



Follow guidelines

Flanges for attaching gas springs to tools



Code	Type
FS	
FSC	
FP	
FPR	
FB	
FI	
FI / 1	
FR	
FRS	





i

MICRO

TITAN

TPH

TPS

TPSP

TPF

TPK

TPC

TPR

TPB

TPHC

TPA

TPG

TPCT

TPSL

STOP  
CYLINDER

STOP  
CYLINDER

TPSR

TPSRs

TPNS

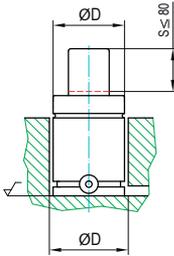
TPHT



### POCKET ASSEMBLY · MONTAJE EN CAJERA

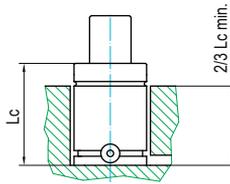
A flat surface is to be guaranteed for the base of the cylinder. Inadequate fixtures produce structural damage or reduce gas spring useful life. This type of installation is not possible for interconnected gas springs.

Se debe asegurar un apoyo plano contra la base del cilindro. Alojamiento inadecuados causan daños estructurales o reducen la vida útil del cilindro. Este tipo de instalación no es posible para cilindros interconectados.



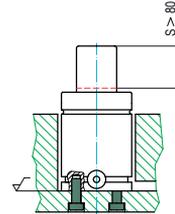
TOLERANCE / TOLERANCIA

$$D \leq 95 - \overset{+1.0}{\underset{-0.25}{\Delta}} \cdot \overset{+1.0}{\underset{-1.5}{\Delta}} \cdot \Delta$$
$$D \leq 120 - \overset{+1.0}{\underset{-1.5}{\Delta}} \cdot \Delta$$



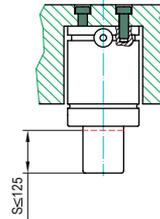
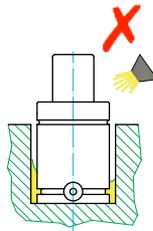
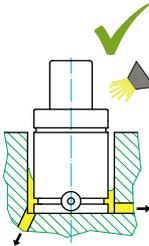
Hole dimensioning

Dimensionado cajera



For strokes bigger than 80mm use clamping screws

Para carreras superiores a 80mm utilizar tornillos de amarre

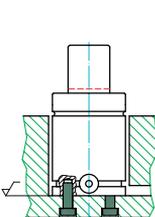


The hole is to be equipped with drainage and conducts are to be cleaned regularly

Proveer de orificios de drenaje a la cajera, y limpiar con regularidad

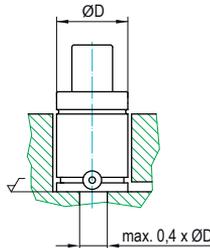
In upside down pockets always mandatory clamping screws

En cajeras invertidas, obligatorio siempre amarre con tornillos



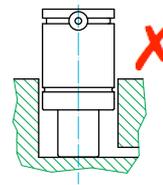
The use of screws is recommended even in drop-in assemblies

Incluso en montajes en cajera, se recomienda la utilización de tornillos



In drop-in assemblies respect the maximum diameter

En cajeras pasante, respetar diámetro máximo



Never install a cylinder in a pocket in an inverted position

Nunca instalar un cilindro en cajera en posición invertida



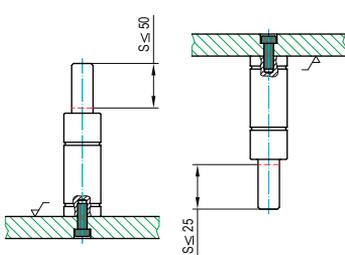
### ASSEMBLY WITH SCREWS · MONTAJE CON TORNILLOS

Secure the gas spring to the tool firmly. If possible, we recommend using the fixture holes in the gas spring to secure it with screws. This type of fixture is the most recommended for interconnected gas springs as vibrations and damage to the connecting elements are thus avoided.

In order to ensure a better grip of the gas spring to the tool, you should follow these guidelines:

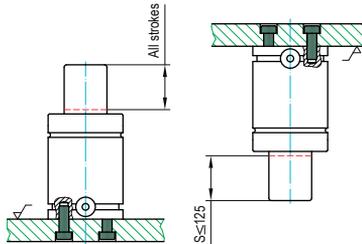
Fijar el cilindro al útil sólidamente. Si es posible, se recomienda usar los agujeros de amarre del cilindro para fijarlo con tornillos. Esta fijación de los cilindros es la más recomendable para cilindros intercomunicados, ya que evitan vibraciones y daños en los elementos de conexión.

Con el fin de asegurar la mejor sujeción del cilindro al útil, es recomendable seguir las siguientes indicaciones:



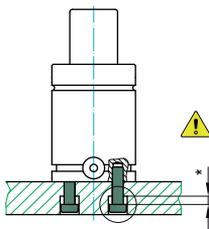
Fastening with a single central screw

Amarre con un solo tornillo central



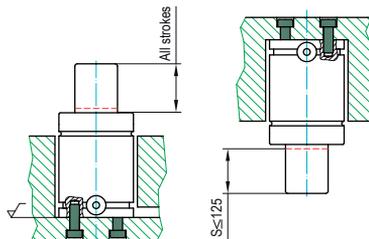
Fastening with multiple screws

Amarre con múltiples tornillos



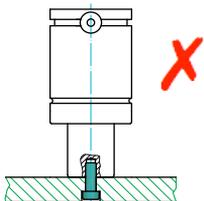
The screws must have the right size

Los tornillos deben tener la longitud adecuada



In inverted position, the cylinder must always be secured with screws

En posición invertida el cilindro siempre amarrado con tornillos



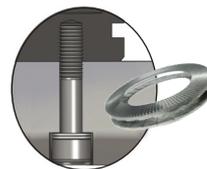
Only for maintenance and transport

Usar solo para mantenimiento y transporte



The stem thread should only be used for maintenance or transportation operations

La rosca del vástago solo debe usarse para mantenimiento o transporte



The use of safety washers is recommended in all screwed fixtures or anaerobic thread fixtures.

