntelmillimeter angegeben.
Todos los diámetros están dados en decimas de milimetro.
Alla diametrar angives i tiondels millimeter.

→ XM 185.823



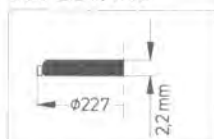
Dugena 991051, 991061

XM 187.815



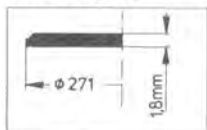
DUGENA E 5106-418

XM 227.816



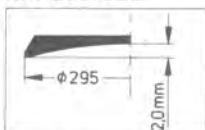
DUGENA E 4115, 318

XM 271.812



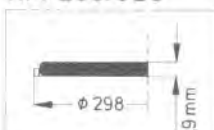
CASIO R 1613

XM 295.800



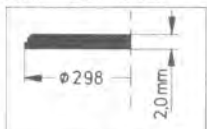
ORIENT OS561, OS575, OS578,
 OS598 m.Dr., OS5086, M103 GC

XM 298.820



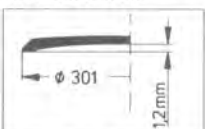
DUGENA I 4569, 718

XM 298.802



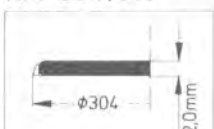
ORIENT 5096, M104 GC

XM 301.810



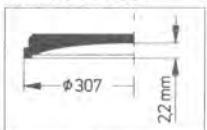
ORIENT 429-61760

XM 304.817



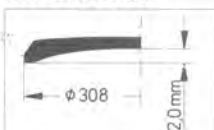
DUGENA A1127, 414

XM 307.813



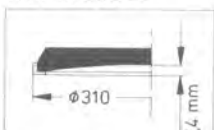
BWC 753082

XM 308.807



OLYMPIC

XM 310.814



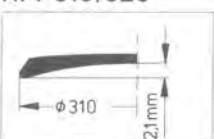
DUGENA A 5115, 518

XM 310.819



ADORA 169

XM 310.825



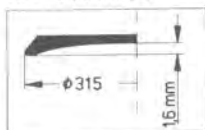
Zentra 496.152/15

XM 310.826



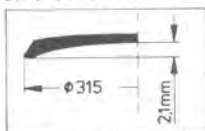
Olympic 1670-C

→ XM 315.809



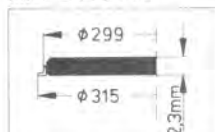
ORIENT OS 544 m. Drücker
M102 GC

XM 315.808



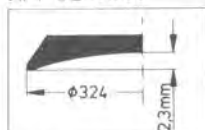
ORIENT OS-533 m. Drücker
M102 GC

XM 315.818



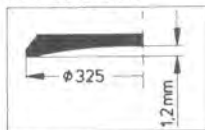
DUGENA I 4640 718

XM 324.801



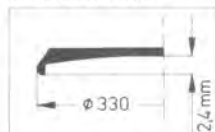
ORIENT OS 501 m. Drücker
M101 GC

XM 325.805



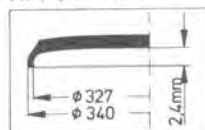
DUGENA 851 145

XM 330.821



SEIKO 330W. 18 GN

XM 340.811



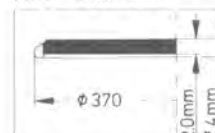
SEIKO 340 W14 GN

XM 360.822



ORIENT 16-622

XM 370.803



ORFINA PORSCHE DESIGN

XM 373.804



ORFINA PORSCHE DESIGN

Mineral glass imitation of plastics
Imitation en plastique des verres minéraux
Mineralglas-Imitationen aus Kunststoff
Cristales minerales imitaciones de plástico
Mineralglas-Imitation av plast

YFO · YBO · DIA-GF/CF

YFO



YFO 180–350 ○

Imitation of plastics, flat, colourless
Imitation en plastique, plat, transparent
Imitation, flach, farblos, aus Kunststoff
Imitaciones, plano, incoloro, de plástico
Imitation, flat, färglös, av plast

Color-System:
white, blanc, weiss, blanco, vit

YBO



YBO 270–350 □

Imitation of plastics, domed, colourless
Imitation en plastique, bombé, transparent
Imitation, bombiert, farblos, aus Kunststoff
Imitaciones, abombado, incoloro, de plástico
Imitation, välv, färglös, av plast

Color-System:
white, blanc, weiss, blanco, vit

DIA-GF/CF



DIA-GF/CF 180 - DIA-GF/CF 352 ○

Diaplan glass, armoured low patented
Genève rond plat armé mince brevet déposé
Diaplanglas armiert, flach, patentrechtlich geschützt
Cristales diaplan armado, extra plano, patentado
Armerat diaplanglas, lägt (patenterat)

Color-System:
gold/silver, or/argent, gold/silber, dorado/
plateado, guld/silver

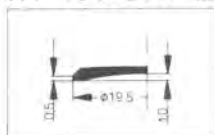
YPL

Mineplan – Watch glass plates extra hard 42 x 42 x 1,2 mm
Mineplan – Plaques des verres de montre très dur 42 x 42 x 1,5 mm
Mineplan – Uhrglasplatten extra hart
Mineplan – Placas para confeccionar duro
Mineplan – Glasplattor extra hard

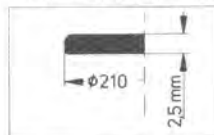
XY 195 - 340 Ø

Special mineral glass imitation of plastics
 Imitation en plastique des verres minéraux spéciaux
 Mineralglas Sonderformen Imitationen aus Kunststoff
 Cristales minerales especiales imitaciones de plástico
 Special Mineralglas-Imitation av plast

→ XY 195.206 III

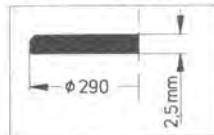


XY 210.351 III



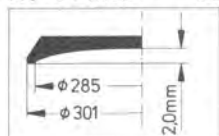
R.PFISTERER 23K
 DUGENA V 2215 718

XY 290.352 III

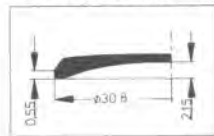


R.PFISTERER 24K

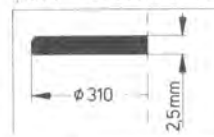
XY 301.219 III



XY 308.207 III

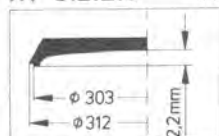


XY 310.353 III



R.PFISTERER 29K

XY 312.218 III



ENICAR 167 07 109

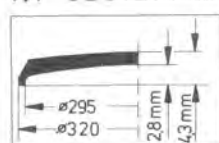
XY 317.209 III



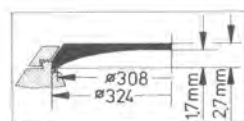
XY 320.208 III



XY 320.214 III

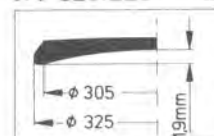


XY 324.210 III



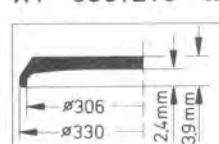
Candino

XY 325.220 III

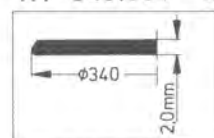


DUGENA 851 145

XY 330.215 III

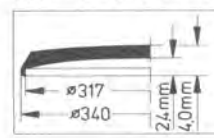


XY 340.354 II



Seiko 340 W 18 GN

XY 340.216 III



Glasses LCD
Verres LCD
LCD-Gläser
Cristales LCD
LCD-Glas

(GB)

LCD Glasses

The flat mineral glasses on page 144 are very often suitable for LCD watches. The number of imprinted LCD glasses in this catalogue is still very limited. However, we offer a considerable number of LCD sheets, all in all 9 different sized masks in 3 different colours. This enables you to fit glasses to quite a large number of watches with only a fairly small stock. The grid on the back of the sheets will help you to determine the exact position of the mask, with our copying machine 'Verapid'. These sheets can be used for all sorts of shapes as well as ordinary round glasses.

(F)

Verres LCD

Les verres minéraux plats page 144 conviennent le plus souvent aux montres LCD. L'offre des verres imprimés LCD est encore limitée dans ce catalogue. Par contre, nous vous présentons un grand nombre de plaques LCD qui offrent 9 ouvertures différentes de fenêtre et chacune dans 3 couleurs d'impression. Ainsi le spécialiste peut équiper un grand nombre de montres avec un petit stock. La grille, imprimée au dos de la plaque, sert à positionner l'ouverture. Avec notre Machine à tailler 'Verapid'. Ces plaques conviennent aux verres de forme comme aux verres ronds.

(D)

LCD-Gläser

Häufig sind für LCD-Uhren die flachen Mineralgläser von Seite 144 geeignet. Das Angebot in diesem Katalog an bedruckten LCD-Gläsern ist noch begrenzt. Dafür wird ein großes Angebot an LCD-Platten vorgelegt, die insgesamt 9 verschiedene Fensterausschnitte in 3 Druckfarben im Moment enthalten. So kann der Fachmann mit einem kleinen Lager eine große Zahl von Uhren verglasen. Das Gitternetz auf der Rückseite dieser Platten dient zum Anzeichnen der Lage des Ausschnittes. Zum direkten Kopierfräsen vom Gehäuse ist die Maschine 'Verapid' besonders geeignet.

(E)

Cristales LCD

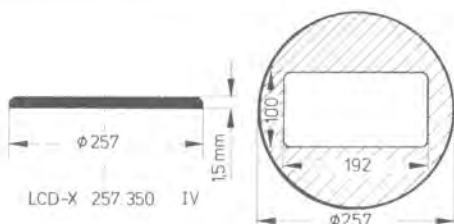
Con frecuencia, los cristales minerales planos de la página 144 se utilizan también para los relojes LCD. En este catálogo aún está limitada la oferta de los cristales LCD impresos. Debido a esto, se ha presentado una gran oferta de placas LCD, que por el momento consta de 9 diferentes tamaños de ventana impresos en tres diferentes colores. De esta manera, las personas que trabajan dentro del ramo pueden llegar a colocar una gran cantidad de cristales teniendo un almacén de tamaño reducido. Las líneas impresas al reverso de estas placas, se utilizan para señalar la posición de los cortes. Para fresados copiados directos de la caja la máquina verapid es apropiada en particular. Estas placas se utilizan tanto para cristales de forma como para redondos.

(S)

LCD-Glas

Många av LCD uren har plana mineralglas av vilka på sidan 144 visas en del. Vårt erbjudande i denna katalog av tryckta LCD-glas är tämligen begränsat. Därför har vi ett större utbud av ämnen i form av LCD-plattor för tillverkning. Totalt nio olika fönsterutförande och tre tryckfärger. Ur dessa plattor kan de flesta former av LCD-glas tillverkas, genom utsågning eller svarvning. Ett ruttmönster på ämnens baksida underlättar tillpassningen. För fräsning av planglas direkt efter boetten rekommenderas glasfräs-maskin „Verapid“.

