



BINI



ROTARY MANIFOLDS



MADE IN ITALY



Established in 1955, BINI OFFICINE MECCANICHE has become a globally recognized manufacturer of high quality and high capacity hydraulic rotary manifolds and electrical swivels. According to technical specifications and application type, BINI OFFICINE designs and manufactures in house most of the components used in its products, meeting or exceeding the customer's requirements. Our products are used on rotating equipment such as aerial work platforms, construction equipment, construction machinery and in many other equipments that can work even in the toughest environmental conditions. Our staff of sales managers and application engineers are available to help customers in the selection of the components, always providing the most suitable, efficient and cost effective solution.

This catalog has the purpose of showing all standard hydraulic rotary manifolds and electrical swivel, and to provide you with the basic design concepts around our products.

BINI OFFICINE MECCANICHE utilizes the most modern CAD-CAM 3D software and CNC machines continuously updated and technologically advanced to the most modern versions the market has to offer.



General Information

Products

In almost all applications they are used on, rotary manifolds are needed for transmitting fluids (hydraulic, water, diesel) between a stationary and a rotating part. Since each application has different requirements, we have developed an extensive selection of various models to choose from, and to be used on mobile, off-shore, agricultural, industrial, concrete pump application and special products for Pipe-Laying Machine.

The first step in manufacturing a rotary manifold is the selection of high grade alloyed steels raw materials and assembly components such as seals, bolts, bearings, bushings.

The second step is to perform rigorous inspections of raw materials and assembly components to ensure they meet our quality standards.

The third step is the actual manufacturing and machining process. In these phases, BINI utilizes and adopts specific techniques and knowledge that are part of decades of experience and well trained personnel.

The fourth and final step is the assembly, painting and specific surface protection requirements, electric swivels assemblies if required, testing, packaging and shipping. After sales service can be handled directly with customers, or through our dealership network.

Features

- Rated pressure up to 420 bar – 6000 PSI
- Rotation speed 0-12 rev/min
- Temperature range: -20 °C / + 90 °C - 4 °F / + 195 °F
- Recommended location: along the vertical axis
- No axial or axial loads are permitted on rotary manifolds
- When supplied, ports are plugged with polyethylene caps
- Large number of models to choose from
- Customer specific designs, even for demanding applications
- Combinations of various ports sizes and electrical ratings
- The most modern and manufacturing processes backed by best material used and optimized selections guarantee our final products the highest quality and reliability.

Options

- Electrical/encoders designed and manufactured by BINI
- Painting and special coatings
- Chemical nickel treatments and stainless steel materials for marine and food applications
- SAE ports and code 62

General Information

Applications

- Agricultural machinery
- Earth moving machines
- Truck cranes and hoisting
- Areal platform
- Marine and off-shore cranes
- Boring and drilling machines
- Demolition and recycling machinery
- Truck mounted concrete mixer pump
- Industrial machinery
- Oil & Gas

Order code

HYDRAULIC ROTARY MANIFOLD F D / T

F = Rotary manifold series (DA, DI, DPC, DM)

D = Rotary manifold's size (you can look this on the tables below)

T = Number of ports required

Example:

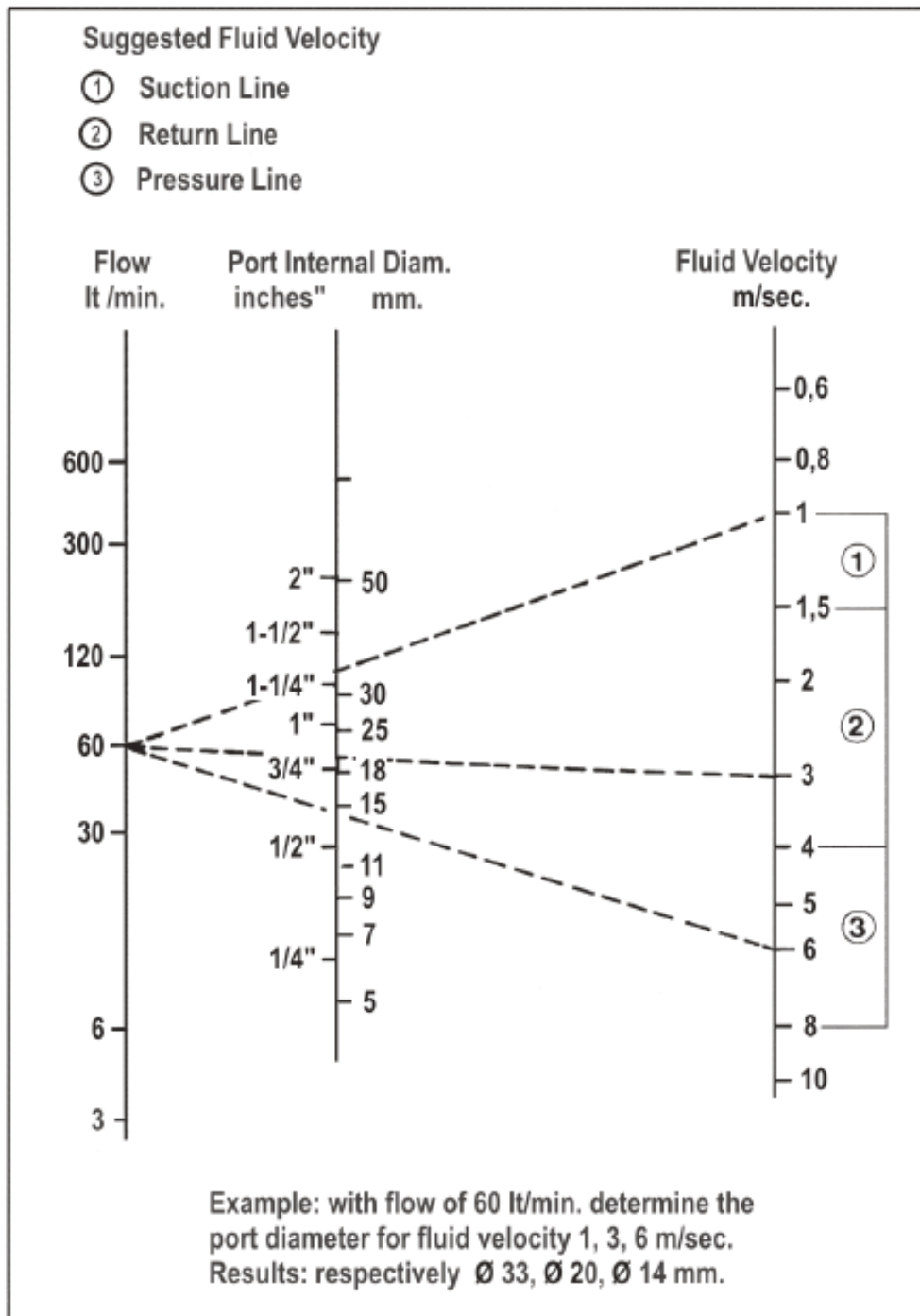
To order a rotary manifold with 6 ports: 4 x G 1/2, 2 x G 3/4, from the tables you can find series, size and the correct code:

