



INTERNAL GEAR PUMP

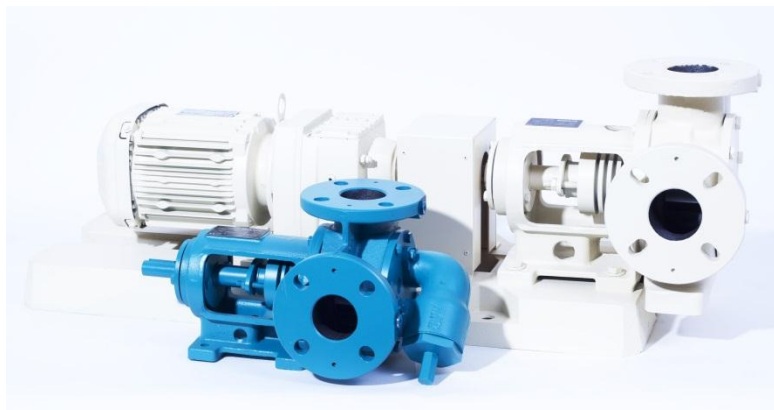


INDUSTRY APPLICATION

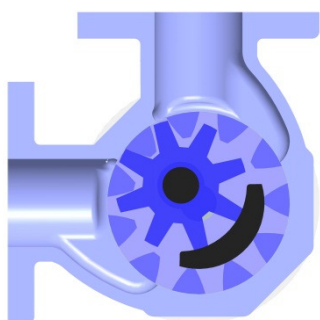
R Pumps are displacement internal gear rotary pumps suitable for pumping liquids of any viscosity.

Special versions can also pump liquids containing abrasive particles.

R Pumps are used for chemical and also food applications.



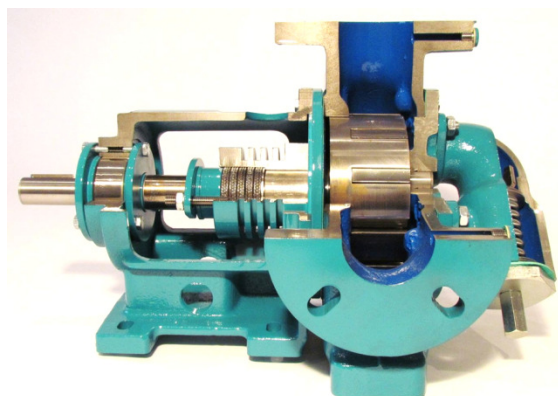
FUNCTIONAL PRINCIPLE



The discharge of the medium are produced from two toothed gears which are eccentrically supported. The gears (Rotor, Idler) are distanced from an half-moon which is integrated in the cover. The separation of these 2 gears effectuates the inlet suction and pumping of the liquid in the pump casing to the pressure side. The re-engagement of the teeth on the pressure side effects the pressurization. With this procedure, a uniform pulse-free flow is achieved.

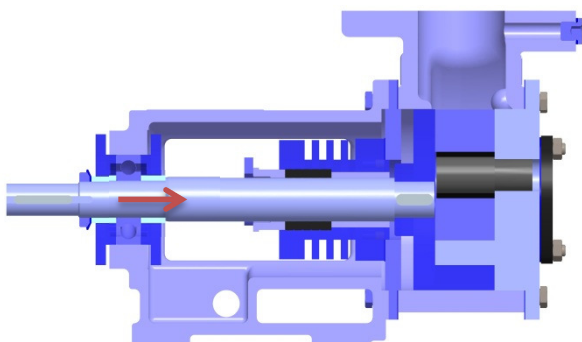
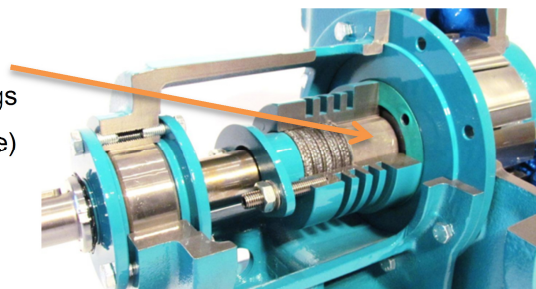
PROPERTIES AND ADVANTAGES

- Simple and robust construction
- Wetted parts made of steel and cast iron or stainless steel
- **Self-priming:** A fast suction is achieved by the high vacuum performance.