Se recomienda utilizar arandelas de seguridad en todas las uniones atornilladas o fijadores de rosca anaeróbic.

Torque references for SHCS-type threaded screws:

- Quality 8.8
- Without lubrication
- New thread
- Torque coefficient  $\mu = 0,14$

Diameter Diámetro	Torque (Nm)
M6	10
M8	25
M10	49
M12	85
M16	210

Valores de referencia de apriete para tornillos roscados tipo SHCS:

- Calidad 8.8
- Sin lubricación
- Rosca nueva
- Coeficiente de apriete  $\mu = 0,14$





i

MICRO

TITAN

TPH

TPS

TPSP

TPF

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TPHC

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STOP  
CYLINDER

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TPSR

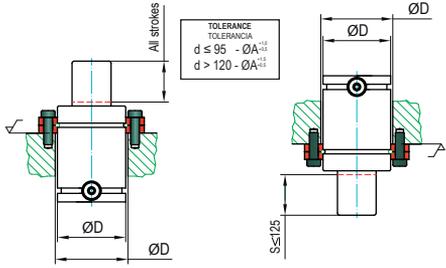
TPSRs

TPNS

TPHT



### FS / FSC / FRS FLANGE ASSEMBLY · MONTAJE CON BRIDA FS / FSC / FRS

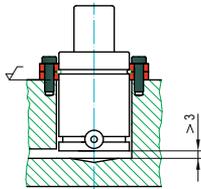


Respect maximum stroke in inverted position

Respetar carrera máxima en posición invertida

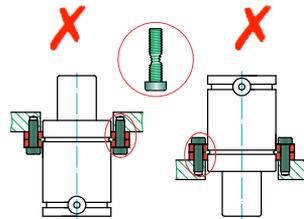
Take into account maximum stroke for installation in inverted position

Tener en cuenta la carrera máxima para instalación en posición invertida



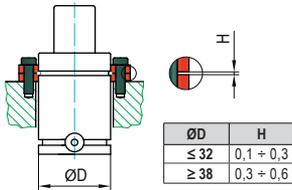
Leave enough space at the base

Dejar espacio suficiente en la base



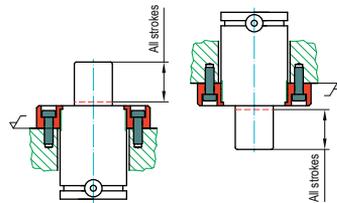
The screws must not withstand the effort of the cylinder

Los tornillos no deben soportar el esfuerzo del cilindro



According to VDI regulation, there is a gap between the flange parts

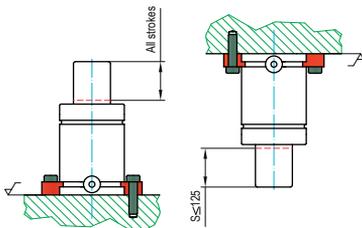
Según normativa VDI, existe un gap entre las partes de la brida



FRS FLANGE  
(Threaded flange with permanent seal)

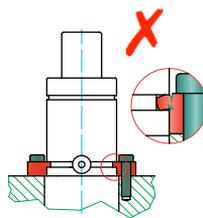
(Brida roscada con sellado permanente)

### FP / FPR LOWER FLANGE ASSEMBLY · BRIDA CON MONTAJE INFERIOR FP / FPR



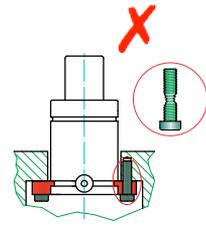
Respect maximum stroke in inverted position

Respetar carrera máxima en posición invertida



Provide enough support to the entire cylinder base

Proveer de apoyo suficiente a toda la base del cilindro

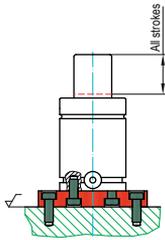


The clamping screws must not withstand the effort of the cylinder

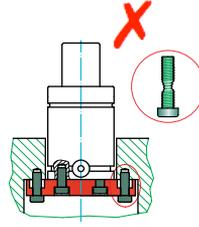
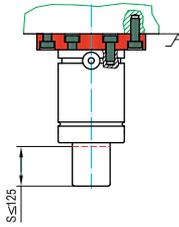
Los tornillos de amarre no deben soportar el esfuerzo del cilindro



### ASSEMBLY WITH FB BASE FLANGE · MONTAJE CON BRIDA BASE FB

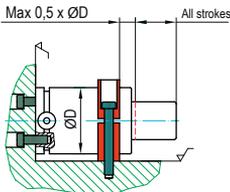


Respect maximum stroke in inverted position  
Respetar carrera máxima en posición invertida

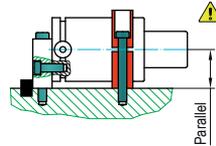
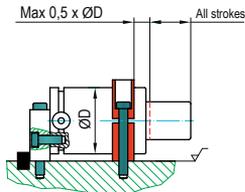


Respect maximum stroke in inverted position  
Respetar carrera máxima en posición invertida

