

TOOTH CLUTCHES

“Air Champ”

METRIC 5HP-SP SERIES, PILOT MOUNT TOOTH CLUTCHES

The Metric 5HP-SP Series provides:

- ▶ Instantaneous Torque up to 3,705 Nm
- ▶ Maximum Operating Speed up to 3700 rpm
- ▶ **8 Standard Bore** sizes ranging from 20 to 75 millimeters
- ▶ **8 Minimum Bore** sizes ranging from 12,7 to 47,6 millimeters—you machine and assemble
- ▶ Positive engagement for accurate positions and perfect registration
- ▶ Accurate timing between two shafts

8 Models offer design flexibility:

- ▶ Sealed, radial ball bearings
- ▶ **Pilot Mount** design with tapped mounting holes
- ▶ Thru-shaft mounting design uses a full-length keyway
- ▶ Ability to mount a pulley, sprocket or gear on the clutch
- ▶ 222 millimeter hose included.

CAUTION!

Tooth clutches are normally engaged when stationary. They are not intended for use in most cyclic applications or high speed engagement. In certain circumstances, tooth clutches can be engaged at differential speeds. Please consult Nexen if you are considering an application involving engagement at differential speeds.

NOTE: Proper Single Position Tooth Clutch engagement depends upon 1) the allowable engagement speed with specific inertia loads and air pressure, and 2) the acceptable speed and air pressure which allow the clutch to engage in one position.

Torque (In. Lbs.) = Nm x 8.849
 PSI = Bar ÷ .0689

▶ METRIC 5HP-SP SERIES, PILOT MOUNT TOOTH CLUTCHES - SINGLE POSITION Standard Bore Clutch:

Model	Product Number	Speeds Up to RPM	Bore (mm)	KEYWAY WD x DP	# of Teeth	Shipping Wt. (kg)
5H30P-SP	912102	3700	20	6 x 2,8	91	3,2
5H35P-SP	912202	3200	25	8 x 3,3	106	4,5
5H40P-SP	912302	3000	30	8 x 3,3	122	5,6
5H45P-SP	912402	3000	35	10 x 3,3	137	7,1
5H50P-SP	912502	3000	40	12 x 3,3	152	9
5H60P-SP	912703	2400	45	14 x 3,8	183	13,5
5H70P-SP	912802	2000	55	16 x 4,3	214	21
5H80P-SP	912902	2000	75	20 x 4,9	244	32

Keys are customer furnished and must be full-length.

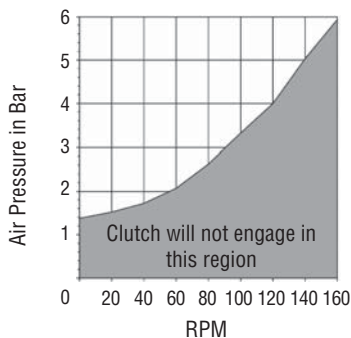
Minimum Bore Clutch:

Minimum bore clutches are supplied unassembled with machinable hubs.

Model	Product Number	Speeds Up to RPM	Bore (mm)	# of Teeth	Shipping Wt. (kg)
5H30P-SP	912103	3700	12,7	91	3,2
5H35P-SP	912203	3200	15,9	106	4,5
5H40P-SP	912303	3000	19,1	122	5,6
5H45P-SP	912403	3000	22,2	137	7,1
5H50P-SP	912503	3000	25,4	152	9
5H60P-SP	912704	2400	31,8	183	13,5
5H70P-SP	912803	2000	38,1	214	21
5H80P-SP	912903	2000	47,6	244	32

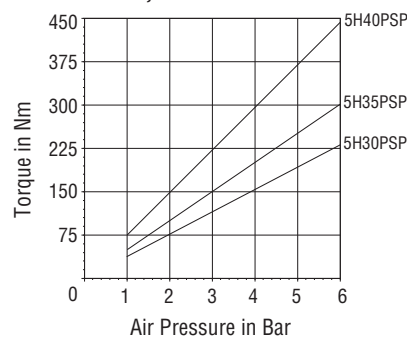
Keys are customer furnished and must be full-length.