LCD-X masked
LCD-X imprimé avec fenêtre
LCD-X bedruckt mit Fenster
LCD-X impresso con ventana
LCD-X tryckt med fönster



LCD masked in blue, brown and black, 42 x 42 mm
LCD imprimée avec fenêtre dans les couleurs bleue, brune et noire, 42 x 42 mm
LCD Platten bedruckt mit Fenster, in den Farben braun, blau und schwarz, 42 x 42 mm
LCD Placas, impresso con ventanas en tres colores azul, café y negro, 42 x 42 mm
LCD Glasplattor, plexi, tryckt med fönster, bla, brun, svart, 42 x 42 mm



LCD-VR 125 x 65
LCD-VR 170 x 80
LCD-VR 185 x 70
LCD-VR 200 x 80
LCD-VR 200 x 135

LCD-VR 200 x 170
LCD-VR 205 x 95
LCD-VR 220 x 125
LCD-VR 240 x 80

LCD-VR 220 x 65 / 125 x 65

2 window black printing, 2 fenêtres imprimé en noir,
2 Fenster schwarzer Druck, 2 ventanas impresso nero,
2 fönster svart tryckt

1. measure width of the window opening, 2. measure height of the window opening
- 1 dimension largeur de l'ouverture de fenêtre, 2 dimension hauteur de l'ouverture de fenêtre
1. Maß Fensterbreite, 2. Maß Fensterhöhe
- 1 medida anchura de la ventana, 2 medida altura de la ventana
1. Mått fönsterbredd, 2. Mått fönsterhöjd

LCD Watch glass plates, clear
LCD Plaques des verres de montre transparentes
LCD Uhrglasplatten, glasklar
LCD Placas para confeccionar transparente
LCD Glasplattor, plexi, glasklar

LCD 42 x 42 x 1,0 mm
LCD 42 x 42 x 1,5 mm
LCD 42 x 42 x 2,0 mm
LCD 100 x 100 x 2,0 mm

YPL

Mineplan – Watch glass plates extra hard 42 x 42 x 1,2 mm
Mineplan – Plaques des verres de montre très dur 42 x 42 x 1,5 mm
Mineplan – Uhrglasplatten extra hart
Mineplan – Placas para confeccionar duro
Mineplan – Glasplattor extra hard

(GB)

LED Glasses

Glasses for watches with an LED display are made of a special red material. Its light transparency has been calculated in such a way that it emits the light of the discharge tube but covers the surrounding area, like the wires. There are also green and yellow diodes for technical applications. So far, these have not been used for watches, however. Most watches with LED display are priced very low, and repairs are therefore very rare. This is the reason why the range of LED glasses in this catalogue has been kept to a minimum. For special cases you can always use LED sheets and cut out the required sizes yourself.

(F)

Verres LED

Les verres pour montres, appelés LED, sont fabriqués à partir d'une matière extrêmement rouge. Cette matière est conçue de manière telle qu'elle laisse filtrer la lumière du tube luminescent sans laisser apparaître les filaments et les structures environnantes. Il existe des techniques d'affichage par diodes lumineuses vertes et jaunes qui ne sont pas encore employées jusqu'à présent dans l'horlogerie. La plupart des montres LED sont fabriquées à des prix tellement bas que leur réparation est rarement effectuée. C'est la raison pour laquelle l'assortiment des verres LED est demeuré petit dans ce catalogue. Dans des cas spéciaux, on peut utiliser les plaques disponibles pour verres de montres LED et fabriquer soi-même des verres plats.

(D)

LED-Gläser

Uhrgläser für Uhren mit LED-Anzeige sind aus einem besonderen roten Material hergestellt. Dieses ist in der Lichtdurchlässigkeit so berechnet, daß es das Licht der Leuchtrohren gut durchläßt, aber die Umgebung, wie z. B. die Schaltdrähte, nicht erkennen läßt. Es gibt in der Technik auch grüne und gelbe Leuchtdioden. Diese sind aber im Uhrenbereich bisher nicht angewandt. Auch sind die meisten Uhren mit LED-Anzeige in so niedriger Preislage hergestellt, daß selten Reparaturen erfolgen. Dieses ist der Grund, weswegen das Sortiment in LED-Gläsern in diesem Katalog klein gehalten ist. Für besondere Fälle können Sie auf die lieferbare LED-Uhrglasplatte zurückgreifen und sich daraus flache Gläser selbst anfertigen.

(E)

Cristales LED

Los cristales para relojes con indicador LED, se fabrican de un material rojo especial. En este material, la transmisión de la luz está calculada de tal forma que se transmita la luz de los tubos luminosos sin dejar ver los contornos, como podría ser por ejemplo, los hilos conmutadores. Dentro de esta técnica existen diodos luminosos, ya sean de color verde o amarillo. Hasta el momento, estos últimos aún no han sido utilizados en el campo de la relojería. La mayoría de este tipo de relojes con indicador LED, son fabricados a un precio tan bajo, que rara vez se mandan a reparación. En casos especiales, se puede escoger alguna de las placas LED disponibles y Ud. mismo podrá fabricar un cristal plano.

(S)

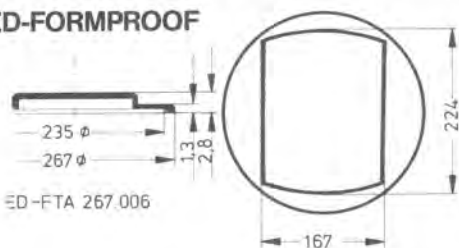
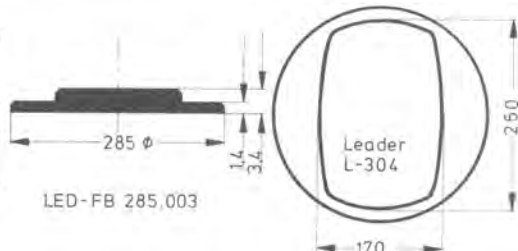
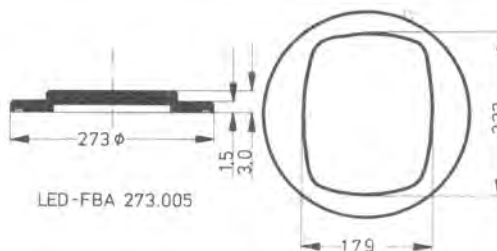
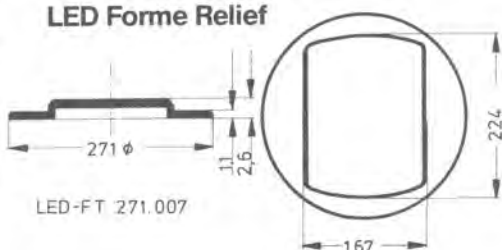
LED-Glas

Dessa äro framställda ur ett rött plastmaterial vars infärgning är beräknad så att lysdioderna är fullt synliga, men de kringliggande detaljerna ej syns genom glaset. Det förekommer på sådana ur även gröna eller gula glas. Dessa har av oss inte framställts p.g.a. att sådana ur är tämligen billiga, varför reparationskostnaderna måste hållas låga. Finnes ej passande glas i katalogen kan Ni själv utforma sådana ur våra röda LED-Glasplattor.

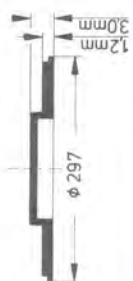
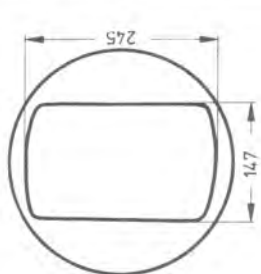
LED-PLLED, flat, red
LED, plat, rouge
LED, flach, rot
LED, plano, rojo
LED, flat, ródLED-PL 192, 202, 241, 268, 280,
281, 282, 283, 284, 291,
292, 293Color-System:
clear, transparent comme du cristal, Tüte
durchsichtig, transparente, glasklar**LED**LED-Watchglass sheets
LED-Plaques pour verres de montres
LED-Uhrglasplatten
LED-Placas para confeccionar cristales de reloj
LED-Glasplattor, plexi

LED 40 x 40 x 1,5 mm

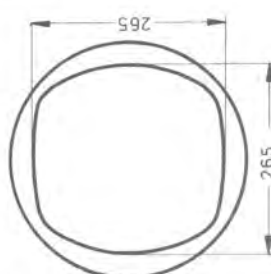
LED 100 x 100 x 1,5 mm

ED-FORMPROOF**LED Forme Relief**

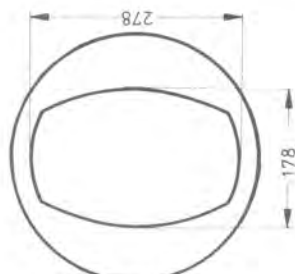
Glasses LED-Formproof see following pages. Explanation of Formproof system page 72.
Verres LED Formproof voir pages suivantes. Explication du système Formproof page 72.
LED-Formproofgläser siehe folgende Seiten. Systemerläuterung Formproof Seite 72.
LED-cristales formproof v. paginas siguientes. Explicaciones de sistema formproof página 72.
LED-formproof-glas se följande sidor. Systemförklaring formproof sidan 72.



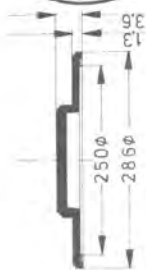
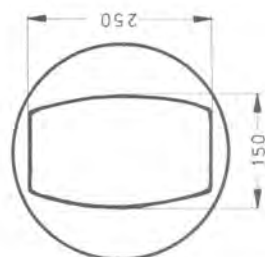
LED-F-T 297.001



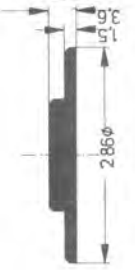
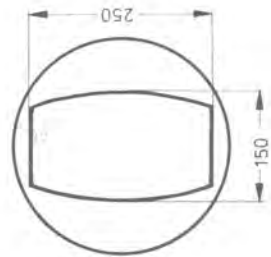
LED-F-B 315.008



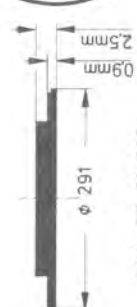
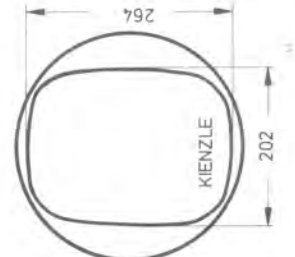
LED-F-B 326.009



LED-F-T 286.010



LED-F-T 286.004



LED-F-B 291.002



N · HW · HWS · SAV

- All even numbers
Tous les numéros pairs
Alle geraden Nummern
Todos los números pares
I alla jämna nummer

Glasses for pocket-watches
Verres pour montres de poche
Taschenuhrgläser
Cristales de bolsa
Fickursglas

N



N 380 – N 500

Lentilles ordinarily domed
Lentille bombé normale
Lentille normalgewölbt
Lentille normalmente abombado
Lentille normalvälv

Color-System:
black, noir, schwarz, negro, svart

HW



HW 380 – HW 400

Empire étanche highly-domed, extra strong
Empire étanche bombé très épais
Empire étanche hochgewölbt extra stark
Empire étanche muy abombado, reforzado
Empire étanche högvälv vattentätt

Color-System;
red, rouge, rot, rojo, röd

HWS



HWS 380 – HWS 400

Empire étanche highly domed, with step
Empire étanche bombé a talon
Empire étanche hochgewölbt mit Stufe
Empire étanche muy abombado, escalonado
Empire étanche högvälv vattentätt med ansats

Color-System:
red, rouge, rot, rojo, röd

M



M 380 – M 500

Miconcave slightly domed
Miconcave bombé
Miconcave Schalenform flachgewölbt
Miconcave poco abombado
Miconcave lagvälv

Color-System:
grey, gris, grau, gris, grå

SAV



SAV 380 – SAV 500

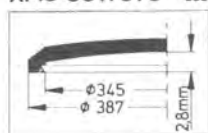
Hunter extra thin for hunter calibres
Savonnette extra mince destiné
aux montres-savonnette
Savonnette extra dünn für Sprungdeckeluhren
Savonnette super-delgado para relojes con tapa
extra tunt Savonnette för fickur med springlock

