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EMBRAGUES HIDRÁULICOS MULTIDISCO

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EMBRAGUE HIDRÁULICO MULTIDISCO

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HYDRAULIC STATIC-CYLINDER MULTI-DISK CLUTCH

The excellent technical, construction and operating characteristics of these clutches have resulted in a wide number of applications through the manufacturing industry.

Their simple design includes a central hub, a disk pack, two axial bearings and a fixed cylinder with a working piston.

Oil/air under pressure enters through external port «A», a solution which permits the elimination of complicated channeling and allows several clutches to be mounted on the same shaft.

Since the cylinder does not rotate, no centrifugal forces are developed in the pressurized oil, thus permitting more rapid coupling and, in particular, uncoupling, which improves intervention frequency.

A series of high-spring-rate thrust springs returns the piston rapidly to its neutral position and have little effect on the working thrust.
The fixed piston transmits its thrust to the rotating disks through a rugged axial bearing.

The stroke of the piston and thrust springs permit disk-wear take-up, thus eliminating the need for adjustment.

Since these clutches have all-steel disks and axial bearings, they must operate in an oil bath or under oil-mist conditions. The only situation where they could be operated dry is when the R.P.M. are not very high and the intervention frequency is very low.

Since these clutches are designed for operation with oil under pressure, they are ideal for applications on equipment using hydraulics. On request, these clutches are also available for operation with compressed air.
The compressed-air versions have a special single seal instead of the two rubber seals used in the oil clutches, which allows compressed-air sealing in the cylinder.

In order to avoid any dragging in the neutral position, we can supply, on request, units provided with special disk-separating springs. This feature is particularly useful where the clutch is mounted vertically or in the presence of very sensitive moving parts or when greater uncoupling precision is required.