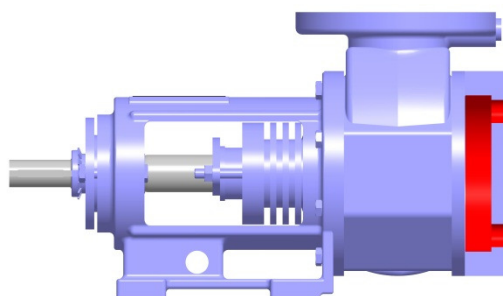
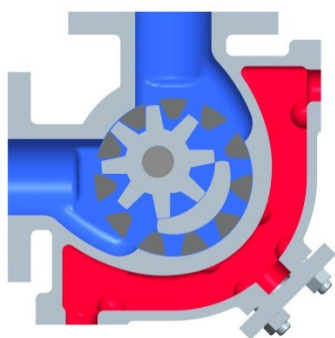
- **Different Variants**

Possible by use of other plain bearings
(Cast iron, bronze, graphite or tungsten carbide)
Special designs can be manufactured on request.



- **Compensation of Attrition:** The attrition can be compensated by the axial displacement of the rotor with shaft. The lost power can be eliminated almost completely.

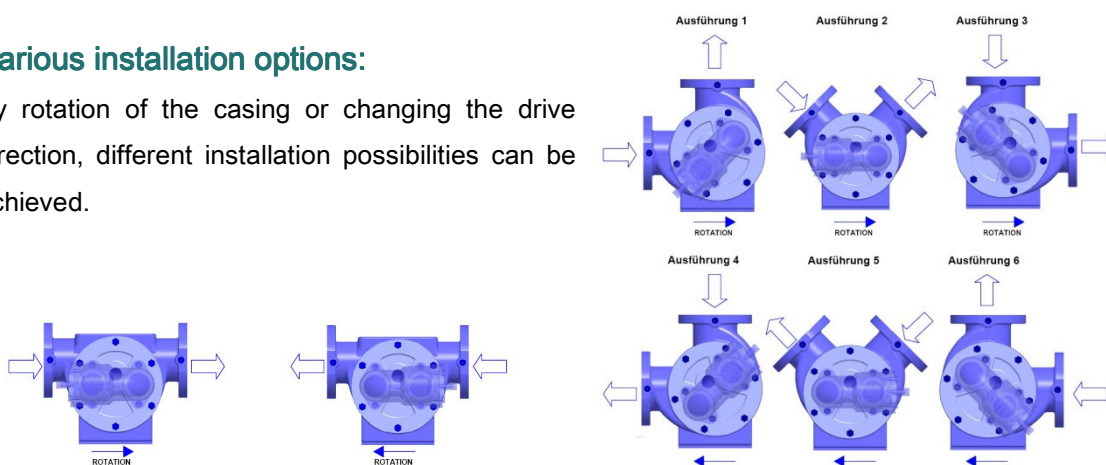
- **Heating:** If required the pump can be equipped with a heating jacket on the pump casing or on the front cover. (for instance: chocolate or hot bitumen)



- **High temperature version:** Special Materials guarantee the pumping of hot liquids with temperatures up to 300°C (for instance hot bitumen).

- **Various installation options:**

By rotation of the casing or changing the drive direction, different installation possibilities can be achieved.



