

MULTIPLATE MECHANICAL BRAKES AND CLUTCHES

Characteristics
These units are suitable for all applications requiring easy design, low cost and a limited space requirement. The unit is operated by means of levers, which press the set of discs, allowing smooth and gradual control. The operator can therefore adjust it to different working conditions.

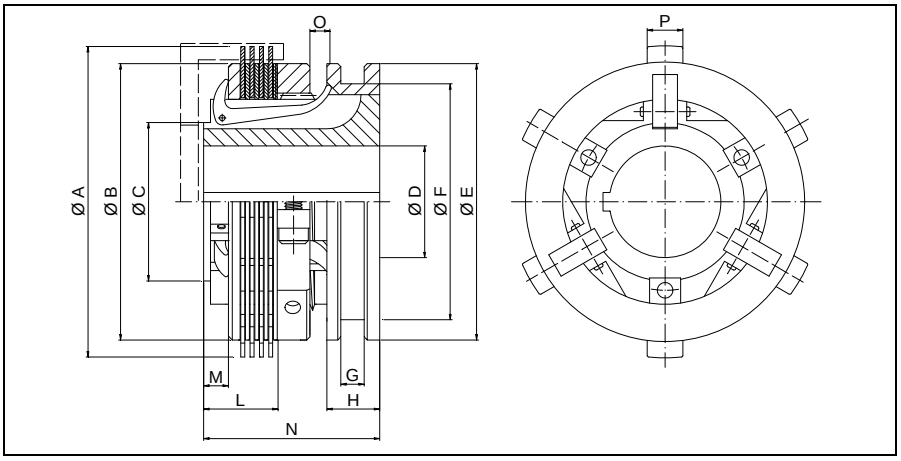
Plates
Plates are made in alloyed steel, hardened at high levels and perfectly ground in order to guarantee good performances and long life. coupling is made both with steel/steel plate (to be used only for wet running) and with steel/sinter plates.
The latter combination offers even when dry running good performances, thanks to its anti-seizing features and excellent resistance to hest; furthermore, it allows higher torques by means of its higher friction coefficient.

Levers
Three levers, which actuate the unit, represent the centrepiece of the machinery. The material and design of the components allow limited efforts during the operating phase, safety during engagement and flexibility, which keeps friction discs at the right pressure of contact.

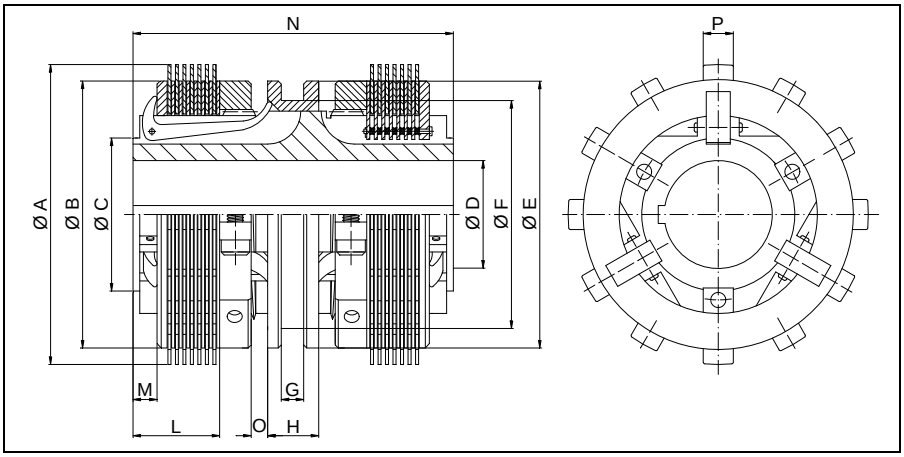
Springs
Each pair of plates is divided by a flexible element (a coil spring or a undulated ring) which ensures the complete disjunction of the plates at the moment of disengagement.

Lubrication
A lubrication if the unit with good-quality mineral oil with a viscosity not higher than 5,2 E/50°C is recommended to prevent rapid wear the plates. We suggest either drip-feed or force-feed lubrication with oil which the centrifugal force spreads onto the plates

Adjustment
Adjustment to set the torque is obtained by means of a threaded ring-nut which can vary clearance between levers and discs.
The adjustment must be carried out very carefully because excessive tightness might cause damage while loosening might cause a rapid wear or the seizing of the discs.



