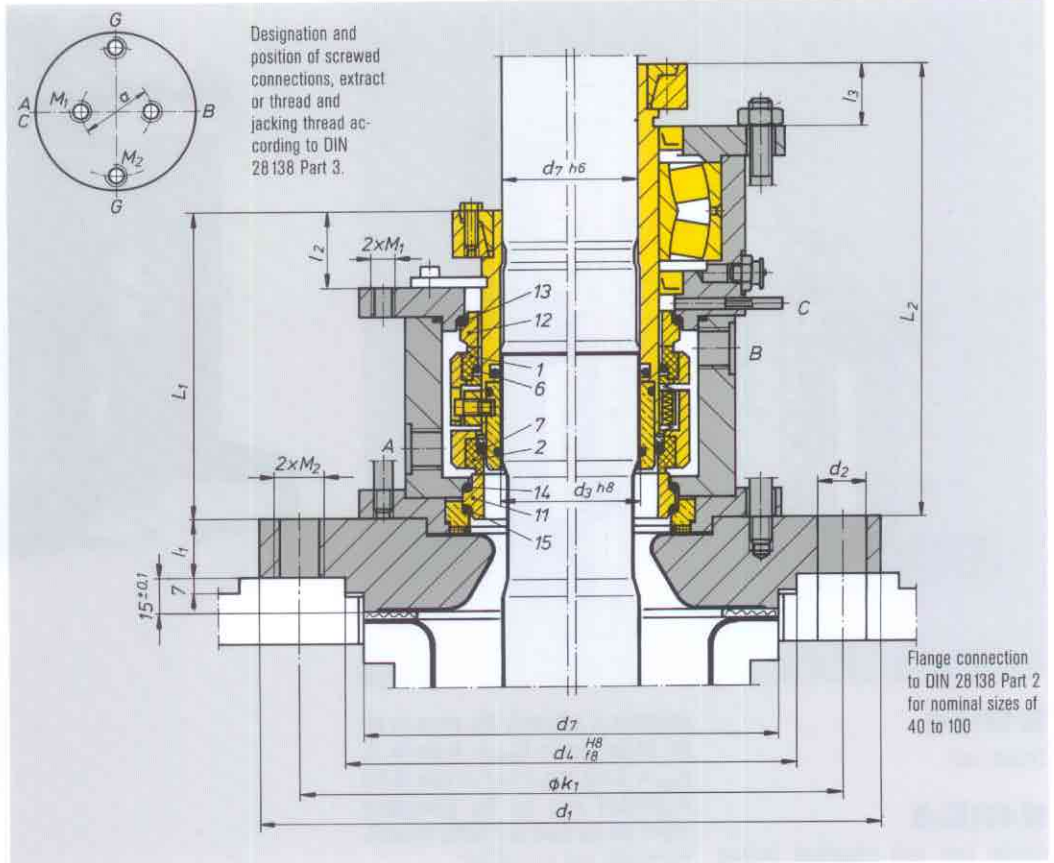
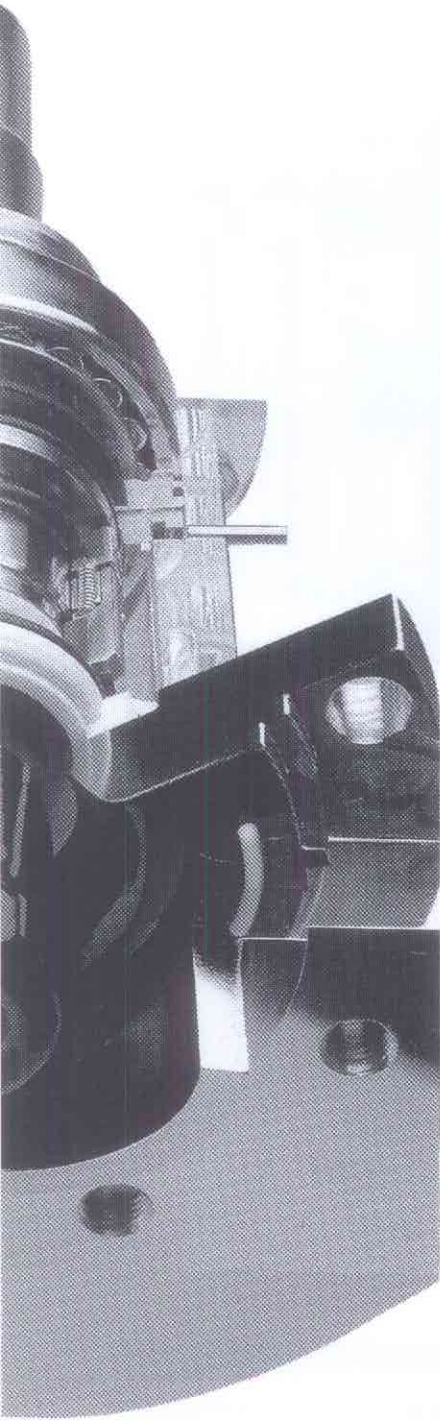