- **Shaft sealing:**

Different variants can be chosen for shaft sealing:

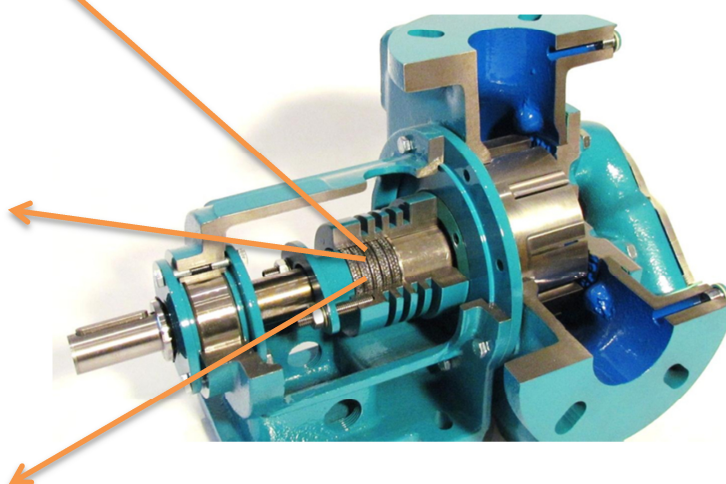
Single or double
mechanical seal

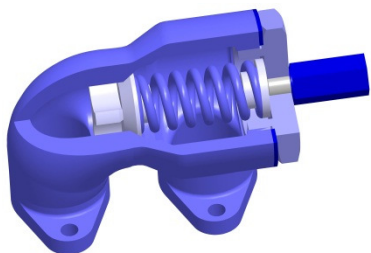


Packing gland

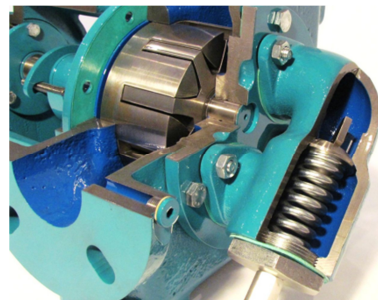


Seal-less in
magnetic coupled
version





- **Protection** of the pump or the pipes possible by fitting a pressure relief valve on the pump cover.



- **ATEX-Version**

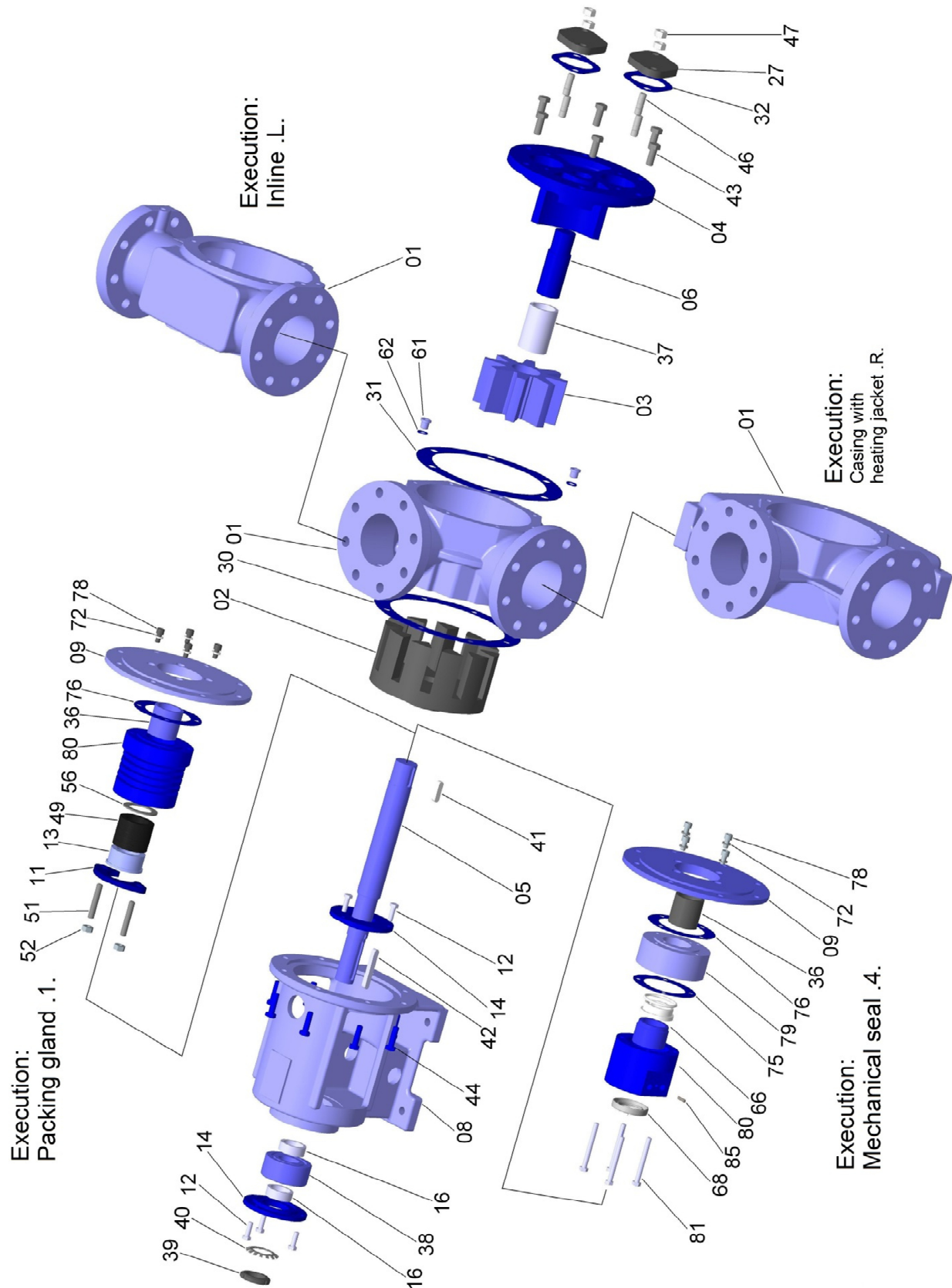
The pumps and aggregates can be certified according to ATEX. For the available versions, materials and the possible accessories please contact our sales staff.



