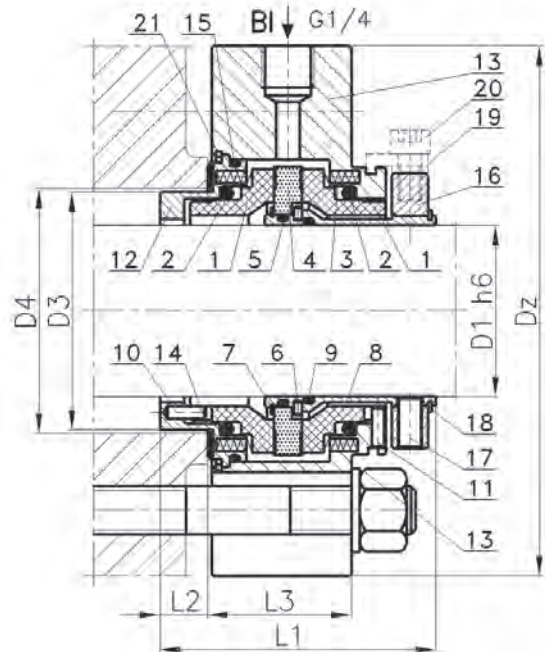
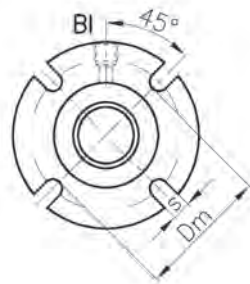
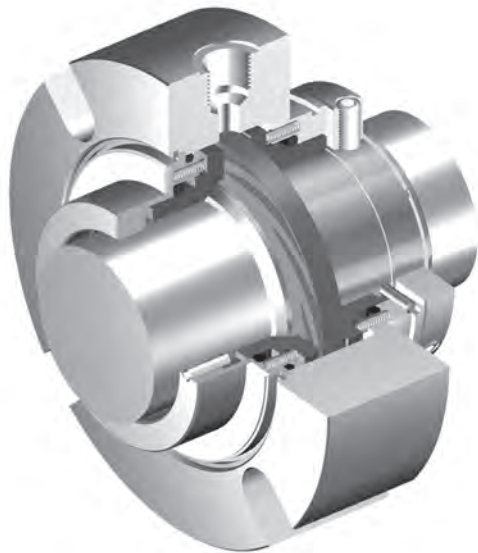


- Double gas-lubricated seal “face to face”
- Compact (cartridge) design
- Dependent on the direction of rotation:
GFR - clockwise,
GFL - counterclockwise
- Multi-spring
- Requires a barrier gas supply
- Non-contacting operation

Operating limits*		
Pressure	p_{max}	1.2 MPa
Temperature	t_{max}	200 °C
Speed	v_{min}	1 m/s

* - see note on page 3.



Features

- very long lifetime and long MTBF (mean time between failures),
- no emission of harmful medium into the atmosphere – they meet stringent ecological requirements in the range of harmful substances,
- possible operation in mediums, which do not form a lubricating film,
- ensures complete leak tightness of a pump (also in the case of a barrier gas pressure failure, the seal continues operation in the contact mode).

Dimensions (mm)

D1	D4	Dm	Dz	L1	L2	L3	S
22	42	66	98	75,5	17	36,5	11
25	45	69	100	75,5	17	36,5	11
32	52	76	108	75,5	17	36,5	11
35	55	79	110	75,5	17	36,5	11
40	60	84	120	75,5	17	36,5	14
45	65	89	118	75,5	17	36,5	14
48	68	93	130	75,5	17	36,5	14
55	75	100	140	75,5	17	36,5	14
75	100	124	170	79,0	15	42,0	18

Other dimensions are available as an option. Please contact ANGA.

