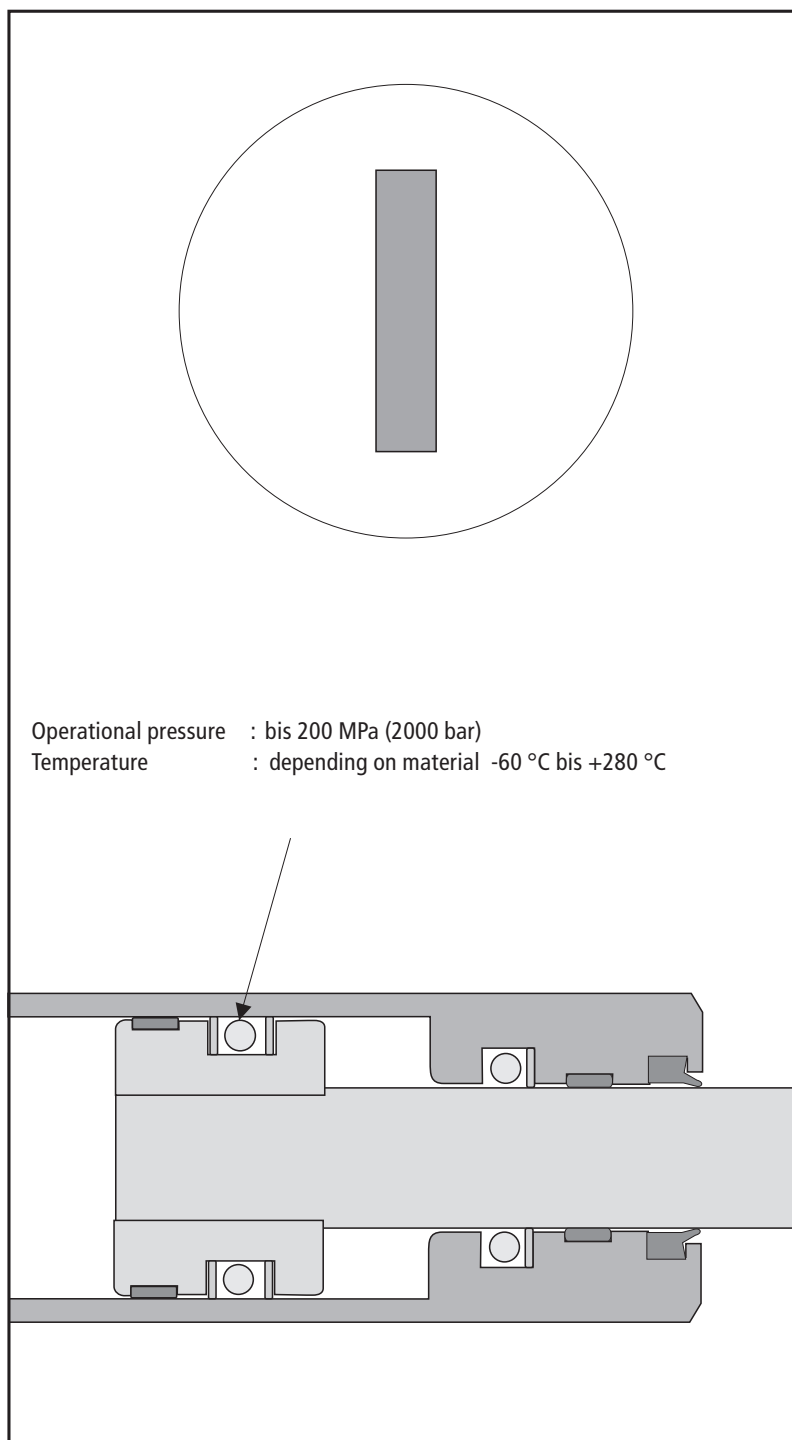


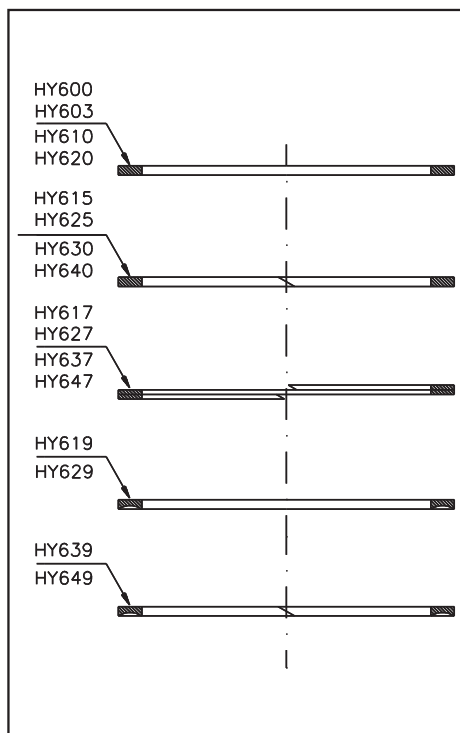


Back up rings - also called thrust rings - are used with static as well dynamic applications. However, they have no sealing function. Extrusion of O-rings or X-seal under the influence of pressure should be avoided. Manufacture of back up rings in various materials is possible.