MULTI PLATE MECHANICAL SIMPLE CLUTCHES
Model FSA



MULTI PLATE MECHANICAL DOUBLE CLUTCHES
Model FDA

DIMENSIONS (mm)

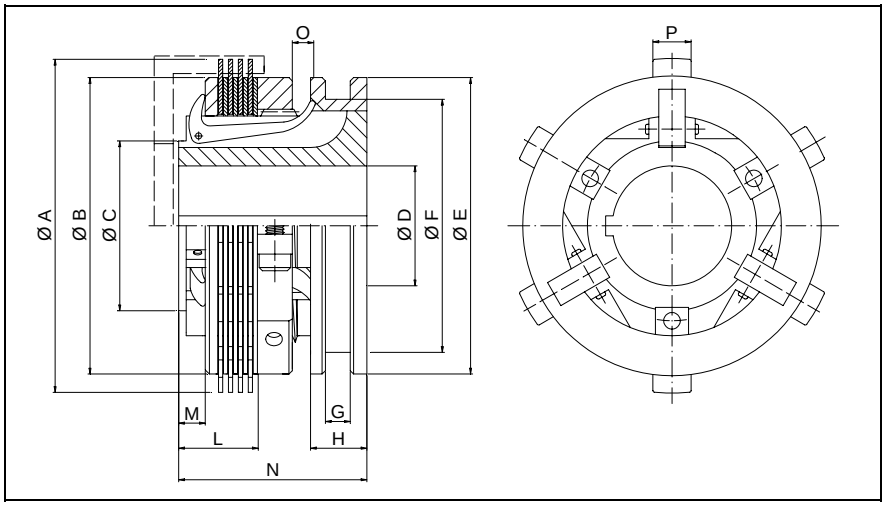
size		A	B	C	D max	E	F	G	H	L	M	NS	ND	O range	P	tabs nr
FSA 069	FDA 069	79	69	30	22	70	55	8	18	30	10	68	113	7,5	12	3
FSA 078	FDA 078	88	78	38	28	75	60	10	22	30	10	75	120	10,5	12	3
FSA 086	FDA 086	96	86	45	35	90	75	14	26	34	10,5	83	132	11	12	6
FSA 098	FDA 098	108	98	56	45	100	85	15	30	34	10,5	90	142	12	12	8
FSA 108	FDA 108	119	108	56	45	110	95	15	35	35	11,5	95	154	14,5	15,5	8
FSA 130	FDA 130	145	130	60	50	125	110	15	32	43	12,5	103	165	13,5	15,5	8
FSA 150	FDA 150	152,4	140	75	60	145	125	20	42	45	16	120	190	15	15,5	12

PERFORMANCES

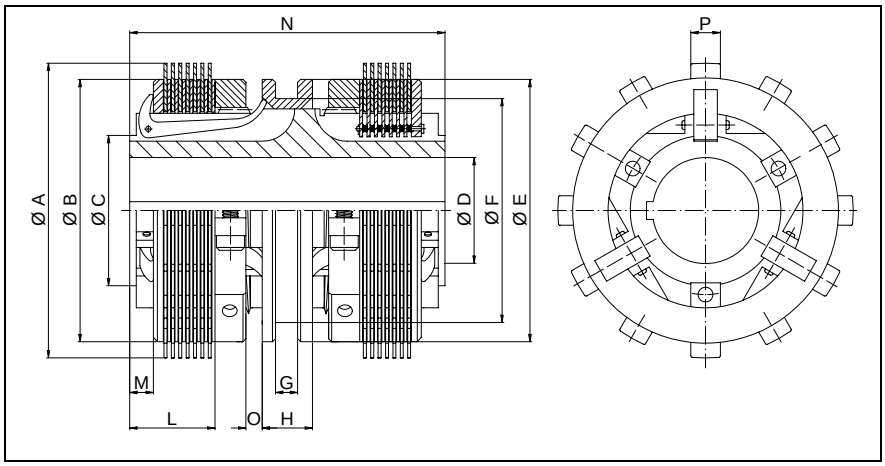
size		*torque* (Nm) M_{stat}	M_{din}	*max rpm*	*thrust force* (Nm)	*weight* (Kg) FSA	FDA	*plates nr*
FSA 069	FDA 069	35	28	3.500	120	1,3	2,2	5/6
FSA 078	FDA 078	50	37	3.400	160	1,5	2,8	5/6
FSA 086	FDA 086	90	68	3.300	200	2,2	3,8	5/6
FSA 098	FDA 098	140	110	3.200	240	2,6	4,5	5/6
FSA 108	FDA 108	210	165	3.000	270	3,6	6,5	5/6
FSA 130	FDA 130	280	220	2.800	320	7,1	12,8	6/7
FSA 150	FDA 150	411	313	2.500	460	13,8	21,5	6/7