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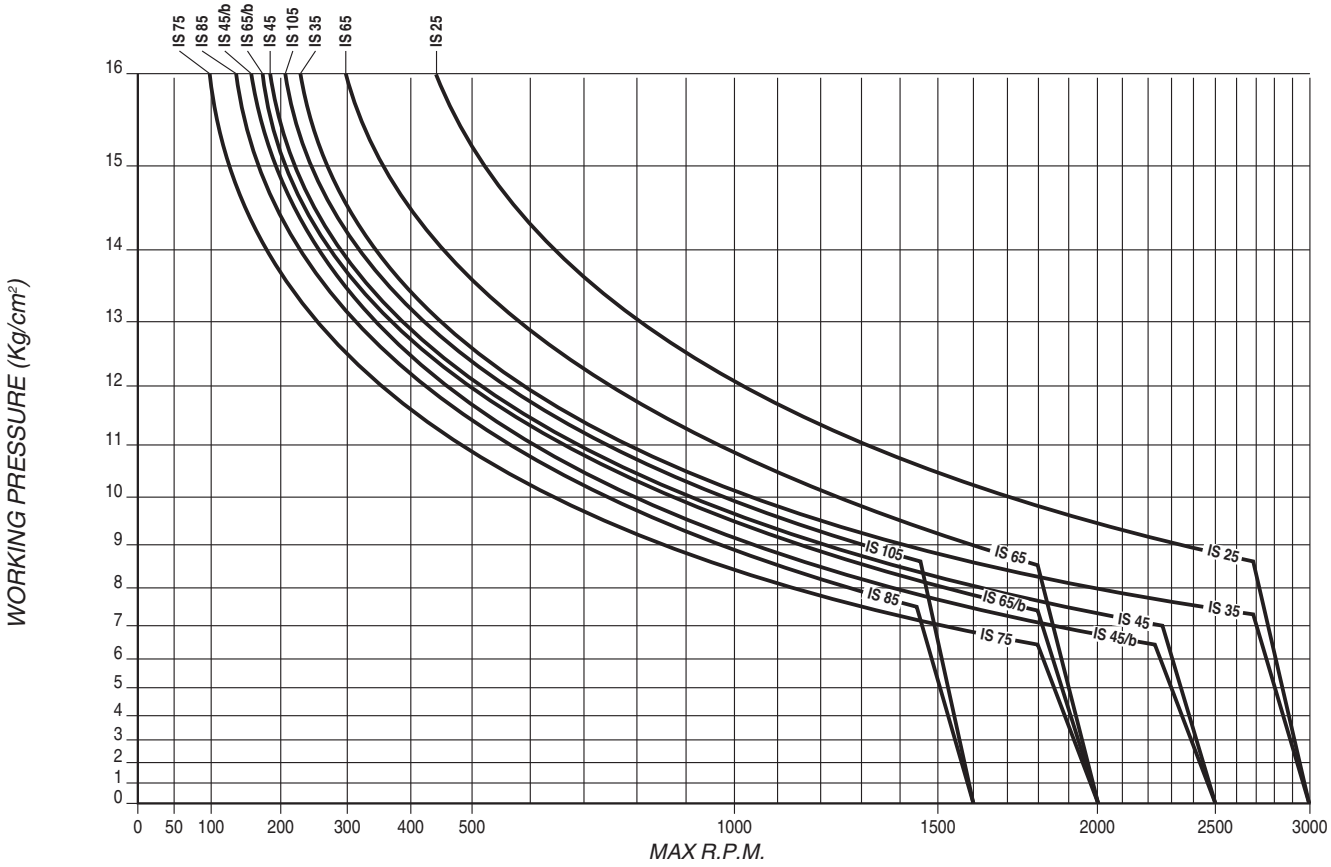
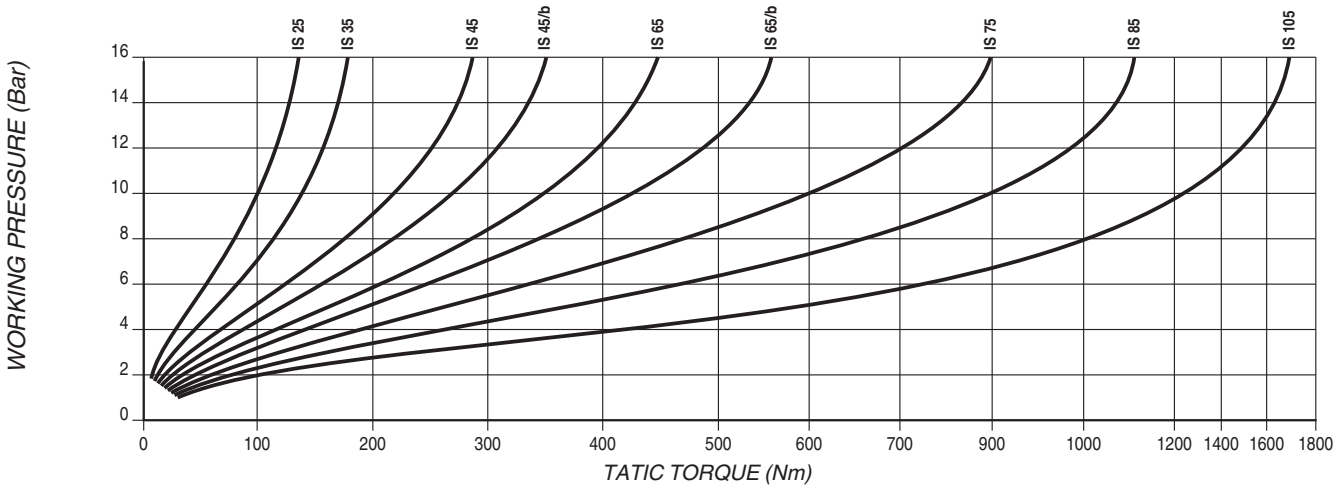
APPROXIMATE DETERMINATION OF ALLOWABLE RPM IN RELATION TO WORKING PRESSURE



