

Hydraulic, Electro-Hydraulic and Special Rotary Couplings



Rotary Couplings

CONTENTS

General Information	4 - 5
Hydraulic Rotary Couplings DA Series	
DA 045 - DA 060	7
DA 085	8
DA 100	9
DA 110	10
Hydraulic Rotary Couplings DI Series	
DI 085 L	12
DI 085 V	13
DI 092	14
DI 100	15
DI 100 V	16
DI 125	17
DI 145	18
Hydraulic Rotary Couplings for Concrete Mixer Pump DPC Series	
DPC 190	20
Mini Hydraulic Rotary Couplings DM Series	
DM 070	22
Atex Certified Rotary Couplings EX Series	
General Information	24 - 25
Electric Swivel Couplings CE Series	
General Information	27 - 28
CE 110	29 - 30
CE 163	31 - 32
Special Rotary Couplings	
GRS 25 - 85 / 6	34
GRS 85 - 114 / 10	35
GRS 114 / 10 - 114 / 19	36
GRS 114 / 18 - 114 / 24	37
GRT 60 - 114	38
GRR 50 / 1 - 50 / 6	39
Rotary Coupling for Excavator	40
Special Rotary Coupling for Machine Tools	40
Rotary Coupling for Pipe-Laying Machine	41
Special Rotary Coupling for Oil Rig	41
Special Rotary Coupling for Off-Shore Applications with Ball Swiwels 4"	42
Straight Hydraulic Rotary Coupling for Off-Shore Applications	42

Rotary Couplings

General Information

Products

In almost all branches of industry rotary unions are needed for transmitting mediums between stationary and rotating machinery parts, whereby every application has different requirements. We have developed an extensive selection of various models for agricultural, industrial and concrete pump application and special products for Pipe-Laying Machine and Off-Shore applications. Fundamental characteristics of each Rotary Coupling are the use of high quality material and components, the painstaking grade of production and a complete technical service package both pre and post sale. A wide range of products that can work with operating pressures of up to 42 MPa (420 Bar, on request higher), multi-passage swivel joints, combined solutions with several types of fluids and complete with electrical applications suited for any type of use.

Features

- Rated pressure up to 42 MPa (420 Bar, on request higher)
- Rotation speed 0-12 n/min. (on request higher)
- Temperature range: -10 / +80 °C (on request -45°C)
- Recommended location: along the vertical axis
- No radial or axial force is permitted on the rotary joint
- Hydraulic ports are closed with polyethylene caps
- Large number of product varieties available
- Customer specific designs, even for high-demanding uses
- Combinations of various mediums and electrical currents
- The most modern materials and manufacturing processes guarantee the highest quality

Optionals

- Fitted with electric rotating collector of our production and / or encoder
- Painting and special coatings
- Chemical nickel treatment or construction in stainless steel for marine and food applications
- SAE ports and code 62

Applications

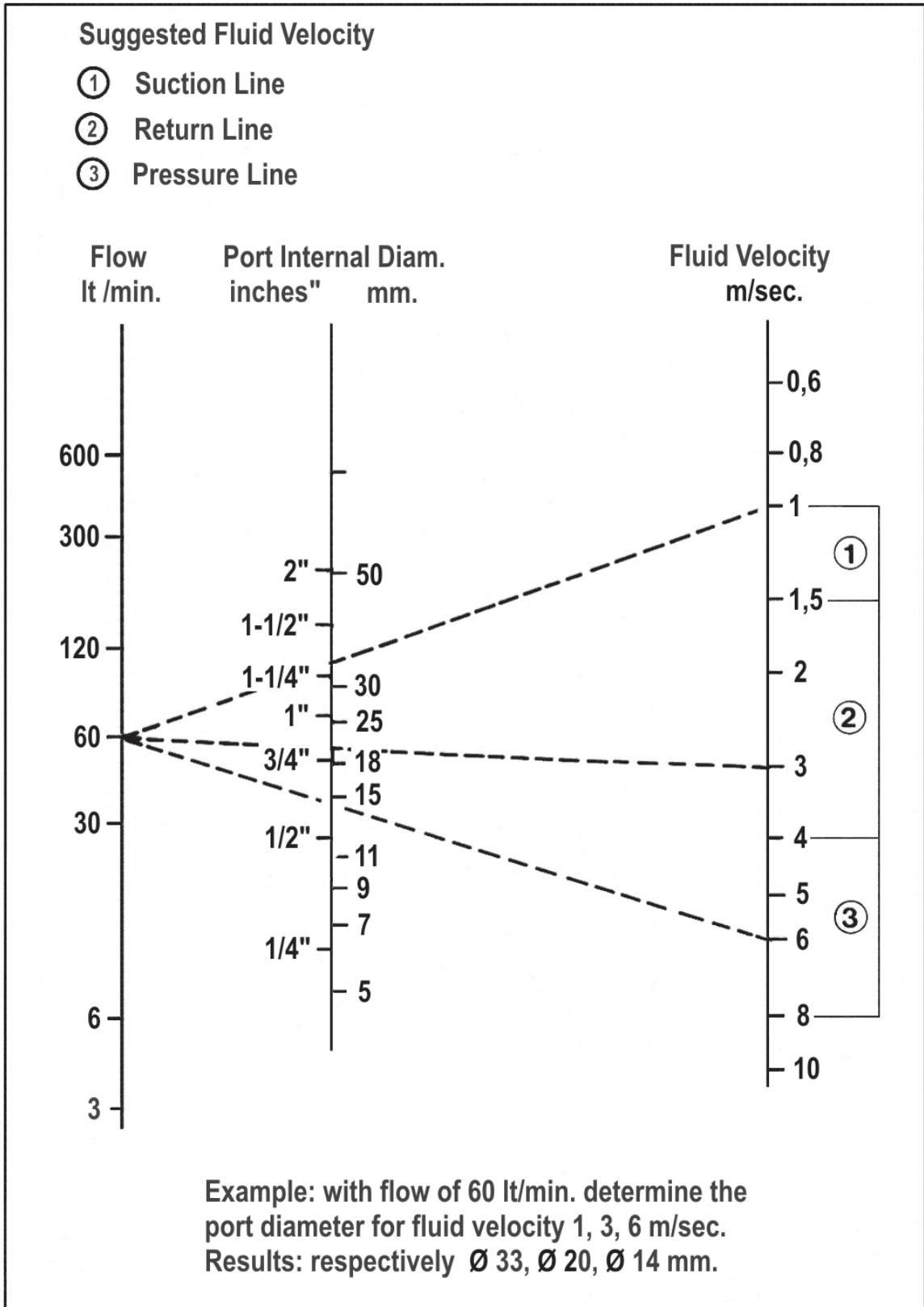
- Agricultural Machinery
- Earth Moving Machines
- Crane Trucks and Hoisting
- Aerial Platform
- Marine and Off-Shore Cranes
- Boring and Drilling Machines
- Demolition and Recycling Machinery
- Truck Mounted Concrete Mixer Pump
- Industrial Machinery
- Oil & Gas

Rotary Couplings

General Information

Fluid Velocity

As the Rotary Couplings have many ports of different diameter, you can estimate the maximum flow of each port using the nomogram below.



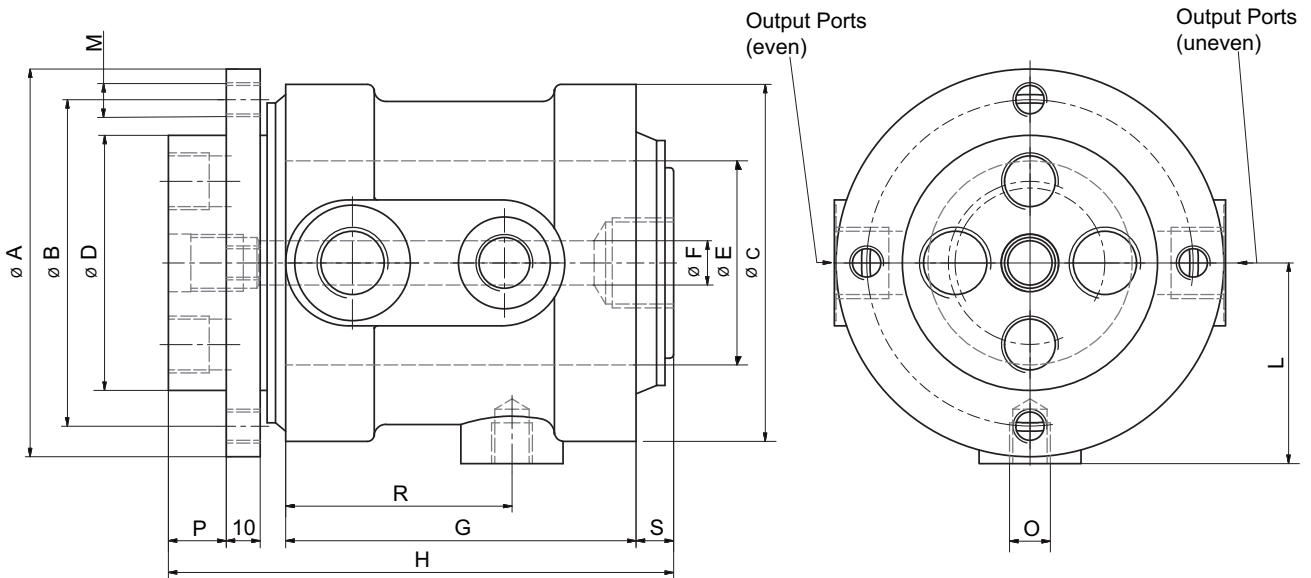
Rotary Couplings



Hydraulic Rotary Couplings DA Series

Rotary Couplings

Hydraulic Rotary Coupling DA 045 - DA 060



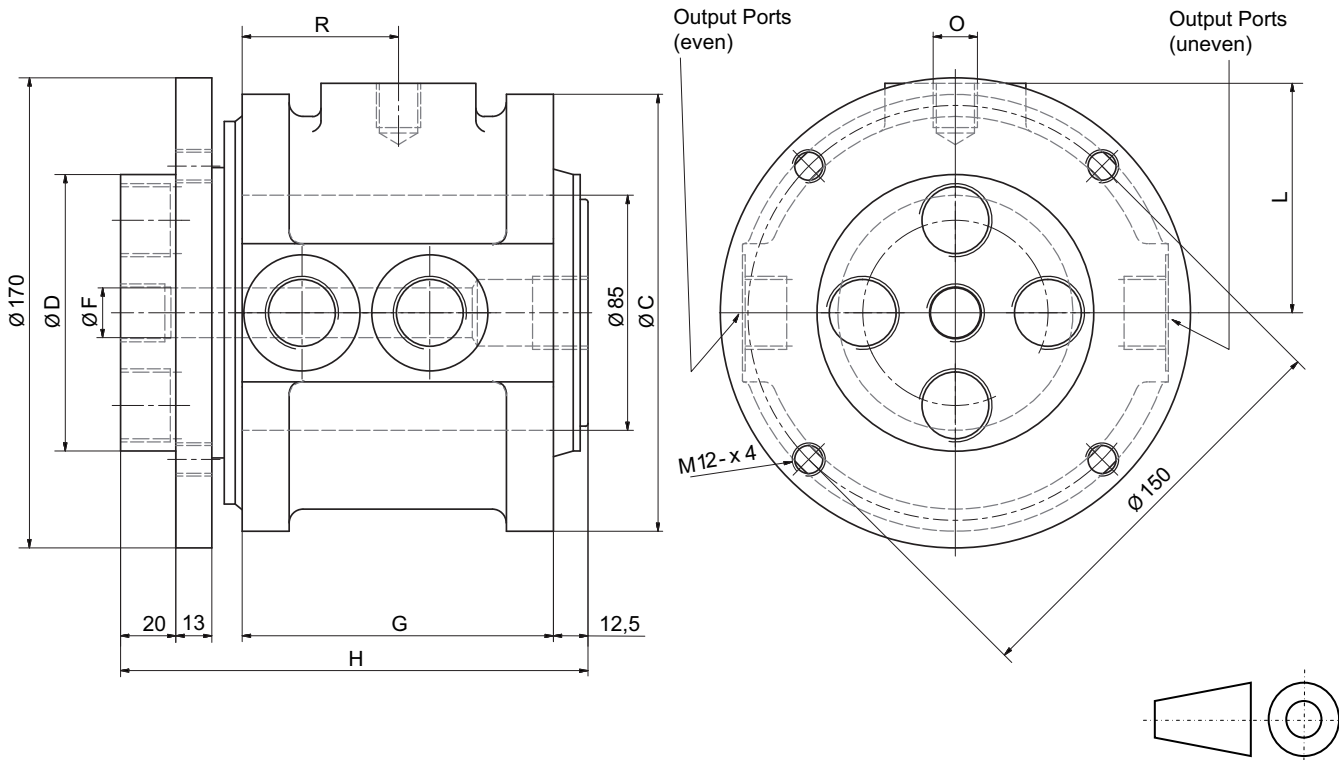
Rated pressure 42 MPa (420 bar)

Dimensions in mm.

Model	A	B	C	D	E	F	G	H	L	M	O	P	R	S	N° of Ways	G 1/4"	G 3/8"	G 1/2"
DA 045/02	94	80	94	62	45	8	59	94	47	M8	M10	14	29,3	10	2		2	
DA 045/04	94	80	94	62	45	8	91	126	47	M8	M10	14	50,5	10	4	2	2	
DA 060/02	114	95	105	75	60	/	76.5	123	61.5	M10	M12	17	39	11	2			2
DA 060/04	114	95	105	75	60	15	103	147.5	59	M10	M12	17	66.5	11	4		2	2
DA 060/06	114	95	114	75	60	18	111.3	158	57	M10	M12	17	55.3	11.7	6	6		

Rotary Couplings

Hydraulic Rotary Coupling DA 085



Rated pressure 42 MPa (420 bar)

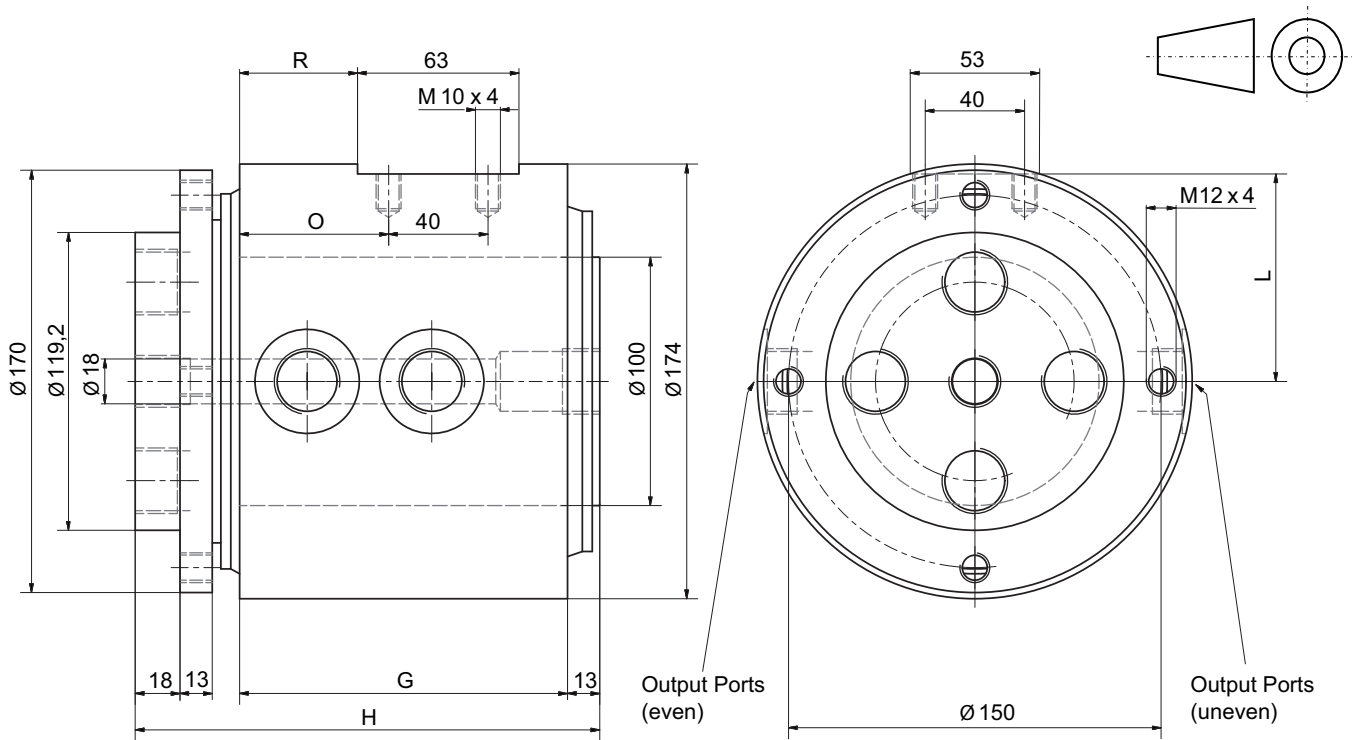
Dimensions in mm.