# M 461



- ▶ For glass-lined vessels
- ▶ Unbalanced
- ▶ Independent of direction of rotation
- ▶ Cartridge unit
- ▶ Connections to DIN

Vessel seals of the M461 range are factory assembled and tested cartridge units ready for fitting in special applications on glass-lined vessels to **DIN 28136**. The fitting dimensions of the mounting flange are in accordance with **DIN 28137 Part 2**. The sleeve dimensions comply with shaft details given in **DIN 28159**. All parts exposed to the product are of non-metallic construction. Torque transmission (acc. to DIN only by clamp connections) and additional options (with the exception of leakage drain) conform to the code system on page 90.

### Operating limits DIN 28138 Part 2

$d_3 = 40 \dots 160 \text{ mm} \quad 1.6'' \dots 6.3''$   
 $p_1 = \text{vacuum} \dots 16 \text{ bar} \quad \text{vac.} \dots 230 \text{ PSI}$   
 $\quad \text{M 461K(L)} \dots 6 \text{ bar} \quad 87 \text{ PSI}$   
 $t = -30 \text{ (-80)}^\circ\text{C} \dots +200 \text{ (250)}^\circ\text{C}$   
 $\quad \quad \quad -22 \text{ (-112)}^\circ\text{F} \dots 392 \text{ (482)}^\circ\text{F}$   
 $v_g = 2 \text{ (5)} \text{ m/s} \quad 6.6 \text{ (16.4)} \text{ ft/s}$

### M 461K-D

Double seal

### M 461KL-D

Double seal with integrated floating bearing

### M 56K(L)-D

Double seal with/without a floating bearing for PN 25 (please refer to Burgmann for special version). Not illustrated.

Item	Description
1	Seal face, atmosphere side
2	Seal face, product side
6	O-ring
7	O-ring
11	Seat, product side
12	Seat, atmosphere side
13	O-ring
14	O-ring
15	O-ring
34	Lip seal

These seals are designed to be self-closing on the product side, i.e. they will remain closed even with pressure variations or a pressure reversal.

Operation optional as single seal ( $p_{1 \text{ max}} = 6 \text{ bar}$  or  $\Delta p_{\text{max}} = 6 \text{ bar}$  at  $p_1 > p_3$ ). In view of the mechanical seal on the atmosphere side, it can be used as a buffer pressurized double seal ( $p_{1 \text{ max}} = 16 \text{ bar}$ ).

A ceramic intermediate sleeve is provided on the product side. This enables a pressure test of the seal cartridge to be made before assembly.