CODE= DI 085 / 06

General Information

Fluid Velocity

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





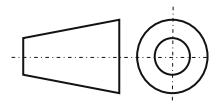
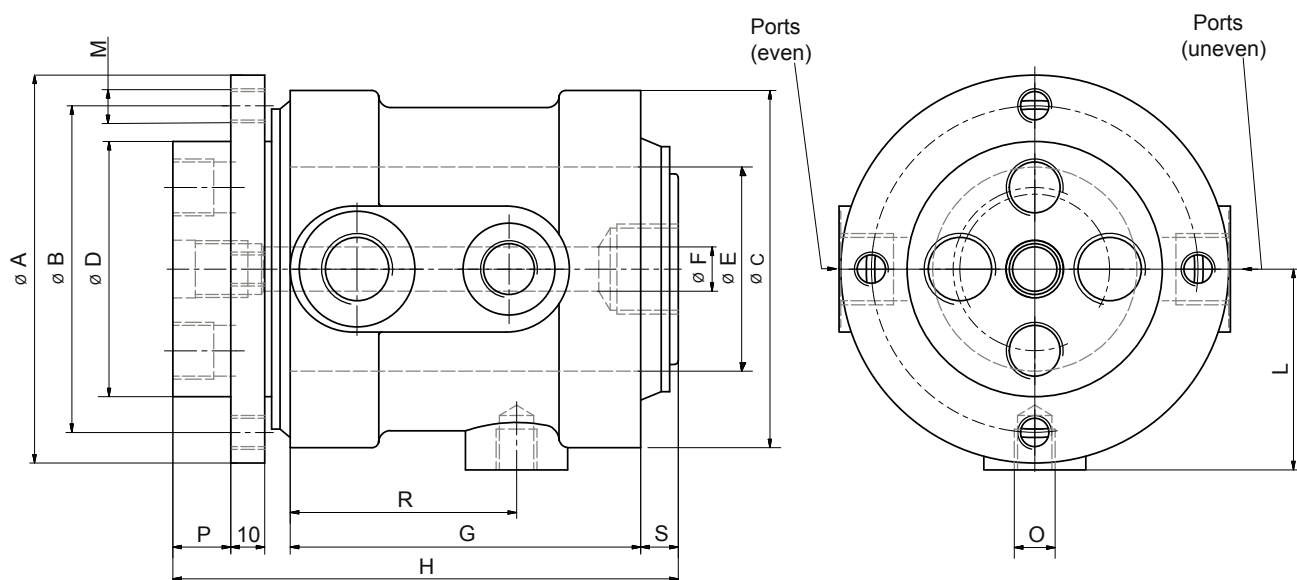
Some machines for the production of the hydraulic rotary manifolds.



Hydraulic Rotary Manifolds

DA Series

Hydraulic Rotary Manifold DA 045 - DA 060

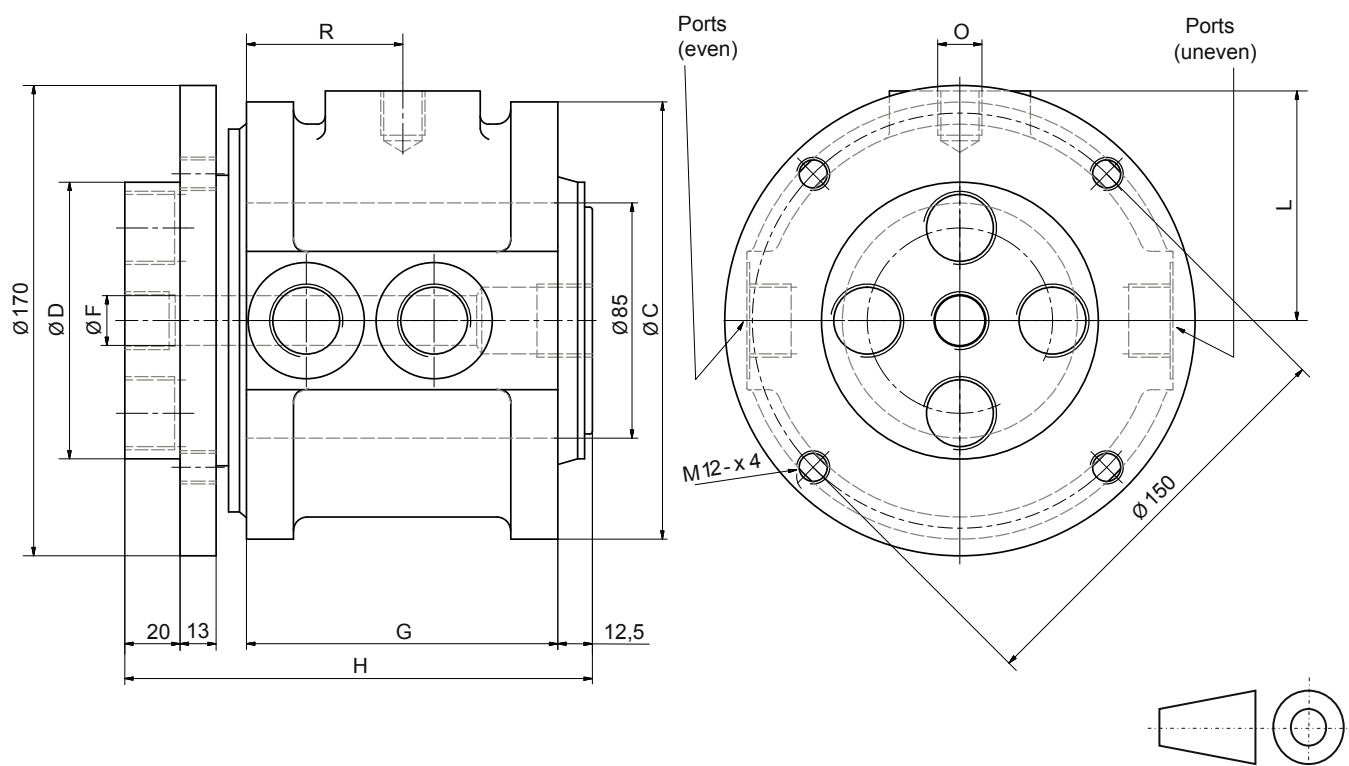


Rated pressure 42 MPa (420 bar) - 6000 psi

Dimensions in mm.

Model	A	B	C	D	E	F	G	H	L	M	O	P	R	S	N° of Ports	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		

Hydraulic Rotary Manifold DA 085



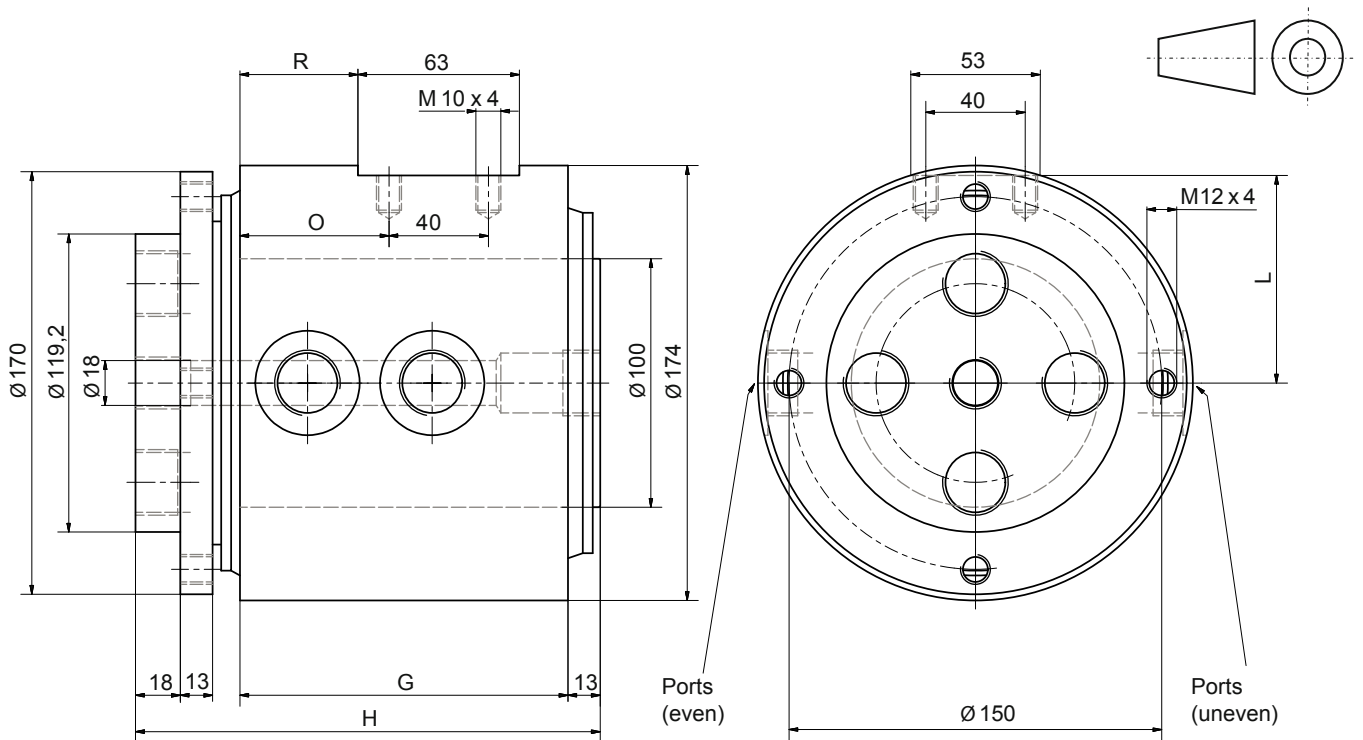
Rated pressure 42 MPa (420 bar) - 6000 psi

Dimensions in mm.