Special Features:

- Simple groove geometry
- Easy assembly
- Multitude of materials of construction
- Individual sizes possible
- Bridging of large sealing gaps
- High areas of temperature
- Neutral to temperature fluctuations





We recommend use of back up rings for one or more of the following conditions in service:

- pressure over 5 Mpa (50 bar)
- larger sealing splits
- higher stroke frequency
- high temperature fluctuations
- pulsating pressures

HY600, HY603 (recommended assembly / mounting sizes for O-rings)

Back up rings of the HY 600, HY 603 series are produced from special polyester elastomer by injection process. The material - hardness 55 shore D - has excellent extrusion resistance. It is, however, possible to use endlessly manufactured back up rings for external sealing applications due to their Memory effect. These back up rings are meant for automatic assembly. Special antiageing additives in the material are also effective in dry air and oil.

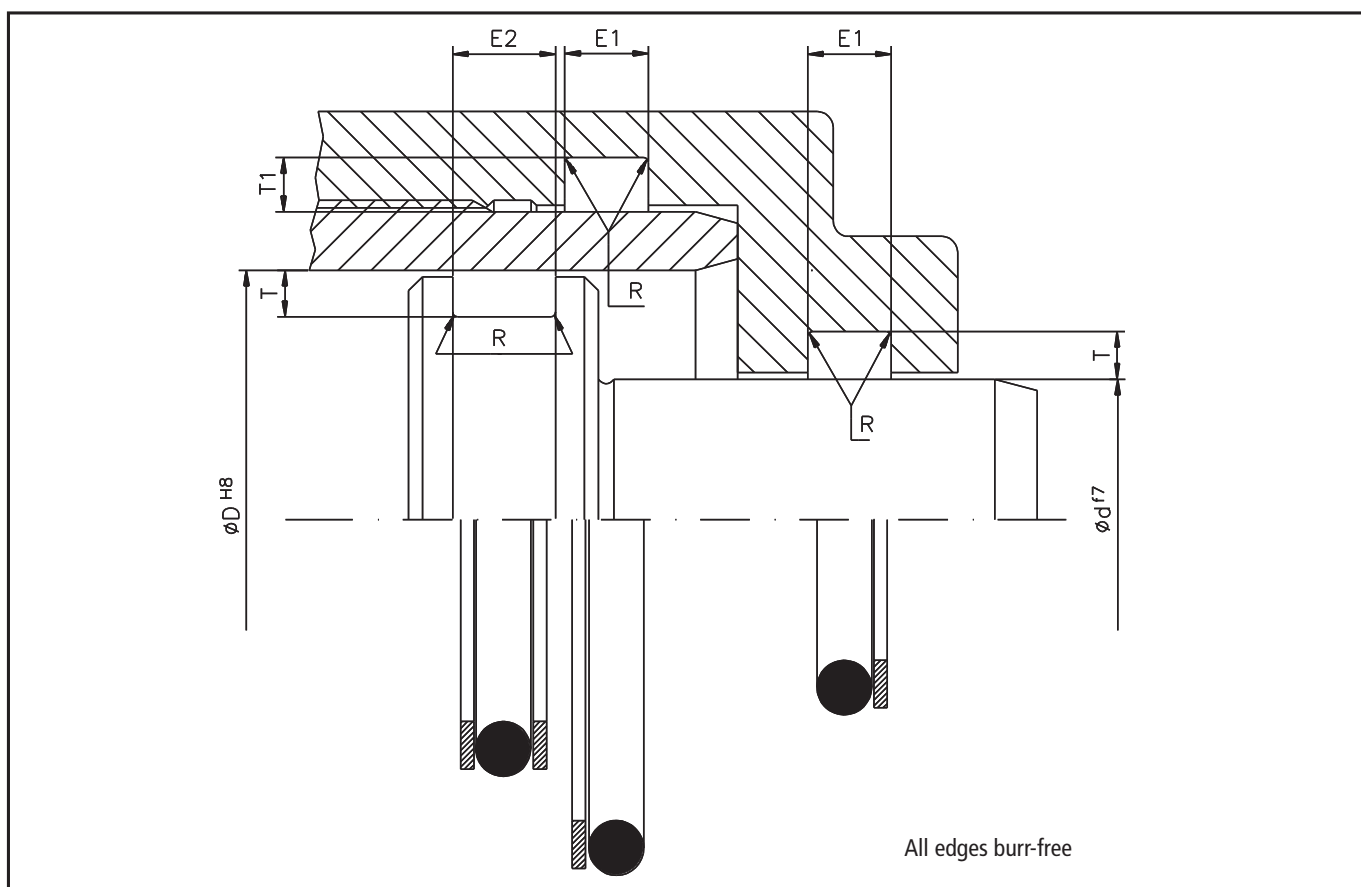
HY610 bis HY649

Rings of this series are produced by turning, and we recommend specific explanations according to specific applications (see table)