PUMP SELECTION – STANDARD VALUES

Type	Connections DN PN 16 (Zoll)	Viscosity mm²/s	Speed min ⁻¹	Capacity m³/h	Input power at 4 bar kW	Weight kg
R 35	40 (1 ¼")	200	1450	3,7	1,4	15
		4000	720	1,9	1,2	
		50000	400	1,1	1,0	
R 40	40 (1 ¼")	200	1450	7,0	2,0	16
		4000	720	3,5	1,6	
		50000	400	1,9	1,3	
R 50	50 (2")	200	960	12,9	3,0	32
		4000	630	8,5	3,0	
		50000	315	4,3	2,0	
R 65	65 (2 ½")	200	630	18,4	4,9	46
		4000	400	11,8	4,5	
		50000	200	6,0	2,6	
R 80	80 (3")	200	500	35,0	7,1	84
		4000	315	22,4	7,2	
		50000	160	11,5	5,2	
R 105	100 (4")	200	400	55,8	10,5	152
		4000	250	35,2	11,3	
		50000	140	20,0	9,8	
R 150	150 (6")	200	400	93,0	15,5	240
		4000	250	58,8	15,4	
		50000	140	33,4	14,8	
R 180	150 (6")		on request			
R 200	200 (8")		on request			
R 250	250 (10")		on request			