Model	C	D	F	G	H	L	O	R	N° of Ports	G 1/4	G 3/8	G 1/2	G 3/4	G1
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.

Hydraulic Rotary Manifold DA 100



Rated pressure 42 MPa (420 bar) - 6000 psi

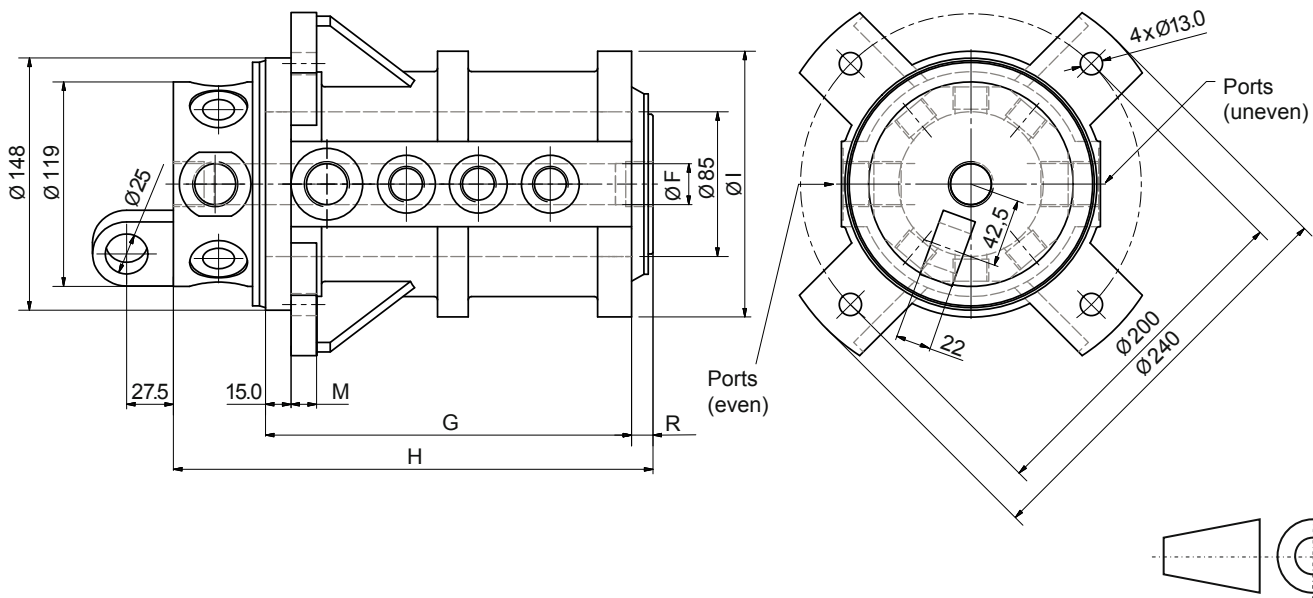
Dimensions in mm.

Model	G	H	L	O	R	N° of Ports	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	



Hydraulic Rotary Manifolds DI Series

Hydraulic Rotary Manifold DI 085 L

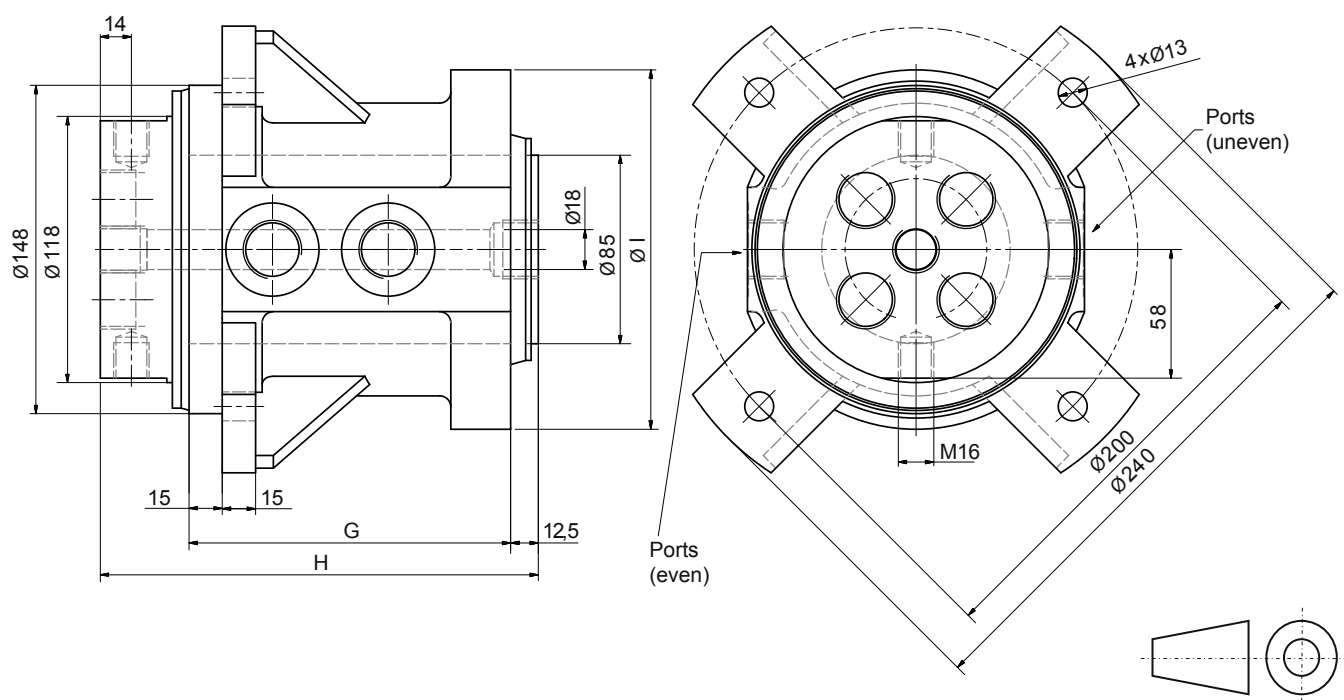


Rated pressure 42 MPa (420 bar) - 6000 psi

Dimensions in mm.

Model	F	G	H	I	M	R	N° of Ports	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