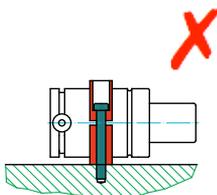
### ASSEMBLY WITH FI / FI/1 TYPE FLANGE · MONTAJE CON BRIDA LATERAL FI / FI/1



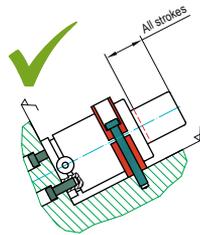
The cylinder must be supported on its base correctly  
El cilindro debe estar soportado en su base correctamente



The cylinder support surface must be completely parallel  
La superficie de apoyo del cilindro debe ser completamente paralela



The cylinder flange is not enough to withstand the effort of the cylinder  
La brida del cilindro no es suficiente para soportar el esfuerzo del cilindro



The cylinder must be supported on its base correctly  
El cilindro debe estar soportado en su base correctamente

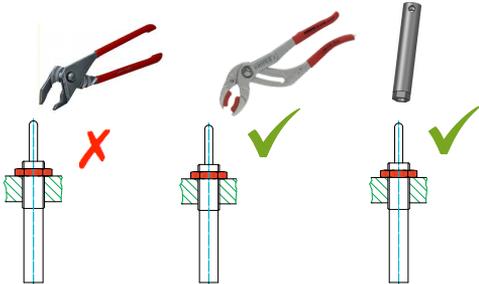
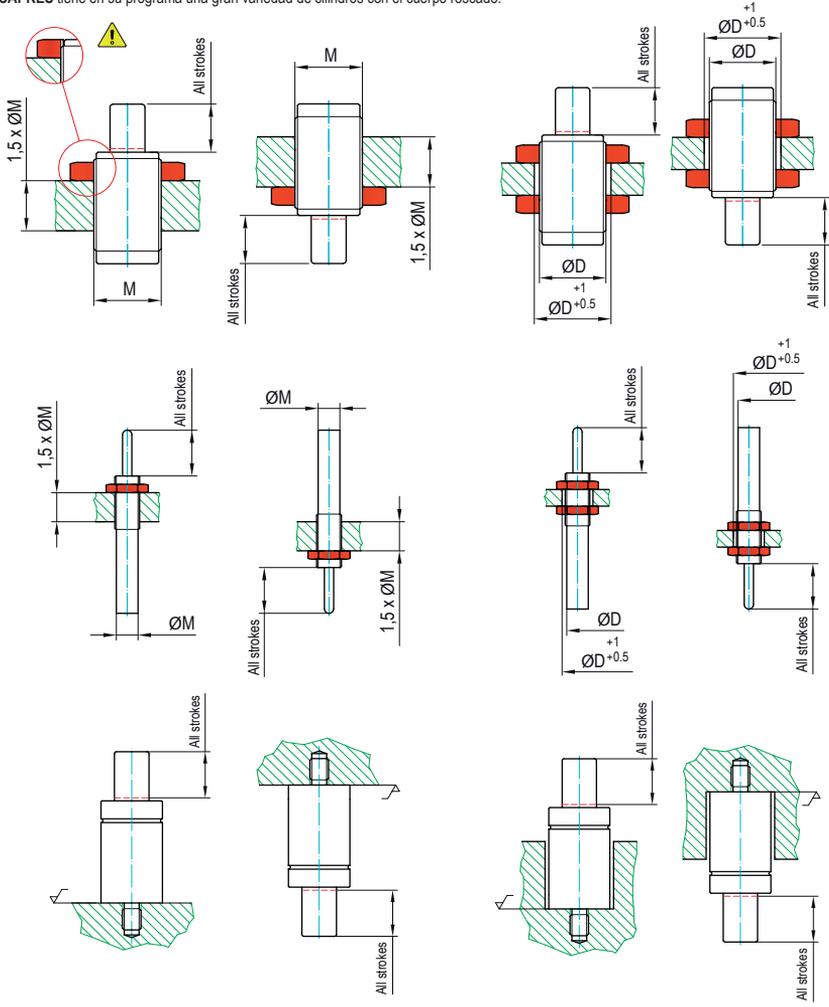