APPROXIMATED DETERMINATION OF STATIC MOMENT IN RELATION TO WORKING PRESSURE



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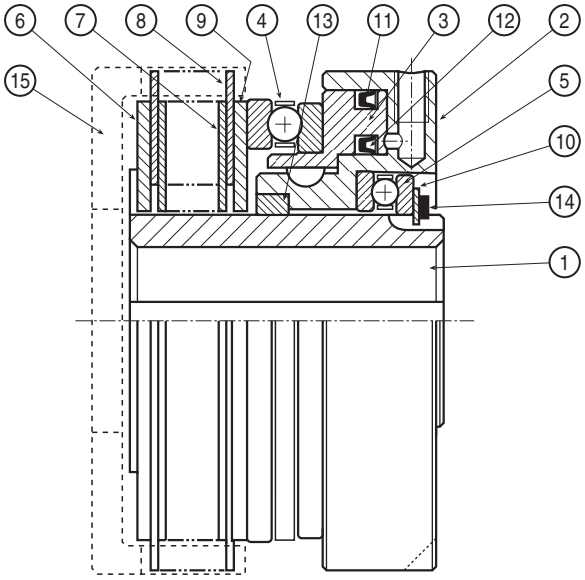

PARTS LIST

1. *CENTRAL HUB*
2. *CYLINDER*
3. *PISTON*
4. *PISTON BEARING*
5. *HUB BEARING*
6. *HEAD PLATE*
7. *INNER DISK*
8. *OUTER DISK*
9. *THRUST PLATE*
10. *LOCK WASHER*
11. *SEAL RING*
12. *SEAL RING*
13. *BRONZE BUSHING*
14. *SAFETY RING*
15. *CUP HOUSING (ON DEMAND)*

MOUNTING

When mounting, please follow our instructions and examples.

The work cylinder must be anchored, but not fixed rigidly, between a bracket located at one of the three 120° milled spots on the work cylinder. The bracket is to be hooked onto the most convenient milled spot, in relation to the oil filler hole, making sure the work cylinder has some axial and radial play.

Use a flexible oil/air line, so as to avoid creating axial and radial tensions which, if excessive, could upset the proper working characteristics of the bearings and thus cause poor operation and eventual clutch failure.

The oil/air line should not be too long and should not have any tight bends, kinks or any alternation that could impede free flow, the lack of which could lead to clutch damage.

If the clutch is to have a maximum service life, it needs to be well lubricated, such as by splashing or, better yet, by using forced lubrication.

We suggest the supplier be contacted for recommendations regarding the type of oil to use. In any case, the oil viscosity should not exceed 5°E/50°C.

The torque values given in the graph are only valid for our recommended working pressures. Pressure changes will produce PROPORTIONAL increases or decreases in torque: i.e., torque is proportional to working pressure.

As the working pressure changes, the maximum allowable clutch R.P.M. will change, as shown in the diagram on the next page.

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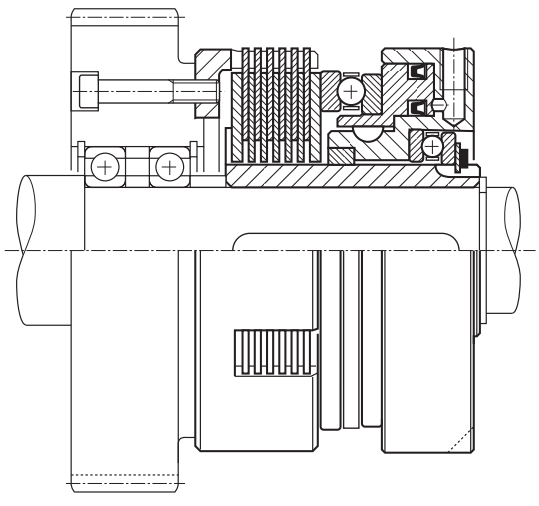