Part	design	application
HY610	endless	internal sealing static
HY620	endless	internal sealing dynamic
HY615	slotted	internal sealing static
HY625	slotted	internal sealing dynamic
HY630	slotted	external sealing static
HY640	slotted	external sealing dynamic
HY617	spiral	internal sealing static
HY627	spiral	internal sealing dynamic
HY637	spiral	external sealing static
HY647	spiral	external sealing dynamic
HY619	concave (endless)	internal sealing static
HY629	concave (endless)	internal sealing dynamic
HY639	concave (slotted)	external sealing static
HY649	concave (slotted)	external sealing dynamic

Material overview back up rings

- 01: PTFE pure
- 12: PTFE modified
- 25: PTFE modified + Fiber glass
- 30: PTFE modified + carbon fiber
- 55: PTFE modified + bronze



Groove sizes for back up rings from PTFE

O-Ring cord	dynamic	static	1 back ring	2 back ring	Radius
S	T ±0,05	T1 ±0,05	E1 ±0,2	E2 ±0,2	R (max)
1,50	1,25	1,10	3,00	4,00	0,20
1,60	1,30	1,20	3,10	4,10	0,20
1,78	1,50	1,30	4,00	5,50	0,20
1,90	1,55	1,40	4,10	5,60	0,20
2,00	1,70	1,60	4,20	5,70	0,20
2,40	2,00	1,90	4,70	6,20	0,20
2,50	2,15	1,95	4,80	6,30	0,20
2,62	2,25	2,10	5,00	6,50	0,20
2,70	2,40	2,10	5,10	6,60	0,20
3,00	2,50	2,40	5,50	7,00	0,30
3,50/3,53	3,05	2,95	6,00	7,50	0,40
3,60	3,15	2,95	6,20	7,70	0,40
4,00	3,50	3,30	6,50	8,00	0,40
4,50	4,00	3,60	7,60	9,40	0,40
5,00	4,40	4,10	8,30	10,10	0,50
5,33	4,70	4,50	8,80	10,60	0,50
5,70	5,00	4,85	9,10	10,90	0,50
6,00	5,40	4,90	9,30	11,10	0,60
6,99/7,00	6,10	5,90	12,00	14,50	0,60
8,00	7,10	6,90	12,90	15,40	0,60
8,40	7,50	7,25	13,50	16,00	0,60
9,00	8,10	7,60	14,20	16,70	0,60
10,00	9,00	8,00	15,50	18,00	0,60



Example for ordering Internal static Back Ring (endless):

Profile HY 610 - 0500 - 24 - 01P - ...
 Rod diameter x 10
 *Supply code-no.
 Standard material
 HME Internal Code

Material Key:

Back ring

HY 600 to HY 603:

300 - Polyester elastomer (see O-rings)

HY 610 to HY 649:

01P - PTFE pure

25P - PTFE glass filled

30P - PTFE carbon

55P - PTFE bronze

Example for ordering external static Back Ring (concav-splitted):

Profile HY 639 - 0500 - 24 - 01P - ...
 Piston diameter x 10
 *Supply code-no.
 Standard material
 HME internal code

*Table for Supply Code-no.

O-ring cord	Code dynamic	static
1,50	12	11
1,60	13	12
1,78	15	13
1,90	16	14
2,00	17	16
2,40	20	19
2,50	21	20
2,62	22	21
2,70	24	21
3,00	25	24
3,50/3,53	30	30
3,60	31	30
4,00	35	33
4,50	40	36
5,00	44	41
5,33	47	45
5,70	50	48
6,00	54	49
6,99/7,00	61	59
8,00	71	69
8,40	75	72
9,00	81	76
10,00	90	80

Issue

01	05
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WARNING: Limits of application stated herein are standard values. They could be individually transgressed with due consideration to respective service conditions. In the event of a large duty cycle, pulsating operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due to a large variety of service conditions that may arise in course of actual use, the company does not take responsibility of or guarantee the functional accuracy of the individual components. Rights for changes are reserved.