Legend

- | | |
|--------------------|---------------------|
| 1. Rotating rings | 11. Locating pin |
| 2. O-ring | 12. Insert of cover |
| 3. Springs | 13. Cover |
| 4. Stationary ring | 14. Flat gasket |
| 5. O-ring | 15. Hex screw |
| 6. Driving pin | 16. Clamp ring |
| 7. Protective ring | 17. Set screws |
| 8. Sleeve | 18. Protective ring |
| 9. O-ring | 19. Assembly arm |
| 10. Locating pin | 20. Hex screws |
| | 21. Protective ring |

Application

GF seals are destined for toxic, corrosive, explosive, abrasive mediums, dangerous for human health or environment and process gases used in chemical, petrochemical, pharmaceutical applications. Recommended when particular cleanness of a product should be assured and when frictional heat causes changes in medium properties.

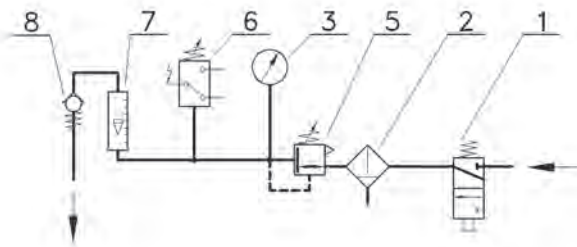
Materials

Part	Code
Rotating ring	Q, U
Stationary ring	A, B
Secondary, flexible seals	E, V, K
Spring	G
Other metal parts	G

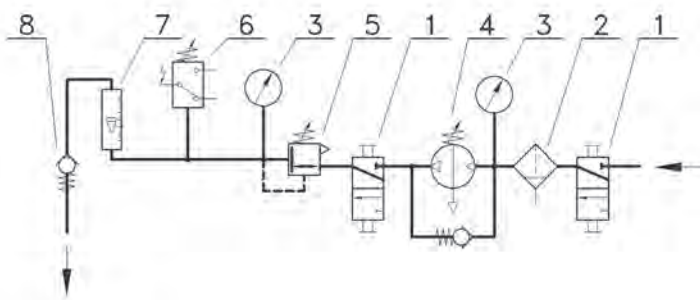
Supply unit is a necessary constant element of gas lubricated seals.

The units are designed as single or multiple systems (e.g. for two seals or more, supplied from one unit).

Supply unit without pressure amplifier

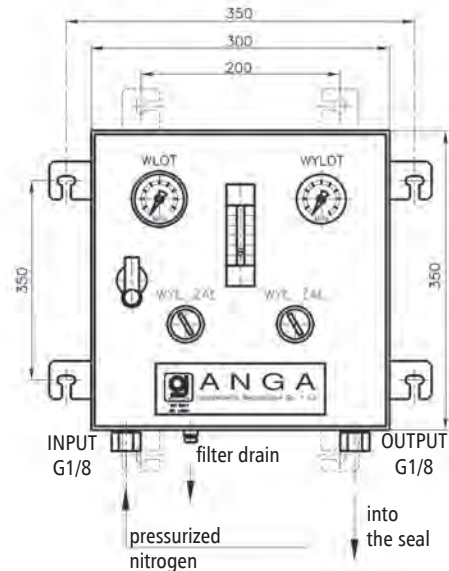


Supply unit with pressure amplifier (x2 or x4)



Description of components of the supply unit

- | | |
|----------------------------|---------------------------------------|
| 1. Cut-off valve | 6. Air-operated electromagnetic relay |
| 2. Filter | 7. Flowmeter |
| 3. Pressure gauge | 8. Non-return valve |
| 4. Hydraulic amplifier | |
| 5. Pressure reducing valve | |



The supply unit provides

- filtered barrier gas from solid contamination,
- control and adjustment of barrier gas flow,
- signaling of critical conditions (monitoring),
- barrier gas amplification (if required) in proportion 1:2 or 1:4 in relation to the actual pressure in the existing industrial network.

Dimensions, materials

With regard to specific operation of gas lubricated seals, supply unit components, materials used and dimensions are to be agreed with Customer every time. Please contact ANGA.

Example of barrier gas demand $Q=f(p,v)$