### ASSEMBLY WITH THREADED GAS SPRINGS · MONTAJE CON CILINDROS ROSCADOS

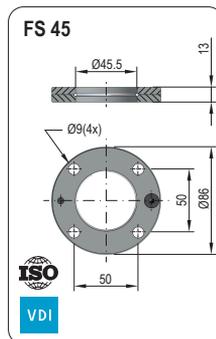
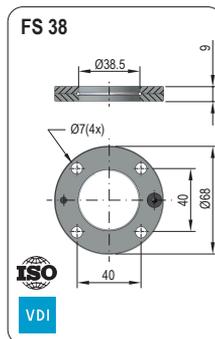
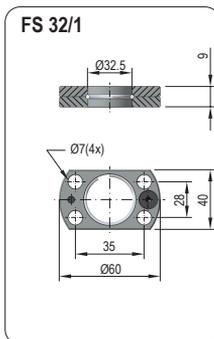
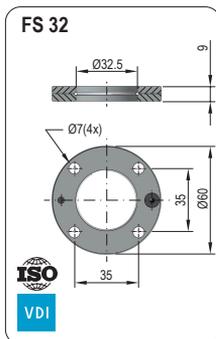
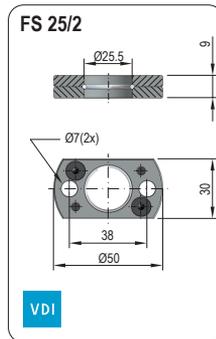
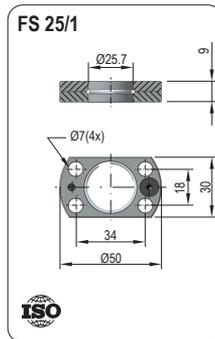
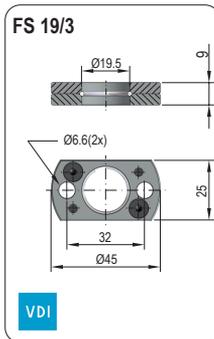
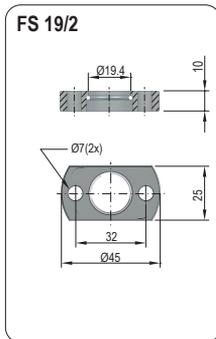
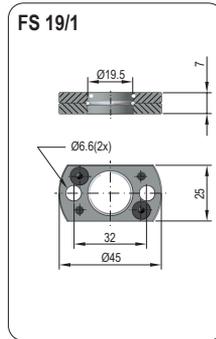
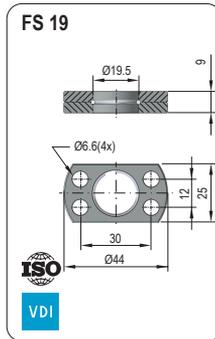
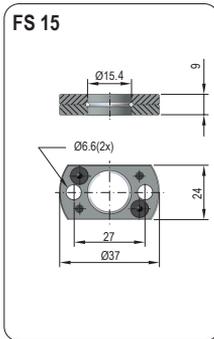
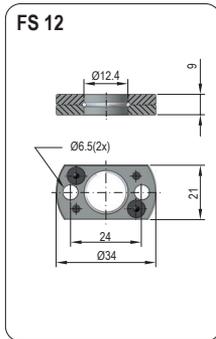
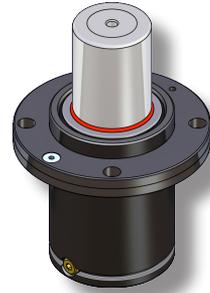
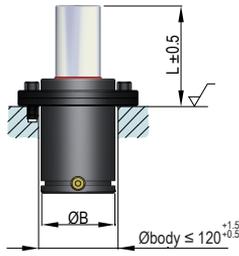
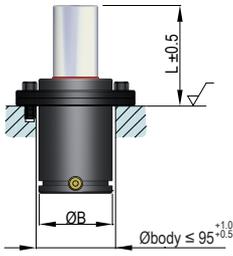
TECAPRES has a wide variety of threaded body gas springs in its program.

TECAPRES tiene en su programa una gran variedad de cilindros con el cuerpo roscado.

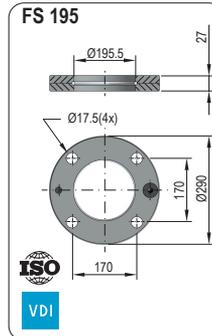
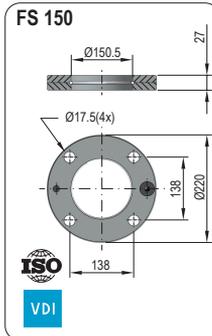
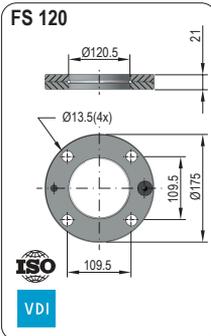
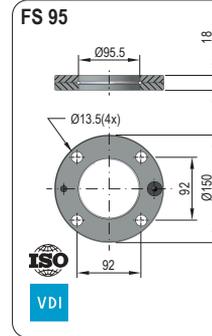
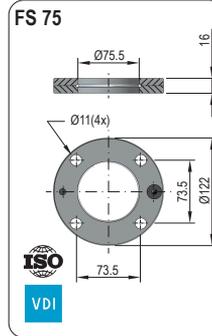
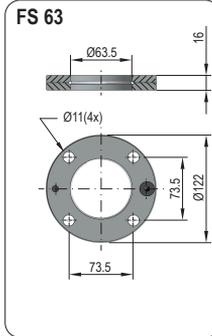
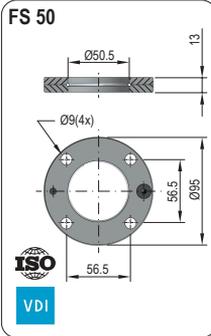
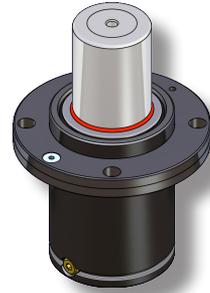