Color-System:
light green, vert clair, hellgrün, verde claro,
ljusgrön

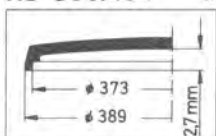
Special-glasses for pocket-watches
Verres spéciaux pour montres de poche
Taschenuhrglas Sonderformen
Cristales de bolsa especiales
Fickursglas, special



XAC 387.575 III

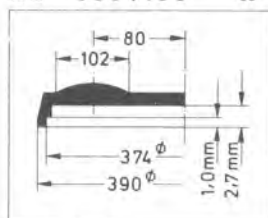


XS 389.434 II



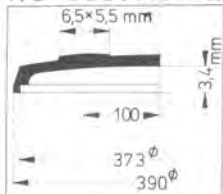
Mikado 4G 4016

XS 390.135 II



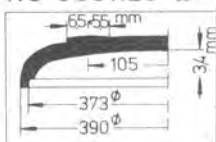
Orient 16-017

XS 390.119 II



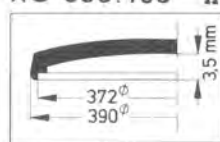
Orient 16-916

XS 390.123 II



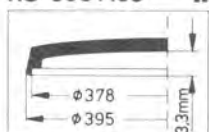
Orient 16-870

XS 390.163 II



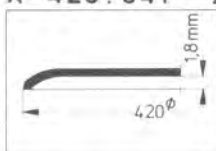
Orient 16-974

XS 395.193 II



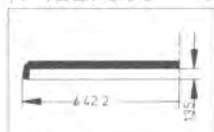
ORIENT 16-478

X 420.041 I



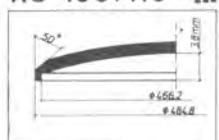
Kienzle 146 / 30

X 422.055 I



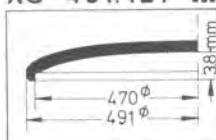
Maurice Guerdat
No. 32 59 / 4

XS 485.115 III



Hanhart Kal. 1022

XS 491.121 III



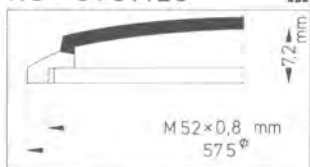
Hanhart Kal. 1012

XS 538.122 III



Hanhart

XS 575.120 III



Hanhart Kal. 1021

Key to Brands and Calibres
Marques de montres
Marken- und Kaliberschlüssel
Marcas y número de calibre
Märkestabell

(GB)

Key to Brands and Calibres

As far as we know the watches and calibres, to which our special forms round correspond, we indicated these next to the drawings of the glasses. Unfortunately in many cases only the case manufacturer and not the watch brand is known. In this list you will find the watch glasses for these brands as they are contained in the catalogue. Further references and supplements will always be appreciated by the wholesale trade and the manufacturer.

(F)

Marques de montres

Lorsque nous connaissons les marques et les calibres des montres pour lesquels nos verres ronds spéciaux ont été conçus nous les précisons avec nos propres références. Malheureusement dans la plupart des cas nous ne connaissons que le nom du fabricant de boites mais par la marque de la montre. Dans la liste vous trouverez, groupés par marques, les verres de montres correspondants et qui figurent dans notre catalogue. Grossistes et fabricants vous seront reconnaissants des compléments d'information que vous pourrez leur fournir à ce sujet.

(D)

Markenschlüssel

Soweit uns die Uhrenmarken und Kaliber, für welche die Rundglas-Sonderformen passen, bekannt sind, haben wir diese bei den Gläserzeichnungen angegeben. Leider ist in vielen Fällen nur der Gehäusehersteller und nicht die Uhrenmarke bekannt. In dieser Liste finden Sie nach Marken zusammengefaßt die für diese Marken im Katalog enthaltenen passenden Uhrgläser. Für Hinweise und Ergänzungen sind Großhandel und Hersteller jederzeit dankbar.

(E)

Marcas y numero de calibre

En la medida en que hemos conocido las marcas y calibres de los relojes que llevan cristales redondos de formas especiales, se han dado a conocer los dibujos de estos cristales. Desgraciadamente, en muchos casos solamente se conoce el fabricante de la caja, sin saber cuál es la marca del reloj. En esta lista, Ud. puede encontrar sintetizado de acuerdo a las marcas, los cristales para las marcas de reloj que contiene el catálogo. Estas indicaciones y complementos son siempre de gran ayuda para el mayorista y el fabricante.

(S)

Märkestabell

Såvida fabrikat och referenser är kända för oss, till vilka våra rundglas-specialformer är passande, har dessa medtagts i tabellen. Tyvärr förekommer i många fall att vi inte känner till urens märke och referenser, därför att vi samarbetar endast med beottillverkaren. Glasen är i tabellen ordnade märkesvis.

Key to Brands and Calibres
Marques de montres
Marken- und Kaliberschlüssel
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Märkestabell

Ref.-Nr.	SK-Nr.	Ref.-Nr.	SK-Nr.	Ref.-Nr.	SK-Nr.
Adora		Citizen		Enicar	
169	XM 310.819	403	CPB 136	160.71.01	XAO 332.580
Arctos		607	CPB 125	167.07.109	XY 312.218
	X 321.016	609	CPB 125	771.14.01	XAO 235.581
	X 323.017	1203	NB 316		
Aristo		1206	ATC 288		
17...	FB 208.958	1212	HW 278		
32.../2	FTA 325.934	1308	HB 294	Guerdat	
33.../2	FTA 325.934	1417	NB 316	3258/4	X 364.056
34.../2	FTA 325.934	2502	NB 278	3259/4	X 422.055
35.../2	FTA 325.934	2504	NB 278		
57...	FT 325.950	31-201	XS 308.107		
5721	FTA 311.395	51-102	XS 294.110	Hanhart	
58...	FT 325.950	51-105	CLH 268/80	Kal. 1012	XS 491.121
mit Langlupe	XAG 324.546	51-201	XS 312.106	Kal. 1021	XS 575.120
mit Langlupe	XAC 324.547	51-201	XS 310.109	Kal. 1022	XS 485.115
T 25...		51-203	XS 312.108		XS 538.122
Glas ohne Minutenring	XAC 325.517	54-0046	XS 321.424		
T 36		54-0054	XS 330.425	Inter Quarz	
Glas ohne Minutenring	XAC 325.517	54-0153	XS 310.426	323	FB 319.397
T 37		54-00200	XS 311.423		
Glas ohne Minutenring	XAC 325.517	54-03421	XAC 311.588	Junghans	
T 37		54-03961	XAG 311.613	0805	XAC 322.572
Glas ohne Minutenring	XAC 325.517	54-03961	XAC 311.585	0807	XAG 322.571
	X 312.013	54-0408	XAC 311.585	0836	X 325.051
	X 318.012	54-0408	XAC 286.586	0836	X 325.054
Minutenring für		54-04201	XAC 201.587	0837	X 325.051
XAC 325.517	X 358.520	54-04202	XAG 201.606	0872	X 325.051
		54-04281	XAC 281.604	0879	X 325.050
		54-04801	XAC 283.584	93/1954	X 310.028
		54-05141	XAC 211.603	93/1954	X 312.027
		54-05142	XAG 211.602	93/1954	X 314.006
		54-7240	FT 302.388	93/1954	X 316.007
		54-07250	FT 303.389	93/1954	X 318.008
		54-07780	FT 302.374	756-0234	XAC 316.560
		54-3851	XAC 306.605	für Minutenring	XAO 327.400
		55-513	XS 342.105		X 320.037
		5602	HW 150		X 318.040
		85-2139	X 223.057		XAC 292.508
		mit Dachflächen	XAC 310.538	Kasper	
			XAC-FAC 310.539	Cal. 901	X 292.021
			XS 311.111		
Bifora		Diehl		Kienzle	
1561	FEA 291.907	42197-0563	X 224.049	01/22	NB 278
1562	FEA 181.908			01/26	NB 278
BWC		Dugena		01/32	X 302.020
435003	HW 188	512.013	XAC 316.560	01/42	X 302.020
753082	XM 307.813	851.145	XY 325.220	01 52/56	X 275.039
793010	ATC 313	851.145	XM 325.805	08 13/17	X 280.024
795013	DIA-C 317	859 239	FBA 310.373	08 13/17	XAC 280.509
813008	ATCB 302	991051	XM 185.823	08/27	XAC 280.510
953004	XAO 322.554	991061	XM 185.823	08/27	XAG 315.500
953004	DIA-G/C 326	A 1127.414	XM 304.817	08 32/36	XAC 315.501
953011	XAC 307.561	A 5115.518	XM 310.814	08 32/36	XAC 315.501
		E 4115.318	XM 227.816	08/41	X 285.038
		E 5106-418	XM 187.815	08/42.46	X 320.026
		I 4569.718	XM 298.820	08 62/66	X 315.025
		I 4640.718	XM 315.818	08 62/66	XAG 320.502
		J 3747.718	XAC 311.601	08 62/66	XAC 320.502
		J 4180.058	XAC 287.600	08/9311	ATC 29.
		Monza	XAG 288.589	08/9611	HB 32
		Monza	XAC 288.590	09 12/16	X 195.02
		Prätina	FB 312.392	10/823	FTA 360.9
		V 2215.718	XY 210.351	13 42/43	XAC 320.5
Candino					
	FEA 308.359				
	FB 319.393				
	XY 324.210				
	XAC 335.576				
Casio					
R 1613	XM 271.812				
Certina					
6801-002	FB 301.355				
6801-003	FB 329.356				
68-004	FBA 312.352				
68-007	FBA 323.353				
69-002	FB 302.354				
7701-001	FTA 312.351				
982/1 16,0-0	ATC 161				
982/1 28,5-6	ATCR 287				
982/1 29,5-31	XAG 297.519				
982/1 29,5-3/5	XAC 297.518				
982/1 30,5-7	XAC 307.516				
982/1 31,0-3	ATCH 313				
982/1 31,0-13	CAC 312				
982/1 31,5-9	XAC 316.515				

Key to Brands and Calibres
Marques de montres
Marken- und Kaliberschlüssel
Marcas y número de calibre
Märkestabell