EXPLOSIONSZEICHNUNG



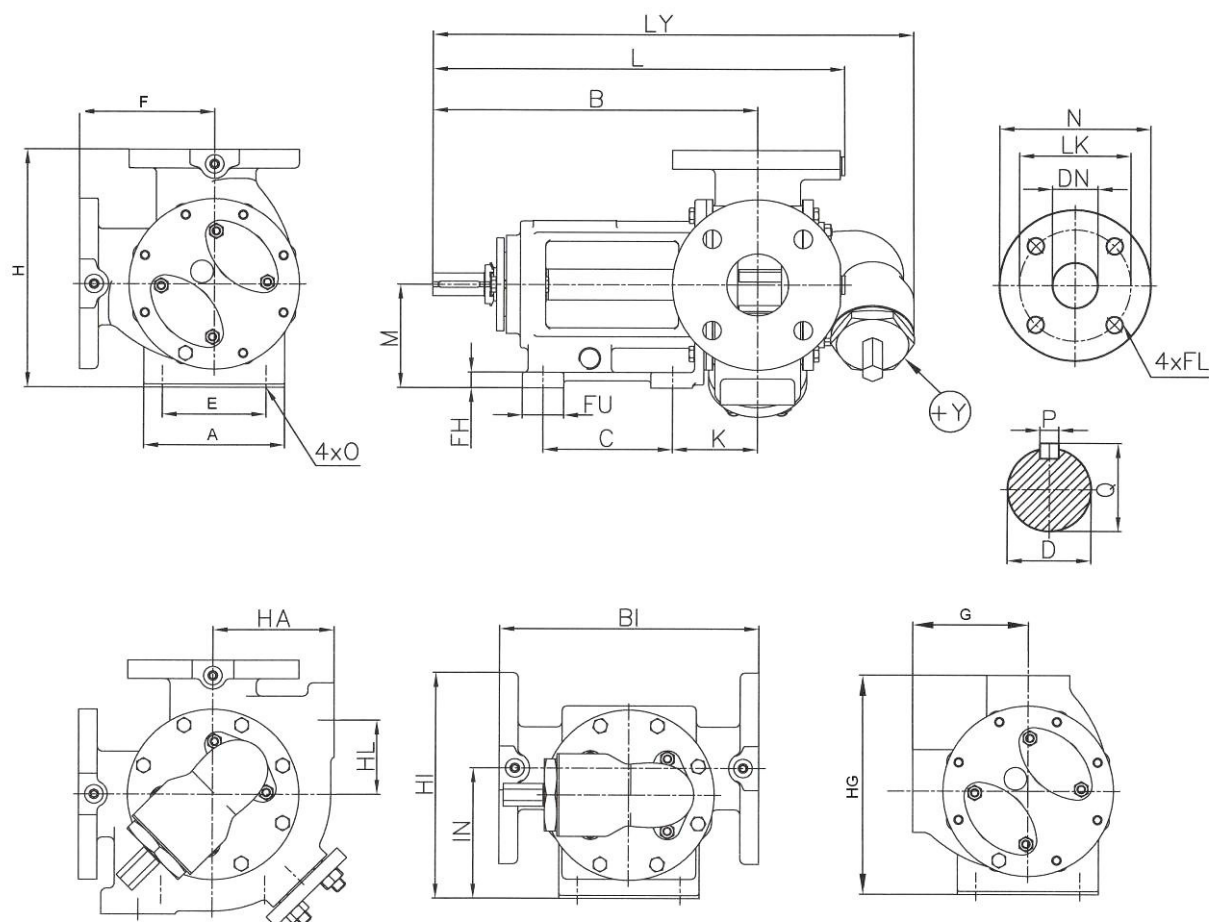
SPARE PARTS LIST

Allgemein General		
Pos.	Benennung	Part Name
01	Gehäuse	Casing
02	Rotor	Rotor
03	Ritzel	Idler
04	Deckel	Cover
05	Welle	Shaft
06	Zapfen	Idler Pin
08	Lagerbock	Bearing Housing
09	Hinterer Deckel	Rear Cover
11	Brillenflansch	Gland Flange
12	Schraube, Lagerdeckel	Screw, Bearing Cover
13	Brille	Gland
14	Kugellagerdeckel	Bearing Cover
16	Distanzhülse	Sleeve
27	Flansch, By-Pass	Flange, By-Pass
28	Flansch, Heizmantel	Flange, Jacket
29	Flanschdichtung, Heizmantel	Flange gasket, Jacket
30	Gehäusedichtung	Casing Gasket
31	Deckeldichtung	Cover Gasket
32	Dichtung, By-Pass	Gasket, By-Pass
36	Wellengleitlager	Shaft Bushing
37	Ritzelgleitlager	Idler Bushing
38	Kugellager	Ball Bearing
39	Nutmutter	Lock Nut
40	Sicherungsblech	Washer
41	Paßfeder, Rotor	Key, Rotor
42	Paßfeder, Welle	Key, Shaft
43	Schraube, Deckel	Screw, Cover
44	Schraube, Gehäuse	Screw, Casing
46	Stiftschraube, By-Pass	Stud, By-Pass
47	Mutter, By-Pass	Nut, By-Pass
49	Packungssatz	Packing Set
51	Stiftschraube, Brille	Stud, Gland
52	Mutter, Brille	Nut, Gland
56	Stützscheibe	Trust Ring
61	Verschlußschraube	Plug
62	Verschlußschraubendichtung	Gasket, Plug
63	Stiftschraube, Heizmantel	Stud, Jacket
64	Mutter, Heizmantel	Nut, Jacket
66	Gleitringdichtung (inkl. 68)	Mechanical Seal (incl. 68)
72	Federring, Hinterer Deckel	Spring Washer, Rear Cover
75	Dichtung, GLRD-Träger	Gasket, Seal Box
76	Dichtung, Gleitlagerträger	Gasket, Bush Housing
78	Schraube, Hinterer Deckel	Screw, Rear Cover
79	Gleitlagerträger	Bush Housing
80	GLRD oder Packungs-Träger	Seal Box
81	Schraube, GLRD-Träger	Screw, Seal Box
82	Öler	Oil Lubricator
83	Bogen	Bend
85	Kegelstift, GLRD	Taper Pin, Mech. Seal

