



The double-acting Caveseal® rod sealing set profile CR consists of a PTFE rod sealing ring and an elastomer O-ring as a preloading element.

The sealing set is appropriate for dynamic applications as an alternative to an O-ring, for situations where sealing performance and friction have to be optimized.

The material combination of the slipper ring (PTFE) and the O-ring (elastomer) makes this product suitable for a wide range of applications, especially for aggressive media and/or high temperatures. Multiple compounds can alternatively be selected according to the individual application profile.

Advantages

- Good sealing performance in extremely small assembly conditions.
- Excellent wear resistance.
- Minimal break-away and dynamic friction and no stick-slip tendency ensures uniform motion even at low speeds.
- Good energy efficiency due to low friction.
- High temperature resistance assured by suitable O-ring compound selection.
- Adaptable to nearly all media thanks to high chemical resistance of the sealing ring and large O-ring compound selection.
- Short axial assembly length.
- Short radial assembly depth.
- Installation in closed and undercut housings.
- Available in diameters from 4 to 3000 mm.
- Can be used in existing O-ring grooves.
- Machined small-volume series and samples available with short lead times.

Range of Application

The CR profile range has been designed exclusively to replace standard O-rings. For dynamic applications we recommend our ON profile range.

Operating pressure	≤ 160 bar
Operating temperature	-30 to +100 °C ¹⁾
Surface speed	≤ 4.0 m/s

¹⁾ For requirements outside of standard temperature range please contact our consultancy service for suitable O-ring compound.

Compounds

Sealing ring: Polon® 012, modified PTFE

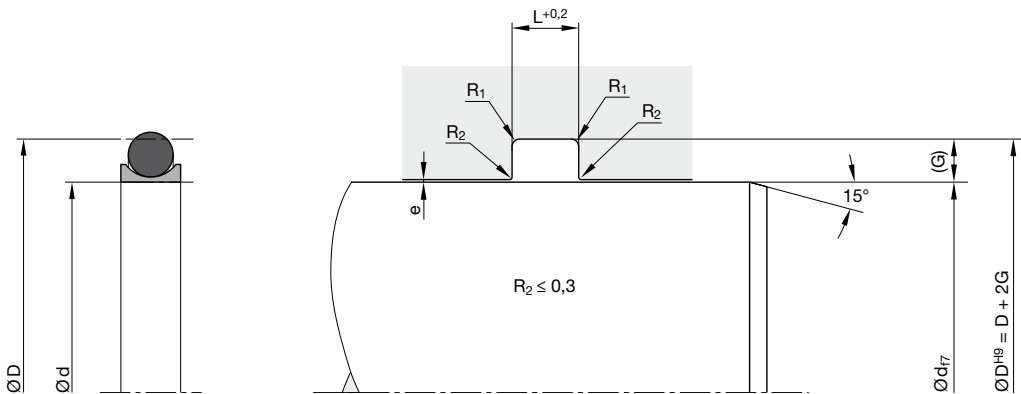
O-ring: N0674, NBR elastomer with approx. 70 Shore A

Installation

For diameters < 10 mm, open grooves are required.

For design modifications of the groove, please contact our consultancy service.

This seal should only be used in combination with guiding elements (e.g. F3).



Housing dimensions

Series No.	Cross-section	O-ring cross-section (mm)	Recommended rod Ø range		Groove width L (mm)	Groove depth G (mm)	Gap max. e (mm)	Radius max. R ₁ (mm)
			≥ d (mm)	< d (mm)				
07400	A	1.78	4	10	2.4	1.45	0.15	0.5
07400	B	2.62	10	20	3.6	2.25	0.20	0.5
07400	C	3.53	20	40	4.8	3.10	0.20	0.5
07400	D	5.33	40	120	7.1	4.70	0.25	0.9
07400	E	6.99	120	400	9.5	6.10	0.30	0.9

Ordering example

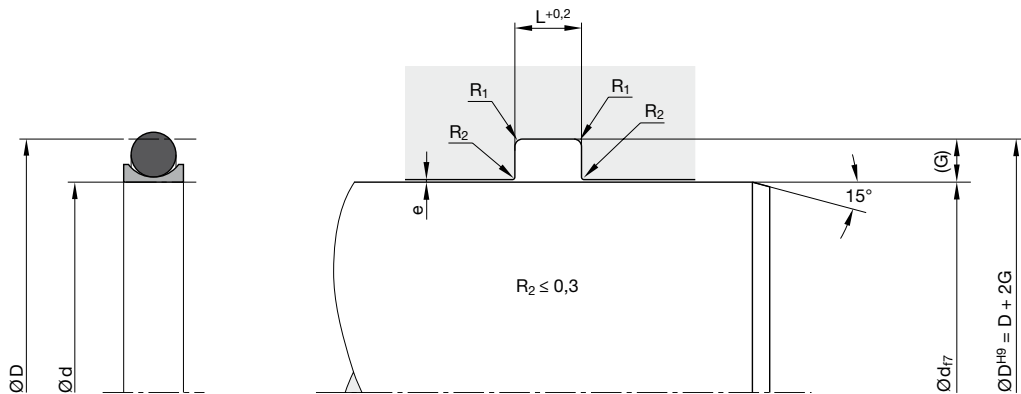
Rod diameter 40 mm

CR 0400 012 07401 D (40.0 x 49.4 x 7.1)