Hydraulic Rotary Manifold DI 085 V

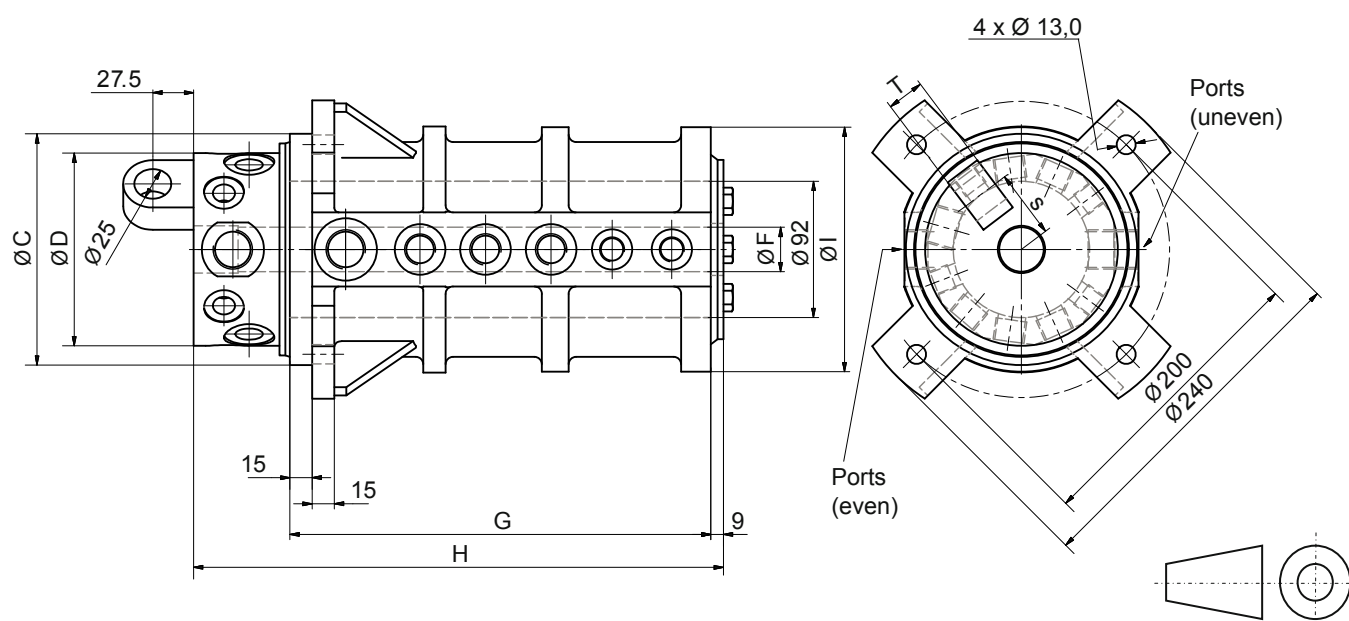


Rated pressure 42 MPa (420 bar) - 6000 psi

Dimensions in mm.

Model	G	H	I	N° of Ports	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	

Hydraulic Rotary Manifold DI 092



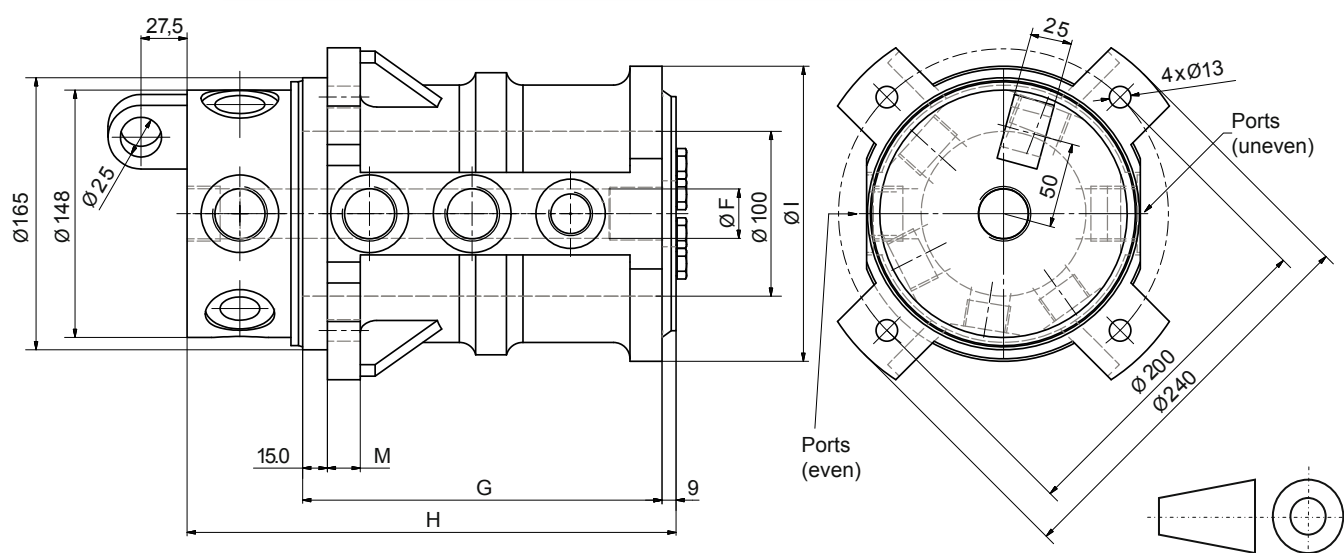
Rated pressure 42 MPa (420 bar) - 6000 psi

Dimensions in mm.

Model	C	D	F	G	H	I	S	T	N°of Ports	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.

Hydraulic Rotary Manifold DI 100

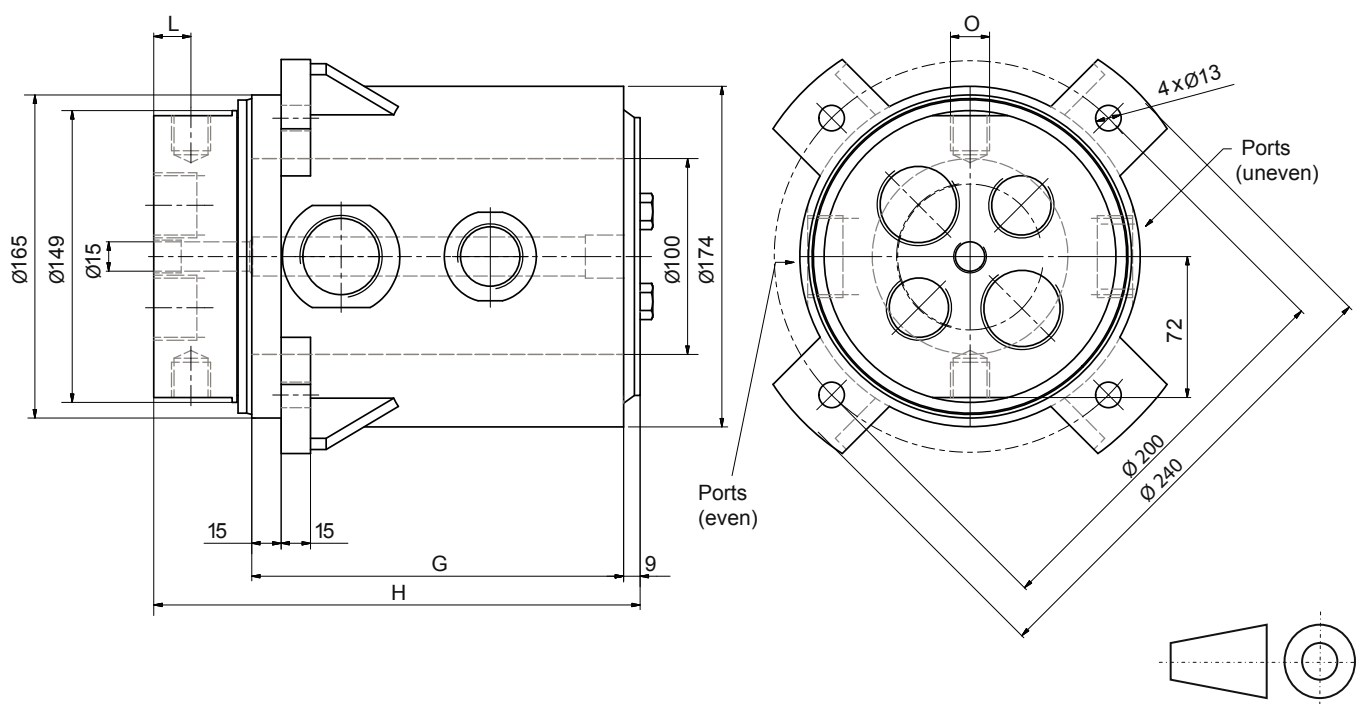
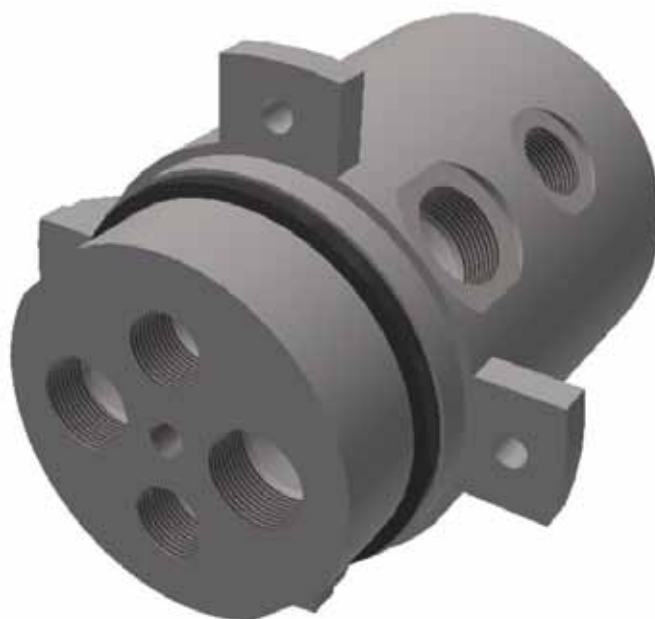