Ausführung: Packung .1. Execution: Stuffing Box .1.		
Pos.	Benennung	Part Name
09	Hinterer Deckel	Rear Cover
11	Brillenflansch	Gland Flange
13	Brille	Gland
36	Wellengleitlager	Shaft Bushing
49	Packungssatz	Packing Set
51	Stiftschraube, Brille	Stud, Gland
52	Mutter, Brille	Nut, Gland
56	Stützscheibe	Trust Ring
72	Federring, Hinterer Deckel	Spring Washer, Rear Cover
76	Dichtung, Gleitlagerträger	Gasket, Bush Housing
78	Schraube, Hinterer Deckel	Screw, Rear Cover
80	Packungsträger	Seal Box

Ausführung: Gleitringdichtung .4. Execution: Mechanical Seal .4.		
Pos.	Benennung	Part Name
09	Hinterer Deckel	Rear Cover
66	Gleitringdichtung (inkl. 68)	Mechanical Seal (incl. 68)
72	Federring, Hinterer Deckel	Spring Washer, Rear Cover
75	Dichtung, GLRD-Träger	Gasket, Seal Box
76	Dichtung, Gleitlagerträger	Gasket, Bush Housing
78	Schraube, Hinterer Deckel	Screw, Rear Cover
79	Gleitlagerträger	Bush Housing
80	GLRD oder Packungs-Träger	Seal Box
81	Schraube, GLRD-Träger	Screw, Seal Box
82	Öler	Oil Lubricator
83	Bogen	Bend
85	Kegelstift, GLRD	Taper Pin, Mech. Seal

DIMENSIONS



Size	General														
	H	F	A	E	O	L	B	M	FH	FU	C	K	N	LK	kg
R 35,40	180	100	120	94	Ø12	313	249	80	12	30	90	65	150	110	16
R 50	230	130	135	100	Ø12	400	313	100	15	40	125	81	165	125	32
R 65	297	165	180	140	Ø14	442	347	132	18	50	140	91	185	145	46
R 80	360	200	200	160	Ø14	533	430	160	20	60	160	117	200	160	84
R 105	405	225	220	180	Ø18	633	505	180	22	60	180	135	220	180	152
R 150	450	250	300	240	Ø18	680	539	200	22	80	185	164	285	240	240

Size	Shaft			.R.			.L.				G			+Y		DN
	D	Q	P	HA	HL	kg	HI	BI	I	kg	HG	G	kg	LY	kg	DN
R 35,40	18	20	6	65	80	16	149	180	90	13	160	80	12	350	2,2	40
R 50	22	24	6	116	72	34	218	250	126	31	210	110	24	463	3	50
R 65	28	31	8	140	100	60	279	320	187	54				510	4,5	65/50
R 80	32	32	10	170	120	88	325	390	225	78				652	8	80
R 105	42	45	12	195	140	166								760	8,5	100
R 150	48	51	14	220	140	210								838	15	150



Basic data:

Capacity:	up to 350 m ³ /h
Discharge pressure:	up to 16 bar
Viscosity:	up to 100000mm ² /s
Temperature:	–60°C up to +300°C
Connections:	DN 40 – DN 250