M_{stat} *Torque at discs stationary betwenn themselves*
M_{dyn} *Torque at discs in motion betwenn themselves*

SINTER PLATE MECHANICAL
SINGLE CLUTCHES
Model FSS



SINTER PLATE MECHANICAL
DOUBLE CLUTCHES
Model FDS



***DIMENSIONS* (mm)**

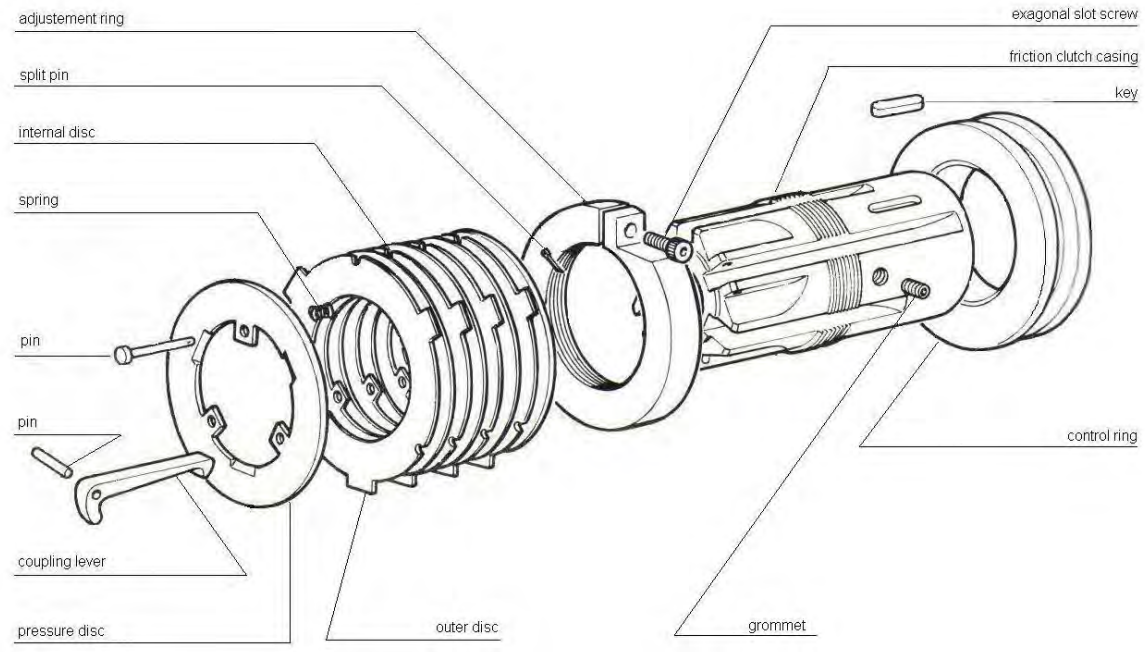
size		A	B	C	D	E	F	G	H	L	M	NS	ND	O *range*	P	tabs nr
FSS 330	FDS 330	84	76	38	28	75	60	10	22	26	11	75	120	10	18.7	6
FSS 335	FDS 335	97	89	45	32	90	75	14	26	28	13	83	132	11	18.7	6
FSS 440	FDS 440	111	102	56	42	100	85	15	30	34	14	90	142	11	18.7	6
FSS 445	FDS 445	125.5	114.5	60	48	110	95	15	35	38	14	95	154	15	20.2	6
FSS 450	FDS 450	140	127	65	50	125	110	15	40	41	17	110	164	20	21.9	6
FSS 455	FDS 455	152.2	140	65	50	125	110	15	40	41	17	110	164	20	15.5	12
FSS 660	FDS 660	167	152	80	60	145	125	20	42	54	17	131	206	20	15.5	12
FSS 760	FDS 760	167	152	80	60	145	125	20	42	59	17	131	206	20	15.5	12
FSS 670	FDS 670	193	178	80	60	145	125	20	42	61	23	131	208	25	18.7	12
FSS 770	FDS 770	193	178	80	60	145	125	20	42	67	23	137	220	25	18.7	12