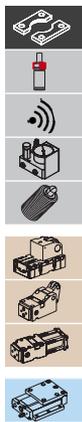
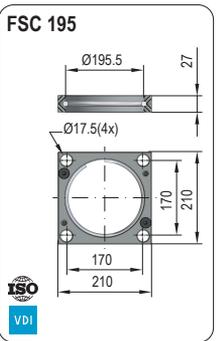
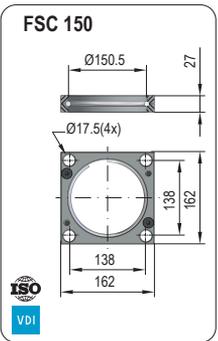
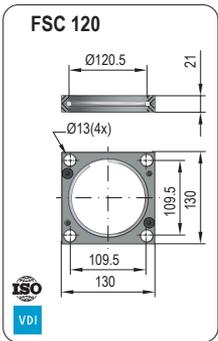
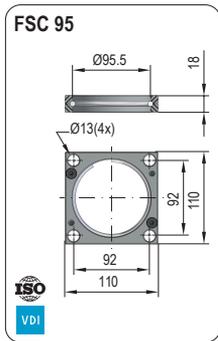
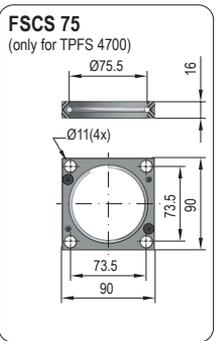
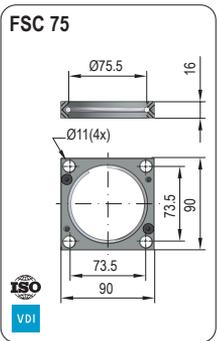
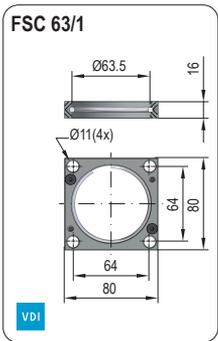
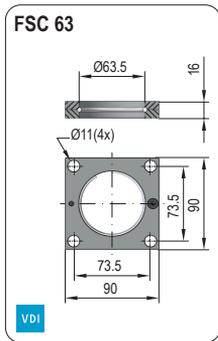
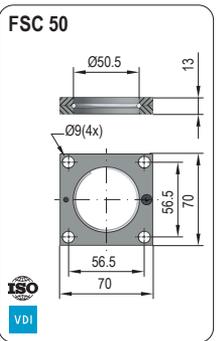
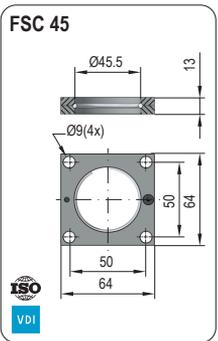
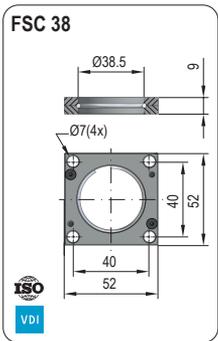
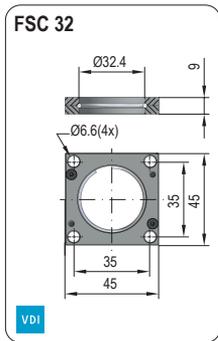
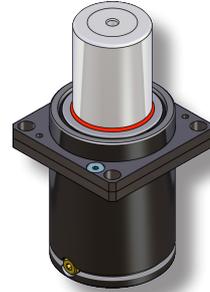
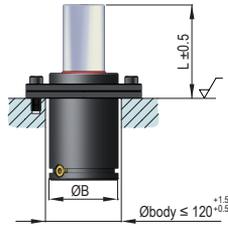
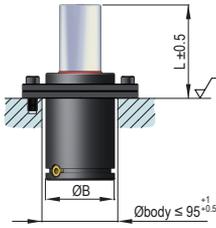
The use of chemical thread locker is recommended. This prevents the gas cylinder from coming loose due to vibrations and shocks

Se recomienda la utilización de fijadores de rosca químicos. Esto evita que el cilindro de gas se pueda soltar debido a vibraciones y golpes.

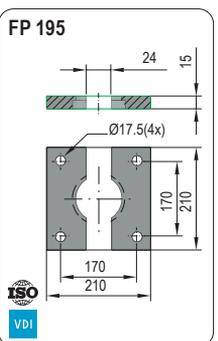
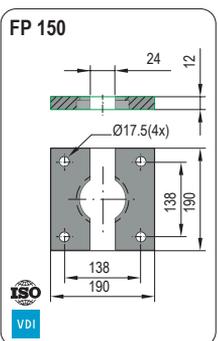
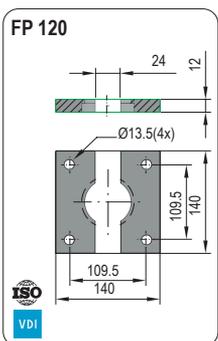
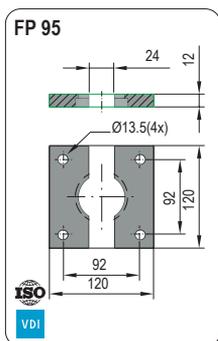
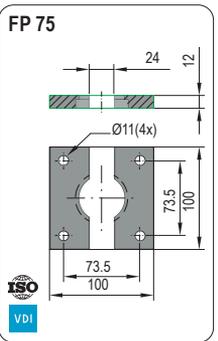
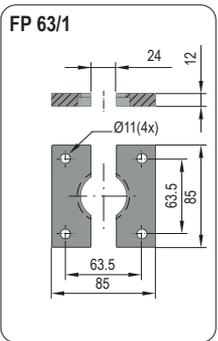
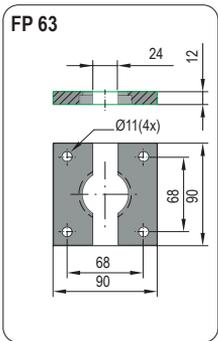
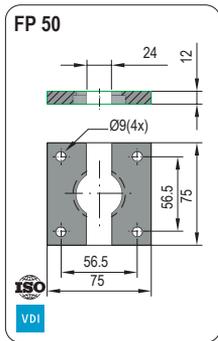
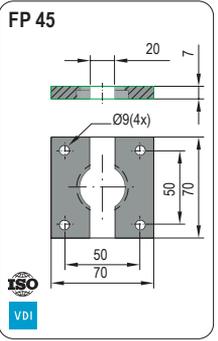
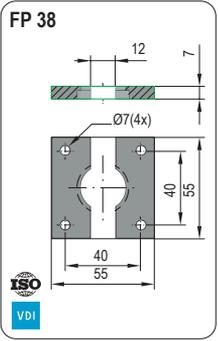
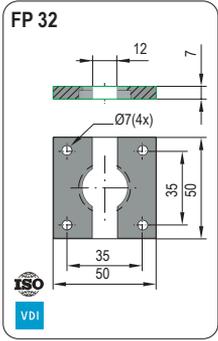
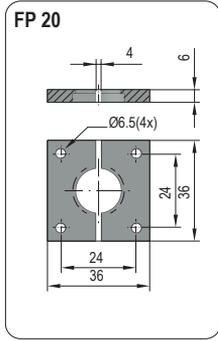
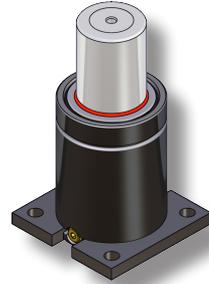
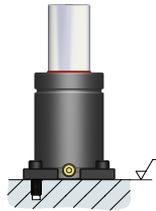