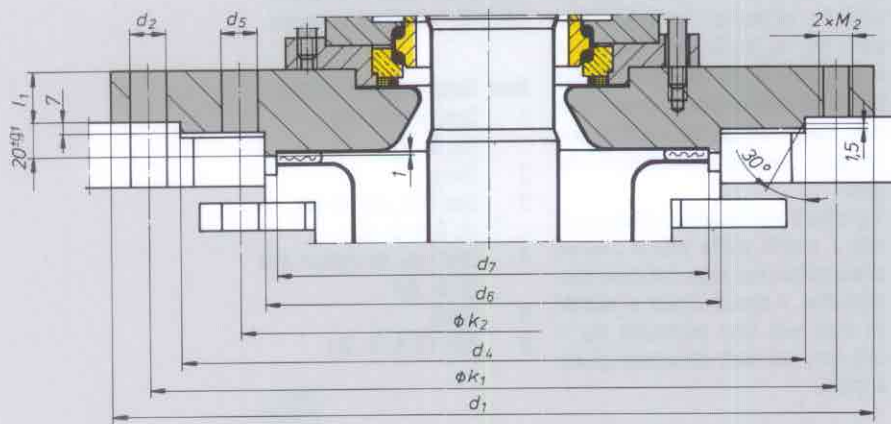
Due to the specific configuration of the seal flange, the seal can be lifted off the glass-lined flange ring as a complete cartridge. The sensitive glass lined flange remains mounted on the vessel. This avoids any damaging of the glass lined surface.

### Gas-lubricated sliding faces

Agitator seals of the 461 series are also available as gas-lubricated versions for DIN connections (AGS 461 K-D, AGS 461 KL-D). See page 66 and page 74.



M 461



Flange connection to DIN 28138 Part 2 for nominal sizes from 125 to 161.

$d_3^{1)}$	$d_7^{1)}$	Nominal size	Flange size <sup>2)</sup>	$d_1$	$n \times d_2$	$d_4$	$n \times d_5$	$d_6$	$d_7$	$\phi k_1$	$\phi k_2$	$L_1$	$L_2$	$l_1$	$l_2$	$l_3$	$M_1$	$M_2$	A, B
40	38	40	E 125	175	4x18	110	-	-	102	145	-	142	184	25	35	28	M12	M16	G <sup>3</sup> / <sub>8</sub>
50	48	50	E 200	240	8x18	176	-	-	138	210	-	147	195	25	40	28	M12	M16	G <sup>3</sup> / <sub>8</sub>
60	58	60	E 250	275	8x22	204	-	-	188	240	-	158	203	25	42	28	M12	M20	G <sup>3</sup> / <sub>8</sub>
80	78	80	E 300	305	8x22	234	-	-	212	270	-	170	240	30	45	34	M16	M20	G <sup>1</sup> / <sub>2</sub>
100	98	100	E 400	395	12x22	313	-	-	268	350	-	177	240	30	52	34	M16	M20	G <sup>1</sup> / <sub>2</sub>
100	98	100	E 500	395	12x22	313	-	-	268	350	-	177	240	30	52	34	M16	M20	G <sup>1</sup> / <sub>2</sub>
125	120	125	E 700	505	4x22	422	12x22	320	306	460	350	208	266	30	75	40	M20	M20	G <sup>1</sup> / <sub>2</sub>
140	135	140	E 700	505	4x22	422	12x22	320	306	460	350	223	282	30	79	40	M20	M20	G <sup>1</sup> / <sub>2</sub>
160	150	160	E 700	505	4x22	422	12x22	320	306	460	350	228	282	30	77	40	M20	M20	G <sup>1</sup> / <sub>2</sub>
160	150	160	E 900	505	4x22	422	12x22	320	306	460	350	228	282	30	77	40	M20	M20	G <sup>1</sup> / <sub>2</sub>
160	150	161	E 901	565	4x26	474	12x22	370	356	515	400	228	282	30	77	40	M20	M20	G <sup>1</sup> / <sub>2</sub>

<sup>1)</sup> Shaft diameters  $d_3$  and  $d_7$  to DIN 28159

<sup>2)</sup> Flange size to DIN 28137 T2