Clamping rings

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

Functioning:

The seals of the clamping rings 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 forwards only after it has overcome the static friction until the clamping ring 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.



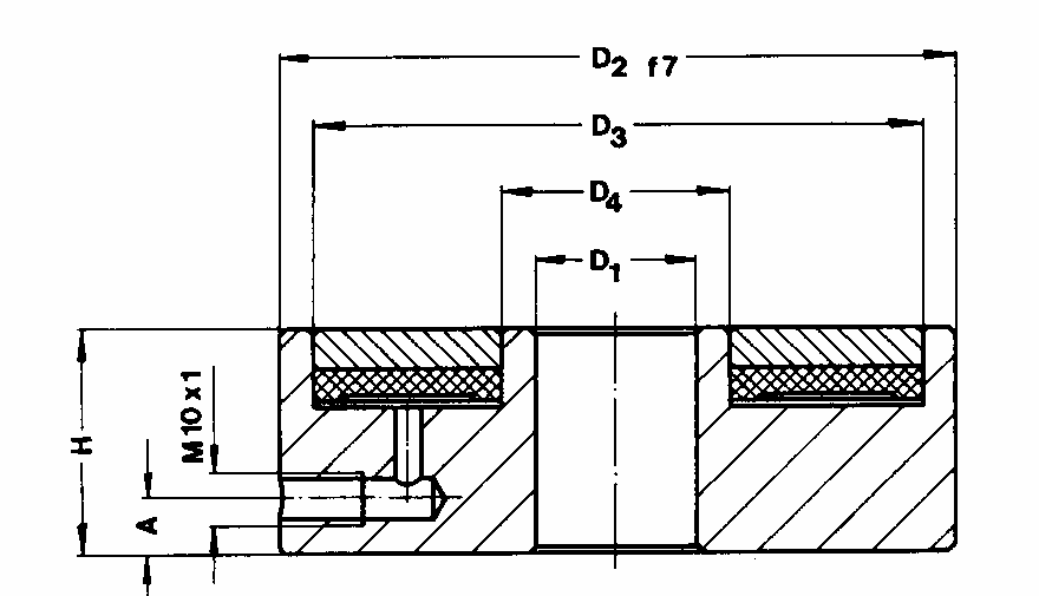
Clamping ring with case



Clamping ring without case

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Clamping rings with case



Clamping rings - available sizes :

Type	KR 1000	KR 1600	KR 2500	KR 4000	KR 6300	KR 10000
Pressure area (cm^2)	15,12	24,03	36,14	56,50	84,67	130,18
Clamping lift (mm)	3	3	4	4	5	5
Max. pressure (bar)	75	75	80	80	85	90
Clamping power (kN) while max. pressure	10,00	16,00	25,00	40,00	63,00	100,00
D_1 (mm)	14,3	16,3	20,3	24,5	30,5	42,5
D_2 (mm)	60	75	90	105	125	155
D_3 (mm)	50	62	75	92	112	140
D_4 (mm)	24	28	32	36	42	55
H (mm)	30	30	32	34	36	40
A (mm)	8	8	8	10	10	10

Determination of clamping power F: $F = A \cdot p \cdot 0{,}9$

A = pressure area of a clamping ring
p = oil pressure in bar

Subject to technical alterations.

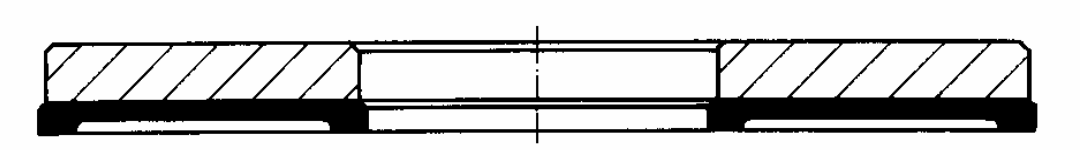
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Clamping rings

METRON clamping rings, well tested for years and versatile, can be employed among other things especially for the clamping of round tables. They are available in two variants:

- the **complete** clamping ring, Typ KR, consisting of case and thrust collar, see sheet K 05/3, page 4.
- the **separate** ring further described made of bronze, a clamping item to be mounted by means of a moulded-on seal directly in a receiving slot.

This type of sealing is also used with METRON clamping discs and gripping pressure plates, which proved to be generally very efficient.
Up to an outside diameter of about 500 mm it can be produced in almost all sizes.
There is also the advantage of a low overall height of minimum 10 mm.



Ratings:

Max. oil pressure = 250 bar, max. temperature = 100° C
Min. oil pressure = ca. 10 bar
Depth of receiving slot = overall height + 2 mm
A slip bevel 30° x 1,5 mm makes mounting easier.
Extremely frequent clamping possible
Recommended oil quality = EP 46 or similar
Determination of clamping power: F = A x p x 0,95

Subject to technical alterations.

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