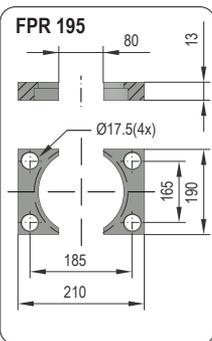
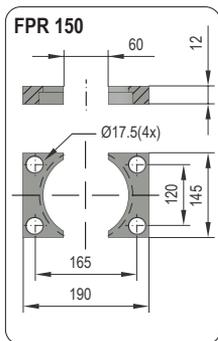
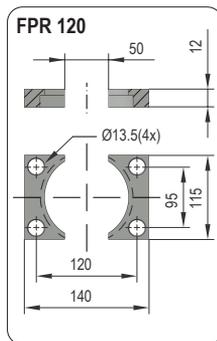
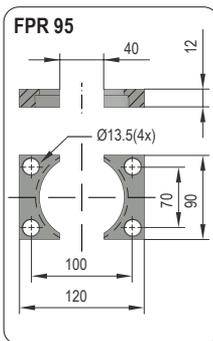
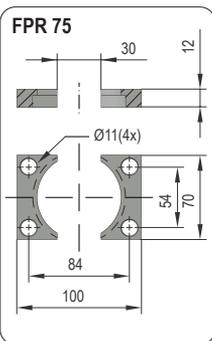
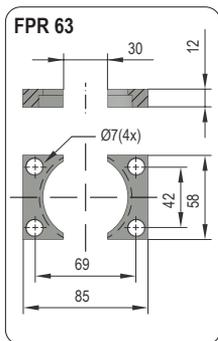
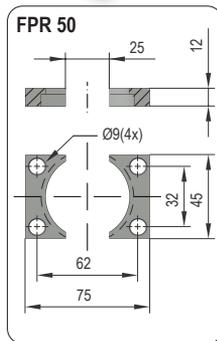
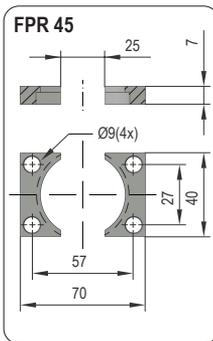
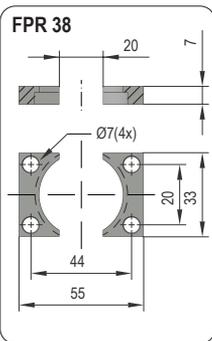
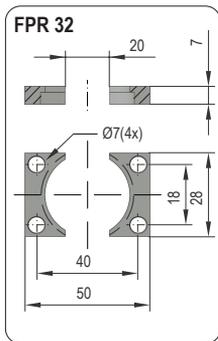
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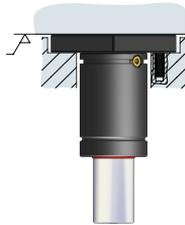


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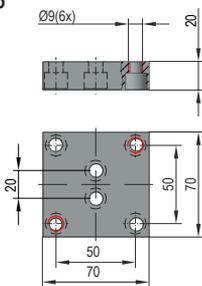
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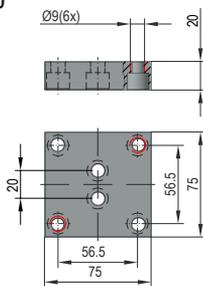


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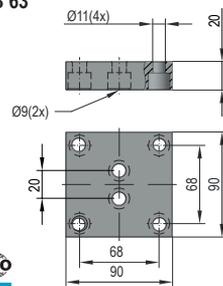
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**FB 50**



