

# U164 Single & Dual Seals

# Glass Lined Agitator Seals - Liquid Lubricated



### Product Description

1. Single and Dual seal configuration
2. Unbalanced design
3. Independent of direction of rotation
4. Cartridge construction
5. Designed for top entry vessels
6. Rotary unit with multiple springs
7. Construction with integrated bearing also available
8. For glass-lined vessels, design according to DIN 28138 T2

### Technical Features

1. Available with or without floating bearing
2. Double seals can be applied at higher pressure and rotating speed
3. Suitable for standardizations
4. Rugged design to ensure long term reliability and operating life
5. Seals are assembled in cartridge construction for easy fitment
6. Over all connecting dimensions are tailor made to customer's specifications
7. The seal design is unique as it closes due to the hydraulic product pressure as well as overlaying barrier pressure

### Typical Industrial Applications

Agitators	Pharmaceutical Reactors
Chemical	Toxic media
Food & beverage	
Non-toxic media	

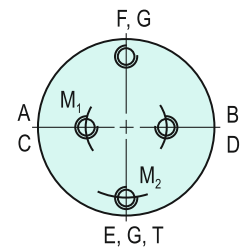
### Materials

According to application and customer's specification.

### Performance Capabilities

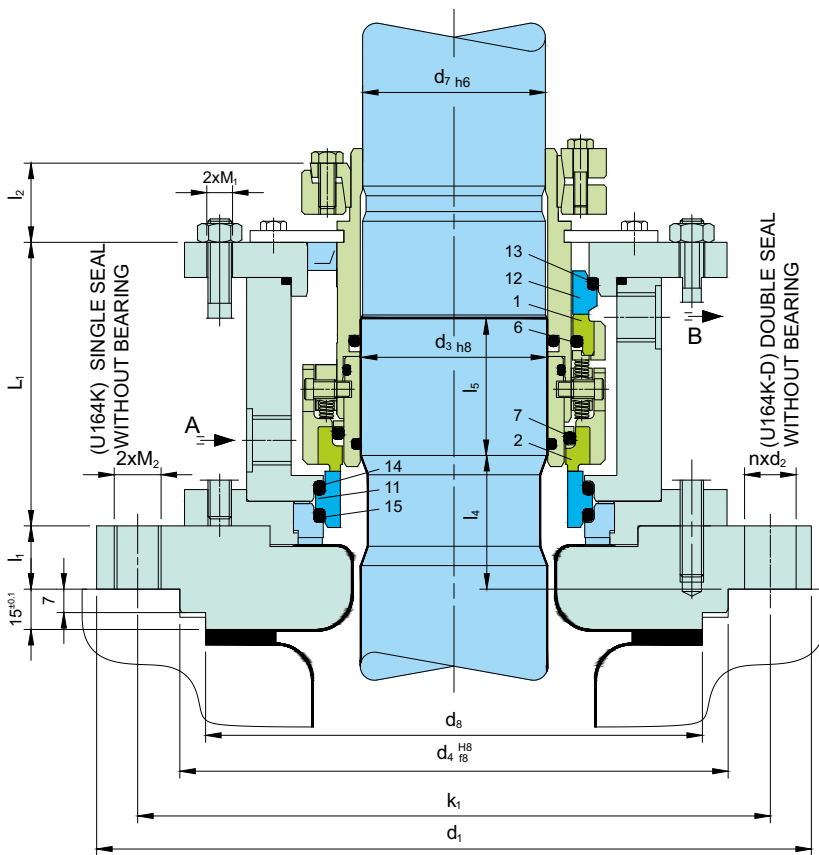
Sizes	$d_3 =$ Upto 160 mm (Upto 6.500")
Pressure	$p_1 =$ vacuum ... 16 bar (232 PSI), $p_3 =$ max. 18 bar (261 PSI)
Temperature	$t_1 = -40\text{ }^\circ\text{C} \dots +200\text{ (250) }^\circ\text{C}$ $(-40\text{ }^\circ\text{F} \dots +392\text{ (482) }^\circ\text{F})$
Speed	0... 5 m/s (0 ... 16 ft/s)

### Installation, Details, Options



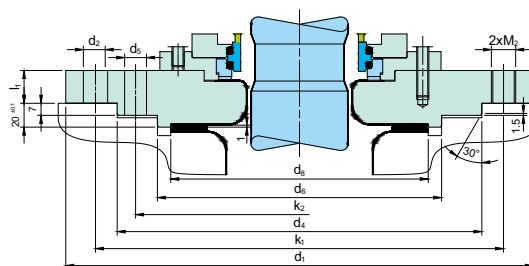
Supply connections  
Designation and positions of screwed connections, pull-off and jacket threads acc. to DIN 28138 T3.

A	Barrier fluid resp. quench IN
B	Barrier fluid resp. quench OUT
C	Drainage
D	Leakage drain G1/8"
E	Cooling IN G3/8"
F	Cooling OUT G3/8"
G	Grease
H	Temperature metering



Note: The item numbers as depicted above are based on our technical experience and knowledge and are placed in the chronological order of their assembly procedure.