Ref.-Nr.	SK-Nr.	Ref.-Nr.	SK-Nr.	Ref.-Nr.	SK-Nr.
13 42/46	XAG 320.502	Omax	XAO-FAC 279.138 XAO-FAC 281.137 XAO-FAC 286.139 XAG-FAC 286.609 XAG-FAC 286.610 XAO-FAC 316.140	OS 238	XS 314.181
13/9211	ATC 293			OS 252	XS 319.183
13/9221	N 396			OS 308	XS 314.417
15 12/16	X 195.023			OS 309	XS 314.417
051/N 52, 53	X 317.015			OS 310 mit Drücker	XS 314.180
059 11/25	XAG 225.513			OS 318 mit Drücker	XS 319.182
059 11/25	XAC 225.514			OS 318 mit Drücker	XS 319.416
060 11/21	XAC 310.510			OS 319 mit Drücker	XS 314.417
060 11/21	XAG 310.511			OS 322	XS 319.183
146/30	X 420.041			OS 326	XS 314.181
840 4700	X 320.032	OS 326 mit Drücker	XS 314.179		
852 1100	FTA 310.913	OS 327	XAC 306.568		
852 1200	FTA 310.914	OS 329	XS 319.182		
852 1300	FEA 310.915	OS 327	XS 319.184		
	LED-FB 291.002	5077 Speedmaster	OS 327	XS 319.184	
		5083	XAG 330.556	OS 337	XS 319.416
Laco		5083	XAC 330.552	OS 342 mit Drücker	XS 297.175
870	X 323.019	5118	XAC 225.551	OS 345	XAC 306.568
261/71/4	X 218.014	5117	XAC 225.550	OS 346 mit Drücker	XS 297.174
Electric	X 319.010	5117	XAC 225.555	OS 429-61760	XM 301.810
Electric	X 322.011	5123	XAG 330.557	OS 469 A 124	FB 320.400
Mechanic	X 332.018	5123	XAC 330.553	OS 501	XM 324.801
		5137	XAC 316.595	OS 533	XM 315.808
Lanco		5142	XAC 316.595	OS 541 mit Drücker	XS 319.184
	FEA 325.960	5200	XAG 316.548	OS 544	XM 315.809
		5200	XAC 316.549	OS 575	XM 295.800
Leader				OS 578	XM 295.800
L 304.102	LED-FB 285.003	Orfina		OS 711	XS 204.419
		Porsche Design	XM 370.803	OS 718	XS 204.419
		Porsche Design	XM 373.804	OS 729	XS 210.421
Lord				OS 5086	XM 295.800
AHS 493	FB 320.396			OS 5096	XM 298.802
				Geh. 469 135	XM 380.822
				Geh. 469 135 / A	XM 380.822
Mikado		Orient		FB	XM 306.315
4 G 3006	XAG-FAC 286.609	15-055	XAC 321.577	Dachflächen	XU-FAC 300.213
4 G 3006	XAC-FAC 286.610	15-057	XAC 307.578		
4 G 3008	XAG 296.611	15-121	XAC 271.570	Oscó	
4 G 3008	XAC 296.612	15-993	XAC 317.579	13	XAC 316.593
4 G 3009	XAG 300.614	16-017	XS 390.135	16/7	FB 289.346
4 G 3009	XAC 300.615	16-231	FB 318.367	16/25	FB 321.385
4 G 3010 C	XAG 311.613	16-239	XS 311.191	16/26	FB 321.385
4 G 4005	XS 294.431	16-244	XS 375.190	16/29	FE 318.383
4 G 4006	FE 295.446	16-265	XS 308.194	25-2	FT 300.345
4 G 4007	FB 302.447	16-306	FE 209.368	64/487	FT 309.381
4 G 4008	FB 302.443	16-418 ohne Lupe	XS 335.113	64/497	FB 289.346
4 G 4011	XS 316.432	16-419	XS 326.192	64/501	FB 299.347
4 G 4014	XS 350.433	16-420	XS 311.191	64/505	FBA 327.348
4 G 4016	XS 389.434	16-428	FT 300.369	64/513	FB 296.342
D 0006	FT 310.399	16-0457	FR 308.390	64/515	FB 296.342
		16-478	XS 395.193	64/519	FB 294.377
		16-622	XM 360.822	64/519/412	FB 296.344
Mildia		16-870	XS 390.123	64/521	FB 299.347
972002	FB 309.394	16-916	XS 390.119	64/525	FB 299.347
		16-924	XS 340.112	64/537	FB 296.342
Mondaine		16-959	XS 336.197	64/535	FT 261.376
VZ 10.18	FEA 308.359	16-966	XS 336.195	64/539	FB 325.778
		16-974	XS 390.163	64/541	FR 299.378
		16-983	XS 302.196	64/559	FB 294.377
Nino		16-985	XS 326.192	64/563	FB 325.778
N 18-27-205		16-991	XS 336.418	64/573	FB 321.385
mit Langlupe	FB 300.340	16-1059	XS 308.194	64/574	FB 321.385
		429-162.40	XAC 345.562	64/581	XAC 316.593
		OS 212		64/583	FB 289.346
Olympic		mit und ohne Drücker	XS 310.177	64/587	FBA 320.384
670 C	XM 310.826	OS 215	XS 308.176	64/589	FBA 320.384
999/2789	XM 308.807	OS 215 mit Drücker	XS 319.183	64/593	XAC 316.593
		OS 217	XS 310.178		
		OS 227	XS 319.184		

Fitting Tools
Dispositif de pose
Einsetzvorrichtungen
Dispositivos de colocación
Monteringsapparater

(GB)

STERNKREUZ-Fitting Tools

Fitting tool no. 38 with stirrup pliers.

This fitting tool is ideal for snap-in glasses. It is very good value for money and extremely sturdy. The pliers are reinforced at the points of maximum stress. The lower support for the chucks can be adjusted in height by means of a knurled nut. The basic tool can be supplemented by additional chucks for both round and shaped glasses. They all fit into the tool box.

The basic fitting tool is made up of:

- No. 380 Stirrup pliers, profile reinforced
- No. 382 Wooden box for all the parts including the supplement
- No. 383 Set of round, concave plastic chucks, sizes 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 38, 42, 46, 50
- No. 384 Set of round, convex rubber chucks, sizes 0 a and 1 a, 3 a, 5 a, 7 a

(F)

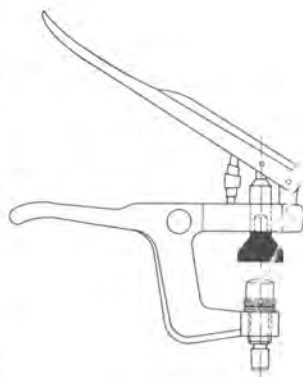
Dispositif de pose STERNKREUZ No. 38

Dispositif de pose No 38 avec pince recourbée en arc. Ce dispositif de pose, économique et solide, est conçu spécialement pour les verres à poser sous tension. Cette potence à main est spécialement renforcée aux points de tension. Cette potence à main est spécialement renforcée aux points de tension, une vis permet le réglage en hauteur des tasseaux. L'équipement de base peut être complété par des tasseaux ronds et des tasseaux de forme. Tout ce matériel se loge parfaitement dans son coffret.

L'équipement de base de ce dispositif se compose de:

- No. 380 Pince recourbée en arc renforcée
- No. 382 Coffret bois pour classer toutes les pièces (ainsi que les pièces complémentaires)
- No. 383 1 jeu de tasseaux ronds, creux, en métal, diamètres 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 38, 42, 46, 50
- No. 384 1 jeu de tasseaux ronds bombés en caoutchouc moulé

Fig. 4



Fitting Tools
Dispositif de pose
Einsetzvorrichtungen
Dispositivos de colocación
Monteringsapparater

(GB)

It can be supplemented by:

- No. 388 Set of round, concave plastic chucks, sizes 19, 21, 23, 25, 27, 29, 31, 33, 34, and 1 plane thrust piece
- No. 283 Set of concave plastic chucks for shaped glasses sizes RX 1 to RX 6, RZ 1 to RZ 3, T 1, T 2, E 1, E 2, (13 pieces)
- No. 385 Set of convex rubber chucks, shape sizes RA 1, RA 3

Special chucks suitable for press and pliers:

- No. 48 and 51 made of plastic for Hanhart stop watches
- No. 48 and 51 made of metal for Hanhart stop watches
- No. 55 60, 65, 70 made of plastic for alarm-clock glasses

STERNKREUZ-Fitting Tool No 88

This fitting tool with a screw press and a set of brass chucks designed especially for fitting armoured glasses and other glasses for water-tight watches which require

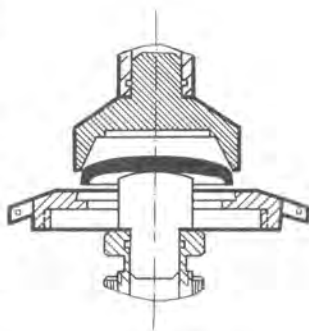
(F)

Et peut être complété par:

- No. 388 1 jeu de tasseaux ronds, creux, en plastique injecté, diamètres 19, 21, 23, 25, 27, 29, 31, 33, 34 et 1 tasseau plat
- No. 283 1 jeu de 13 tasseaux creux, de forme, en plastique injecté, grandeurs RX 1 à RX 6, RZ 1 à 1 RZ 3, T1, T2, E1, E2.
- No. 385 1 jeu de tasseaux bombés en caoutchouc moulé, grandeurs de forme RA 1, RA 3.

Tasseaux spéciaux pour presse et pince:

- No. 48 et 51 en plastique pour chronographes Hanhart
- No. 48 et 51 en métal pour chronographes Hanhart
- No. 55 60, 65, 70 en plastique pour réveils.



Dispositif de pose STERNKREUZ No 88

Ce dispositif avec potence à vis et jeu de tasseaux laiton a été spécialement conçu pour poser les verres armés et les autres verres de montres étanches qui



Fitting Tools
Dispositif de pose
Einsetzvorrichtungen
Dispositivos de colocación
Monteringsapparater

(GB)

high pressure to fit. The screws align perfectly. A special set of supports makes sure that the chucks can be screwed into the press absolutely parallel even if the threads are worn from constant use. This not only extends the life of the press but it also means that there is no breakage when fitting the glasses. The purchase of one of these presses is therefore a worthwhile investment.

The basic plate of the fitting tool No. 88 is already prepared to take one set of chucks for shaped glasses and a glass remover which can remove even the tightened fitting glass from the case. These parts together make up the Universal Fitting Tool No. 88 U.

The screw press of both fitting tools can be changed to horizontal use if required. This is particularly useful when the fitting tool is used to fit snap-in glasses. With armoured glasses, it is easier to use the tool vertically since that way the glass can be put onto the case loosely before the chuck is used from above.

(F)

demandent une grande pression. Cette potence est très précise. Les supports de tasseaux sont conçus de manière telle que lorsque les tasseaux sont vissés ils restent bien parallèles malgré une usure du filetage provoquée par un usage prolongé. De ce fait, non seulement la longévité de l'ensemble est assurée mais surtout cela évite de casser des verres au moment de les poser. Ainsi l'investissement de ce dispositif s'amortit dans un délai rapide.

Le plateau de cet ensemble est déjà préparé à recevoir un jeu de tasseaux pour verres de forme et un outil avec lequel on peut enlever les verres même s'ils sont fixés très solidement à la boîte. Tout cet ensemble porte la référence: Dispositif universel de pose No. 88 U.

Cette potence à vis peut être fixée sur le plateau pour un emploi en position horizontale. Cette position convient très bien pour poser les verres sous tension. Avec les verres armés la solution de la potence en position verticale est meilleure parce que le verre est mieux placé sur la boîte avant de l'enfoncer avec le tasseau supérieur.



Fitting Tools
Dispositif de pose
Einsetzvorrichtungen
Dispositivos de colocación
Monteringsapparater

(GB)

The glass remover No. 881 can also be supplied individually. Its function can be seen from the illustrations. The glass is changed into position above the rim of the case by means of the jaw (with the help of the horizontal screw). The case is then pressed away from the glass in a downward movement by a small plastic pressure block attached to the vertical screw.

The fitting tools Nos. 88/88 U and 98 are designed in such a way that they can be set up next to each other and so give you a truly complete set of tools always ready for use.

All the parts for STERNKREUZ Fitting Tools can be supplied individually. The Universal fitting tool, STERNKREUZ No. 88 U consists of

- No. 882 Base plate for all the following parts
- No. 880 Screw press, to be installed vertically or horizontally by changing the foot
- No. 881 Glass removing appliance
- No. 887 Supports, 1 small S 1, 2 large S 2
- No. 888 Universal support
- No. 883 Set of round, concave metal chucks, sizes 16 S to 35 S (20 pieces).
- No. 884 Set of round, concave plastic chucks, brass sizes 12, 14 and 35, 36, 38, 42, 46 and 50

(F)

L'outil No 881 pour enlever les verres est livrable séparément. Son utilisation est décrite par les croquis. Le verre est serré horizontalement, au ras de la lunette, entre deux mâchoires coupantes. Puis la boîte est repoussée verticalement, vers le bas, par un petit bloc plastique qui la sépare du verre.