Model	C	D	F	G	H	L	O	R	N° of Ways	G 1/4"	G 3/8"	G 1/2"	G 3/4"	G 1"
DA 085/02	160	100	18	68	124.5	104.5	M16	34	2				2	
DA 085/02-01	165	110	11	78	134.5	82.5	M16	39	2					2
DA 085/04	158	100	18	112.5	169	83	M16	56.5	4				4	
DA 085/04-01	165	110	11	125	181.5	82.5	M16	70.8	4			2		2
DA 085/06	151	120	19	149	209.5	105.5	*	77.5	6	2		2	2	
DA 085/08	151	100	30	165	211.5	105.5	*	90	8	6	2			

* For further informations please contact our Technical Dept.

Rotary Couplings

Hydraulic Rotary Coupling DA 100



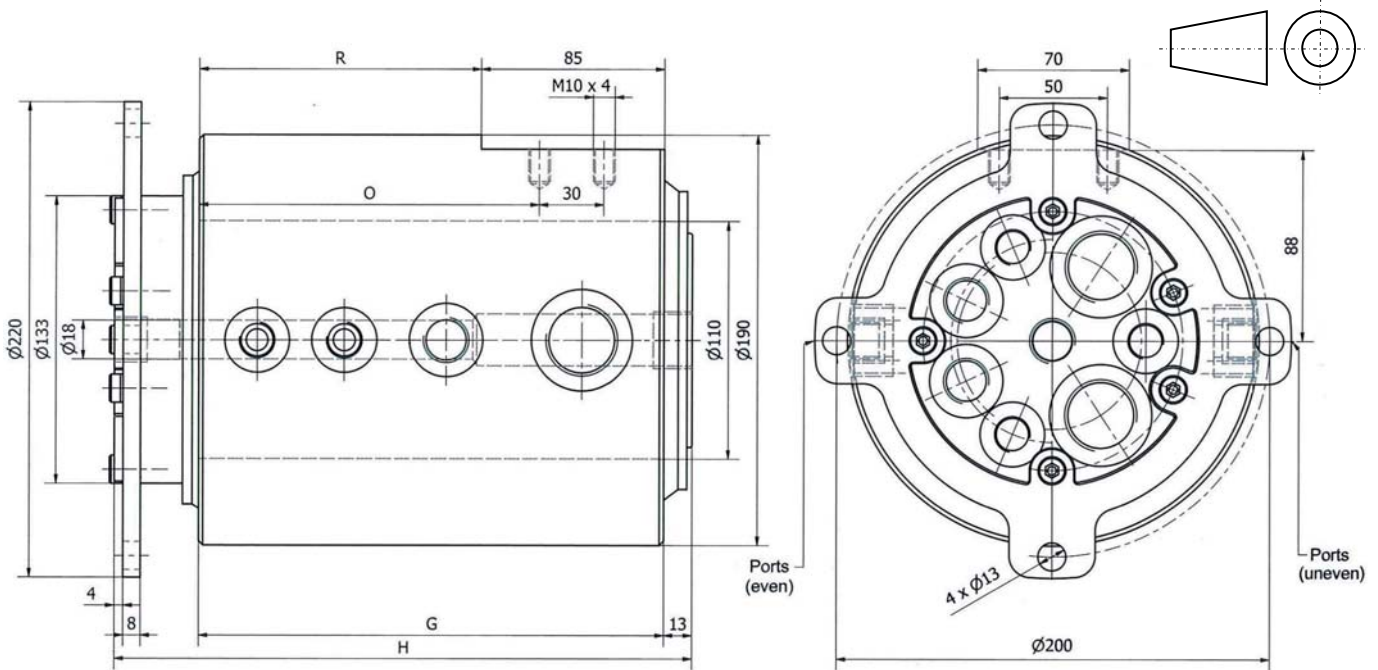
Rated pressure 42 MPa (420 bar)

Dimensions in mm.

Model	G	H	L	O	R	N° of Ways	G 3/8"	G 1/2"	G 3/4"	G 1"
DA 100/04	144	199	84	60	48.5	4			2	2
DA 100/05	160	215	84	60	48.5	5		2	2	1
DA 100/06	160	215	84	60	48.5	6		2	4	
DA 100/07	181,5	236.5	83	71.5	60	7	4		3	

Rotary Couplings

Hydraulic Rotary Coupling DA 110



Rated pressure 42 MPa (420 bar)

Dimensions in mm.

Model	G	H	O	R	N° of Ports	G 3/8	G 1/2	G 3/4	G 1
DA 110/05	170	222	124	105	5		2	1	2
DA 110/07	215	267	157	130	7	2	2	1	2

Rotary Couplings



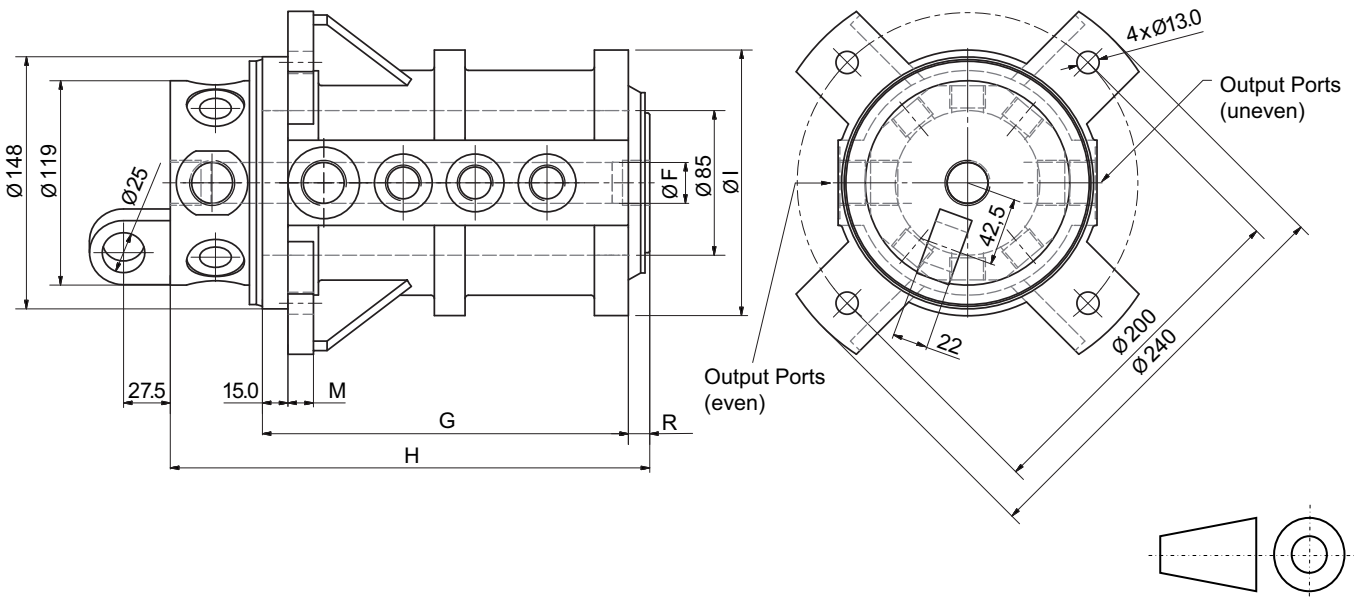
Hydraulic Rotary Couplings DI Series

HT 72 / A / 106 / 1018 / E

Pag. 11

Rotary Couplings

Hydraulic Rotary Coupling DI 085 L



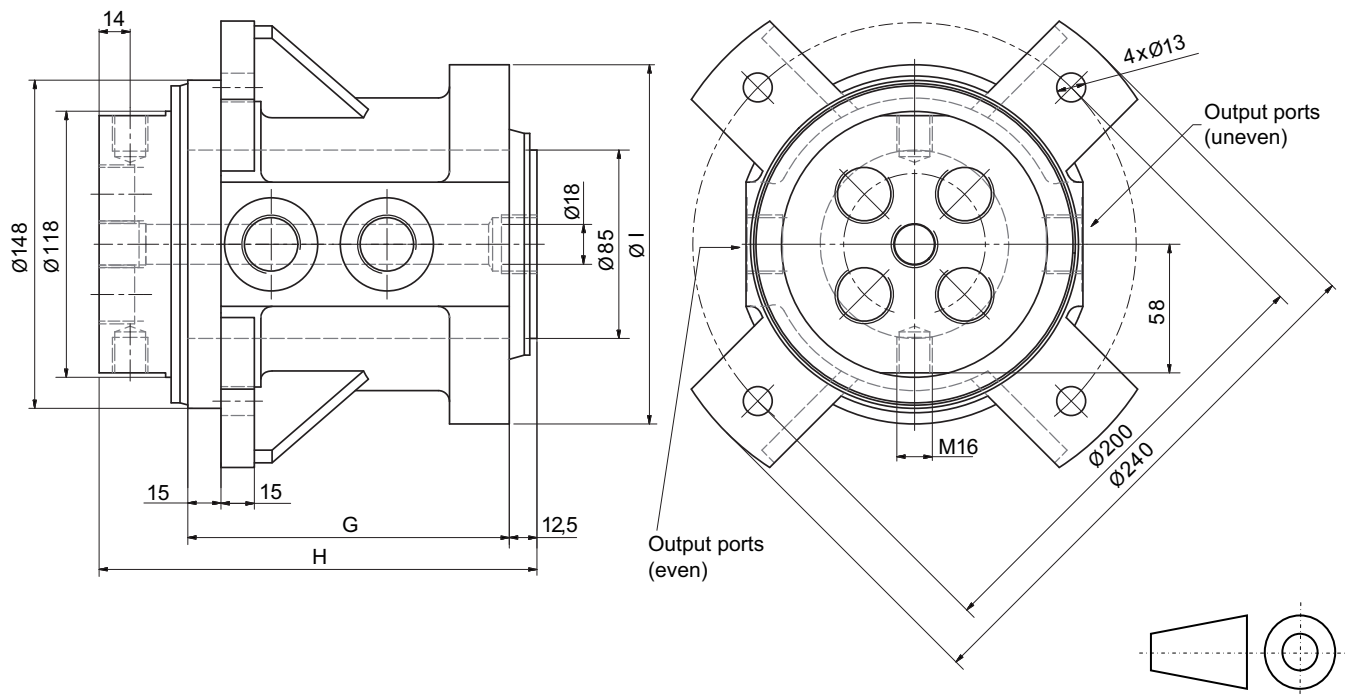
Rated pressure 42 MPa (420 bar)

Dimensions in mm.

Model	F	G	H	I	M	R	N° of Ways	G 3/8"	G 1/2"	G 3/4"
DI 085/02L	22	93	155.5	152	15	12.5	2			2
DI 085/04L	17	145	207.5	162	15	12.5	4			4
DI 085/06	24	173	239.5	155	15	12.5	6		4	2
DI 085/08	24	206	272.5	166	15	12.5	8		8	
DI 085/08-01	24	215	281.5	156	17	12.5	8		6	2
DI 085/10	20	256	319	152	15	8.5	10	4	4	2

Rotary Couplings

Hydraulic Rotary Coupling DI 085 V



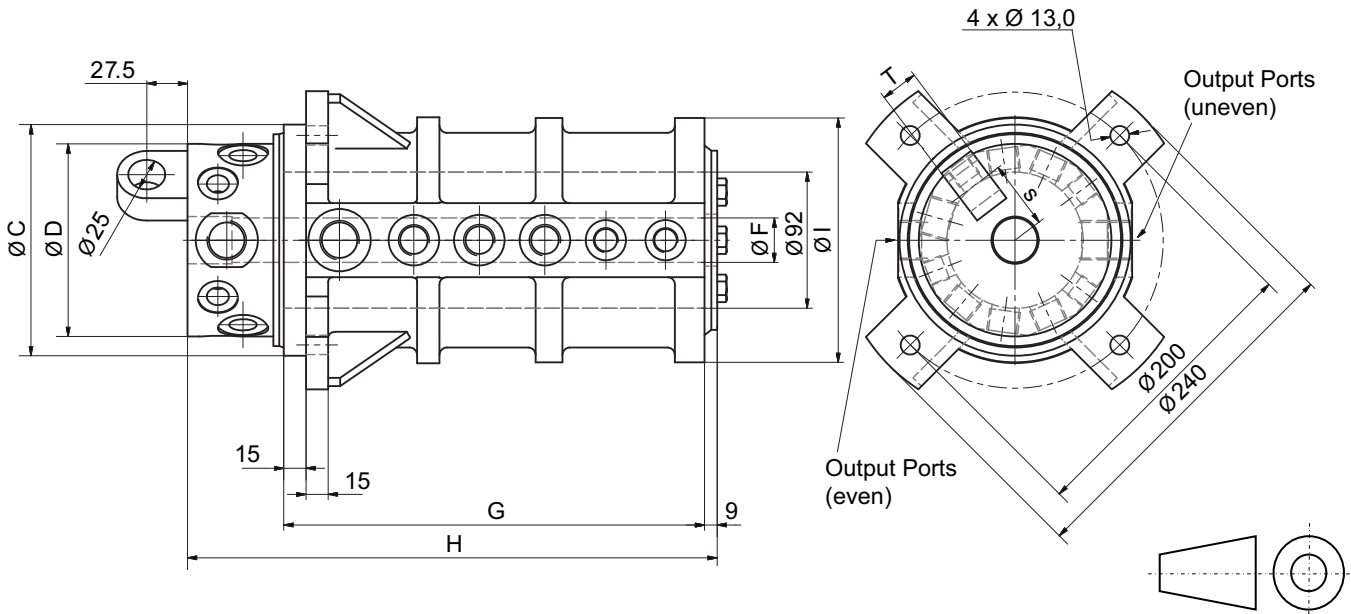
Rated pressure 42 MPa (420 bar)

Dimensions in mm.

