Clamping discs

These clamping items have a high pressure moulded-on seal and represent highly effective units within the closest spaces. They are suitable for mounting inside movable machine parts which are supposed to be fixed together temporarily.

The clamping discs do not require much space. All it takes is a bore hole only 10 mm deep, H7 diameter tolerance. The clamping discs are also available in small sizes: with oil pressures of up to 250 bar the clamping power is extremely high.

The special design guarantees that there is no wear by abrasion at the clamping discs seal. Moreover these items seal airtight: loss due to leakage is out of the question.

Functioning:

The seals of the clamping discs are produced oversized and when mounted they are subject to high pre-stress combined with considerable static friction. As a result the clamping items can be slightly moved to and fro without giving rise to any sliding at the cylinder wall.

With the first surfacing of oil pressure, the seal initially springs and moves forward only after it has overcome the static friction until the clamping disc fits to the sliding way of the piece which is supposed to be clamped. – The seal now maintains this position.

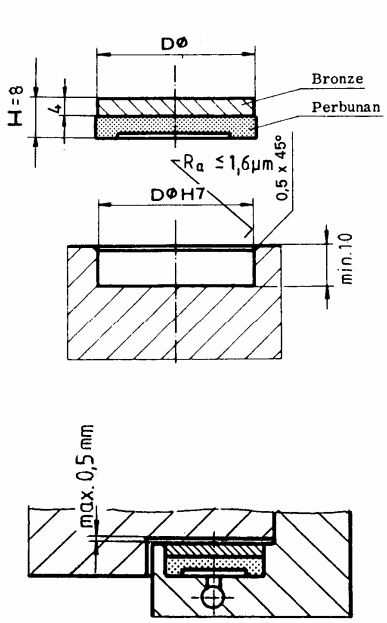
After the pressure is removed there is a spring-back of the clamping item of around 0.01 mm whilst it is lifted from the sliding way. While shifting the machine parts there is practically no abrasion. This characteristic, together with the frictionless functioning of the seals, ensures METRON clamping items longest life cycles and trouble free running.



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Clamping discs





Clamping discs – available sizes:

D (mm)	A (cm^2)
16	2,01
22	3,80
28	6,16
32	8,04
42	13,85
52	21,24
64	32,17

The height „H“ when not mounted is 8 mm. After mounting into the cylinder the height increases – depending on the diameter and height tolerance of the seal – up to maximum 9 mm.
9 mm.

The measure „b“ cylindrical length of the bore hole has to be at least 10 mm with all clamping disc sizes. Scoring has to be avoided.

Determination of clamping power F: $F = A \cdot n \cdot p \cdot 0{,}95$

A = pressure area of a clamping disc
n = number of clamping discs
p = oil pressure in bar

max. oil pressure : 250 bar
recommended oil quality: EP 46 or similar

Mounting with assembling tools page BA-K06/3

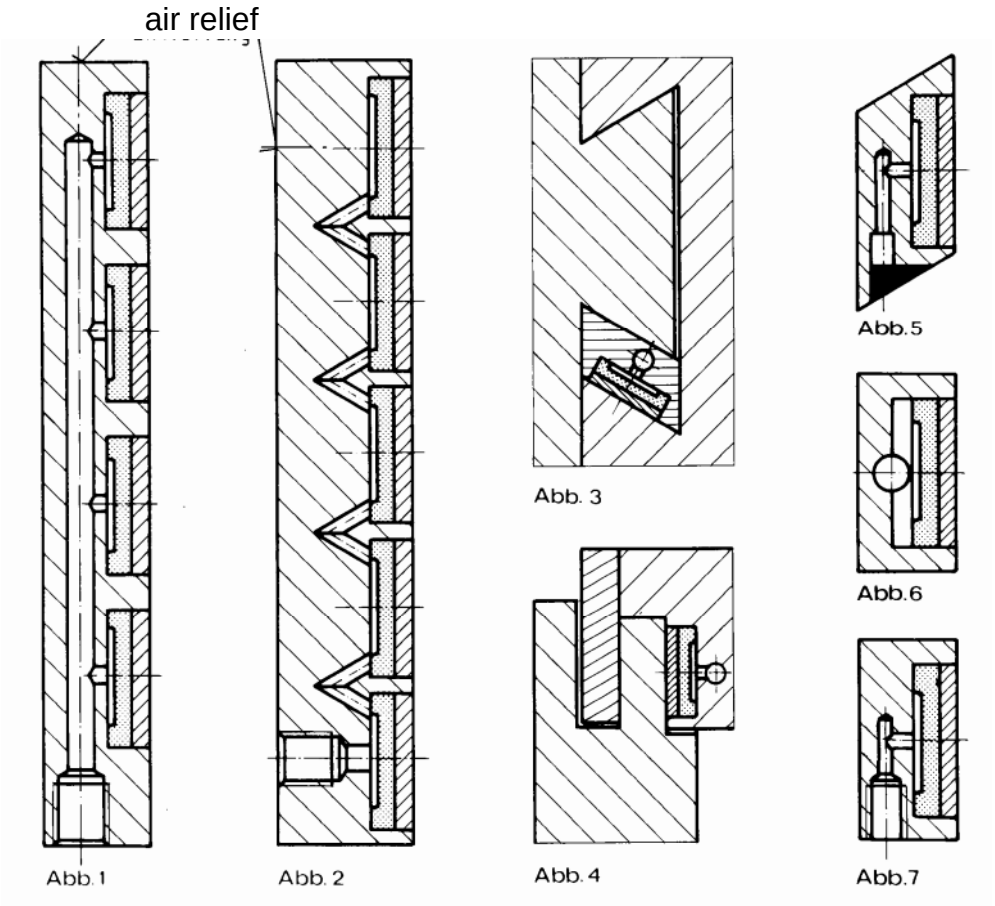


Abb. 1: Clamping discs in a flange fitting strip, connected through a central bore and side cuts

Abb. 2: Clamping discs in a flange fitting strip, connected through diagonal side bore. This way you can avoid extremely long connecting bores

Abb. 3: Example for clamping of a dovetail insertion

Abb. 4: Clamping by means of a flange fitting strip

Abb. 5: Example of a milled and welded oil channel with rails which cannot be bored any further because of their length

Abb. 6: Example of a clamping discs connection by means of **one** bore (without side-cuts)

Abb. 7: Example of a lateral oil connection

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