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



Flange connections acc. to DIN 28137 T2 for nominal diameters 125 ... 161.

Standards
<b>FDA</b> DIN 28136 T3 (for glass-lined vessels) DIN 28137 T2 (flange connection for glasslined vessels) DIN 28159 (shaft end for glass-lined vessels)

Notes
<b>Options:</b> Cooling or heating flange Leakage drain, flush or heating flange Leakage drain or flush Polymerization barrier, leakage drain or flush

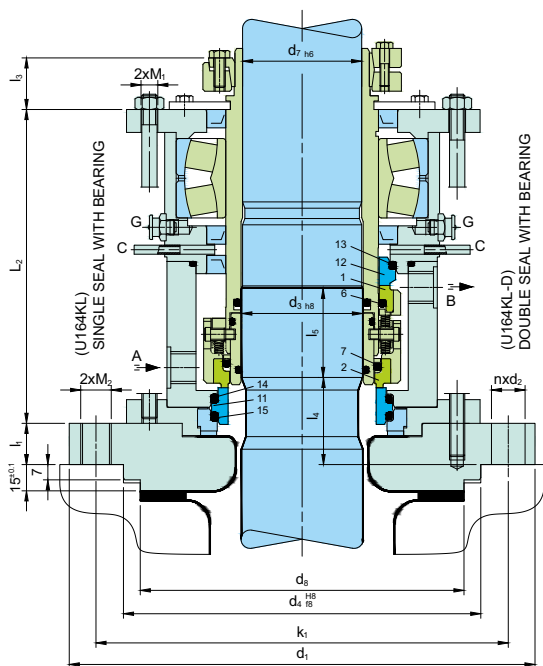
### Torque Transmissions

**NOTE:**  
Refer "Agitator Seals Accessories" page no. 83

### Installation, Details, Options

**NOTE:**  
Refer "Agitator Seals Accessories" page no. 83

### Design Variations



#### Double Seals Variants

- UK164K-D**  
Double seal
- UK164KL-D**  
Double seal with integrated floating bearing
- U156K(L)-D**  
Double seal with/without floating bearing for PN 25

### Dimensional Data

#### Dimensions in millimeter

d <sub>3</sub> <sup>1)</sup>	d <sub>7</sub> <sup>1)</sup>	Nominal size	Flange size <sup>2)</sup>	d <sub>1</sub>	nxd <sub>2</sub>	d <sub>4</sub>	nxd <sub>5</sub>	d <sub>6</sub>	d <sub>8</sub>	k <sub>1</sub>	k <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>	I <sub>4</sub>	I <sub>5</sub>	M <sub>1</sub>	M <sub>2</sub>	A, B
40	38	40	E125	175	4X18	110	-	-	102	145	-	107	156	25	35	28	50	50	M12	M16	G3/8
50	48	50	E200	240	8X18	176	-	-	138	210	-	107	167	25	40	28	50	50	M12	M16	G3/8
60	58	60	E250	275	8X22	204	-	-	188	240	-	116	175	30	42	28	50	60	M12	M20	G3/8
80	78	80	E300	305	8X22	234	-	-	212	270	-	125	206	30	45	34	60	60	M16	M20	G1/2
100	98	100	E400	395	12X22	313	-	-	268	350	-	125	206	30	52	34	60	60	M16	M20	G1/2
100	98	100	E500	395	12X22	313	-	-	268	350	-	125	206	30	52	34	60	60	M16	M20	G1/2
125	120	125	E700	505	4X22	422	12X22	320	306	460	350	133	226	30	75	40	60	80	M20	M20	G1/2
140	135	140	E700	505	4X22	422	12X22	320	306	460	350	144	242	30	79	40	60	80	M20	M20	G1/2
160	150	160	E700	505	4X22	422	12X22	320	306	460	350	151	242	30	77	40	60	85	M20	M20	G1/2
160	150	160	E900	505	4X22	422	12X22	320	306	460	350	151	242	30	77	40	60	85	M20	M20	G1/2
160	150	161	E901	565	4X26	474	12X22	370	356	515	400	151	242	30	77	40	60	85	M20	M20	G1/2

1) Shaft diameters d<sub>3</sub> and d<sub>7</sub> to DIN 28159

2) Flange size to DIN 28137T2

inch size available from size 1.575 to 6.500

**Note:** Additional technical & dimensional information will be provided on request.

The specifications, drawings, images etc included in this catalogue are intended to be generic and must be interpreted as equivalent or functionally equivalent, more specifically the performance capabilities mentioned in this catalogue is based on optimum values, however the performance of the product is dependent on size, material of construction, media, pressure, temperature, sliding velocity etc and it shall vary from size to size or application to application. Customers are requested to consult with Sealmatic before employing the product from this catalogue for any application.