Rated pressure 42 MPa (420 bar) - 6000 psi

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
DI 100/06	30	218	297	185	17	6				2	4
DI 100/07	30	210	284	175	15	7		1	2	4	
DI 100/08-01	30	296	375	174	15	8				4	4
DI 100/10	30	307	386	176	15	10			6	2	2
DI 100/12	30	300	379	176	15	12			10	2	
DI 100/12-01	30	302	376	176	15	12	2	2	6	2	
DI 100/13	30	288	359	176	15	13	4	5	2	1	1
DI 100/14	30	360	439	176	15	14	4		8		2
DI 100/16	20	380	459	176	15	16	10		4		2
DI 100/16-01	18	368	465	176	15	16	2		14		
DI 100/18	20	386	465	168	15	18	12		2	4	

Hydraulic Rotary Manifold DI 100 V

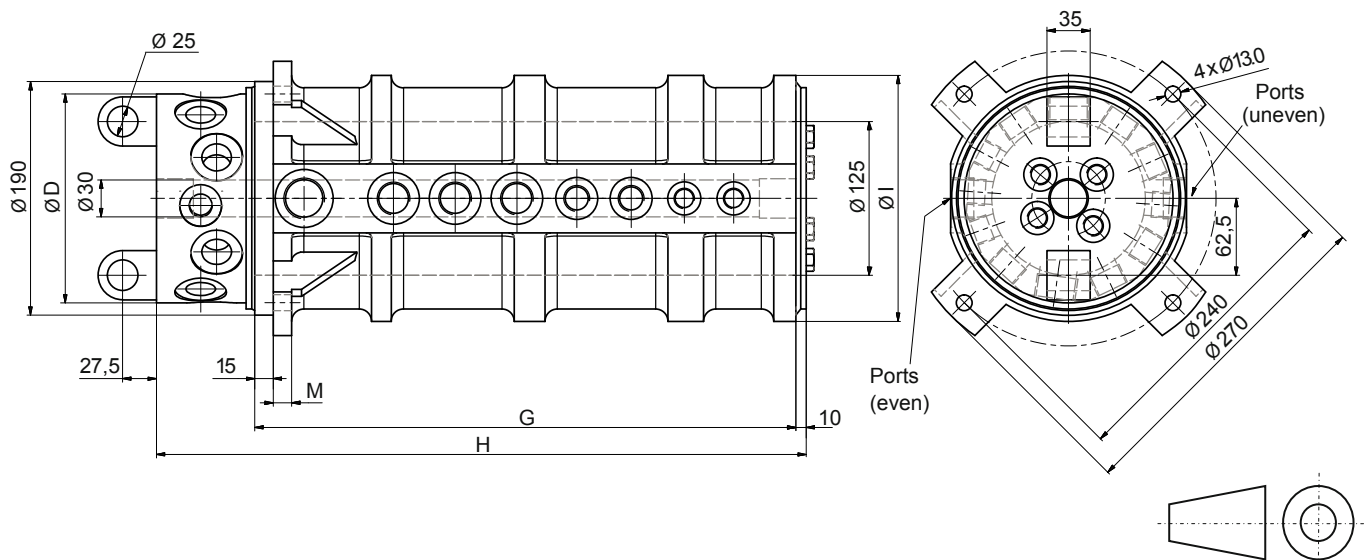


Rated pressure 42 MPa (420 bar) - 6000 psi

Dimensions in mm.

Model	G	H	L	O	N° of Ports	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

Hydraulic Rotary Manifold DI 125

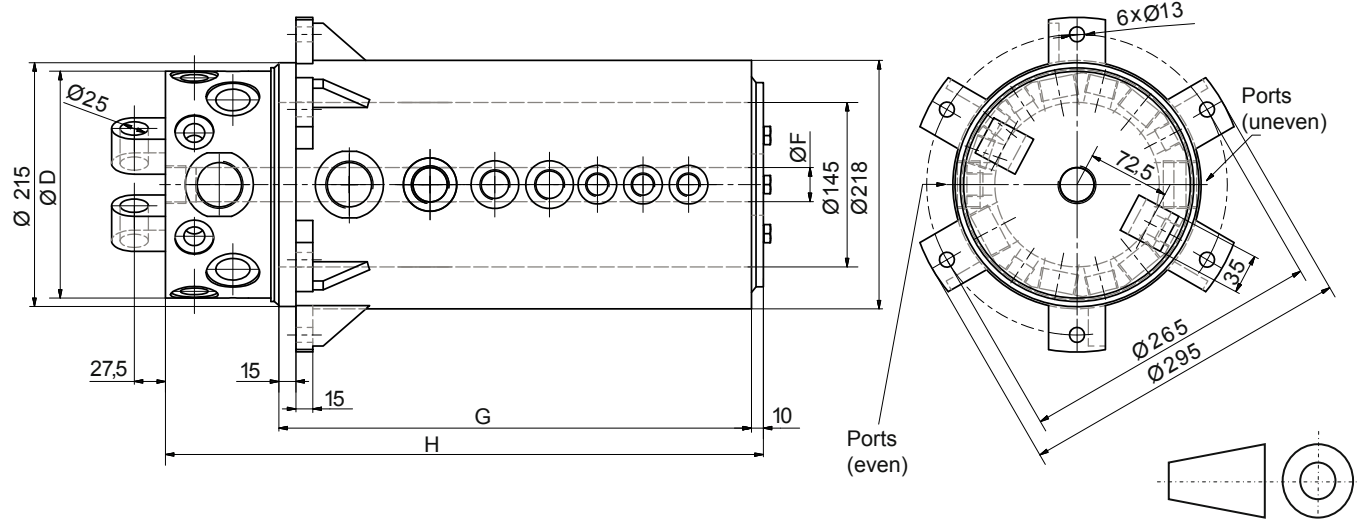


Rated pressure 42 MPa (420 bar) - 6000 psi

Dimensions in mm.

Model	D	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
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	

Hydraulic Rotary Manifold DI 145



Rated pressure 42 MPa (420 bar) - 6000 psi

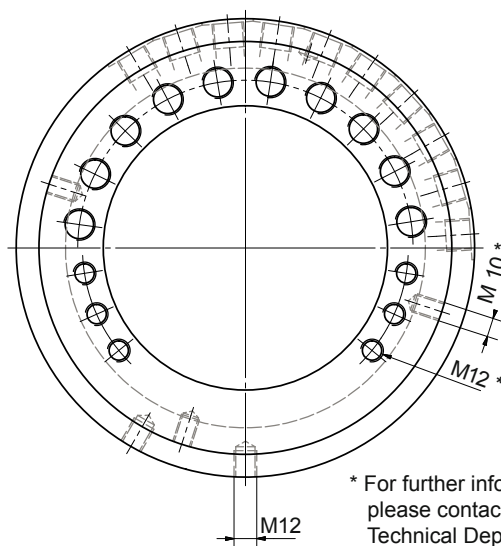
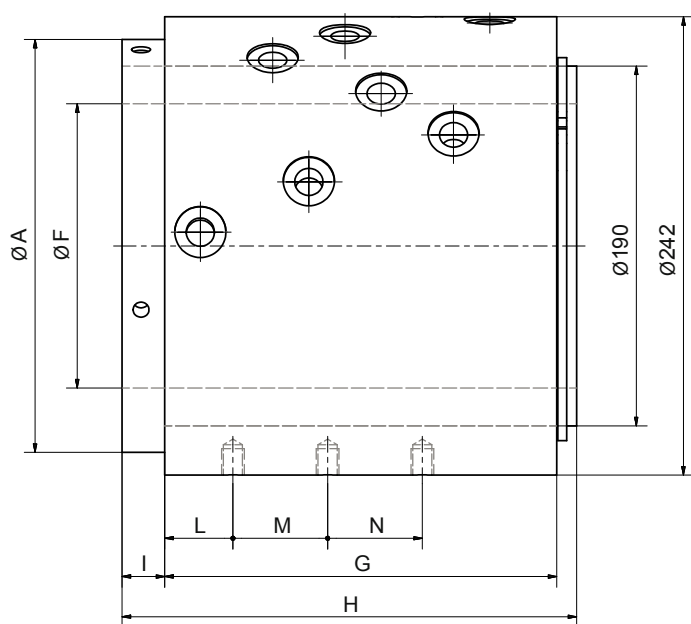
Dimensions in mm.