Model	G	H	I	N° of Ways	G 1/2"	G 3/4"	G 1"
DI 085/02V	93	145.5	152	2		2	
DI 085/04V	145	197.5	162	4		4	

Rotary Couplings

Hydraulic Rotary Coupling DI 092



Rated pressure 42 MPa (420 bar)

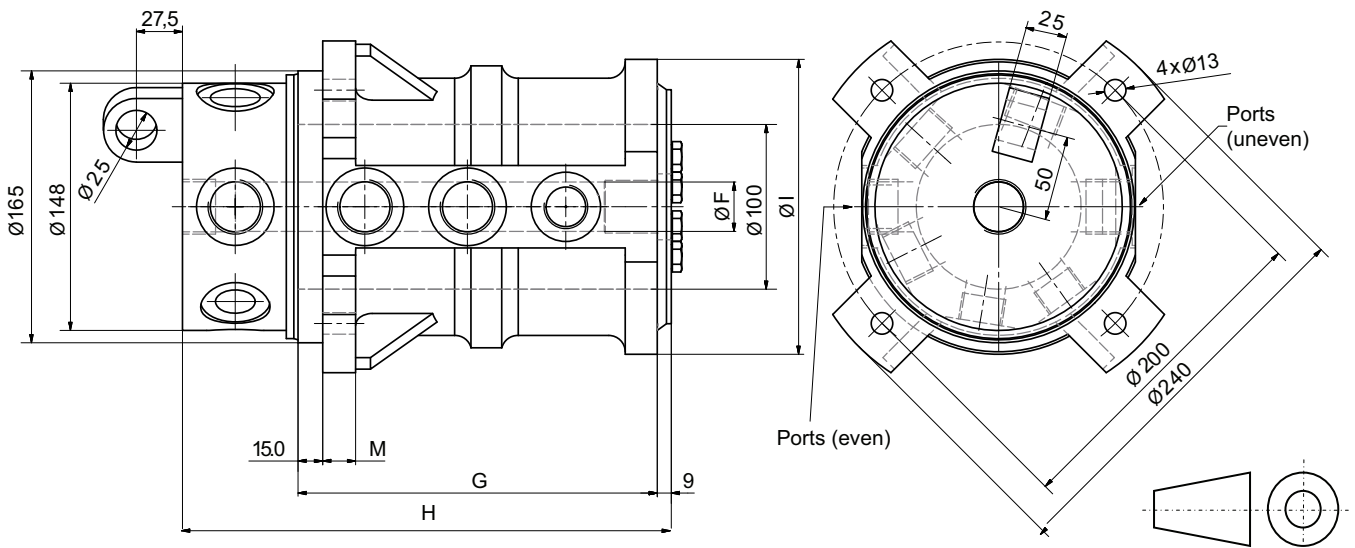
Dimensions in mm.

Model	C	D	F	G	H	I	S	T	N° of Ways	G 1/4"	G 3/8"	G 1/2"	G 3/4"	G 1"
DI 092/05	156	128	30	158	222	158	45	22	5			1	4	
DI 092/06	156	128	30	239	318	158	45	22	6				6	
DI 092/07	156	128	30	192	256	158	45	22	7		1	4	2	
DI 092/07-01	156	128	20	233	334	165	45	22	7		2	1		4
DI 092/08	156	128	30	234	308	158	45	22	8		2		6	
DI 092/09	156	128	30	234	293	158	45	22	9		2	5	2	
DI 092/11	156	128	30	284	358	164	45	22	11		4	5	2	
DI 092/12	156	128	30	290	364	165	45	22	12	4	4	2	2	
DI 092/14	148	118	30	300	369	158	45	22	14	12		2		
DI 092/18	148	118	/	370	445	150	*	*	18	16		2		

* For further informations please contact our Technical Dept.

Rotary Couplings

Hydraulic Rotary Coupling DI 100



Rated pressure 42 MPa (420 bar)

Dimensions in mm.

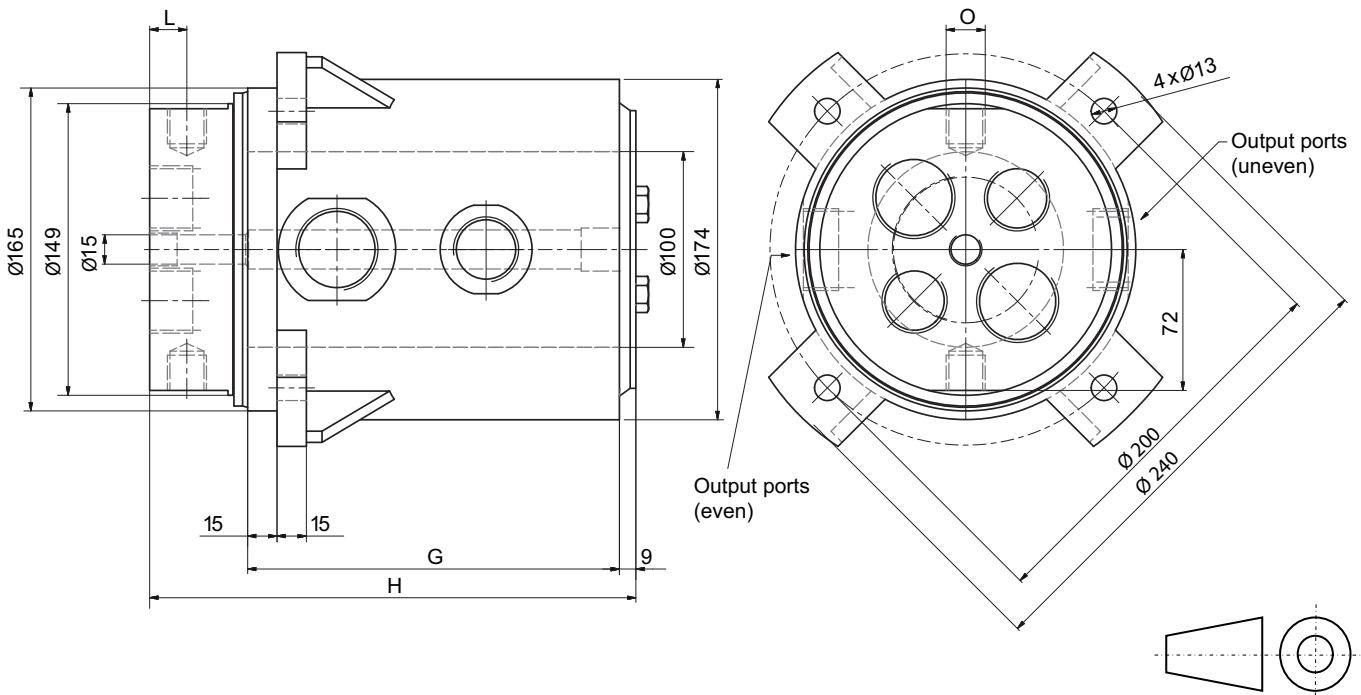
Model	F	G	H	I	M	N° of Ports	G 1/4	G 3/8	G 1/2	G 3/4	G 1	G 1 1/4
DI100/05	30	195	281	176	15	5			1		4	
DI100/06	30	218	297	185	17	6				2	4	
DI100/07	30	210	284	175	15	7		1	2	4		
DI100/07-01	30	232	321	176	15	7	2		1		4	
DI100/08-01	30	296	375	174	15	8				4	4	
DI100/08-02	24	284	373	176	15	8			2	1	4	1
DI100/10	30	307	386	176	15	10			6	2	2	
DI100/12	30	300	379	176	15	12			10	2		
DI100/12-01	30	302	376	176	15	12	2	2	6	2		
DI100/13	30	288	359	176	15	13	4	5	2	1	1	
DI100/14	30	360	439	176	15	14	4		8		2	
DI100/16	20	380	459	176	15	16	10		4		2	
DI100/16-01	18	368	465	176	15	16	2		14			
DI100/18	20	386	465	168	15	18	12		2	4		

HT 72 / A / 106 / 1018 / E

Pag. 15

Rotary Couplings

Hydraulic Rotary Coupling DI 100 V



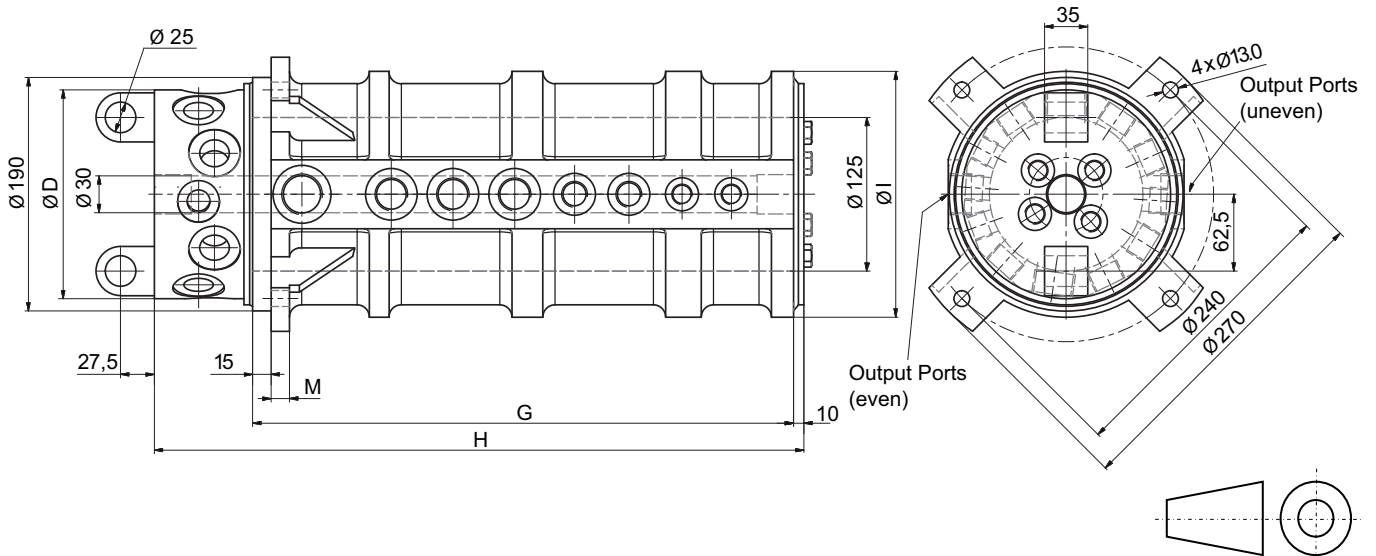
Rated pressure 42 MPa (420 bar)

Dimensions in mm.

Model	G	H	L	O	N° of Ways	G 1"	G 1-1/4"
DI 100/02V	131	179	15	M16	2		2
DI 100/04V	190	249	19	M20	4	2	2

Rotary Couplings

Hydraulic Rotary Coupling DI 125



Rated pressure 42 MPa (420 bar)

Dimensions in mm.

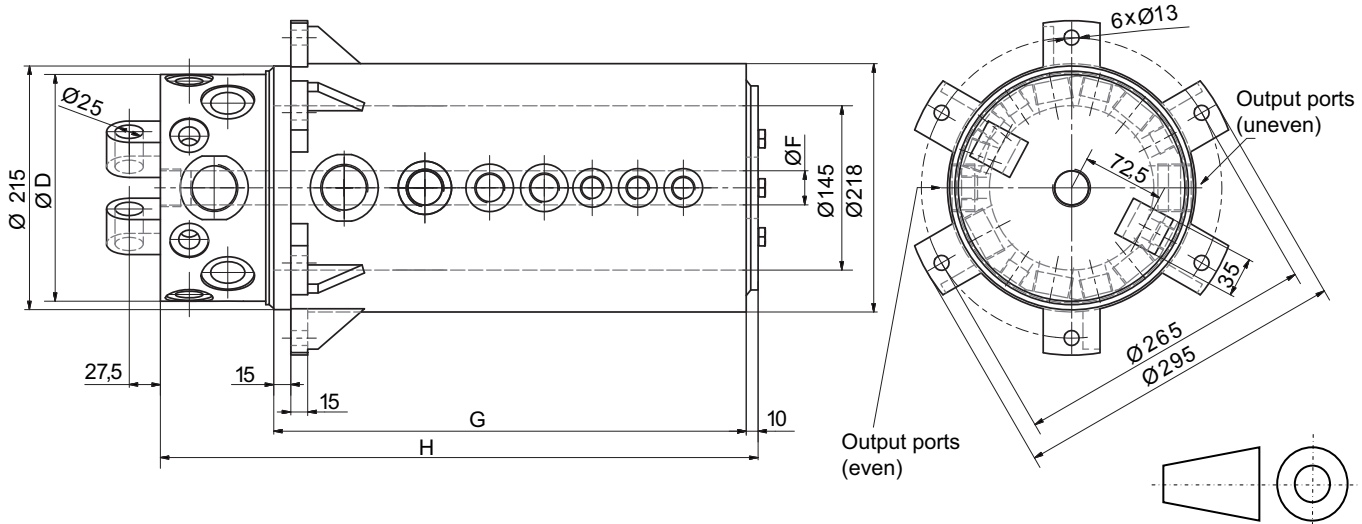
Model	D	G	H	I	M	N° of Ways	G 1/4"	G 3/8"	G 1/2"	G 3/4"	G 1"	G 1-1/4"
DI 125/05	168	208	288	208	20	5				1	2	2
DI 125/06	168	226	306	200	15	6				2	2	2
DI 125/06-01	168	224	304	200	15	6					6	
DI 125/07	168	270	360	200	15	7				3		4
DI 125/07-01	168	250	340	200	15	7				3	2	2
DI 125/07-02	168	232	312	200	15	7			3		4	
DI 125/09	168	290	380	200	15	9			2	3	2	2
DI 125/11	168	332	422	200	15	11			4	3	2	2
DI 125/11-01	168	300	410	200	15	11			5	4	2	
DI 125/12	168	353	443	200	15	12			5	3	2	2
DI 125/13	168	391	501	200	15	13			7	4	2	
DI 125/14	168	390	480	200	15	14	4		4	2	2	2
DI 125/16	168	440	530	202	15	16		4	4	6	2	
DI 125/18	178	492	592	200	15	18	2		8	4	2	2
DI 125/18-01	178	442	532	200	15	18	4		8	4	2	

HT 72 / A / 106 / 1018 / E

Pag. 17

Rotary Couplings

Hydraulic Rotary Coupling DI 145



Rated pressure 42 MPa (420 bar)

Dimensions in mm.