PERFORMANCES

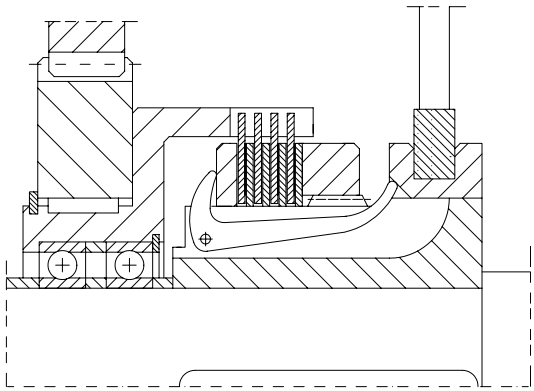
size		*torque (Nm)* M_{stat}	M_{din}	*max RPM*	*thrust force* (Nm)	*weight (Kg)* FSS	FDS	*plates nr*
FSS 330	FDS 330	59	44	3800	120	1.4	2	3/4
FSS 335	FDS 335	98	78	3700	160	1.6	2.7	34
FSS 440	FDS 440	161	122	3600	200	3.8	5.3	4/5
FSS 445	FDS 445	225	176	3400	240	5.2	7.8	4/5
FSS 450	FDS 450	333	254	3200	260	6.8	8.7	4/5
FSS 455	FDS 455	382	284	3000	360	8.5	13.6	4/5
FSS 660	FDS 660	745	568	2800	400	10	17.8	6/7
FSS 760	FDS 760	902	686	2800	400	11	19.8	7/8
FSS 670	FDS 670	1274	980	2400	460	12.5	20	6/7
FSS 770	FDS 770	1490	1137	2400	460	14	23	7/8

M_{stat} *Torque at discs stationary betwenn themselves*
M_{dyn} *Torque at discs in motion betwenn themselves*

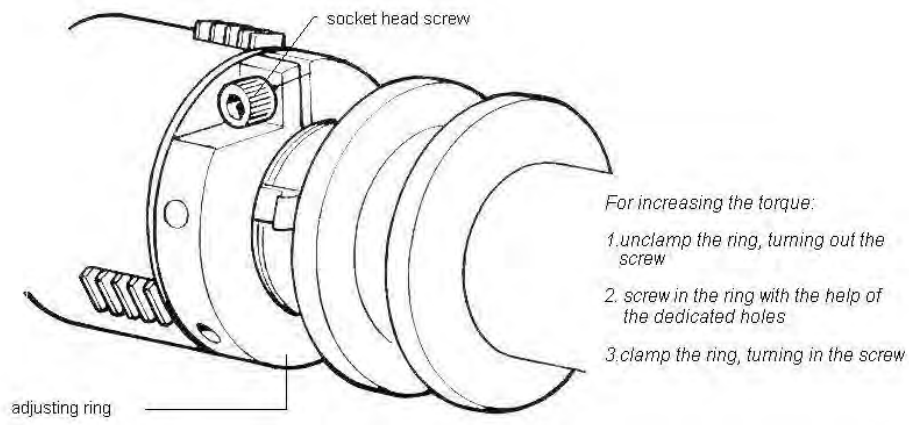
PARTS NAME



MOUNTING EXAMPLE



ADJUSTMENT



Symbology


mechanically actuated


electromagnetically actuated


hydraulically actuated


pneumatically actuated


springs loaded


permanent magnet


with rotating magnet


with stationary magnet


with steel plates


with steel plates E


with sintered discs M


with linings


toothed


accessories


powder