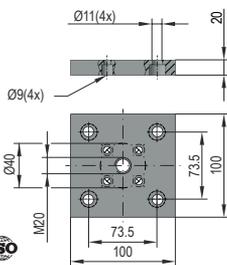
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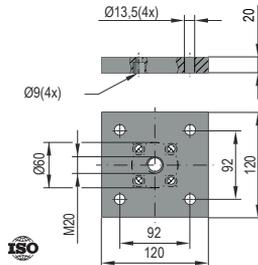
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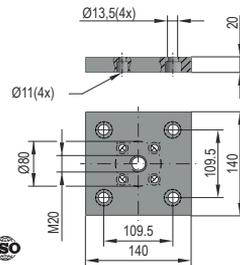
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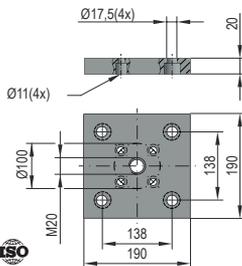
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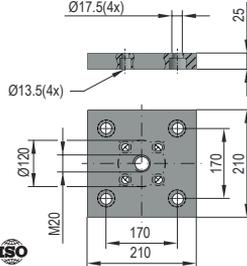
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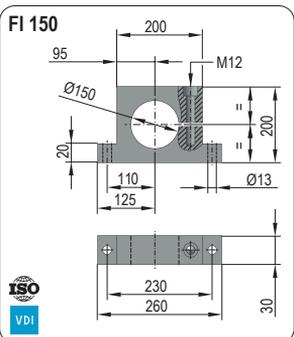
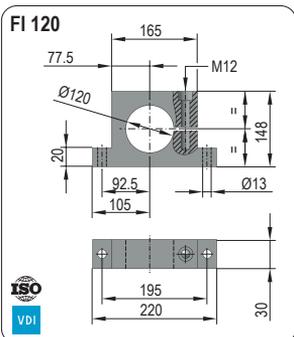
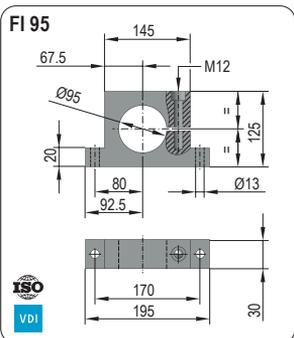
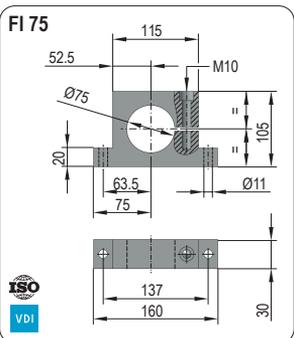
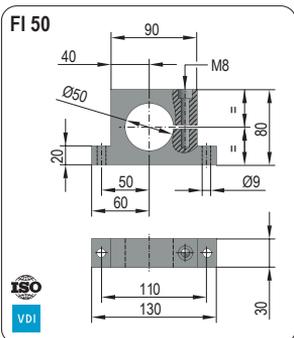
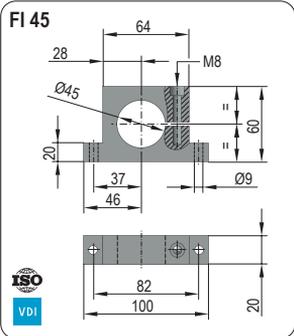
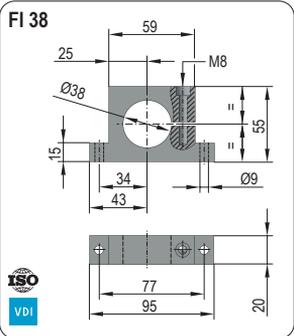
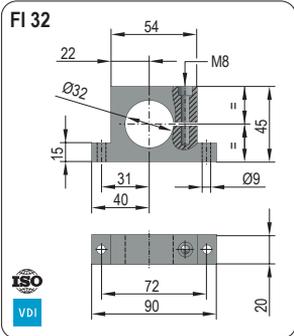
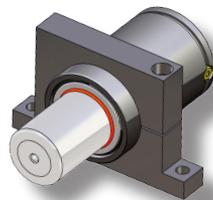
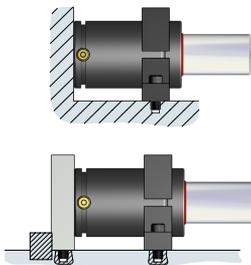
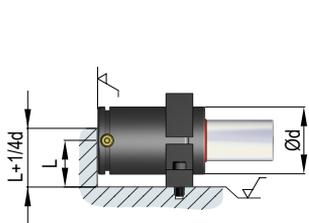


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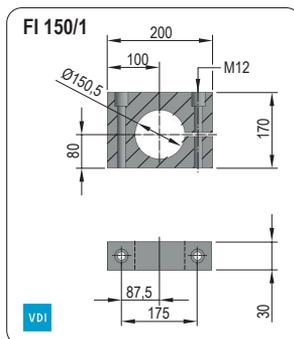
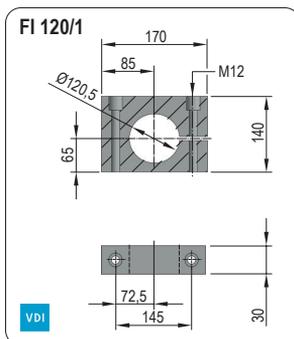
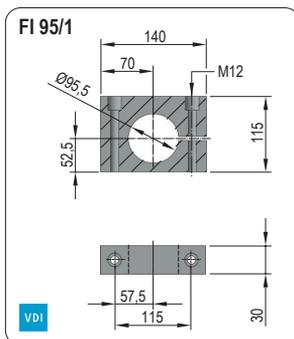
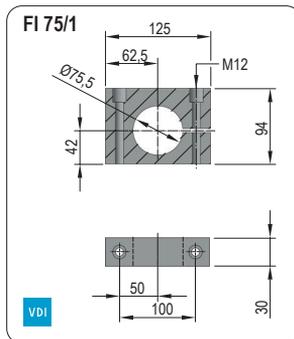
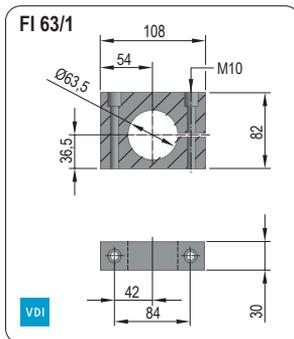
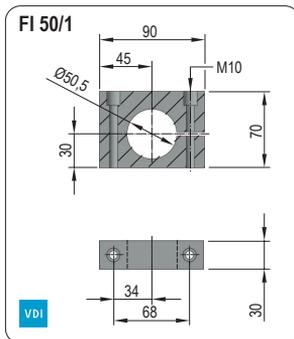
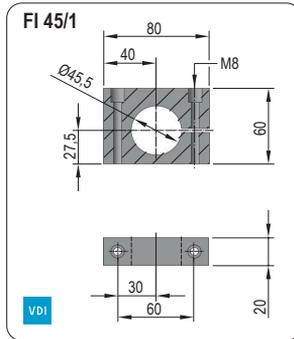
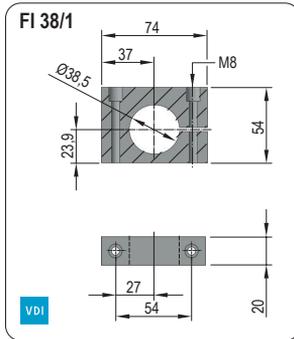
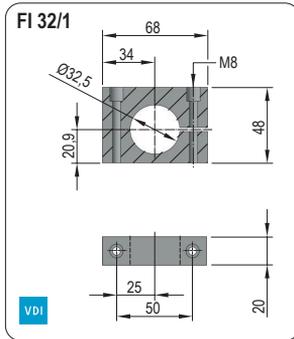
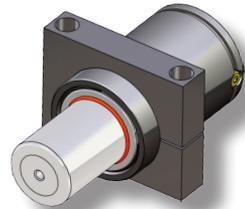
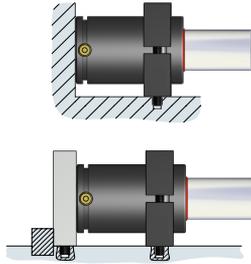
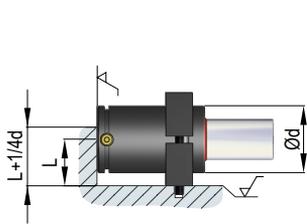
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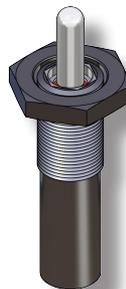


