

GUIDE RINGS

Form and application

The function of guide rings is to achieve the fine guidance of moving connections in hydraulic and pneumatic cylinders, and prevent metallic contact between pistons and cylinders.

Profiles and dimensions are given in Fig. 1.

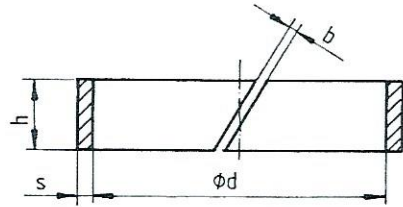


Figure 1

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Guide rings are manufactured of thermoplastics: polytetrafluoroethylene (PTFE), polyamide (PA) and polyacetal (POM).

Operating conditions of the above elements are given in Table 1.

If PTFE guide rings are required due to operating conditions, guide rings manufactured from PTFE filled with bronze are applied with steel cylinders, and guide rings manufactured from PTFE filled with graphite are used with light or non-ferrous cylinders.

Table 1.

Material designation	Applications		
	Temperature range °C	Velocity (m/sec)	Medium
PTFE	-200 up to +260	5	Air Water Mineral oils HFA (emulsion oil-water) HFB (emulsion water-oil) HFC (polyglycol-water) HFD (phosphorous esters) Brake fluids
PA	-40 up to +120	1	Air Mineral oils HFA (emulsion oil-water) HFB (emulsion water-oil) HFC (polyglycol-water)
POM	-40 up to +100	1	Air Mineral oils HFA (emulsion) HFB (emulsion water-oil) HFC (polyglycol-water)

Installation

Guide rings are installed on to the piston and their function is to guide it, or in to the cylinder and their function is to guide the rod.

Sizes and installation dimensions

Nominal and other relevant dimensions of guide rings used for guiding the piston rod, and required installation dimensions are given in Table 2.

The designation of this type of guide rings is 0484.

Nominal and other relevant dimensions of guide rings used for guiding the piston, and the required installation dimensions are given in Table 3.

The designation of this type of guide rings is 0485.

GUIDE RINGS 0485

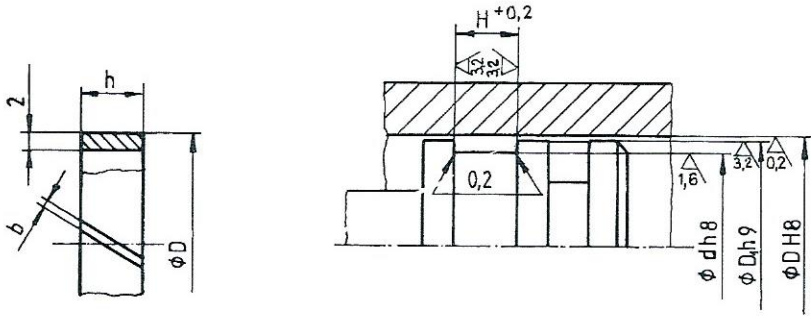


Table 3.

Nominal size	∅d	∅D	∅D ₁	b	h		H			
20	16	20	19	2-3	10			10,2		
25	21	25	24	2-3	10			10,2		
32	28	32	31	2-3	10			10,2		
40	36	40	39	2-3	10			10,2		
50	46	50	49	2-3	10	20		10,2	20,3	
63	59	63	62	3-4	10	20		10,2	20,3	
70	66	70	69	3-4	10	20		10,2	20,3	
80	76	80	79	3-4	10	20		10,2	20,3	
90	86	90	89	4-5	10	20		10,2	20,3	
100	96	100	99	4-5	0	20		10,2	20,3	
125	121	125	124	4-5	10	20		10,2	20,3	
140	136	140	139	4-5		20	30		20,3	30,5
160	156	160	159	5-6		20	30		20,3	30,5
180	176	180	179	5-6		20	30		20,3	30,5
200	196	200	199	5-6		20	30		20,3	30,5
225	221	225	224	5-6		20	30		20,3	30,5
250	246	250	249	6-7		20	30		20,3	30,5
320	316	320	319	6-7			30			30,5
350	346	350	349	7-8			30			30,5
400	396	400	399	7-8			30			30,5

Order examples:

1. Guide rings 0485 20 × 10 PA
2. Guide rings 0485 400 × 30 POM
3. Guide rings 0485 100 × 20 PTFE