Model	D	F	G	H	N° of Ports	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	



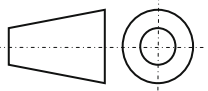
Hydraulic Rotary Manifolds for Concrete Mixer Pump DPC Series

Hydraulic Rotary Manifold DPC 190



* For further informations
please contact our
Technical Dept.

Rated pressure 42 MPa (420 bar) - 6000 psi

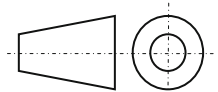
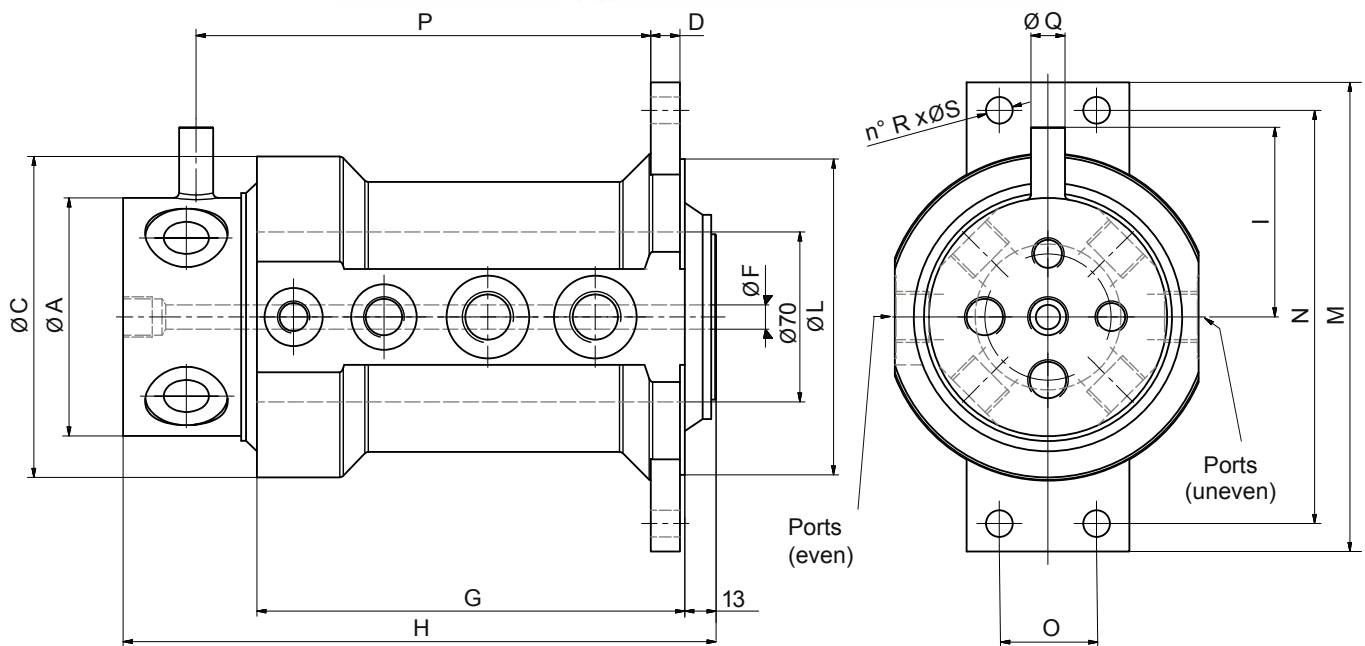
 Dimensions in mm.

Model	A	F	G	H	I	L	M	N	N° of Ports	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 Manifolds DM Series

Mini Hydraulic Rotary Manifold DM 070



Rated pressure 42 MPa (420 bar) - 6000 psi

Dimensions in mm.

Model	A	C	D	F	G	H	I	L	M	N	O	P	Q	R	S	N° of Ports	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	11	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		



Electrical Rotary Swivels CE Series

General Information

Description

Electrical available with multiple # of contacts depending on the customer needs.
On request the Electrical swivel can be supplied assembled with the hydraulic rotary manifolds.

Typical applications

When transmissions of signals or FieldBus current is required between a stationary and a rotating part. Typical applications include cranes, building equipment , aerial platforms, or any applications with a 360° rotation.

General Features

Rotation speed: 0-15 rev / min. (higher speeds on request)

Operating temperature: -20 / +60 ° C - 4° F / + 140° F

IP protection rating: IP55 / 65

Direction of Rotation: Reversible (CW / CCW)

Electrical Characteristics

Rated voltage: 500V AC, 220V DC

Intensity of current:mA - 80 A

Contact resistance ring-brush: <20 mΩ

Ring Material: Bronze with silver plating treatment for the power lines and gilding for signals 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 : available with gold plated contacts for CANBUS type signal transmissions.

General Information

Materials Used

Base: Anodized aluminum

Housing: nickel plated or anodized aluminum

Cover: Anodized aluminum

Cable routing: smooth PVC

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

Hardware : galvanized steel

On request options

Installation on Hydraulic Rotary Manifolds

Connectors : AMP, DEUTSCH

Prearranged for encoder and installation option if required

Special cables and different cable lengths

Anti-condensation heaters

Conduits and fittings suitable for special applications

Order Code

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

T = total electrical contacts required

N = N° number of electrical contacts specifying types (analog, CANBUS)

C = Current density (A)

L = length of output cables (meters)

Example:

To order a manifold 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 with 8-way power 10 A and 4 way 20 A + CAN BUS which engages 5 rings.

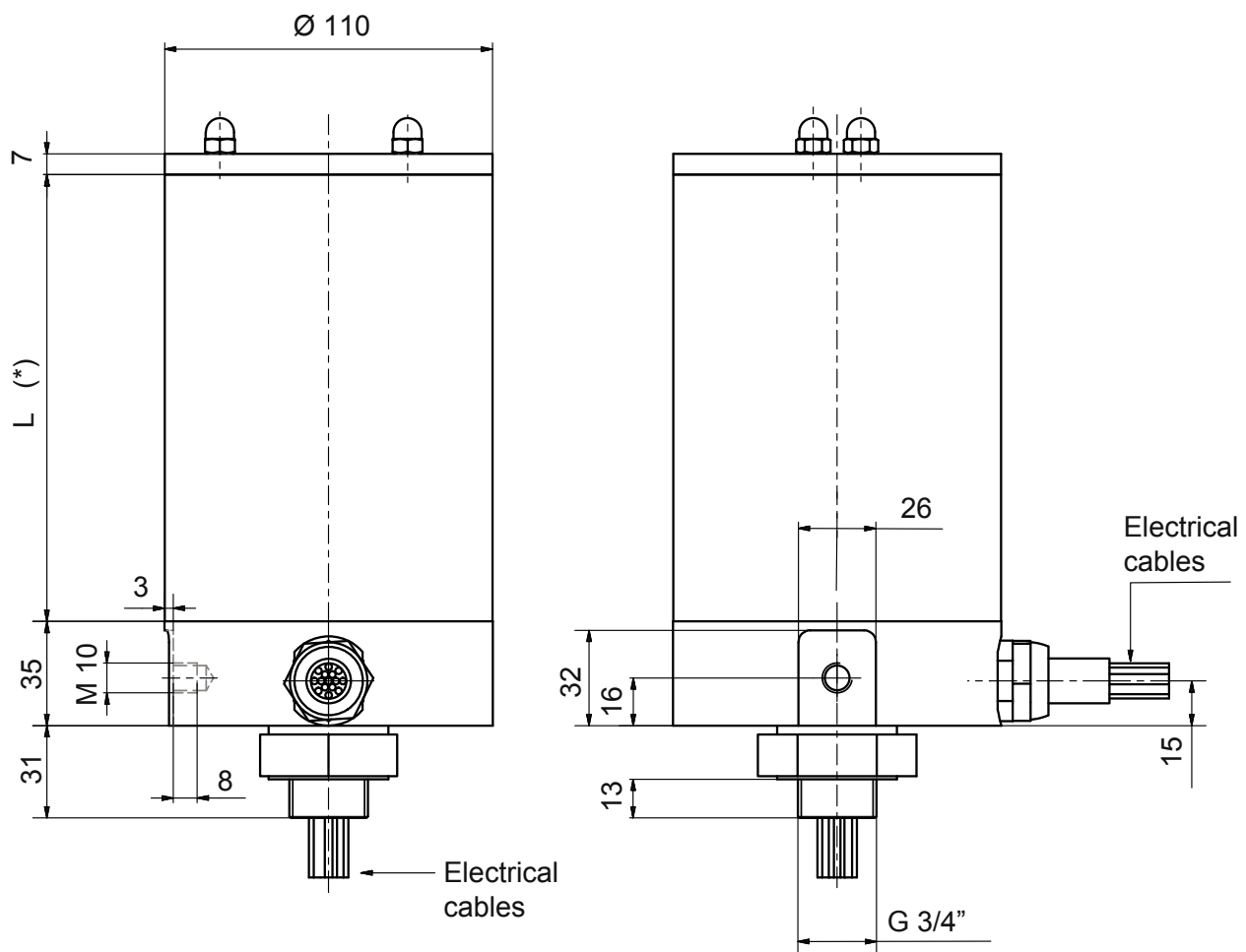
Output cables 3 m. length.