Les dispositifs No 88, 88 U et 98 sont construits de manière qu'on puisse les placer les uns à côté des autres afin d'avoir à portée de main, sur le plan de travail, un outillage complet de pose de verres.

Les éléments complémentaires sont livrables avec tous les dispositifs STERNKREUZ.

Le dispositif de pose STERNKREUZ No 88 U universel et complet comprend:

- No. 882 Plaque de base permettant le classement des pièces ci-après:
- No. 880 Presse à vis se fixant horizontalement ou verticalement en retournant le support
- No. 881 outil pour enlever les verres
- No. 887 porte-tasseaux 1 petit réf. S 1, 2 grands réf. S 2
- No. 888 1 porte-tasseaux universel
- No. 883 1 jeu de 20 tasseaux creux, ronds réversibles, en laiton diamètres 16 S à 35 S



Fitting Tools
Dispositif de pose
Einsetzvorrichtungen
Dispositivos de colocación
Monteringsapparater

(GB)

- No. 885 Set of round, convex rubber chucks, sizes 1 a (metal reinforced) 3 a, 5 a and 7 a
- No. 886 Pair of chucks for smallest glasses, size 9 S (metal) and Oa (plastic)
- No. 283 Set of concave plastic chucks for shaped glasses sizes RX 1 to RX 6, RZ 1 to RZ 3, T 1, T 2, E 1, E 2, (13 pieces)

supplementary set:

- No. 385 Set of convex rubber chucks, shape sizes RA 1, RA 3

(F)

- No. 884 1 jeu de 8 tasseaux creux, ronds, en plastique injecté métallisé, diamètres 12, 14, 35, 36, 38, 42, 46, 50
- No. 885 1 jeu de 4 tasseaux ronds, bombés en caoutchouc injecté réf. 1a, réf. 3a, 5a, 7a,
- No. 886 1 paire de tasseaux ronds pour verres très petits diamètre 9 S en métal et Oa, en plastique
- No. 283 1 jeu de 13 tasseaux creux, de forme, en plastique injecté grandeurs RX 1 à RX 6, RZ 1 à RZ 3, T 1, T 2, E 1, E 2

et en complément:

- No. 385 1 jeu de tasseaux de forme, en caoutchouc moulé réf. RA 1, RA 3.

STERNKREUZ Fitting Tool no. 98

STERNKREUZ has created a new tool for fitting glasses No. 98. It consists of a set of chucks in metal and plastic, designed in such a way that even watch glasses can be fitted which, until now, presented certain difficulties. This is particularly the case for FORMPROOF GLASSES, TOP GLASSES, MINERAL GLASSES.

Dispositif de pose STERNKREUZ No. 98

STERNKREUZ a créé un nouveau jeu de tasseaux réf. 98 pour poser les verres de montres. Composé de tasseaux en métal et en plastique construits spécialement pour poser tous les verres de montres, y compris ceux qui présentaient jusqu'à ce jour quelques difficultés. Ceci est particulièrement le cas pour les verres DE FORME RELIEF, A JUPE, MINÉRAUX.



Fitting Tools
Dispositif de pose
Einsetzvorrichtungen
Dispositivos de colocación
Monteringsapparater

(GB)

The new chucks fit precisely into screw press No. 880 which is part of the fitting tools Nos. 88 and 88 U. The same chucks can also be used with a special set of supports for any tools, which are on the market now. The chucks are reversible which results in a graduation of the metal chuck of 0,5 mm. The plastic chucks, being reversible, can also be used for different cases. Instructions for use are supplied with tool No. 98.

STERNKREUZ No. 98

The Fitting tool STERNKREUZ No. 98 for special round glasses to be used in the press No. 880 consisting of:

- No. 982 Box for mounting of all the chucks following parts
- No. 983 Set of round metal chucks, 18 X to 36 X, 38 X, 40 X, 46 X, 40 XH (22 pieces)
- No. 984 Set of round plastic chucks, 1 F, 2 F, 3 F, 4 F (4 pieces)
- No. 980 Set of supports, 2 pieces S 3, 2 pieces S 4 (4 pieces)

and has a supplementary set of:

- No. 981 Set of supports for lever press, B 1, B 2, B 3, B 4, B 5 (5 pieces)

(F)

Ces nouveaux tasseaux s'adaptent très bien à la potence à vis réf. 880. Ils sont inclus dans l'outil à poser les verres réf. 88 et 88 U. Ces mêmes tasseaux peuvent être également employés avec des potences à levier que l'on trouve sur le marché en utilisant les supports réf. 981. Les tasseaux sont réversibles et permettent une gamme de dimensions tous les 5/10 de mm, les tasseaux en plastique, réversibles également, peuvent être utilisés pour différentes boîtes.

Un mode d'emploi est joint au jeu de tasseaux réf. 98.

Le dispositif de pose de verres ronds de formes spéciales STERNKREUZ No 98, utilisable avec la potence No 880, comprend:

- No. 982 Coffret pour les pièces ci-dessous:
- No. 983 1 jeu de 22 tasseaux creux en métal 18 X à 36 X, 38 X, 40 X, 46 X, 40 XH (22 pièces)
- No. 984 1 jeu de 4 tasseaux en plastique injecté 1 F, 2 F, 3 F et 4 F (4 pièces)
- No. 980 1 jeu de porte-tasseaux, 2 pièces S 3, 2 pièces S 4 (4 pièces)

et en complément:

- No. 981 1 jeu de 5 porte-tasseaux pour presse à levier B 1, B 2, B 3, B 4, B 5 (5 pièces)



Cabinets
Armoires de rangement
Aufbauschränke
Muebles
Glasförvaringsskap

(GB)

STERNKREUZ Storage Cabinets

SK storage cabinet systems help keep your stockroom tidy. They are mainly intended for the storage of watch glasses, and are purpose made as regards their dimensions. By virtue of their versatility they can, however, also be used for any other conceivable parts. You can start off with a base, a cabinet No. 100 and a lid. At a later stage, an unlimited number of cabinets can be added between base and lid. SK cabinets are perfectly steady even at a height of two metres.

The cabinets have slots for four, six or eight longitudinal compartments. The wooden partitions can be ordered separately. These have small slots to subdivide the compartments with dividers for round or shaped glasses.

For easier stock control you can get our SK card index from your wholesaler – completely free of charge.

The various storage cabinets.

- No. 112 Base
- No. 114 Lid
- No. 100 Storage cabinet, empty, with slots for shaped and/or round watch glasses
- No. 130 Storage cabinet for round watch glasses, with 5 wooden partitions and 50 dividers

(F)

Armoires de rangement STERNKREUZ

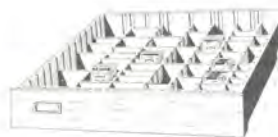
Les armoires de rangement STERNKREUZ apportent de l'ordre dans votre stock. Elles sont particulièrement prévues pour le classement des verres de montres, leurs dimensions sont adaptées. Elles se prêtent aussi au rangement de toutes les fournitures existantes par leurs possibilités de classification. Vous pouvez commencer par un socle, une armoire No 100 et un couvercle. Les différentes armoires peuvent être insérées plus tard entre le socle et le couvercle. Les armoires STERNKREUZ, empilées les unes sur les autres, restent encore stables sur une hauteur de 2 m.

Les armoires ont des fentes pour 4, 6 ou 8 séparations facultatives. Les séparations en bois peuvent être commandées séparément. Elles comportent des petites fentes destinées à recevoir des planchettes pour verres ronds ou pour verres de forme.

Pour votre contrôle de stock, votre grossiste vous livre le fichier STERNKREUZ sans frais supplémentaires.

Les différentes armoires:

- No. 112 socle
- No. 114 couvercle
- No. 100 armoire de rangement, sans séparation, avec fentes pour le classement des verres de forme ou des verres ronds



Cabinets
Armoires de rangement
Aufbauschränke
Muebles
Glasförvaringskap

(GB)

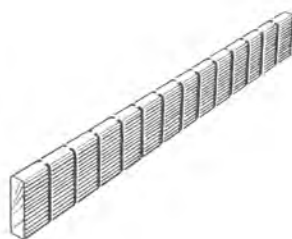
- No. 120 Storage cabinet for shaped glasses, with 7 wooden partitions and 70 dividers
- No. 125 Storage cabinet, for round and shaped watch glasses, with 6 partitions and 30 dividers for each type
- No. 170 Storage cabinet for clock glasses, empty (twice the height of cabinet No. 100)
- No. 180 Storage cabinet for clock glasses with 7 wooden partitions

Singel parts for storage cabinet

- No. 133 Dividers for round glasses
- No. 123 Dividers for shaped glasses
- No. 135 Wooden partitions for watch glass cabinet
- No. 185 Wooden partitions for clock glass cabinet

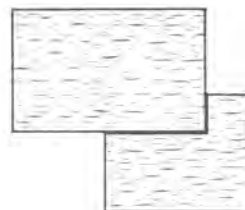
(F)

- No. 130 armoire de rangement pour verres ronds avec 5 séparations en bois et 50 planchettes à monter.
- No. 120 armoire de rangement pour verres de forme avec 7 séparations en bois et 7 planchettes à monter
- No. 125 armoire de rangement combinée pour verres ronds et verres, de forme avec 6 séparations en bois et pour chacune 30 planchettes à monter
- No. 170 armoire de rangement pour verres de réveils sans séparations, avec fentes pour 7 séparations
- No. 180 armoire de rangement pour verres de réveils complète avec 7 séparations



Pièces détachées pour l'armoire de rangement

- No. 133 planchette pour verres ronds
- No. 123 planchette pour verres de forme
- No. 135 séparation en bois, individuelle
- No. 185 séparation en bois, individuelle pour armoire de verres de réveils.



(D)

- Nr. 130 Aufbauschrank für Rundgläser mit 5 Holztrennwänden und 50 Einsteckbrettchen
- Nr. 120 Aufbauschrank für Formgläser mit 7 Holztrennwänden und 70 Einsteckbrettchen
- Nr. 125 Aufbauschrank kombiniert für Rund- und Formgläser mit 6 Holztrennwänden und je 30 Einsteckbrettchen
- Nr. 170 Aufbauschrank für Weckergläser (doppelte Höhe des Aufbauschrankes Nr. 100) o. lnh. mit Schlitzfen für 7 Holztrennwände
- Nr. 180 Aufbauschrank für Weckergläser komplett mit 7 Holztrennwänden

Einzelteile zum Aufbauschrank

- Nr. 133 Einsteckbrettchen für Rundgläser
- Nr. 123 Einsteckbrettchen für Formgläser
- Nr. 135 Holztrennwände, einzeln
- Nr. 185 Holztrennwände für Weckerglas-schrank, einzeln

(E)

- No. 130 Mueble para cristales redondos con 5 tiras separadoras de madera y 50 tablillas de inserción.
- No. 120 Mueble para cristales de forma con 7 tiras separadoras de madera y 70 tablillas de inserción.
- No. 125 Mueble combinado para cristales redondos y de forma con 6 tiras separadoras de madera y 30 tablillas de inserción para cada clase.
- No. 170 Mueble para cristales despertadores (doble altura del mueble No. 100) sin contenido con guías p. 7 tiras separadoras de madera.
- No. 180 Mueble para cristales despertadores completo con 7 tiras separadoras de madera.

Accesorios para el mueble:

- No. 133 Tablillas de inserción para cristales redondos
- No. 123 Tablillas de inserción para cristales de forma
- No. 135 Tiras separadoras de madera, pieza suelta
- No. 185 Tiras separadoras de madera, para muebles de cristales despertadores, pieza suelta.