Model	D	F	G	H	N° of Ways	G 1/4"	G 1/2"	G 3/4"	G 1"	G 1- 1/4"	G 1- 1/2"
DI 145/07	198	50	249	359	7			3	2	2	
DI 145/07-01	198	60	246	356	7		1	2	2	2	
DI 145/07-02	198	60	278	388	7		1			6	
DI 145/07-03	198	50	300	410	7	2		1			4
DI 145/09	178	50	290	400	9		2	2	3	2	
DI 145/09-01	178	50	280	390	9		3	2	2	2	
DI 145/11	198	50	360	460	11			2	9		
DI 145/11-01	198	50	320	430	11		5	2	2	2	
DI 145/12	198	60	380	490	12		1	4	5	2	
DI 145/12-02	198	30	427	537	12		1	3	6	2	
DI 145/13	198	50	494	604	13		6	3	2	2	
DI 145/15	198	30	477	587	15		6	3	4	2	
DI 145/17	198	30	489	599	17		5	4	4	4	

Rotary Couplings



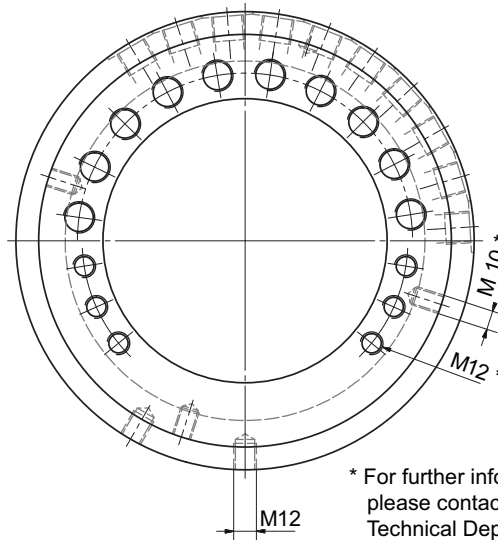
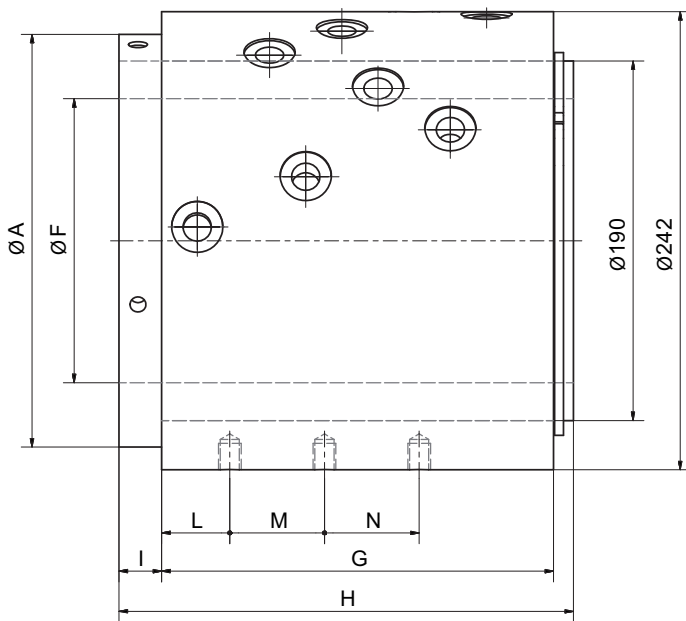
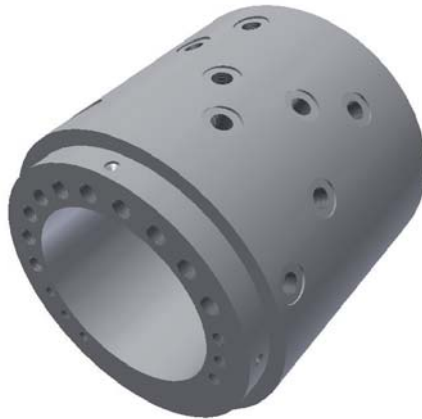
Hydraulic Rotary Couplings for Concrete Mixer Pump DPC Series

HT 72 / A / 106 / 1018 / E

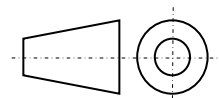
Pag. 19

Rotary Couplings

Hydraulic Rotary Coupling DPC 190



* For further informations please contact our Technical Dept.



Rated pressure 42 MPa (420 bar)

Dimensions in mm.

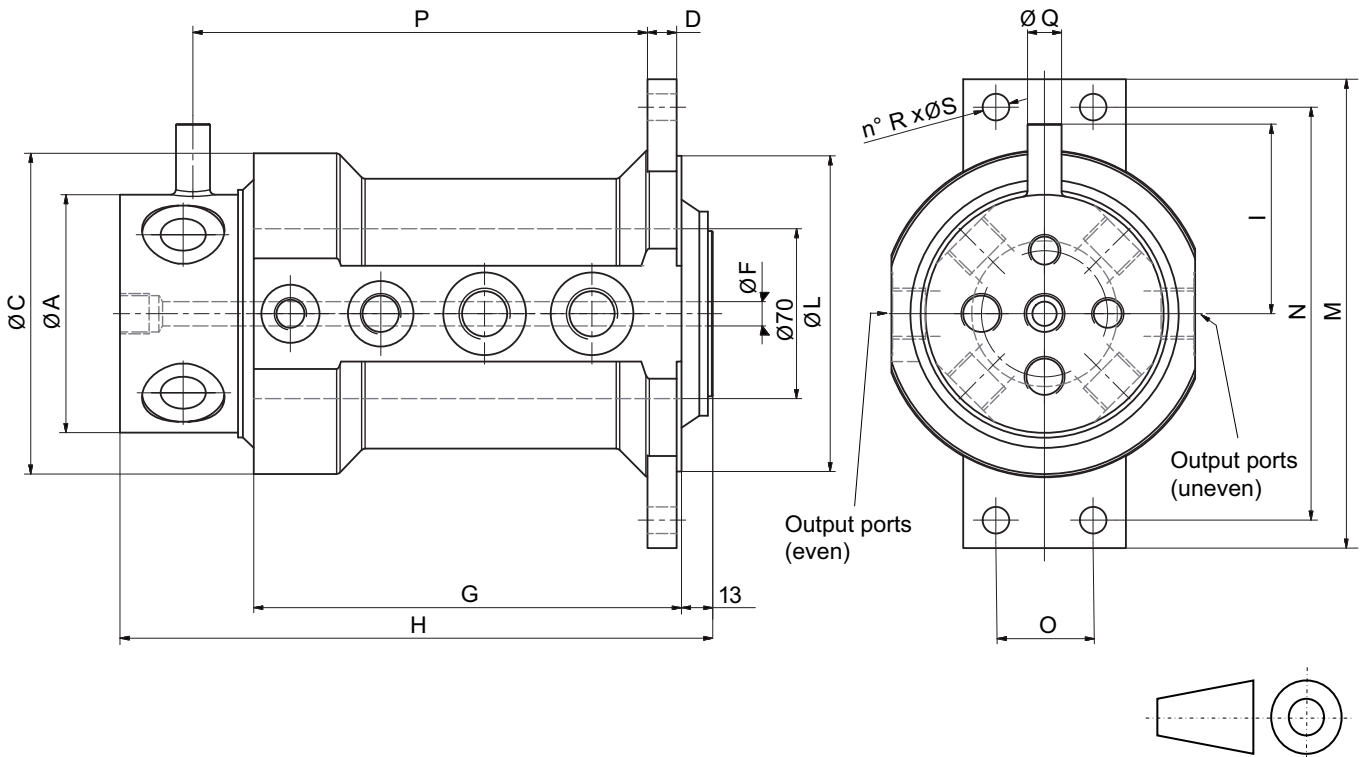
Model	A	F	G	H	I	L	M	N	N° of Ways	G 3/8"
DPC 190/08	217	150	190	222	22.5	36	50	50	8	8
DPC 190/10	217	150	207	240	22.5	36	50	50	10	10
DPC 190/12	217	150	246	279	22.5	36	50	50	12	12
DPC 190/16	227	140	322	362	29.5	85	75	75	16	16
DPC 190/18	227	140	360	400	29.5	105	75	75	18	18



Mini Hydraulic Rotary Couplings DM Series

Rotary Couplings

Mini Hydraulic Rotary Coupling DM 070



Rated pressure 42 MPa (420 bar)

Dimensions in mm.

Model	A	C	D	F	G	H	I	L	M	N	O	P	Q	R	S	N° of Ways	G 1/8"	G 1/4"	G 3/8"	G 1/2"
DM 070/07	79	125	15	/	127	169	70	110	170	140	/	122.5	14	2	13	7		7		
DM 070/07-01	89	125	15	20	127	175	70	110	170	140	/	125.5	14	2	13	7		3	4	
DM 070/08	89	116	12	/	164	232	65	130	190	170	40	155	14	4	9	8	1	3	4	
DM 070/08-01	99	132	12	/	176	244	70	130	193	170	40	187	14	4	11	8		2	2	4
DM 070/08-02	99	132	12	/	172	240	70	130	193	170	40	178	14	4	11	8		1	7	
DM 070/08-03	89	125	15	20	155	219	85	110	170	140	/	30	20	2	13	8		4	4	
DM 070/09	99	132	12	/	176	252	70	130	193	170	40	187	14	4	9	9			4	5
DM 070/09-01	91	132	12	/	175	243	66	130	195	170	40	191	14	4	9	9		5	4	
DM 070/11	79	110	11	/	181	223.5	70	110	170	140	/	180.5	14	2	13	11		11		

Rotary Couplings



Atex Certified Rotary Couplings EX Series

Rotary Couplings

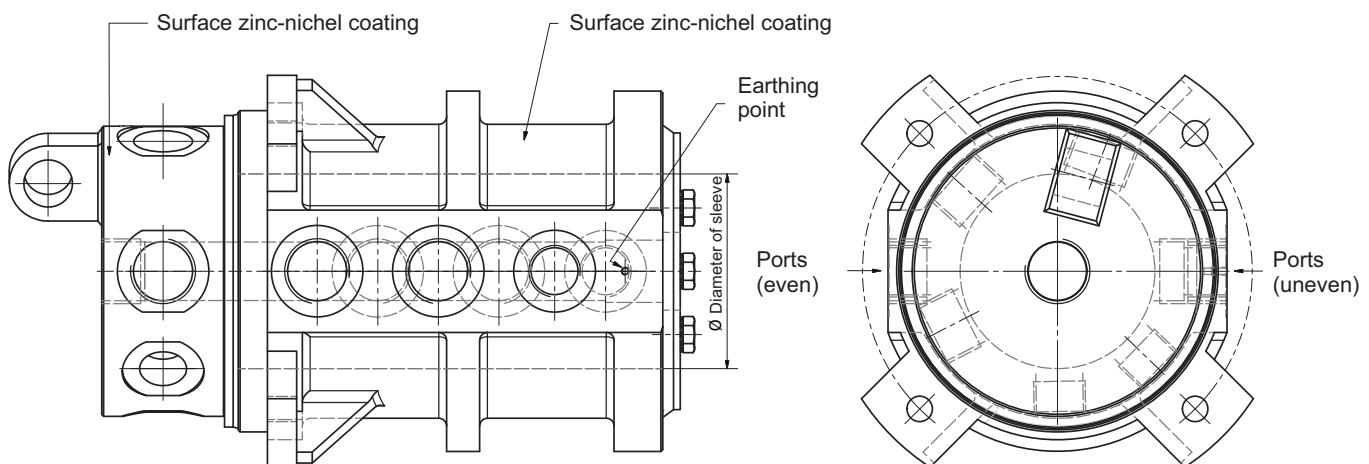
General Information

The hydraulic rotary couplings of series EX are designed for applications in potentially explosive ambients and are certified according to the norm ATEX 2014/34/EU by TÜV NORD. They are therefore suitable to be used in ambients with the presence of gas and dust (group II) with the risk of explosion. In addition, they can be customized for what belongs the layout, number of passages, working pressures, rotational speed and types of fluids.

According to the norms IEC 80079-36 and IEC 80079-37 there have been analyzed potential sources of sparks and accordingly the external surfaces of the rotary couplings have a special coating which prevents against sparks and corrosion. Every rotary coupling of the EX-series has an earth-point in order to provide the electric discharge of the different parts. Extensive thermal testing has been done in order to fully comply with the analyses of risks according to the ATEX-norms.

Following to this certification, the EX-series rotary couplings can be installed on machines operating in zone 1 (and consequently also in zone 2) with gas, and zone 21 (consequently also in zone 22) with explosive dusts. These hydraulic rotary couplings can be equipped with electric swivel couplings which have equal ATEX certification (EN 60079-0), so are suitable to operate on onshore and offshore oil & gas platforms, on chemical equipment and in food-processing machinery.

Installation Drawing



Rotary Couplings

TÜV Nord has proved the correspondance of the EX-series hydraulic rotary couplings, with the following directives:

- 2014/34/EU
- ISO IEC 80079-36
- ISO IEC 80079-37
- EB 60079-0
- ISO 12100:2010
- UNI EN 1127-1
- Documentation FT-SJEX-01
- TÜV NORD no. 0206087

TECHNICAL CHARACTERISTICS:

Working pressure up to 450 Bar

Marking for GAS: Ex h IIC T4 Gb

Marking for EXPLOSIVE DUSTS: Ex h IIIC T1 35°C Db

Rotating speed: 0-15 n/min.

Ambient temperature: -50 to +50°C

Recommended fluid temperature: -30 to +60°C

Maximum working temperature of fluid: +75°C

Standard fluid: hydraulic mineral oil

Other possible fluids: air, water, water-oil emulsions, gasoline etc.

Oil cleanliness: 19/17/14 (UNI EN ISO 4406)

Starting torque: depending on the diameter of the rotator and on the number of passages.

Resistance in salt fog: over 300 hours (UNI EN ISO 9227)

Direction of rotation: bi-directional

CONSTRUCTION FEATURES:

A variety of layouts and characteristics, according to the planned application.

Materials of the main parts: steel or spheroidal casting for the external part

Special surface treatments according to the planned application.

Available connection ports: standard with BSP-threads (UNI EN ISO 1179), for SAE-3000 PSI or SAE-6000 PSI flanges (UNI EN ISO 6162), and UNF threads (UNI EN ISO 11926).

The external housing is with point for electric earth connection.

Recommended position of installation is vertical. No radial or axial forces are allowed. The rotary couplings are supplied with oil for internal corrosion protection and all ports are plugged with polyethylene plastic plugs.

Rotary Couplings



Electric Swivel Couplings CE Series

Rotary Couplings

Electric Swivel Couplings CE Series General Information

Description

Electrical connector rotating with variable numbers of rings depending on the needs of the customer.

The Electrical connector can be coupled with the hydraulic rotary couplings of our production.

Typical Applications

Where the request is the transmission of signals, and fieldbus current from a fixed part to a rotating reversible.

Typical applications include cranes, building equipment rotating aerial platforms, etc.

General Features

Rotation speed: 0-20 n/min. (higher speeds on request)

Operating temperature: -20 / +60 °C (other on request)

Protection degree: IP55 / 65 (higher on request)

Rotation direction: reversible (CW / CCW)

Electrical Characteristics

Rated voltage: 500V AC, 220V DC

Intensity of current:mA - 80 A

Types of signals: Canbus, Ethernet, Profibus, video etc.

Contact resistance ring-brush: <20mΩ

Ring Material: bronze with silver plating treatment for the power lines, golden for signal lines

Brush holder: double A-arm (2 brushes per ring)

Brush Material: metalcarbon for power lines and Silvergraphite for signals lines

Cable outlet: axial for rings, radial for brushes

Length: 3m from both sides, different lengths on request.

