

Multi-Disc Clutches

Series 4H and 54H-P



Series 4H and 54H-P Pressure Applied Multi-Disc Clutches

Stationary Cylinder for Dry Operation

Series 4H pressure-applied stationary cylinder multi-disc clutches are designed for dry use. Pressure supply feeds into cylinder via a flexible tube. Piston and cylinder sub-assembly mounts on shielded ball bearings. Positive disengagement achieved by use of release springs between inner plates. Standard drive rings available as optional extras.

Features

- Clutch requires no adjustment
- Shielded bearings need no lubrication in service
- Stationary cylinder allows simple supply connection
- Torques can be varied by regulating supply pressure
- Engagement speed controlled by varying pressure supply flow rate
- Large friction area gives extended plate life
- Individual plate separation ensures low drag torque
- Multi-disc design results in compact high torque clutch
- No axial thrusts transmitted to adjacent components
- All concentricities controlled within the clutch simplifying installation
- Pilot mount can be used to attach pulleys, sprockets and other drive components simplifying assembly

Series 54H-P clutches developed from series 4H clutches, incorporate a pilot mount. Pilot mount with the drive ring integral is supported on an extended hub by a rigid shielded double bearing assembly. Pulleys, sprockets and other drive components can fit directly to pilot mount, which has a toleranced spigot diameter for location and tapped fixing holes. By using a suitable adaptor, a flexible coupling can fit to the pilot mount, connecting co-axial shafts which are beyond the alignment limits of series 4H clutches.

Typical Applications

- High Cyclic On/Off Applications
- Packaging
- Printing
- PTO's
- Test Rigs

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MODEL		4H30	4H35	4H40	4H45	4H50	4H60	4H70	
		54H30P	54H35P	54H40P	54H45P	54H50P	54H60P	54H70P	
Performance Data									
Rated Static Torque	Nm	at 10 bar	115	180	280	390	550	950	1440
		at 5.5 bar	57	90	140	200	280	460	650
	ft-lbs	at 150 psi	85	140	215	295	410	720	1100
		at 80 psi	41	68	105	145	200	330	480
Rated Dynamic Torque	Nm	at 10 bar	72	115	180	250	340	600	960
		at 5.5 bar	36	58	90	128	175	290	430
	ft-lbs	at 150 psi	55	90	135	185	260	455	730
		at 80 psi	27	44	66	92	128	210	320
Pressure to Overcome Release Springs	bar	1.0	1.0	0.9	0.8	0.8	1.3	1.8	
	psi	15	15	12	11	12	19	25	
Drag Torque	Nm	0.07	0.12	0.18	0.25	0.34	0.60	1.00	
	ft-lbs	0.05	0.09	0.14	0.19	0.26	0.46	0.73	
Maximum Energy per Engagement	kJ	8	11	13	16	17	20	25	
Maximum Energy per Hour	kJ	240	333	390	480	510	600	750	
Maximum Speed	revs/min	7200	6000	5040	4480	4000	3200	2720	
Diameters (all dimensions in mm)									
A		99	114	118	137	146	164	187	
B		35	45	45	60	65	75	85	
Lengths									
L		75	80	79	86	92	105	119	
M		111	121	120	131	137	157	179	
N	Maximum Engaged	44	44	44	47	52	62	70	
P	Maximum Engaged	25	25	24	25	27	33	36	
P	Disengaged	17	18	17	17	18	21	23	
U		37	39	40	42	45	55	61	
4H Drive Ring									
R		102	115	127	146	159	185	213	
S (H7)		45	54	54	70	74	88	100	
T		8	9.5	9.5	11	11	14.5	14.5	
54H-P Pilot Mount									
R		102	115	127	146	159	185	213	
V (h8)		72	88	88	102	112	132	145	
W		19	20	20	23	21	23	31	
Fixing Holes	Number of holes	3	3	3	6	6	6	6	
	Size	M6	M6	M6	M6	M8	M8	M10	
	Depth	13	15	15	15	15	20	20	
	P.C.D.	88	102	108	120	135	155	180	