(S)

- Olika uppbyggnadsdelar.**
- Nr. 112 Sockel, 414 x 332 mm
- Nr. 114 Lock
- Nr. 100 Uppbyggnadslåda utan indelning, med spår för inredning till rund och formglas eller boettpackningar.
- Nr. 130 Uppbyggnadslåda för rundglas med 5 skiljeväggar och 50 indelnings-skivor.
- Nr. 120 Uppbyggnadslåda för formglas med 7 skiljeväggar och 70 indelnings-skivor.
- Nr. 125 Uppbyggnads-låda, kombinerad för rund och form-glas med 6 skilje-väggar och 30 indelnings-skivor.
- Nr. 170 Uppbyggnadslåda för väckarglas, (dubbel höjd som låda Nr. 100) med 7 spår för skilje-väggar.
- Nr. 180 Uppbyggnadslåda för väckarursglas, komplett med 7 skiljeväggar.

Lösa delar.

- Nr. 133 Indelningsskivor för rundglas.
- Nr. 123 Indelningsskivor för formglas.
- Nr. 135 Skiljeväggar.
- Nr. 185 Skiljeväggar för låda Nr. 170

Round Gaskets for Watches
Joint rond pour montre bracelet
Dichtungen
Arillos de empaque
Packningar

(GB)

STERNKREUZ-Gaskets

Many watches have gaskets at the bottom of the case, sometimes also at the rim of the glass (underlaid glasses). SK keep a comprehensive range of these gaskets, either packed individually or in assorted sizes. The following gaskets are available:

(F)

Joints d'étanchéité

Certaines montres sont équipées de joints placés dans la carrure de la boîte ou sur le verre (verre à talon). Pour cette raison STERNKREUZ offre un assortiment important de joints sous emballage individuel ou sous forme d'assortiment. Les joints suivants sont disponibles.

(D)

STERNKREUZ-Dichtungsring, rund

Viele Uhren enthalten Dichtungen am Gehäuseboden, bisweilen auch am Glassitz (Unterleggläser). Hierfür hält STERNKREUZ ein umfangreiches Sortiment an Dichtungsringen bereit, einzeln verpackt oder auch in Sortierungen. Folgende Dichtungsringe sind lieferbar.

(E)

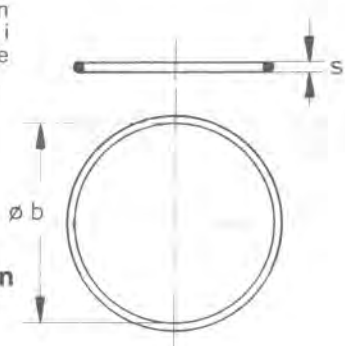
Arillos de empaque

Muchos relojes están provistos de empaques en el fondo de la caja, así como también en el asiento de los cristales (Cristales de asiento). Debido a esto, STERNKREUZ preparó una amplia gama de arillos de empaque, que se pueden surtir individualmente o por lotes, conteniendo diferentes medidas. Los arillos de empaque que están disponibles son los siguientes.

(S)

Packningar

Flertal ur har packning under bakboetten även så har många packning under glaset (underläggsglas). Därför har STERNKREUZ ett stort sortiment av packningar som kan levereras efter mått eller i sortiment. Följande packningar är levererbara.



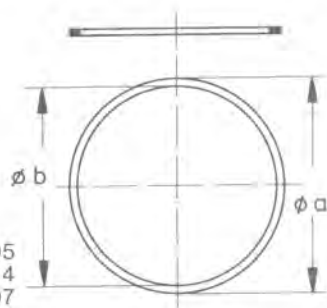
O-shaped gaskets with cylindrical cross section

Joint O à section cylindrique
O-Ring mit zylindrischem Querschnitt
Arillo-O con área cilíndrica
O-Ring med runt tvärsnitt

b x s	b x s	b x s	b x s	b x s	b x s
139 x 5	242 x 9	275 x 10	288 x 8	307 x 19	330 x 8
170 x 8	250 x 8	280 x 7	293 x 10	310 x 8	335 x 8
175 x 6	260 x 8	280 x 8	294 x 8	310 x 10	336 x 10
186 x 7	260 x 10	280 x 10	297 x 10	315 x 8	345 x 8
205 x 8	268 x 9	282 x 9	300 x 6	315 x 10	
210 x 6	270 x 10	288 x 6	303 x 7	320 x 9	

Round Gaskets for Watches
 Joint rond pour montre bracelet
 Dichtungen
 Arillos de empaque
 Packningar

Flat gaskets, 0,4 mm thick
 Joint plat épaisseur 0,4 mm
 Flache Ringe 0,4 mm stark
 Arillo plano con especifico de 0,4 mm
 Plan packning 0,4 mm tjock



b x a	b x a	b x a	b x a	b x a	b x a
110 x 130	195 x 220	241 x 255	267 x 287	282 x 295	
130 x 150	196 x 205	242 x 252	268 x 284	282 x 314	
140 x 160	197 x 207	245 x 260	268 x 288	283 x 297	
150 x 163	199 x 211	245 x 264	270 x 280	283 x 304	
150 x 168	200 x 210	245 x 270	270 x 285	285 x 295	
158 x 170	200 x 216	246 x 256	270 x 287	285 x 300	
160 x 170	200 x 220	246 x 270	270 x 290	285 x 305	
160 x 172	200 x 223	250 x 263	270 x 295	285 x 315	
160 x 180	201 x 209	250 x 265	270 x 296	285 x 320	
162 x 170	202 x 212	250 x 266	270 x 298	290 x 298	
162 x 175	205 x 216	250 x 280	270 x 300	290 x 300	
163 x 171	205 x 220	252 x 268	270 x 303	290 x 305	
163 x 183	205 x 227	253 x 272	270 x 306	290 x 308	
164 x 172	208 x 222	254 x 269	272 x 290	290 x 310	
166 x 180	208 x 224	254 x 274	272 x 300	290 x 320	
167 x 178	210 x 226	255 x 270	272 x 304	290 x 329	
170 x 179	212 x 223	255 x 275	272 x 306	290 x 333	
170 x 185	212 x 224	256 x 280	272 x 308	291 x 306	
172 x 186	213 x 223	260 x 268	272 x 310	292 x 306	
173 x 183	213 x 230	260 x 270	274 x 283	292 x 308	
175 x 188	214 x 225	260 x 290	275 x 285	292 x 312	
178 x 187	216 x 238	261 x 274	275 x 290	292 x 316	
178 x 190	217 x 230	261 x 277	275 x 295	294 x 308	
178 x 192	220 x 234	262 x 272	275 x 300	294 x 314	
179 x 192	220 x 235	262 x 275	275 x 303	295 x 305	
180 x 191	223 x 240	262 x 278	276 x 282	296 x 308	
180 x 195	223 x 250	262 x 282	276 x 284	296 x 309	
182 x 190	224 x 234	262 x 283	276 x 294	296 x 328	
182 x 192	230 x 260	263 x 284	277 x 290	298 x 316	
183 x 196	233 x 250	264 x 280	278 x 286	299 x 310	
183 x 204	234 x 260	264 x 290	278 x 288	300 x 316	
183 x 206	235 x 250	265 x 277	278 x 298	300 x 331	
188 x 200	237 x 260	265 x 284	280 x 295	301 x 317	
188 x 203	238 x 245	265 x 293	280 x 300	301 x 319	
192 x 200	240 x 250	265 x 295	280 x 306	302 x 325	
194 x 205	240 x 253	266 x 279	280 x 309	303 x 310	
195 x 213	240 x 255	266 x 280	280 x 310	303 x 328	
195 x 216	240 x 280	266 x 282	280 x 319	304 x 317	
					b x a
					305 x 315
					305 x 321
					307 x 320
					308 x 328
					309 x 316
					310 x 320
					310 x 324
					311 x 324
					315 x 331
					315 x 333
					315 x 338
					315 x 340
					315 x 343
					318 x 330
					320 x 335
					320 x 340
					325 x 335
					325 x 340
					325 x 345
					340 x 355
					358 x 370
					360 x 386
					365 x 385
					378 x 390

Watch glass Adhesives
Colle pour verres de montres
Uhrglaskleber
Pegamento para cristales de reloj
Gaslim

(GB)

**STERNKREUZ-MINECOL
pour Mineral glasses**

STERNKREUZ-MINECOL Ordering No. 224 was especially developed for the glueing of mineral watch glasses and packed in a very handy way. It is a one-component adhesive which hardens by contact with UV rays. So additionally you only need a lamp with intense UV radiation, e. g. OSRAM-ULTRA-VITALUX 300 W.

This is a „once-in-a-lifetime“ purchase which definitely pays for itself in the long run. STERNKREUZ-Minecol is supplied in a handy, ready-to-use, syringe, and packed in a light-proof container which can be re-used.

The syringe comes with a fine hypodermic needle which means that the right quantity of the adhesive can be applied to a precise point.

Every pack contains a second hypodermic needle in case the original one should be clogged-up. The hypodermic needles can be supplied separately (Order No. 225).

The watch case with the glued-in glass should be left under the lamp with UV radiation for at least 10 minutes and is then left to cool down. After 20 minutes at the most the adhesive is hardened and the glass is held in place very tightly.

However, STERNKREUZ-Minecol can easily be removed by scalding the case.

(F)

**STERNKREUZ-Minecol
pour verres minéraux**

La MINECOL STERNKREUZ réf. 224 a été conçue plus particulièrement pour coller les verres minéraux. Emballée d'une manière pratique, c'est une colle unique en son genre, dont la caractéristique est de durcir sous l'action des rayons UV. Pour cette raison une lampe à rayons UV très forts est nécessaire (par exemple OSRAM-ULTRA VITALUX 300 W). C'est un achat qui est payant.

La MINECOL STERNKREUZ est livrée dans une seringue maniable, prête à l'emploi, dans un emballage qui la protège de la lumière et dans lequel on peut la ranger.

Chaque seringue est livrée avec deux canules (dont une de remplacement) permettant un dosage précis et une économie de colle. Les canules peuvent être livrées séparément sous la référence 225.

Placez la boîte de montre avec son verre collé durant 10 minutes au moins sous la lampe à rayons UV susmentionnée et faites la refroidir lentement. Lorsque la boîte est froide (après 20 Minutes au plus), la colle est durcie et le verre est fixé.

Si nécessaire, vous pouvez retirer la colle MINECOL STERNKREUZ en faisant bouillir la boîte.



D

**STERNKREUZ-MINECOL
für Mineralgläser**

STERNKREUZ-MINECOL, Bestell-Nr.224 wurde speziell für das Einkleben von Mineral-Uhrgläsern entwickelt und besonders arbeitsgerecht verpackt. Es handelt sich um einen Einkomponenten-Kleber, der durch die Einwirkung von UV-Licht härtet. Sie benötigen also zusätzlich nur noch eine Lampe mit einer starken UV-Strahlung, z. B. OSRAM-VITALUX 300 W. Das ist eine einmalige Anschaffung, die sich auf Dauer lohnt.

STERNKREUZ-Minecol wird in einer handlichen, fertig vorbereiteten Spritze geliefert, in einer lichtgeschützten Verpackung, in die man sie immer wieder hineinlegen kann.

Ausgerüstet ist die Spritze mit einer sehr feinen Kanüle, welche die Bearbeitung am Uhrgehäuse besonders erleichtert. Einzelne Kanülen können unter der Bestell-Nr. 225 nachgeliefert werden.

Das Uhrgehäuse mit dem eingeklebten Uhrglas legen Sie mindestens 10 Minuten unter die angesprochene UV-Lampe und lassen es dann langsam abkühlen. Wenn das Gehäuse wieder kühl ist, spätestens nach 20 Minuten, ist der Kleber ausgehärtet und hält das Glas sehr gut fest.