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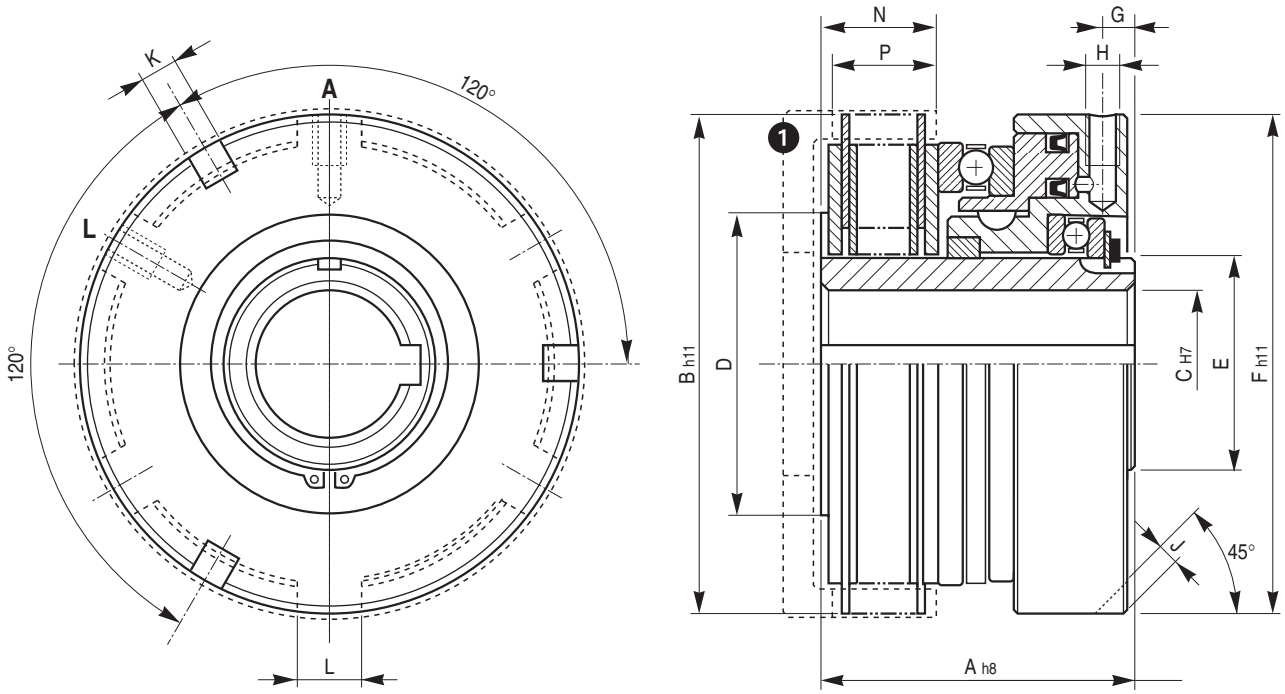
HYDRAULIC STATIC-CYLINDER MULTI-DISK CLUTCH

MODEL	IS □□□
CODE	03.01.□□□.01



A = *Oil supply* **L** = *Lubrication*

□□□	Torques		Working pressure	Cylinder volume	Weight	External plates	Cap Housing on demand
	Mi (Nm)	Ms (Nm)	(bar)	(cm^3)	(kg)	N.	❶
025	45	80	8	8	2,5	5	C 03.02
035	65	110	8	10	3,2	5	--
045	100	180	8	11	3,8	6	C 04.01
045/b	125	220	8	12	4,2	6	C 05.01
065	160	280	8	19	7	6	C 06.02
065/b	200	350	8	25	7,5	7	C 06.02
075	300	500	8	40	10,5	8	--
085	400	700	8	46	16	5	C 08.01
105	600	1050	8	86	25	6	C 10.01

□□□	A	B	C min	C max	D	E	F	G	H	J	K	L	N	P	Lugs N.
025	69	97	16	30	59	40	98	6	1/8"	4	8	12	24	22	6
035	69	108,5	18	36	72	45	108	7	1/8"	4	8	12,5	25	22	8
045	75	116,5	20	40	72	50	112	6	1/8"	5	8	15	29	25	6
045/b	75	120	20	40	72	50	112	6	1/8"	5	8	16	29	25	8
065	90	145	25	46	92	60	130	7	1/8"	6	10	16	33	30	8
065/b	98	145	25	48	92	60	138	7	1/8"	6	10	16	36	32	8
075	105	145	30	44	92	55	158	8	1/4"	7	10	16	41	37	8
085	115	179	30	58	70	75	180	25	1/4"	8	10	20	35	26	9
105	165	218	30	58	70	75	235	24	1/4"	10	12	20	43	34	10