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

Electric Rotary Swivel CE 110



Installation Drawing



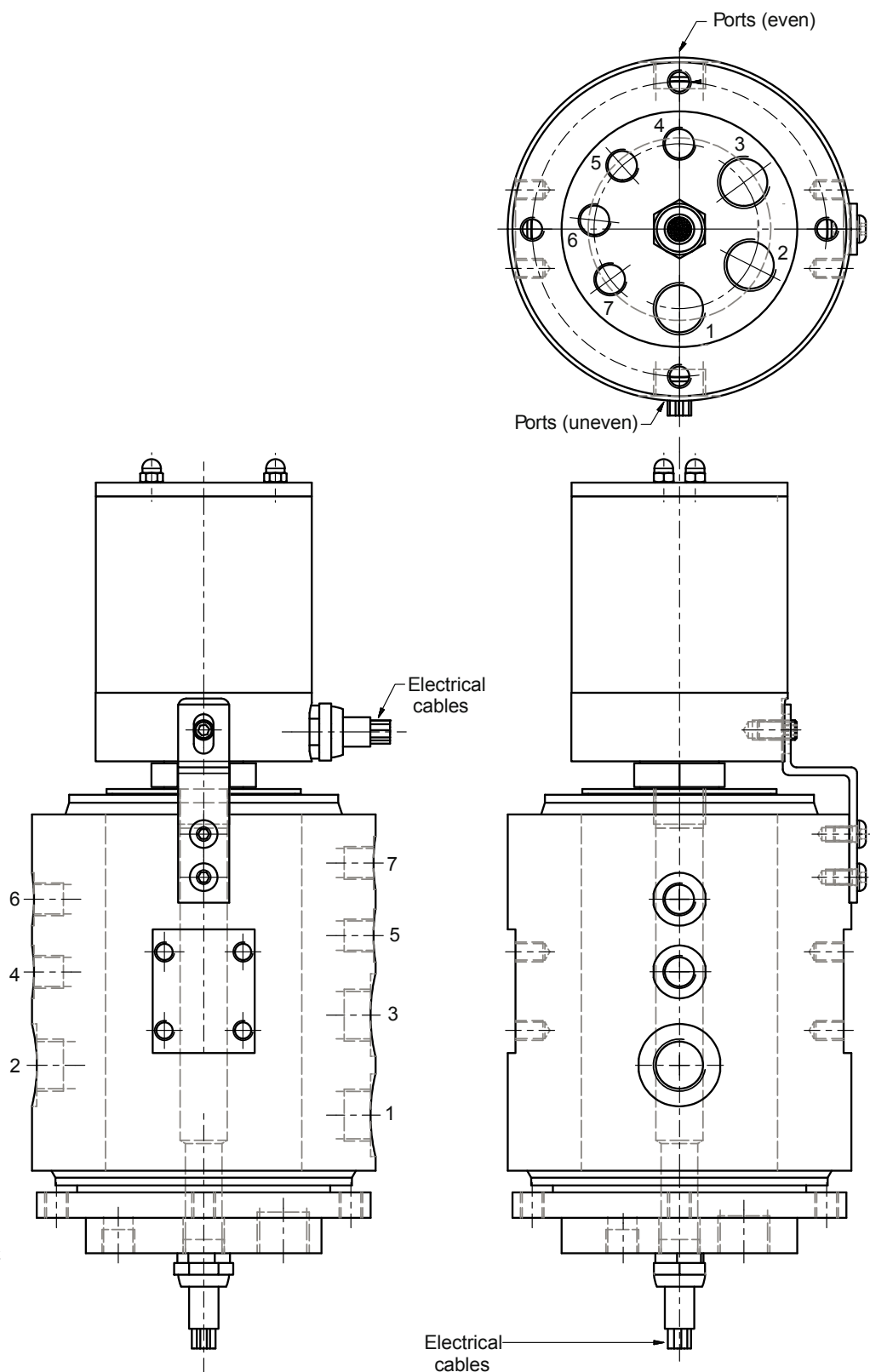
$L (*)$ - Variable, depending on the number of contacts.