Cable cross section: single-core cables from 0.75mm² to 4 mm² depending on the current intensity requested

Shielded cables for signals

Used Materials

Base: anodized aluminum

Housing: nickel plated or anodized aluminum

Cover: anodized aluminum

Cable routing: smooth PVC

Standard fittings for wiring guide: nickel plated brass or galvanized with seal

Screws: galvanized steel

Rotary Couplings

Electric Rotary Coupling CE Series

Accessories

- Installation on hydraulic rotary coupling
- Connectors
- Prepared for encoder and eventual installation if required
- Special cables
- Anti-condensation heaters
- Conduits and fittings suitable for special applications

Order Code

COLLECTOR ELECTRICAL CE 110 / T N° x A - L

T = total electrical pathways required

N = N° number of electrical pathways of characteristic C

C = current density (A)

L = length of the output cables (m)

Example

To order a manifold size CE 110 with 8-way power 10 A and 4 way 20 A + CAN BUS which engages 5 rings. Output cables 3 m. length.

CODE = CE 110 / 17 n° 8 x 10A - n° 4 x 20A - n° 5 x CAN BUS - 3 m.

To order a manifold size CE 163 with 8-way power 10 A and 4 way 20 A + CAN BUS which engages 5 rings. Output cables 3 m. length.

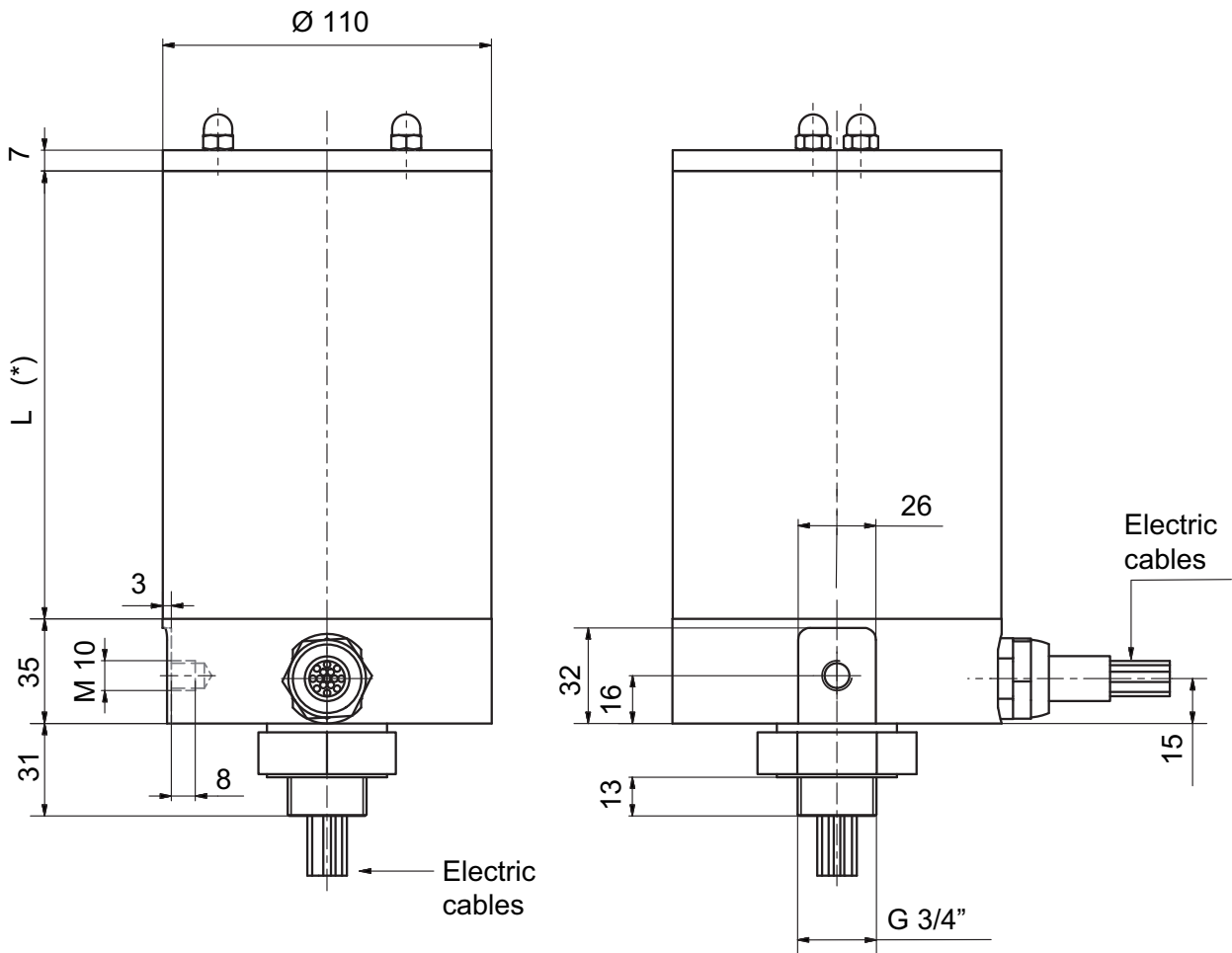
CODE = CE 163 / 17 n° 8 x 10A - n° 4 x 20A - n° 5 x CAN BUS - 3 m.

Rotary Couplings

Electric Rotary Coupling CE 110



Installation Drawing

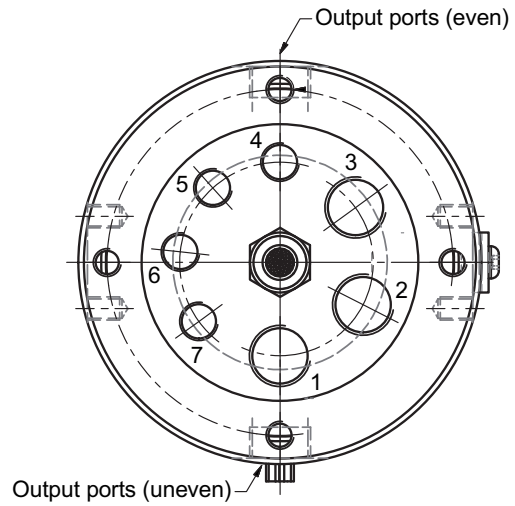


L (*) - Variable, depending on the number of rings.

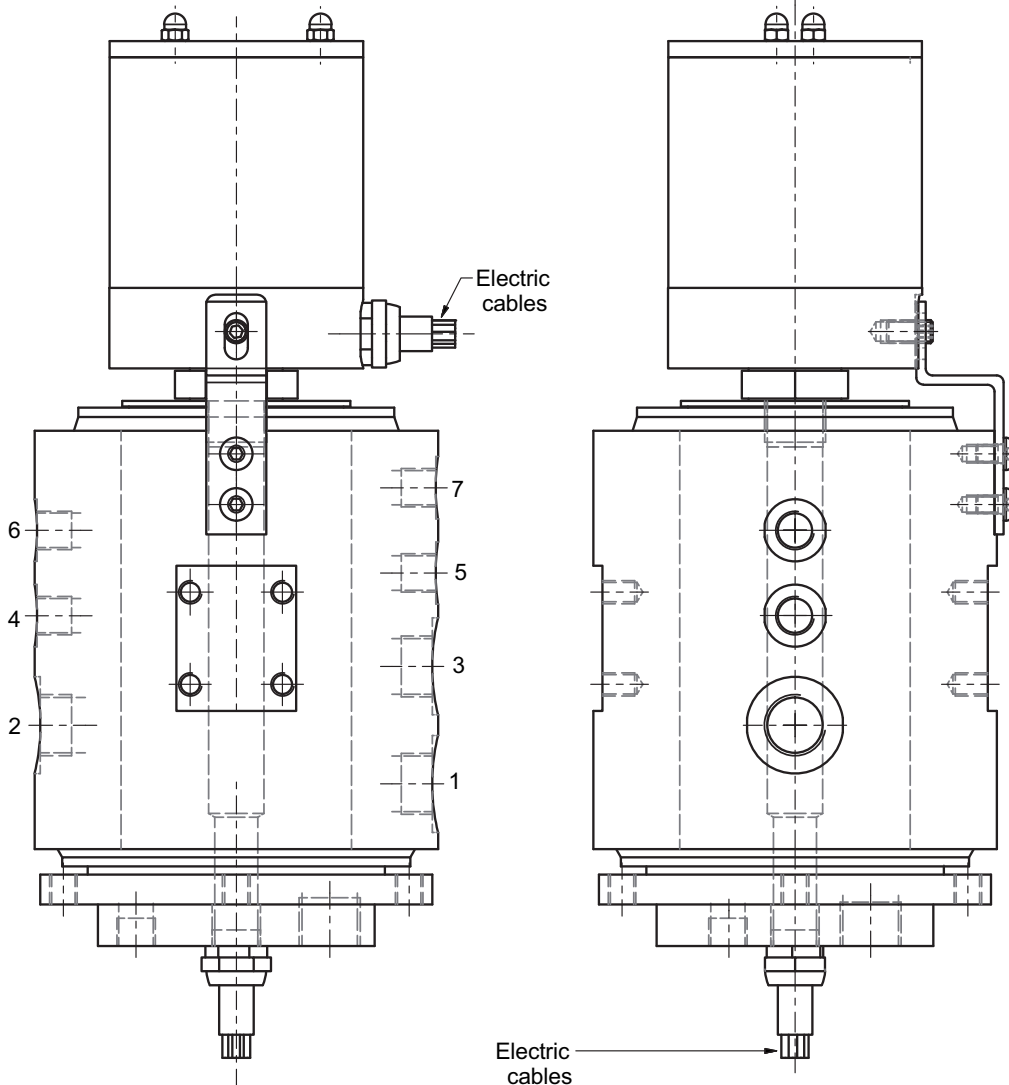
Rotary Couplings

Electric Rotary Coupling CE 110

Example of installation on Hydraulic Rotary Coupling



Electric



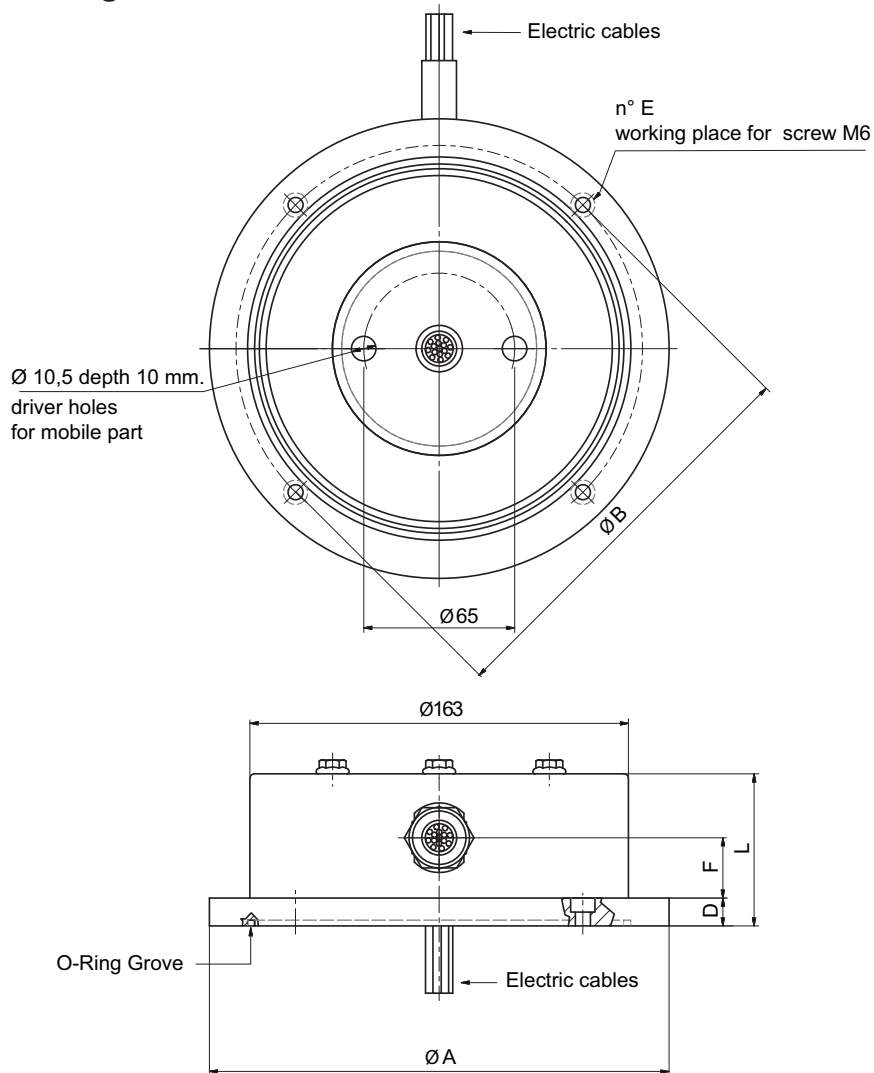
Hydraulic

Rotary Couplings

Electric Rotary Coupling CE 163



Installation Drawing



A*	B	L**	D	E	F*
170	130	variable	13	4	variable from 26 to 38
170	130	variable	4.5	4	variable from 26 to 38
180	164	variable	18.5	4	variable from 26 to 38
199	175	variable	10	4	variable from 26 to 38
218	205	variable	12.5	6	variable from 26 to 38

* For further information please contact our Technical Dept.