▶ MIN. STATIC AIR PRESSURE FOR ENGAGEMENT Vs. RPM



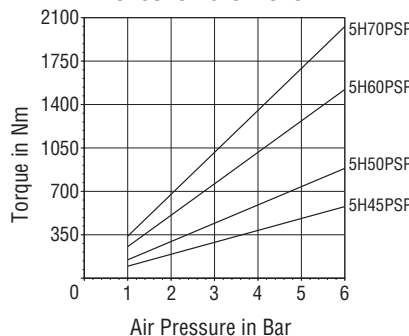
▶ TORQUE Vs. AIR PRESSURE

5H30PSP, 5H35PSP & 5H40PSP

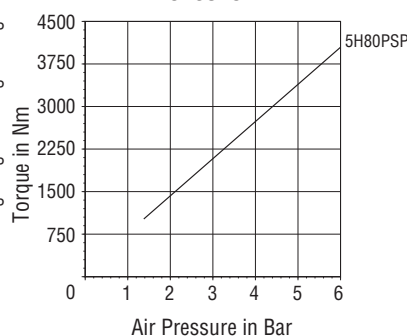


▶ TORQUE Vs. AIR PRESSURE

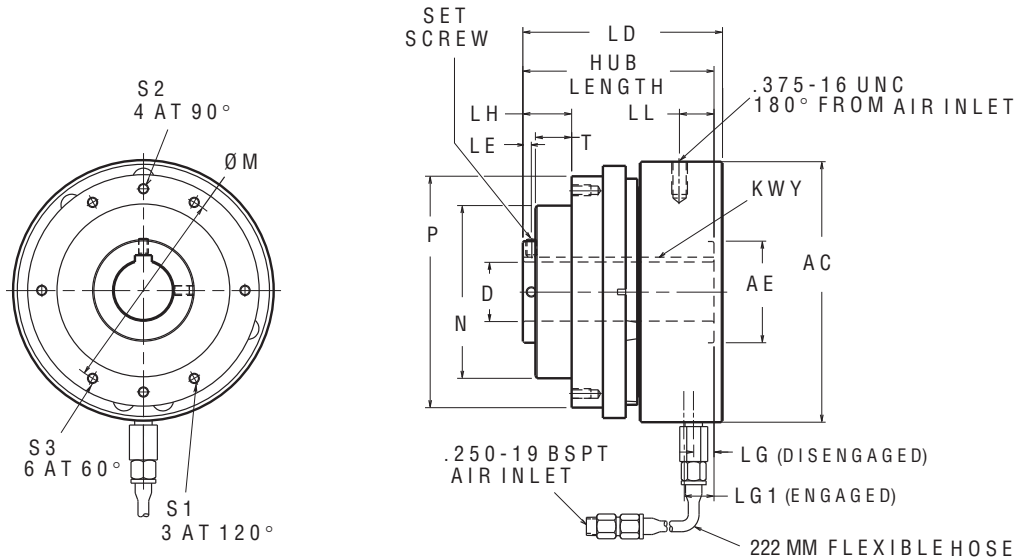
5H45PSP, 5H50PSP, 5H60PSP & 5H70PSP



5H80PSP



METRIC 5HP-SP PILOT MOUNT CLUTCH - APPROXIMATE DIMENSIONS (MILLIMETERS)



MODEL	PRODUCT NUMBER	AC	AE	D ^{H7}	LD	LE	LG	LG1	LH	LL	M	N ^{h8}	P	S1	S2	S3	T	HUB LENGTH	KWY WD x DP
5H30P-SP	912102	116	35	20	102	5	14	20	23	--	88	72	98	M6	M6	--	17,5	99	6 x 2,8
5H35P-SP	912202	129	45	25	107	5	14	20	25	--	102	88	114	M6	M6	--	17,5	105	8 x 3,3
5H40P-SP	912302	135	45	30	110	5	14	20	25	--	108	88	124	M6	M6	--	17,5	107	8 x 3,3
5H45P-SP	912402	154	60	35	118	5	17	22	29	--	120	102	137	--	M6	M6	21,4	118	10 x 3,3
5H50P-SP	912502	167	65	40	121	6	17	22	29	--	135	112	152	--	M8	M8	19,8	121	12 x 3,3
5H60P-SP	912703	192	75	45	136	7,5	21	27	32	--	155	132	178	--	M8	M8	22,2	137	14 x 3,8
5H70P-SP	912802	211	85	55	149	10	22	28	36	30	180	145	210	--	--	M10	25,4	151	16 x 4,3
5H80P-SP	912902	235	95	75	219	16	55	61	73	55	216	187	241	--	--	M12	47,6	219	20 x 4,9

MODEL	SET SCREW
5H30P-SP	M6, 2 @ 90°
5H35P-SP	M6, 2 @ 90°
5H40P-SP	M6, 2 @ 90°
5H45P-SP	M6, 2 @ 90°
5H50P-SP	M8, 2 @ 90°
5H60P-SP	M10, 2 @ 90°
5H70P-2P	M12, 2 @ 90°
5H80P-SP	M20, 3 @ 120°

NOTE: Drawings are expressed in third angle projection.