- CR Profile
- 0400 Rod diameter x 10
- 012 Compound
- 07401 Series no. / Compound code O-ring:
 - 07400 without O-ring
 - 07401 N0674 (NBR) 70±5 Shore A -30 / +110 °C
 - 07402 V0747 (FKM) 75±5 Shore A -25 / +200 °C
 - 07403 N0304 (NBR) 75±5 Shore A -50 / +110 °C
 - 07404 E0540 (EPDM) 80±5 Shore A -40 / +150 °C
 - 07405 N3578 (NBR) 75±5 Shore A -30 / +110 °C
 - 07406 N3588 (NBR) 90±5 Shore A -20 / +110 °C
- D Cross-section

Please note

For certain applications, it may be appropriate to use a nonstandard cross-section – reduced or heavier. In these cases, please replace the standard cross-section code (in above example: “D”) by the one you require (for example “C” or “E”).



Standard range

Groove				O-ring			Groove				O-ring		
Size	$\varnothing d$ mm	$\varnothing D$ mm	L mm	No.	CS mm	ID mm	Size	$\varnothing d$ mm	$\varnothing D$ mm	L mm	No.	CS mm	ID mm
0040	4	6.9	2.4	2-008	1.78	4.47	1600	160	172.2	9.5	2-438	6.99	158.12
0050	5	7.9	2.4	2-009	1.78	5.28	1700	170	182.2	9.5	2-440	6.99	170.82
0060	6	8.9	2.4	2-010	1.78	6.07	1800	180	192.2	9.5	2-442	6.99	183.52
0080	8	10.9	2.4	2-011	1.78	7.65	1900	190	202.2	9.5	2-443	6.99	189.87
0100	10	14.5	3.6	2-111	2.62	10.77	2000	200	212.2	9.5	2-445	6.99	202.57
0120	12	16.5	3.6	2-112	2.62	12.37	2100	210	222.2	9.5	2-446	6.99	215.27
0140	14	18.5	3.6	2-113	2.62	13.94	2200	220	232.2	9.5	2-446	6.99	215.27
0150	15	19.5	3.6	2-114	2.62	15.54	2300	230	242.2	9.5	2-447	6.99	227.97
0160	16	20.5	3.6	2-114	2.62	15.54	2400	240	252.2	9.5	2-448	6.99	240.67
0180	18	22.5	3.6	2-116	2.62	18.72	2500	250	262.2	9.5	2-449	6.99	253.37
0200	20	26.2	4.8	2-211	3.53	20.22	2600	260	272.2	9.5	2-450	6.99	266.07
0220	22	28.2	4.8	2-212	3.53	21.82	2700	270	282.2	9.5	2-450	6.99	266.07
0250	25	31.2	4.8	2-214	3.53	24.99	2800	280	292.2	9.5	2-451	6.99	278.77
0300	30	36.2	4.8	2-217	3.53	29.32	2900	290	302.2	9.5	2-452	6.99	291.47
0320	32	38.2	4.8	2-219	3.53	32.92	3000	300	312.2	9.5	2-453	6.99	304.17
0350	35	41.2	4.8	2-220	3.53	34.52	3100	310	322.2	9.5	2-454	6.99	316.87
0360	36	42.2	4.8	2-221	3.53	36.09	3200	320	332.2	9.5	2-454	6.99	316.87
0400	40	49.4	7.1	2-326	5.33	40.64	3300	330	342.2	9.5	2-455	6.99	329.57
0450	45	54.4	7.1	2-327	5.33	43.82	3400	340	352.2	9.5	2-456	6.99	342.27
0480	48	57.4	7.1	2-328	5.33	46.99	3500	350	362.2	9.5	2-457	6.99	354.97
0500	50	59.4	7.1	2-329	5.33	50.17	3600	360	372.2	9.5	2-457	6.99	354.97
0520	52	61.4	7.1	2-329	5.33	50.17	3700	370	382.2	9.5	2-458	6.99	367.67
0560	56	65.4	7.1	2-331	5.33	56.52	3800	380	392.2	9.5	2-459	6.99	380.37
0600	60	69.4	7.1	2-332	5.33	59.69	3900	390	402.2	9.5	2-460	6.99	393.07
0630	63	72.4	7.1	2-333	5.33	62.87	4000	400	412.2	9.5	2-461	6.99	405.26
0650	65	74.4	7.1	2-334	5.33	66.04							
0700	70	79.4	7.1	2-335	5.33	69.22							
0750	75	84.4	7.1	2-337	5.33	75.57							
0800	80	89.4	7.1	2-338	5.33	78.74							
0850	85	94.4	7.1	2-340	5.33	85.09							
0900	90	99.4	7.1	2-342	5.33	91.44							
0950	95	104.4	7.1	2-343	5.33	94.62							
1000	100	109.4	7.1	2-345	5.33	100.97							
1050	105	114.4	7.1	2-346	5.33	104.14							
1100	110	119.4	7.1	2-348	5.33	110.94							
1150	115	124.4	7.1	2-350	5.33	116.84							
1200	120	132.2	9.5	2-427	6.99	120.02							
1250	125	137.2	9.5	2-429	6.99	126.37							
1300	130	142.2	9.5	2-430	6.99	129.54							
1350	135	127.2	9.5	2-432	6.99	135.89							
1400	140	152.2	9.5	2-433	6.99	139.07							
1500	150	162.2	9.5	2-437	6.99	151.77							

Further sizes on request.