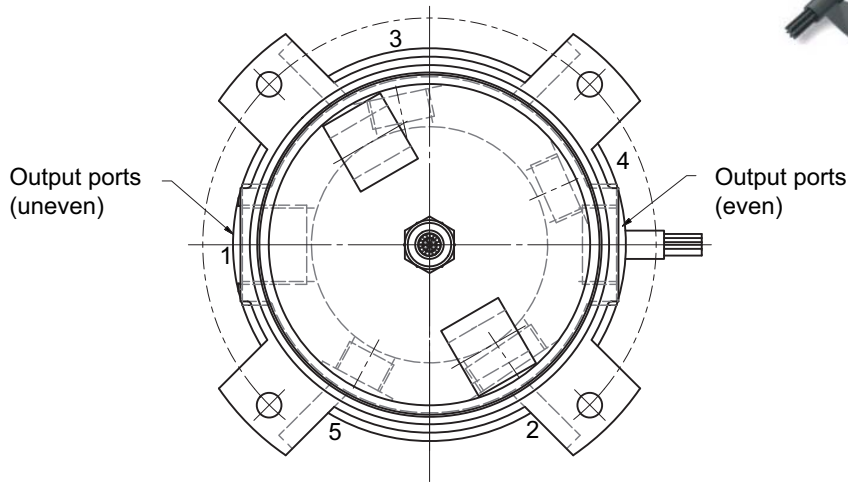
** Variable, depending on the number of rings

HT 72 / A / 106 / 1018 / E

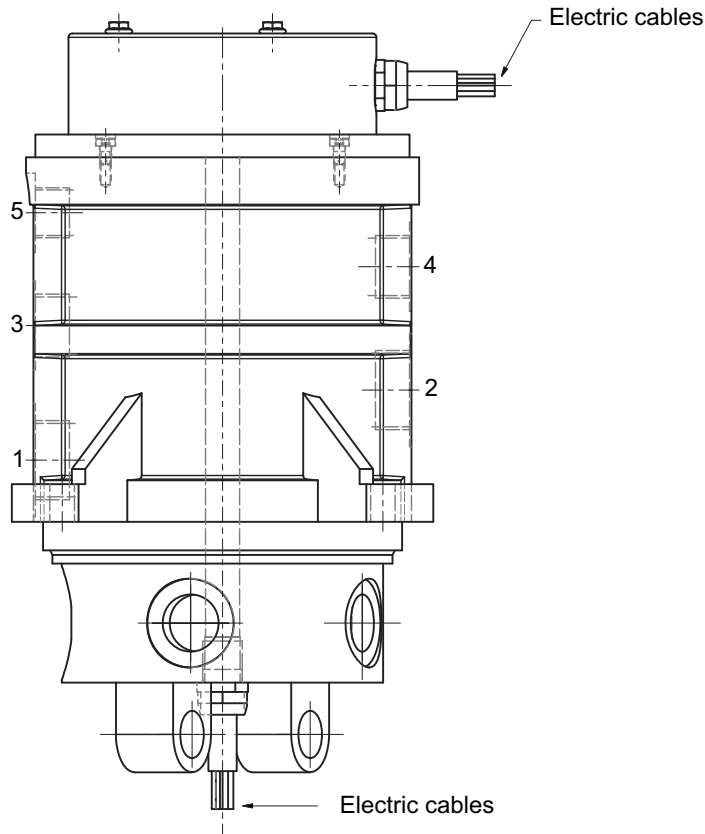
Rotary Couplings

Electric Rotary Coupling CE 163

Example of installation on Hydraulic Rotary Coupling



Electric



Hydraulic

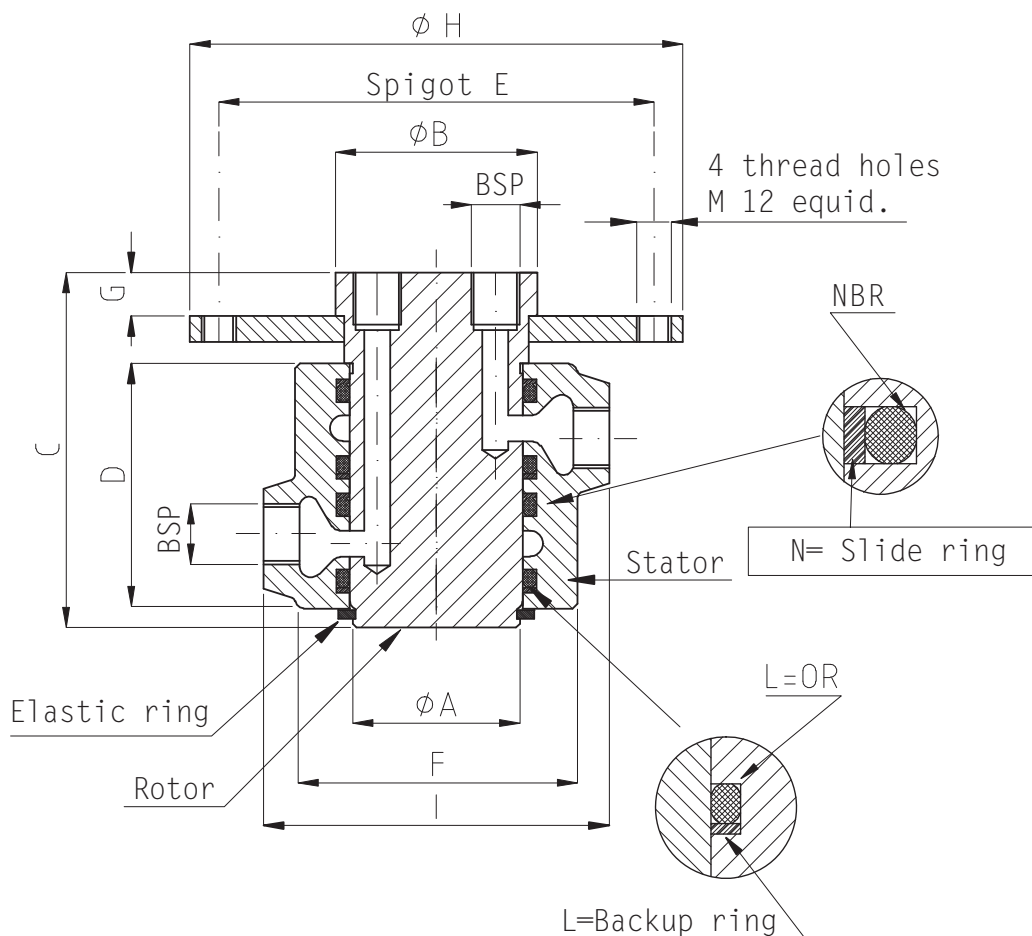
Rotary Couplings



Special Rotary Couplings

Rotary Couplings

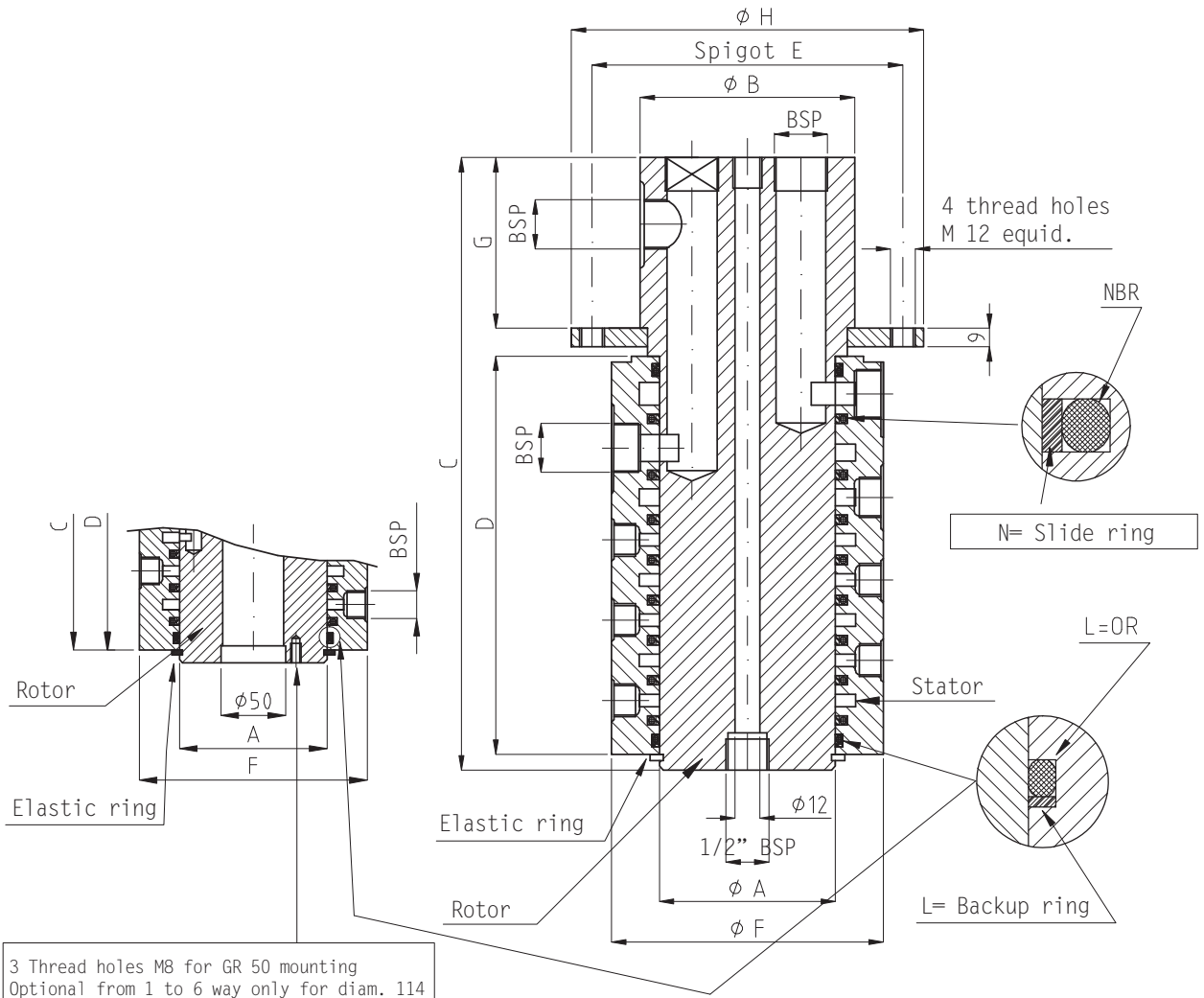
Hydraulic Rotary Coupling GRS 25 - 85/6



Model code	Type	Max. press. bar	BSP Ports					ϕA	ϕB	C	D	E	F	G	ϕH	L	M	N	Stator material	Rotor material
			1/4	3/8	1/2	3/4	1"													
GRS															O-RING	Backup ring	Seals			
	2v $\phi 25$	250	2				25	45	137	78	66	50	45	80	02 OR 3100 03 OR 3112		N° 03 NCS/R $\phi 25 \times 2,8$	C45	C45	
	2V $\phi 30$		2				30	44	102	62	66	80	25	90	02 OR 3118 03 OR 3131		N° 03 NCS/R $\phi 30 \times 2,8$			
	2V $\phi 35$				2		35	119	122	100	100	80		119	02 OR 3137 04 OR 3156		N° 04 NCS/R $\phi 35 \times 2,8$			
	2V $\phi 45$			2			45	59		81	80	95		95						
	5V $\phi 45$	5																		
	2V $\phi 60$	200			2		60	70	124	85	151	98	15	188	n° 04 OR 6237	n° 04 $\phi 60$		CAST IRON G 25	C45	
	4V $\phi 60$ MB	300		2	2		60	72	162	117	151	113	22	188	N° 05 OR 6250		N° 05 LRC $\phi 60 \times 5,7$	C45	C45	
	8V $\phi 70$		4	2	2		70	90	389	195	151	126	70	175	n° 9 OR 177		N° 9 NCS/R $\phi 70 \times 3,8$	C45	C45	
	8V $\phi 75$			6	1	1	75	90	392	205	151	112	70	180	N° 9 OR 4312		N° 9 NCS/R $\phi 75 \times 3,8$	C45	C45	
	2V $\phi 85$	200			1	1	85	99	135	93,5	151	128	15	188	N° 04 OR 6337	N° 04 $\phi 85$		CAST IRON G 25	C45	
	4V $\phi 85$	200			3	1	85	99	230	187	151	128	18	188	N° 08 OR 6337	N° 08 $\phi 85$		CAST IRON G 25	C45	
	4V $\phi 85$ MB	200			2	2	85	99	191	148	151	128	18	188	N° 05 OR 6337	N° 08 $\phi 85$		CAST IRON G 25	C45	
	6V $\phi 85$ TB	300			4	2	85	99	231	189	151	118	18	175	02 OR 6337 06 OR 6350	N° 02 $\phi 85$	N° 06 LRC $\phi 85 \times 5,7$	Iron tube fe 520	C45	

Rotary Couplings

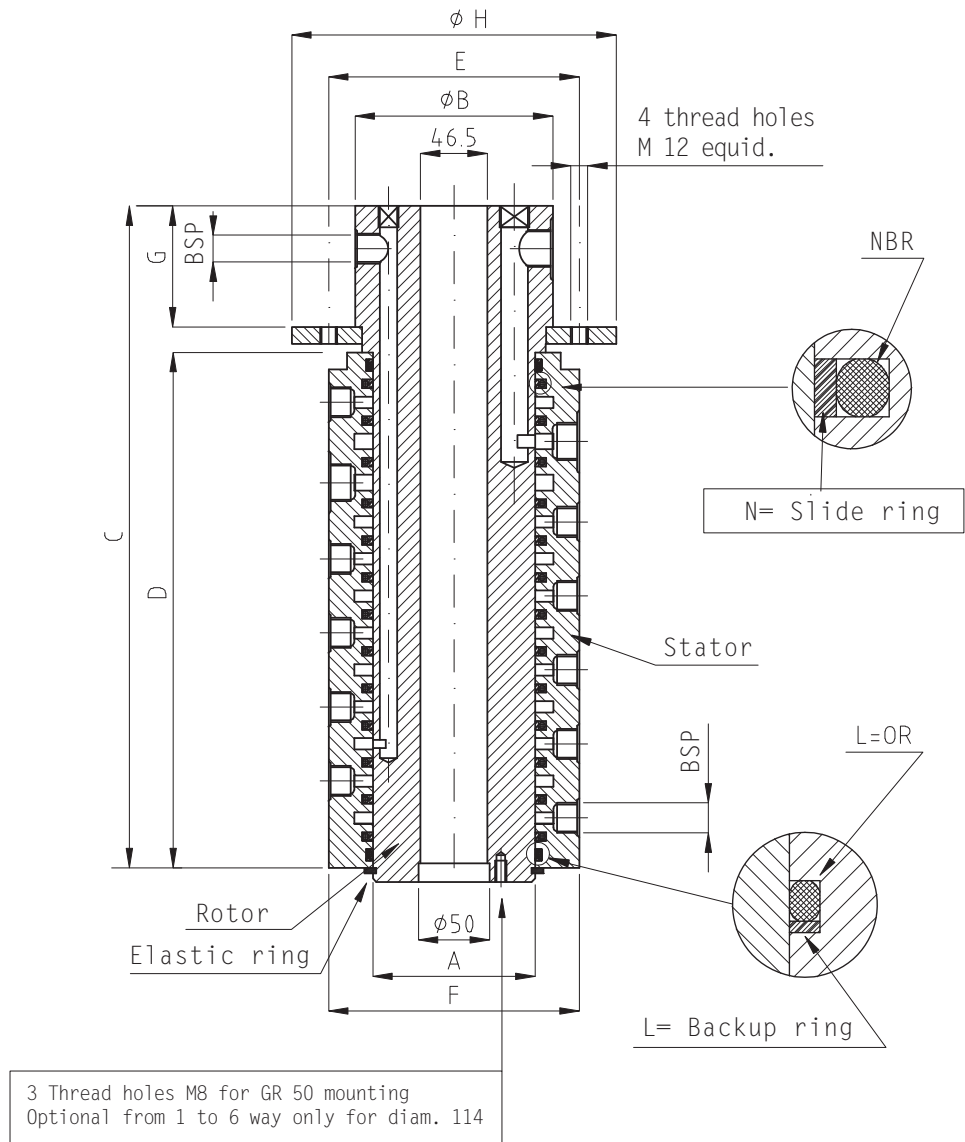
Hydraulic Rotary Coupling GRS 85 - 114/10