Trotzdem kann man ein Gehäuse auch wieder von MINECOL reinigen, indem man es auskocht.

E

**STERNKREUZ-MINECOL
para cristales minerales**

STERNKREUZ-MINECOL (No. de pedido 224) fue creado especialmente para pegar cristales de reloj minerales, y es envasado de tal forma que hace fácil su manejo. Se trata de un pegamento de un solo ingrediente que endurece por influencia de la luz ultravioleta. Ud. necesita además sólo una lámpara de fuerte radiación ultravioleta, como la OSRAM VITALUX 300 W.

Esta es una adquisición costeable por mucho tiempo.

STERNKREUZ-MINECOL se surte en una práctica jeringa previamente preparada y ésta viene dentro de un empaque que lo protege contra la luz. La jeringa puede guardarse nuevamente en el mismo empaque después de su uso.

Las cánulas se pueden surtir individualmente bajo el No. de pedido 225.

La caja del reloj deberá someterse por lo menos 10 minutos bajo los rayos de la lámpara ultravioleta mencionada y después dejar enfriar la caja lentamente. Cuando la caja está fría de nuevo, el pegamento se endurece a más tardar en 20 minutos, sujetando así, firmemente el cristal.

Aún así, el MINECOL puede ser removido de la caja, al sumergir ésta en agua hirviendo.

S

**STERNKREUZ-MINECOL
för Mineralglas.**

MINECOL best. Nr. 224 är specialklister för mineralglas i praktisk förpackning. Det är av enkomponentstyp som hårdas vid bestrålning av ultraviolettt ljus. Ni behöver alltså en ultraljuslampa, förslagsvis „Osram Vitalux 300 W“. Engångskostnaden för anskaffning av lampan betalar sig mångfald genom det enkla handhavandet och det goda resultatet.

STERNKREUZ MINECOL levereras i en ljusskyddad spruta med vek kanyl, lämpad för alla typer av glasfalsar.

Watch glass Adhesives
Colle pour verres en plastique
Gläserkitt
Cemento para cristales de material plastico
Glasklister för plexiglas

(GB)

STERNKREUZ Glass Adhesive for Plastic Glasses

If for a particular reason, plastic glasses have to be glued in it is important to use the right adhesive. It must not contain any aggressive solvents, such as monomeric softening agents, because these would destroy the glass especially if the adhesive attacks the inside of the watch. A bottle of the wrong type of adhesive left open in a cabinet together with new watches could destroy all the plastic watch glasses. STERNKREUZ adhesive No. 222 in a bottle or No. 221 in a tube is chemically neutral to all plastic watch glasses. It can be diluted to the required tenacity with pure benzine. The adhesive in the bottle is particularly suited for thinning. The adhesive in the tube is probably more practical for direct, undiluted application, especially with the interchangeable syringe which can be used for more than one tube. It is important, however, to put the thin piece of wire back into the syringe after use. The syringe can be supplied individually with order No. 223. Whenever you buy adhesive, insist on STERNKREUZ.

(F)

Colle STERNKREUZ pour verres en plastique

Lorsque, pour des raisons particulières, il faut coller des verres en plastique l'utilisation d'une colle adaptée est très importante. Cette colle ne doit pas contenir de solvants agressifs comme par exemple les adoucisseurs monomères car ils ont un effet chimique qui détruit le verre surtout si la colle entre à l'intérieur de la montre. Il peut arriver qu'un flacon resté ouvert et contenant une mauvaise colle se trouve, avec des montres neuves, dans une armoire fermée, cette mauvaise colle peut alors détruire tous les verres en plastique. La colle STERNKREUZ en flacon réf. 222 et en tube réf. 221 est chimiquement neutre envers tous les verres de montres en plastique. On peut la diluer avec de l'essence chimiquement pure afin d'obtenir la dureté désirée. Pour cette dilution il est préférable d'employer la colle en flacon, l'utilisation de la colle en tube est pratique parce que sa canule, interchangeable, peut être employée pour plusieurs tubes. Il faut faire attention de bien replacer le fil métallique dans la canule après chaque usage. La canule peut être livrée seule sous référence 223. Lorsque vous achetez de la colle, demandez expressément la marque STERNKREUZ.



(D)

STERNKREUZ-Gläserkitt für Kunststoffgläser

Müssen aus besonderen Gründen Kunststoffgläser eingeklebt werden, dann ist die Verwendung des richtigen Uhrglaskittes sehr bedeutsam. Dieser Kitt darf keine aggressiven Lösungsmittel enthalten, wie z. B. monomere Weichmacher. Sie wirken sonst zerstörend auf das Uhrglas ein, ganz besonders, wenn der Kitt in das Innere der Uhr eindringt. Es kann vorkommen, daß ein offenes Fläschchen falschen Gläserkittes mit neuen Uhren zusammen in einem abgeschlossenen Schrank alle Kunststoffuhrgläser darin zerstört. STERNKREUZ-Gläserkitt Nr. 222 in der Flasche oder Nr. 221 in der Tube ist chemisch neutral gegen alle Kunststoffuhrgläser. Er läßt sich mittels chemisch reinen Benzines beliebig verdünnen, so daß Sie sich die gewünschte Zähigkeit selbst herstellen können. Für das Verdünnen ist der Kitt in der Flasche besonders geeignet. Für die Verarbeitung ist der Kitt in der Tube praktisch, insbesondere mit der auswechselbaren Kanüle, die für viele Tuben verwendet werden kann. Man muß lediglich beachten, daß der feine Draht immer wieder in die Kanüle zurückgesteckt wird nach Gebrauch. Die Kanüle wird einzeln geliefert unter der Best.-Nr. 223. Bitte verlangen Sie beim Kauf von Gläserkitt ausdrücklich die Marke STERNKREUZ.

(E)

STERNKREUZ-cemento para cristales de material plástico.

Cuando por razones especiales se requiere pegar los cristales para reloj, es de gran importancia utilizar el cemento adecuado para cristales de reloj. Este cemento no deberá contener soluciones agresivas, como por ejemplo, monómero plastificante. Estos actúan sobre el cristal en forma destructiva y especialmente cuando el cemento se filtra hasta llegar al reloj. Puede suceder que cuando se almacena un frasco abierto de un cemento inadecuado junto con relojes nuevos dentro de un mueble cerrado, todos los cristales de estos relojes llegan a destruirse. El cemento STERNKREUZ No. 222 en frasco o No. 221 en tubo, es químicamente neutral para todos los cristales de reloj. Este se puede adelgazar con gasolina químicamente pura, de ésta manera puede Ud. mismo obtener la viscosidad deseada. Para adelgazar el cemento, es más apropiado utilizar el que viene envasado en el tubo, con sus cánulas intercambiables y que pueden utilizarse para muchos tubos más. Siempre se deberá tener cuidado en volver a insertar la aguja en el tubo después de ser utilizado. Las cánulas se surten individualmente bajo el No. de pedido 223. Por favor, pida siempre a su proveedor de cemento para cristales, la marca STERNKREUZ.

(S)

STERNKREUZ glasklister för plexiglas.

Vissa glas kan på grund av sin form eller storlek inte inspännas i boetten, sådana måste klistras fast. Därvid bör Ni använda ett klister som ej innehåller skadliga lösningsmedel, som riskerar att förstöra urglaset. Öppnade klisterförpackningar med sådana skadliga lösningsmedel förvarade i glaskåpet kan vålla bestående skador på glasens yta. STERNKREUZ glasklister i tub best. Nr. 221 eller i flaska best. Nr. 222 är kemiskt neutrala mot plexiglas och binder effektivt mot metaller. Limmet kan förtunnas med kemiskt ren bensin. Till Nr. 221 levereras en praktisk metallkanyl som i hög grad underlättar arbetet med klistringen. I kanylens skyddshuvud sitter en vek tråd som alltid håller kanylhålet rent. Best. Nr. för kanylen är 223. Vid beställning av glasklister begär alltid uttryckligen STERNKREUZ.

Eyepieces
Loupes pour horloger
Uhrmacherlupen
Lupas de relojero
Lupar

(GB)

Eyepieces

SK watchmaker's eyepieces, for obvious reasons, are made extremely light and unbreakable. They can be supplied in a green case with normal magnification, and as specials with differently coloured rims which indicate the magnification.

Standard models

No. 311-1
 Luminosity 1 Magnification 10 x (with diaphragm)
 No. 311-1½ Luminosity 1½ Magnification 6,7 x (with diaphragm)
 No. 311-2
 Luminosity 2 Magnification 5 x
 No. 311-2½
 Luminosity 2½ Magnification 4 x
 No. 311-3
 Luminosity 3 Magnification 3,3 x
 No. 311-3½
 Luminosity 3½ Magnification 2,8 x
 No. 311-4
 Luminosity 4 Magnification 2,5 x

Models with colour coded rims

No. 312-1
 Luminosity 1 Magnification 10 x (with diaphragm) red rim
 No. 312-1½ Luminosity 1½ Magnification 6,7 x (with diaphragm) red/white rim
 No. 312-2
 Luminosity 2 Magnification 5 x blue rim
 No. 312-2½
 Luminosity 2½ Magnification 4 x blue/white rim

(F)

Loupes pour horloger

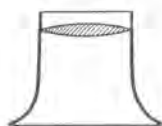
Les loupes STERNKREUZ pour horloger sont intentionnellement légères et incassables. Elles sont livrables en exécution normale avec étui vert et en exécution spéciale avec un bord de couleur qui permet de reconnaître immédiatement le grossissement.

exécution normale

No. 311-1
 force 1 grossissement 10,0 fois (avec ocellère)
 No. 311-1½
 force 1½ grossissement 6,7 fois (avec ocellère)
 No. 311-2
 force 2 grossissement 5,0 fois
 No. 311-2½
 force 2½ grossissement 4,0 fois
 No. 311-3
 force 3, grossissement 3,3 fois
 No. 311-3½
 force 3½ grossissement 2,8 fois
 No. 311-4
 force 4 grossissement 2,5 fois

avec bord caractéristique de couleur

No. 312-1
 force 1 grossissement 10,0 fois (avec ocellère) bord rouge
 No. 312-1½
 force 1½ grossissement 6,7 fois (avec ocellère) bord rouge et blanc
 No. 312-2
 force 2 grossissement 5,0 fois bord bleu
 No. 312-2½
 force 2½ grossissement 4,0 fois bord bleu et blanc



(D)

STERNKREUZ-Uhrmacherlupen

werden in einer bewußt leichten und unzerbrechlichen Ausführung hergestellt. Sie sind lieferbar in Normalausführungen mit grünem Gehäuse und in Sonderausführungen mit farbigem Kennrand, aus dem die Vergrößerung sofort zu erkennen ist.

normale Ausführung

- Nr. 311-1
Stärke 1, Vergrößerung 10-fach (mit Blende)
- Nr. 311-1½
Stärke 1½, Vergrößerung 6,7-fach (mit Blende)
- Nr. 311-2
Stärke 2, Vergrößerung 5-fach
- Nr. 311-2½
Stärke 2½, Vergrößerung 4-fach
- Nr. 311-3
Stärke 3, Vergrößerung 3,3-fach
- Nr. 311-3½
Stärke 3½, Vergrößerung 2,8-fach
- Nr. 311-4
Stärke 4, Vergrößerung 2,5-fach

mit farbigem Kennrand

- Nr. 312-1
Stärke 1, Vergrößerung 10-fach (mit Blende)
- Rand rot
- Nr. 312-1½
Stärke 1½, Vergrößerung 6,7-fach (mit Blende)
- Rand rot/weiß
- Nr. 312-2
Stärke 2, Vergrößerung 5-fach, Rand blau
- Nr. 312-2½
Stärke 2½, Vergrößerung 4-fach, Rand blau/weiß

(E)

Lupas de relojeros

Las lupas para relojero STERNKREUZ se producen bajo un procedimiento que las hace bastante ligeras e irrompibles. Estos lentes se surten normalmente con una base verde. Los de tipo especial, se les agrega una banda de color, con la cual se puede saber el grado de aumento del mismo.