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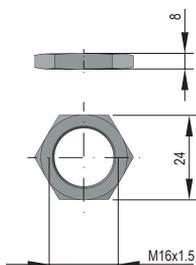


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- TPSRS
- TPNS
- TPHT

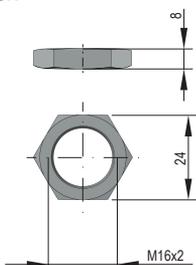




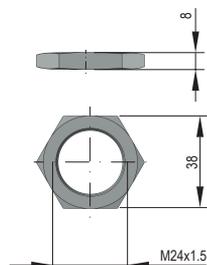
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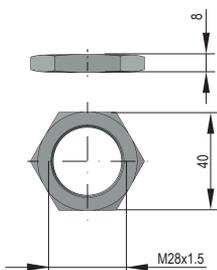
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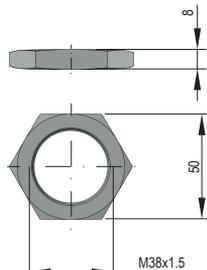
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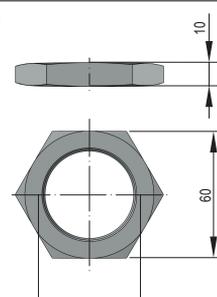
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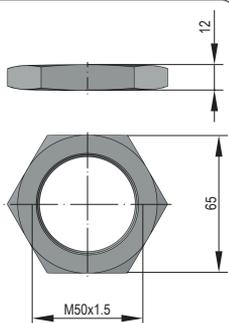
**FR 38**



**FR 45**



**FR 50**





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MICRO

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STOP CYLINDER

STOP CYLINDER

TPSR

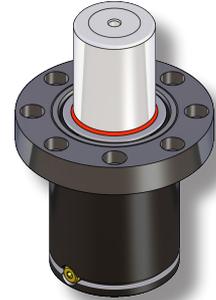
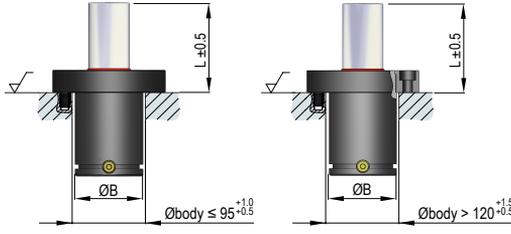
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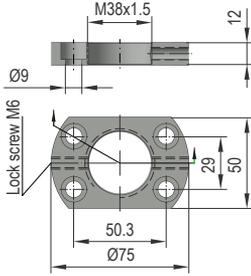
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TPHT

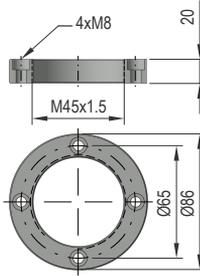


It should be assembled only at factory: no removable flange

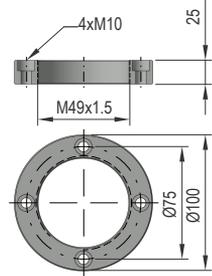
**FRS 38**



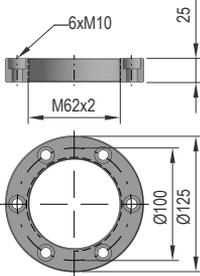
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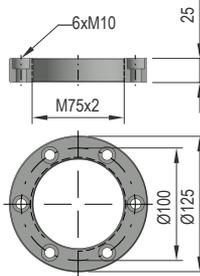
**FRS 50**



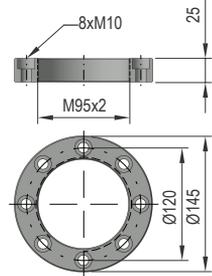
**FRS 63**



**FRS 75**



**FRS 95**



**FRS 120**