Model code	Type	Max Press.	BSP Ports				ϕA	ϕB	C	D	E	F	G	ϕH	L	M	N	Stator material	Rotor material
			M14 x1.5	3/8	1/2	3/4													
GRS	6V $\phi 85$ TA	300		4	2		85	104	293	189	151	165	83	175	02 OR 6337 06 OR 6350	N° 02 $\phi 85$	N° 06 LRC $\phi 85 \times 5,7$	Iron tube fe 520	C45
	8V $\phi 85$	300		8			85	99	270	189	151	135	60	175	02 OR 6337 07 OR 6350	N° 02 $\phi 85$	N° 07 LRC $\phi 85 \times 5,7$	Iron tube fe 520	C45
	9V $\phi 85$	300			7	2	85	119	370	252	176	146	89	198	02 OR 6337 08 OR 6350	N° 02 $\phi 85$	N° 08 LRC $\phi 85 \times 5,7$	Iron tube fe 520	C45
	10V $\phi 85$	300		8	2		85	99	312	231	151	135	60	175	02 OR 6337 09 OR 6350	N° 02 $\phi 85$	N° 09 LRC $\phi 85 \times 5,7$	Iron tube fe 520	C45
	11V $\phi 85$	300			9	2	85	119	412	294	176	146	89	198	02 OR 6337 10 OR 6350	N° 02 $\phi 85$	N° 10 LRC $\phi 85 \times 5,7$	Iron tube fe 520	C45
	12V $\phi 85$	300	10	2			85	99	370	273	175	135	70	200	02 OR 6337 11 OR 6350	N° 02 $\phi 85$	N° 11 LRC $\phi 85 \times 5,7$	Iron tube fe 520	C45
	15V $\phi 90$	300	13		2		90	110	412	330	176	150	66	198	N° 02 OR	N° 02 $\phi 90$	14 NCS/R $\phi 90 \times 3,8$	Iron tube fe 520	C45
	5V $\phi 114$	300		2	2	1	114	124	217	173	176	173	17	228	06 OR 6450	N° 10 $\phi 114$		Iron tube fe 520	C45
	5V $\phi 114$ two pump	300		2	2	2	114	129	248	166	176	173	56	228	02 or 6450 04 or 201	N° 02 $\phi 114$	04 NCS/R $\phi 114 \times 5,8$	Iron tube fe 520	C45
	6V $\phi 114$	300		4	2		114	129	285	241	176	173	17	228	02 OR 6450 07 OR 201	N° 02 $\phi 114$	07 NCS/R $\phi 114 \times 5,8$	Iron tube fe 520	C45
	6V $\phi 114$	300		4		2	114	129	285	241	176	173	17	228	02 OR 6450 07 OR 201	N° 02 $\phi 114$	07 NCS/R $\phi 114 \times 5,8$	Iron tube fe 520	C45
	7V $\phi 114$ two pump	300		4	2	2	114	129	292	210	176	173	56	228	02 or 6450 06 or 201	N° 02 $\phi 114$	06 NCS/R $\phi 114 \times 5,8$	Iron tube fe 520	C45
	7V $\phi 114$	300		3	4		114	129	701	206	176	192	22	228	02 or 6450 06 or 201	N° 02 $\phi 114$	06 NCS/R $\phi 114 \times 5,8$	Iron tube fe 520	C45
	8V $\phi 114$	350			8		114	129	394	281	176	173	85	228	02 OR 6450 09 OR 201	N° 02 $\phi 114$	02 NCS/R $\phi 114 \times 5,8$	Iron tube fe 520	C45
	10V $\phi 114$	350			10		114	139	489	366	176	173	99	228	02 OR 6450 11 OR 201	N° 02 $\phi 114$	11 NCS/R $\phi 114 \times 5,8$	Iron tube fe 520	C45

Rotary Couplings

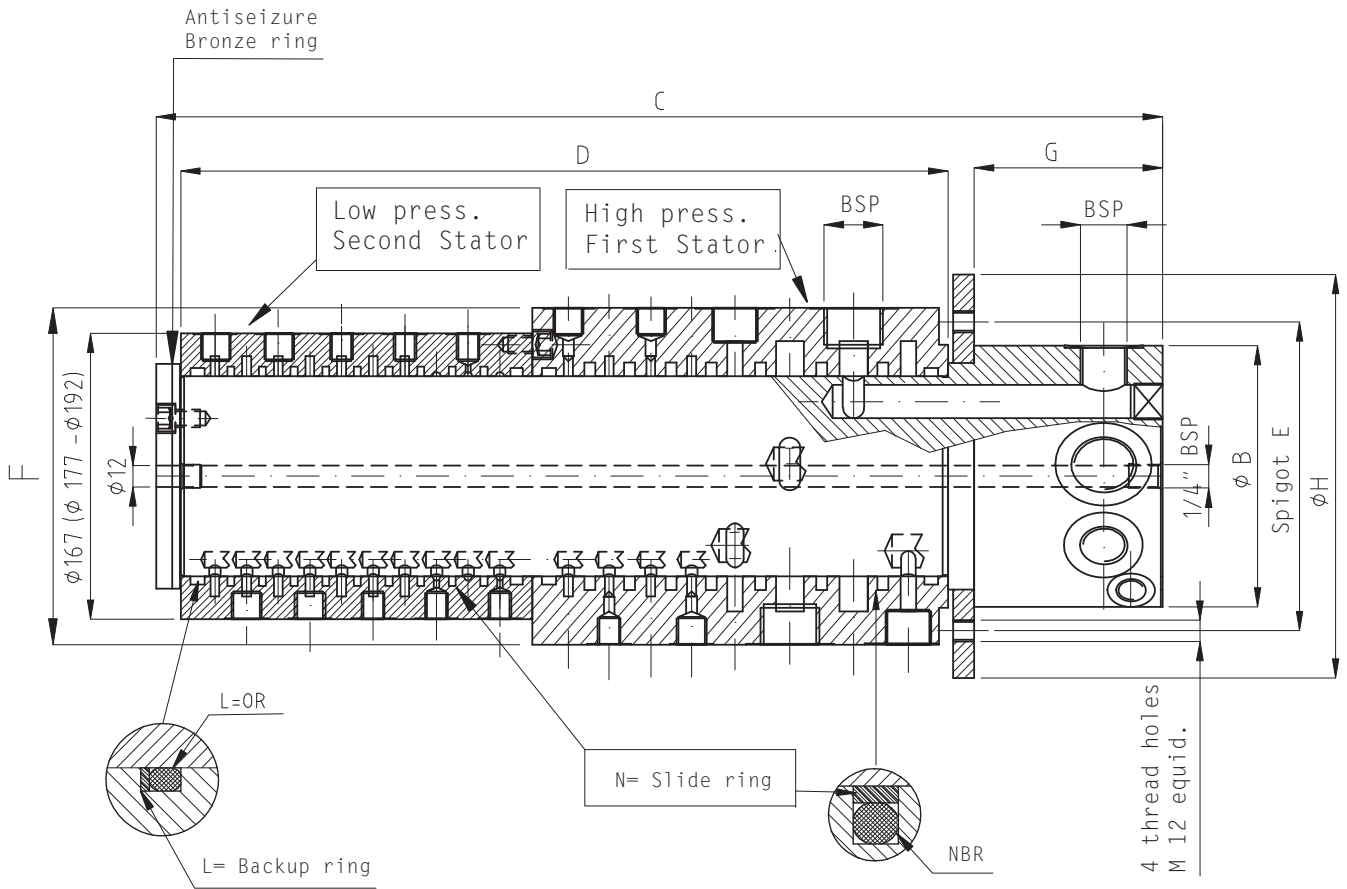
Hydraulic Rotary Coupling GRS 114/10 - 114/19



Model code	Type	Max press. bar	BSP Ports					φ A	φ B	C	D	E	F	G	φ H	L	M	N	Stator material	Rotor material
			1/4	3/8	1/2	3/4	1"													
GRS															O-RING	Backup ring	Seals			
	10V φ114	350			6	2	2	114	139	426	308	176	173	89	228	02 OR 6450 11 OR 201	N° 02 φ 114	11 NCS/R φ 114 X 5,8	Iron tube fe 520	C45
	12V φ114	350			10	2		114	139	475	362	176	173	85	228	02 OR 6450 13 OR 201	N° 02 φ 114	13 NCS/R φ 114 X 5,8	Iron tube fe 520	C45
	13V φ114	350	1		12			114	139	538	421	176	176	80	228	02 OR 6450 14 OR 201	N° 02 φ 114	14 NCS/R φ 114 X 5,8	Iron tube fe 520	C45
	15V φ114	350	13		2			114	139	482	356	176	173	98	228	02 OR 6450 14 OR 201 02 OR 4475	N° 02 φ 114	14 NCS/R φ 114 X 5,8 02 NCS/R φ 114 X 3,8	Iron tube fe 520	C45
			Metric & BSP Ports																	
			M 14 x 1,5	3/8	1/2	3/4	1"													
	17V φ114	350	15		2			114	139	491	398	176	176	61	228	02 OR 6450 16 OR 201	N° 02 φ 114	16 NCS/R φ 114 X 5,8	Iron tube fe 520	C45
	19V φ114	350	17		2			114	139	533	440	176	176	61	228	02 OR 6450 18 OR 201	N° 02 φ 114	18 NCS/R φ 114 X 5,8	Iron tube fe 520	C45

Rotary Couplings

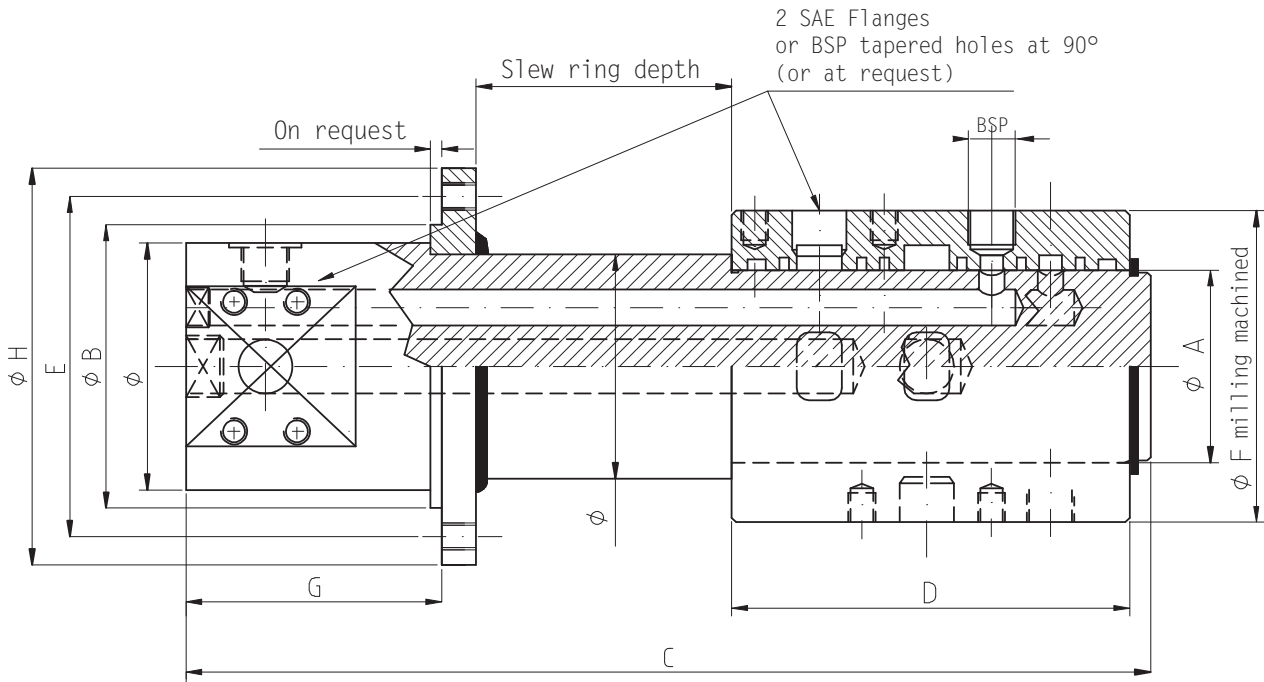
Hydraulic Rotary Coupling GRS 114/18 - 114/26



Model code	Type	Max. press. BAR	BSP Ports					φ A	φ B	C	D	E	F	G	φ H	L	M	N	Stator material	Rotor material
			1/4	3/8	1/2	3/4	1"													
GRS	18V φ114		7	7	2	2	114	139	572	437	176	192	107	230	04 OR 6450 16 OR 201	N° 04 φ 114	16 NCS/R φ 114 X 5,8	Iron tube fe 520	C45	
	19V φ114			15	4		114	139	568	446	176	192	107	228	04 OR 6450	N° 04 φ 114		Iron tube fe 520	C45	
	20V φ114			16	4		114	139	600	464	176	192	107	228	04 OR 6450	N° 04 φ 114		Iron tube fe 520	C45	
	21V φ114		4	13	4		114	139	612	490	176	192	107	228				Iron tube fe 520	C45	
			Metric & BSP Ports																	
			M14 x15	3/8	1/2	3/4	1"													
	23V φ114		19	1	1	2		114	139	661	554	176	176	76	228	04 OR 6450 21 OR 201	N° 04 φ 114	21 NCS/R φ 114 X 5,8	Iron tube fe 520	C45
	25V φ114		21	1	1	2		114	139	696	576	176	176	89	228	04 OR 6450 23 OR 201	N° 04 φ 114	23 NCS/R φ 114 X 5,8	Iron tube fe 520	C45
	26V φ114		22	1	1	2		114	139	722	602	176	176	89	228	03 OR 6450 24 OR 201	N° 03 φ 114	23 NCS/R 2 TEN. SPEC.	Iron tube fe 520	C45