Electric Rotary Swivel CE 110

Installation example on a Hydraulic Rotary Manifold

Electric

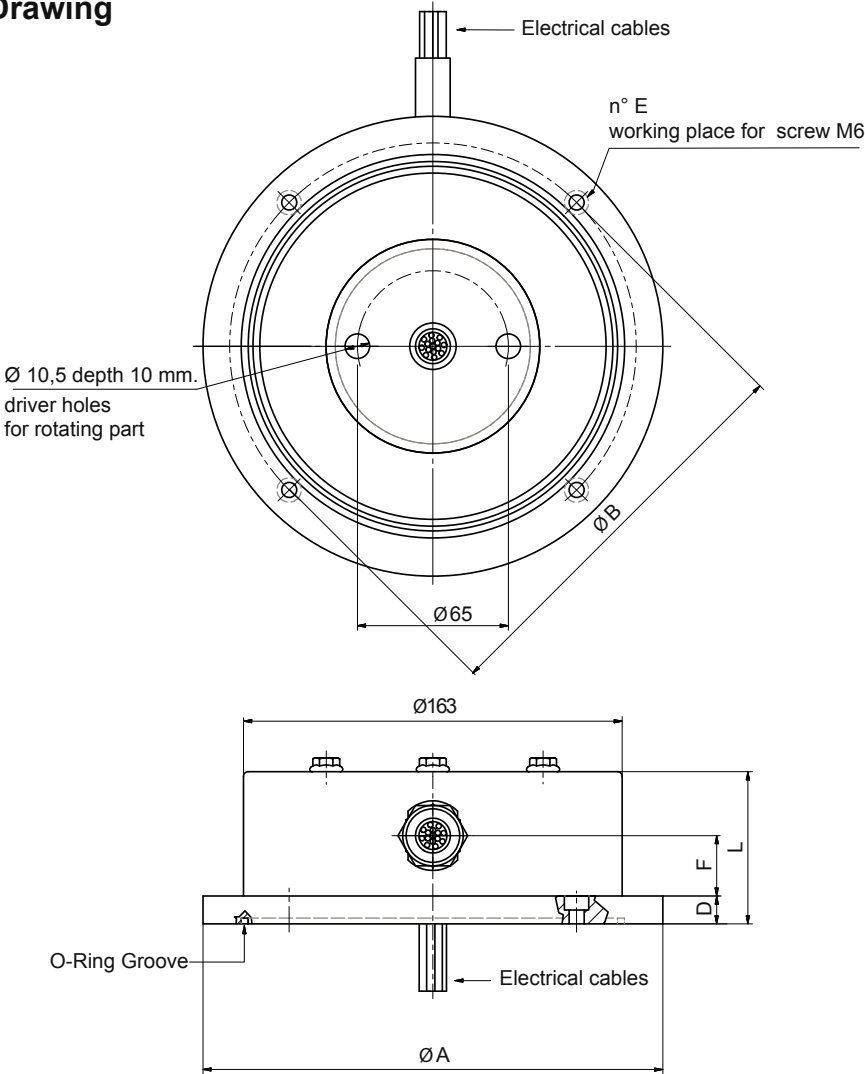
Hydraulic



Electric Rotary Swivel CE 163



Installation Drawing



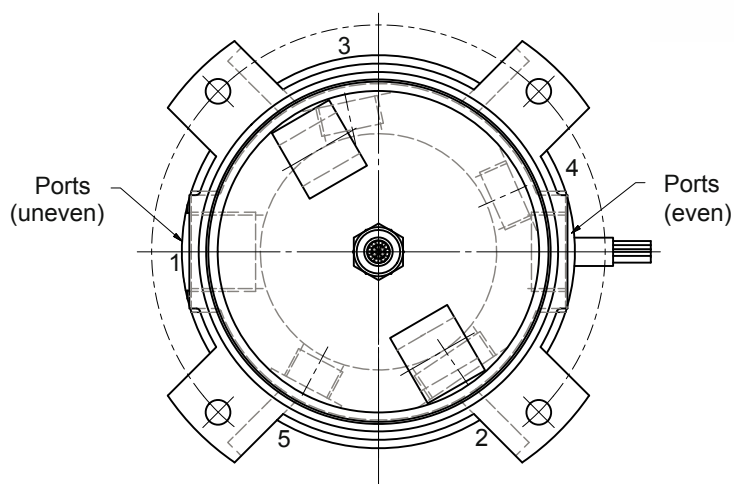
A*	B	L**	D	E	F*
170	130	variable	13	4	variable from 26 to 38
170	130	variable	4.5	4	variable from 26 to 38
180	164	variable	18.5	4	variable from 26 to 38
199	175	variable	10	4	variable from 26 to 38
218	205	variable	12.5	6	variable from 26 to 38

* For further information please contact our Technical Dept.

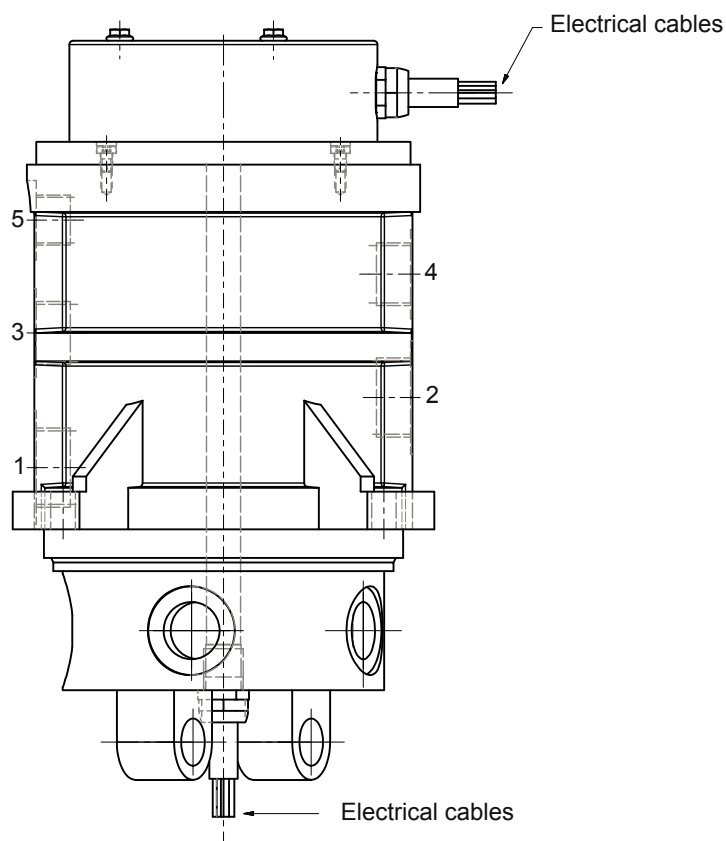
** Variable, depending on the number of rings

Electric Rotary Swivel CE 163

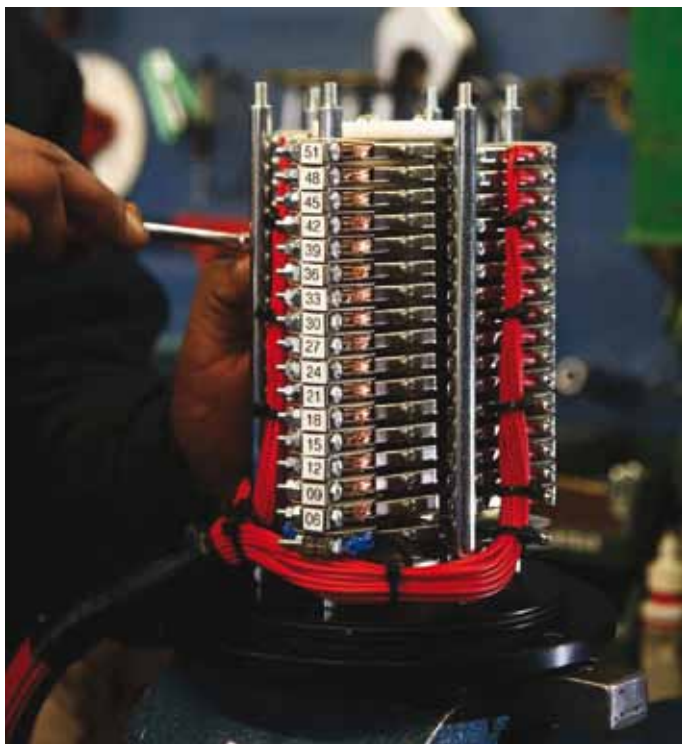
Installation example on a Hydraulic Rotary Manifold



Electric



Hydraulic



Examples of standard electrical swivels

NEW PATENT 2013: new solutions for electrical swivels.

In the picture below you can look a special electro-hydraulic rotary manifold with the electrical swivel inside of the hydraulic part.

This patented solution, with the highest possible protection degree, is ideal for marine application, in mines and in all applications where there is few axial space available. Our Technical Dept. can design all these solutions, even for demanding applications.

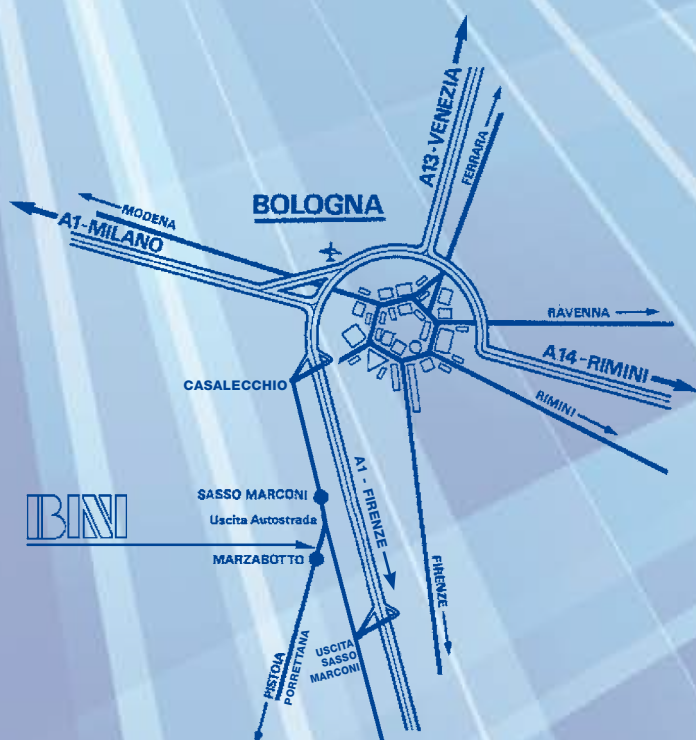




Examples of special hydraulic rotary manifolds, designed on customer's requirements.

Examples of hydraulic rotary manifolds with electrical swivels.





BINI OFFICINE MECCANICHE

Design and construction of rotary manifolds

Via Porrettana Nord 33/A
 40043 Marzabotto - Bologna (Italy)
 Tel. +39 051.93.28.36 - Fax +39 051.93.22.10
 e-mail: commerciale@biniofficine.com
 web: www.biniofficine.com