Modelos Normales

- No. 311-1
intensidad, aumento 10 (con diafragma)
- No. 311-1½
intensidad 1½ aumento 6,7 (con diafragma)
- No. 311-2
intensidad 2 aumento 5
- No. 311-2½
intensidad 2½ aumento 4
- No. 311-3
intensidad 3 aumento 3,3
- No. 311-3½
intensidad 3½ aumento 2,8
- No. 311-4
intensidad 4 aumento 2,5

con banda de color

- No. 312-1
intensidad 1 aumento 10 (con diafragma) banda roja
- No. 312-1½
intensidad 1½ aumento 6,7 (con diafragma) roja/blanca
- No. 312-2
intensidad 2 aumento 5 azul
- No. 312-2½
intensidad 2½ aumento 4 azul/blanco
- No. 312-3
intensidad 3 aumento 3,3 amarilla
- No. 312-3½
intensidad 3½ aumento 2,8 amarilla/blanca

(S)

STERNKREUZ urmakerilupar är framställd i ett flertal utförande och styrkor. Normalutförande är av grön plast, fins även i specialutförande med färging som utvisar förstöringsgraden. Vid beställning var vänlig uppgiv önskat nummer.

Gröna Plastlupar vanliga

- Nr 311-1
Styrka 1 10 ggr förstoring
 - Nr. 311-1½
Styrka 1½ 6,7 ggr förstoring
 - Nr. 311-2
Styrka 2 5 ggr förstoring
 - Nr. 311-2½
Styrka 2½ 4 ggr förstoring
 - Nr. 311-3
Styrka 3 3,3 ggr förstoring
 - Nr. 311-3½
Styrka 3½ 2,8 ggr förstoring
 - Nr. 311-4
Styrka 4 2½ ggr förstoring
- med olkfärgade kanter**
- Nr. 312-1
Styrka 1 10 ggr förstoring, röd kant
 - Nr. 312-1½
Styrka 1½ 6,7 ggr förstoring, röd-vit kant
 - Nr. 312-2
Styrka 2 5 ggr förstoring, blå kant
 - Nr. 312-2½
Styrka 2½ 4 ggr förstoring, blå-vit kant
 - Nr. 312-3
Styrka 3 3,3 ggr förstoring, gul kant
 - Nr. 312-3½
Styrka 3½ 2,8 ggr förstoring, gul-vit kant
 - Nr. 312-4
Styrka 4 2½ ggr förstoring, vit kant

Accessories
Accessoires
Hilfsmittel
Accesorios
Hjälpmedel

(GB)

No. 312-3
Luminosity 3 Magnification
3,3 x yellow rim

No. 312-3½
Luminosity 3½ Magnifi-
cation 2,8 x yellow/white rim

No. 312-4
Luminosity 4 Magnification
2,5 white rim

Special models

No. 313-1
Aplanetic lenses Magnifi-
cation 10 x

No. 313-1½
Aplanetic lenses Magnifi-
cation 6 x

No. 314-1
Lens for precious stones
Magnification 10 x

(F)

No. 312-3
force 3 grossissement 3,3
fois bord jaune

No. 312-3½
force 3½ grossissement 2,8
fois bord vert et blanc

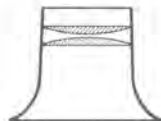
No. 312-4
force 4 grossissement 2,5
fois bord blanc

exécution spéciale

No. 313-1
loupe plane grossissement
10 fois

No. 313-1½
loupe plane grossissement
6 fois

No. 314-1
loupe pour pierriste
grossissement 10 fois



Work surface

The SK work surface No. 300, approx. 300x200 mm, is green. The board is hard and has a smooth surface.

Transparent plastic boxes round

No. 350 24 mm Ø
12 mm high

rectangular

No. 351 35,5 x 24,0 mm,
7 mm high

No. 353 24,3 x 24,0 mm,
10 mm high

No. 354 24,3 x 24,0 mm,
6 mm high

No. 355 45 x 22,5 mm,
18 mm high

No. 356 22,5 x 22,5 mm,
18 mm high

Plagues de travail

Les plaques de travail réf. 3000 dans les dimensions de 300x200 mm environ vert. La plaque est dure et sa surface est lisse.

Boîtes transparentes en plastique rondes

No. 350 diamètre 24 mm
hauteur 12 mm

rectangulaires

No. 351 35,5 x 24,0 mm
hauteur, 7 mm

No. 353 24,3 x 24,0 mm,
hauteur 10 mm

No. 354 24,3 x 24,0 mm
hauteur 6 mm,

No. 355 45 x 22,5 mm
hauteur 18 mm

No. 356 22,5 x 22,5 mm
hauteur 18 mm



(D)

Nr. 312-3
3,3-fach, Rand gelb
Nr. 312-3 1/2
Stärke 3 1/2, Vergrößerung
2,8-fach, Rand gelb/weiß
Nr. 312-4
Stärke 4, Vergrößerung
2,5-fach, Rand weiß
Sonderausführung
Nr. 313-1
Aplanatische Lupen,
Vergrößerung 10-fach
Nr. 313-1 1/2
Aplanatische Lupen,
Vergrößerung 6-fach
Nr. 314-1
Steinlupen, Vergrößerung
10-fach

Arbeitsplatte

Die STERNKREUZ-Arbeitsplatte Nr. 300, Größe ca. 300 x 200 mm, ist grün. Die Platte ist hart und hat eine glatte Oberfläche.

Dosen aus durchsichtigem Kunststoff rund

Nr. 350 24 mm Ø,
12 mm hoch

rechteckig

Nr. 351 35,5 x 24,0 mm,
7 mm hoch
r. 353 24,3 x 24,0 mm,
10 mm hoch
r. 354 24,3 x 24,0 mm,
6 mm hoch
r. 355 45,0 x 22,5 mm,
18 mm hoch
r. 356 22,5 x 22,5 mm,
18 mm hoch

(E)

No. 312-4
intensidad 4 aumento 2,5
blanca
modelos especiales
No. 313-1
Lupa aplanática,
aumento 10
No. 313-1 1/2
Lupa aplanática, aumento 6
No. 314-1
Lupa para joyas,
aumento 10

Placa de trabajo

La placa de trabajo STERNKREUZ No. 300, mide aproximadamente 300x200 mm color verde. Esta placa es bastante fuerte y tiene la superficie completamente plana.

Cajas de materia plástica transparente redondas

No. 350 24 mm
altura 12 mm

rectangulares

No. 351 35,5 x 24,0 mm,
7 mm altura
No. 353 24,3 x 24,0 mm,
10 mm altura
No. 354 24,3 x 24,0 mm,
6 mm altura
No. 355 45 x 22,5 mm,
18 mm altura
No. 356 22,5 x 22,5 mm,
18 mm altura

(S)

specialutförande

Nr. 313-1
Aplanatisk lup, 10 ggr
förstoring
Nr. 313-1 1/2
Aplanatisk lup, 6 ggr
förstoring
Nr. 314-1
Stenlup, 10 ggr förstoring

Arbetsplatta

STERNKREUZ arbetsplatta Nr. 300. Storlek 300 x 200 mm är grön. Dessa plattor är hårda och har en glatt yta. Företagsaskar av genomskinlig plast.

Furnituraskar av genomskinlig plast Rund

Nr. 350 24 mm Ø 12 mm
hög

rektangulär

Nr. 351 35,5 x 24,0 mm,
7 mm hög
Nr. 353 24,3 x 24,0 mm,
10 mm hög
Nr. 354 24,3 x 24,0 mm,
6 mm hög
Nr. 355 45,0 x 22,5 mm,
18 mm hög
Nr. 356 22,5 x 22,5 mm,
18 mm hög

Copying machine
Fraiseuse à copier
Kopierfräsmaschine
Fresadora copiadora
Glasfräsmaskin

(G)

With the copying machine **STERNKREUZ - VERAPID** plane watch glasses can be milled on both sides directly to the case. This machine has an additional installation to mill glasses for LCD-watches with mask from the available **STERNKREUZ**-watch glass plates. Operating instructions are attached to the machine. Please find the offer of the **STERNKREUZ**-watch glass plates, being suitable to this machine, on page 155 and 157.

Machine **STERNKREUZ-Verapid** order No. 18 - weight 10 kg, voltage 220 V 50 HZ, dimensions 27 x 20 x 30 cm, spare milling tool order No. 185

(E)

Con la fresadora copiadora **STERNKREUZ - VERAPID** Vds. mismos pueden fresar cristales de reloj según la caja directamente de ambas partes. Además la máquina está en condiciones para fresar cristales de relojes LCD con máscara de las placas de cristales de reloj **STERNKREUZ** listas para la entrega. La instrucción de manejo es adjuntada a la máquina. La oferta para estas placas de cristales de reloj **STERNKREUZ** adecuadas a esta máquina, Vds. encuentran a las páginas 155 y 157.

Máquina **STERNKREUZ-VERAPID** no. de pedido 18 - peso 10 kg, voltaje 220 V, 50 HZ, dimensiones 27 x 20 x 30 cm.

Fresadoras de recambio no. de pedido 185

(F)

Avec la fraiseuse à copier **STERNKREUZ - VERAPID** vous pouvez vous-mêmes fraiser de verres de montres plats de deux côtés directement du boîte. Cette machine a une installation supplémentaire pour fraiser de verres pour montres LCD avec masque des plaques de verres de montres disponibles chez **STERNKREUZ**. Un mode d'emploi sera attaché à la machine. Sur les pages 155 et 157 vous trouvez l'offre des **STERNKREUZ**-plaques de verres de montres convenables à cette machine.

Machine **STERNKREUZ-VERAPID** réf. 18 - poids 10 kg, tension 220 V 50 HZ, dimensions 27 x 20 x 30 cm, fraise de remplacement réf. 185

(D)

Mit der Kopierfräsmaschine **STERNKREUZ - VERAMID** können Sie beiderseits plane Uhrgläser direkt nach dem Gehäuse selbst fräsen. Zusätzlich ist die Maschine eingerichtet, um Gläser für LCD-Uhren mit Maske aus den lieferbaren **STERNKREUZ**-Uhr glasplatten zu fräsen. Eine Bedienungsanleitung liegt der Maschine bei. Das Angebot über **STERNKREUZ**-Uhr glasplatten, passend zu dieser Maschine, finden Sie auf den Seiten 155 und 157.

Maschine **STERNKREUZ-VERAPID** Bestell-Nr. 18 - Gewicht 10 kg, Spannung 220 V, 50 HZ. Abmessungen 27 x 20 x 30 cm, Ersatzfräser Best.-Nr. 185

(S)

Med glasfräsmaskin **STERNKREUZ-VERAPID** kan Ni själv efter boetten tillpassa plana glas.

Maskine kan även användas för utfräsning av LCD glas med fönster, lämpliga glasplattor återfinnes på sidorna 155 och 157

STERNKREUZ-VERAPID har beställningsnummer 18. Mått 270 x 200 x 300 mm. Vikt 10 kg. Spänning 220 Volt 50 ps.

Ersättningsfräsar, beställningsnummer 185.