Rotary Couplings

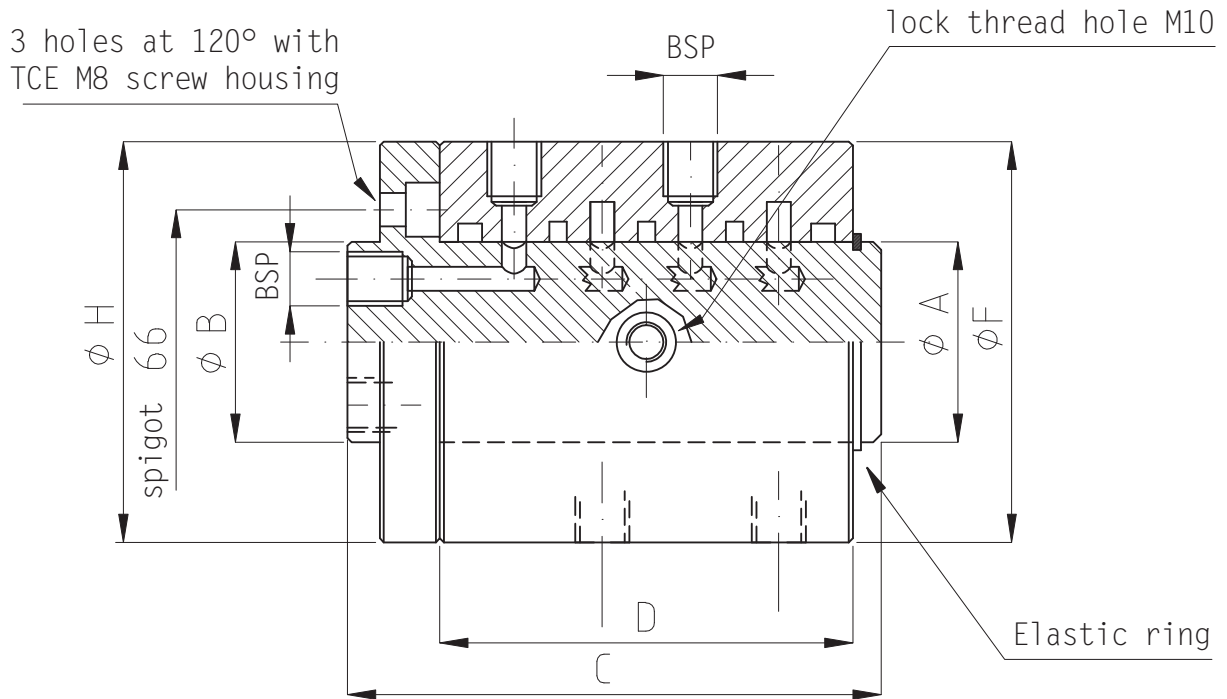
Hydraulic Rotary Coupling GRT 60 - 114



Model code	Type	Max. press. bar	BSP & SAE PORTS						phi A	phi B	C	D	E	F	G	phi H	L	M	N	Stator material	Rotor material
			1/4	3/8	1/2	3/4	1"														
GRT	2V phi 60		1	2		SAE 2		60	100	309	100	120	125	87	136	02 OR 66 03 OR 168	X X	03 NCS/R phi 60	Iron tube fe 520	C45	
	5V phi 75		1	2		2+2		75	125	316	193	151	185	95	175	02 OR 179 06 OR 4312	N° 02 phi 75	06 NCS/R phi 75	Iron tube fe 520	C45	
	5V phi 75		1	2			2+2	75	125	330	208	151	195	95	175	02 OR 179 06 OR 4312	N° 02 phi 75	06 NCS/R phi 75	Iron tube fe 520	C45	
	4V phi 85			2		SAE 2		85	99	393	161	151	150	95	175	02 OR 6337 06 OR 4362	N° 02 phi 85	06 NCS/R phi 85 X 3,8	Iron tube fe 520	C45	
	4V phi 85				2	SAE 2		85	104	430	174		150	105		02 OR 6337 05 OR 4362	N° 02 phi 85	05 NCS/R phi 85 X 3,8	Iron tube fe 520	C45	
	5V phi 85		1	2		SAE 2		85	99	452	196	176	150	95	220	02 OR 6337 06 OR 4362	N° 02 phi 85	06 NCS/R phi 85 X 3,8	Iron tube fe 520	C45	
	2V phi 114					SAE 2		114	180	381	154	180	190	60	220	02 OR 6450 04 OR 201	N° 02 phi 114	04 NCS/R phi 114 X 5,8	Iron tube fe 520	C45	
			BSP & SAE PORTS																		
			1/4	1/2	3/4	1 1/4	1 1/2	2"													
	4V phi 85			2		SAE 2		85	115	451	182	198	165	90	228	02 OR 6337 05 OR 4362	N° 02 phi 85	05 NCS/R phi 85 X 3,8	Iron tube fe 520	C45	
	2V phi 100					SAE 2		100	139	445	160	230	192	138	260	02 OR 189 03 OR 192	N° 02 phi 100	03 NCS/R phi 100 X 5,8	Iron tube fe 520	C45	
	5V phi 100	1	2			2+2		100	125	434	294	151	260	95	175	02 OR 189 06 OR 192	N° 02 phi 100	06 NCS/R phi 100 X 5,8	Iron tube fe 520	C45	
	4V phi 114		2			SAE 2		114	158	385	200	198	194	15	228	02 OR 6450 04 OR 201	N° 02 phi 114	04 NCS/R phi 114 X 5,8	Iron tube fe 520	C45	

Rotary Couplings

Hydraulic Rotary Coupling GRR 50/1 - 50/6



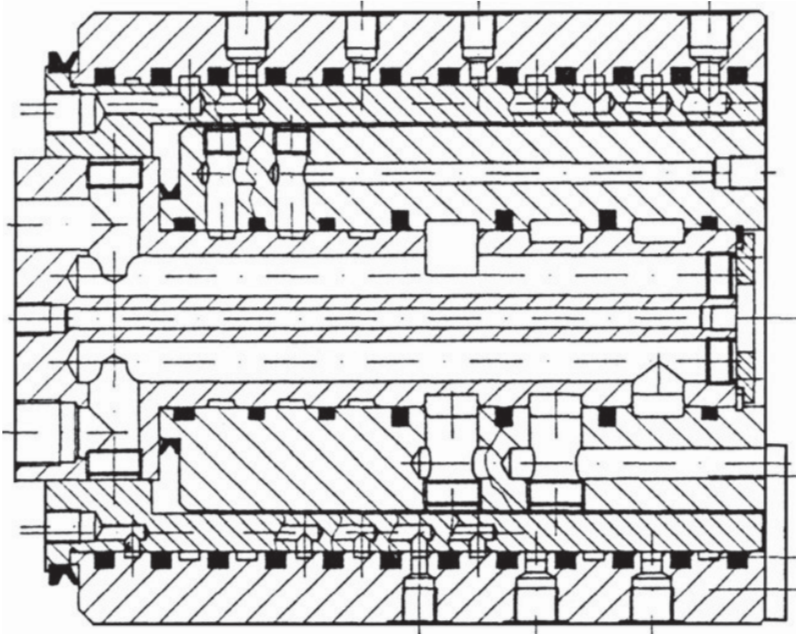
THIS MODEL MAY BE COUPLED WITH 114 DIAMETER COUPLING

Model code	Type	Max. press. bar	BSP Ports			φ A	φ B	C	D	E	F	G	φ H	L	M	N	Stator material	Rotor material
			1/8	1/4	3/8													
GRR	1v φ50		1			50	50	89	59	66	100		98	n°02 OR 6200	n° 02 φ 50			Steel
	2v φ50		2			50	50	112	82	66	100		98	n°03 OR 6200	n° 04 φ 50			Steel
	4v φ50		4			50	50	133	103	66	100		98	n°05 OR -156		n°05 LRC φ49.6xφ53.8x3.8		Steel
	5 v φ50	2		3		50	50	155	125	66	110		98	n°06 OR -156		n°06 LRC φ49.6xφ53.8x3.8		Steel
	6 v φ50	2		4		50	50	177	147	66	110		98	n°07 OR -156		n°07 LRC φ49.6xφ53.8x3.8		Steel

Rotary Couplings

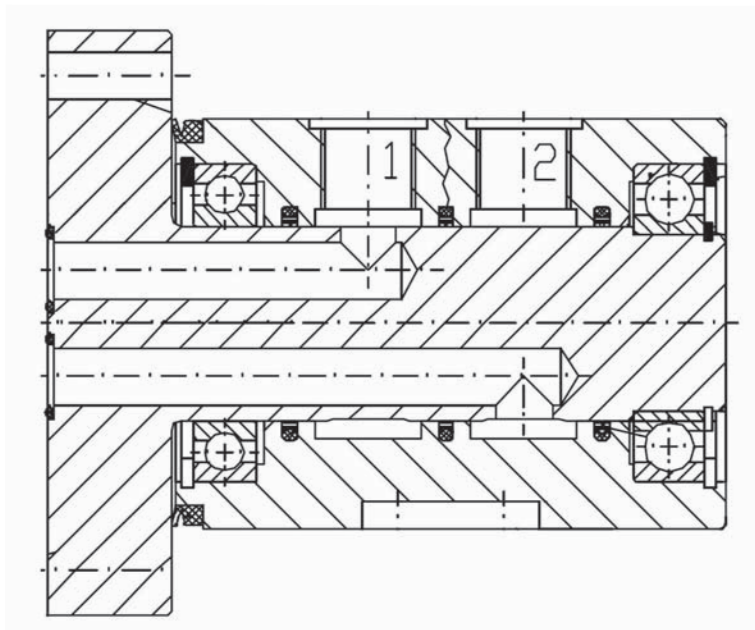
Rotary Coupling for Excavator

- 16 passages
- Pressure up to 400 bar
- With centre bore



Special Rotary Coupling for Machine Tools

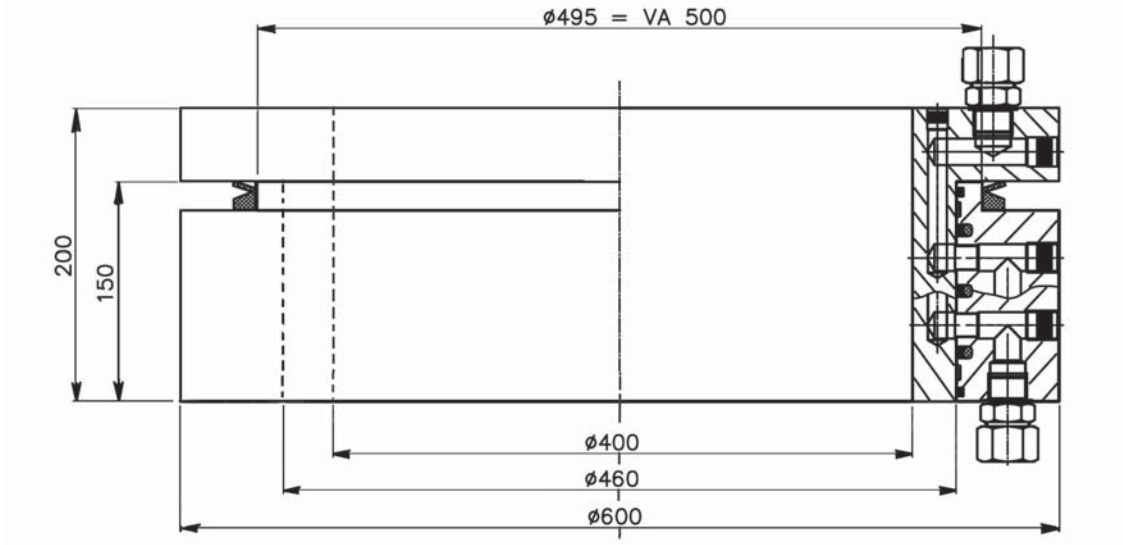
- Pressure up to 315 bar
- Speed max. 150 n / min.



Rotary Couplings

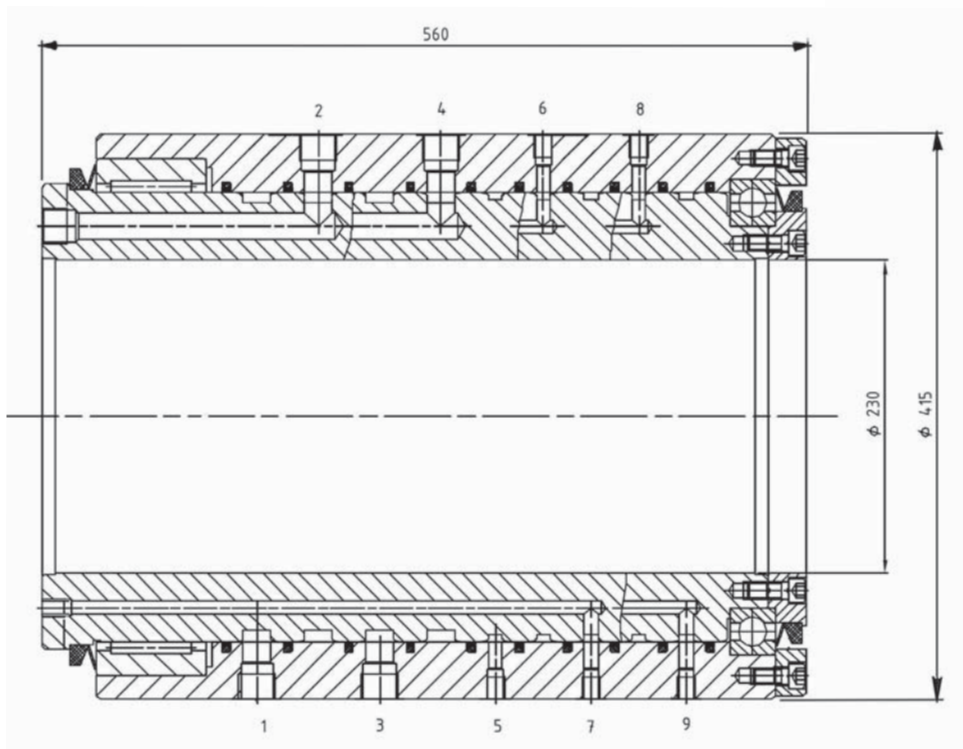
Rotary Coupling for Pipe-Laying Machine

- Pressure up to 500 bar
- Speed up to 15 n / min.
- With centre bore



Special Rotary Coupling for Oil Rig

- Port 1 - 4 - 3/4" BSP - Hydraulic oil - Pressure 150 bar
- Port 5 - 1/4" BSP - Separation set
- Port 6 - 9 - 1/4" BSP - Air - Pressure 8 bar
- Max. speed = 150 n / min.
- With centre bore 230 mm. diam.
- Surface finish - Chemical nickel plating

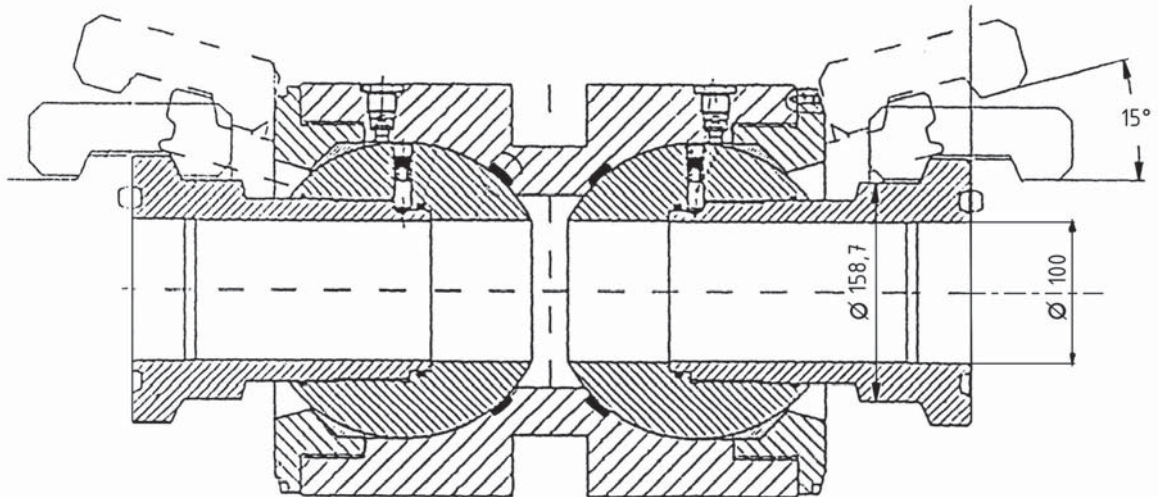


HT 72 / A / 106 / 1018 / E

Rotary Couplings

Special Rotary Coupling for Off-Shore Applications with Ball Swivels 4"

- Working pressure up to 550 bar
- Test pressure 800 bar
- Nominal size 100 mm.
- Rotation possibility with pressure 550 bar
- Max. angle $15^\circ + 15^\circ$
- **Made in STAINLESS STEEL**



Straight Hydraulic Rotary Coupling for Off-Shore Applications

- Working pressure up to 550 bar
- Test pressure 800 bar
- Nominal size 100 mm.
- Rotation possibility with pressure 550 bar
- **Made in STAINLESS STEEL**

