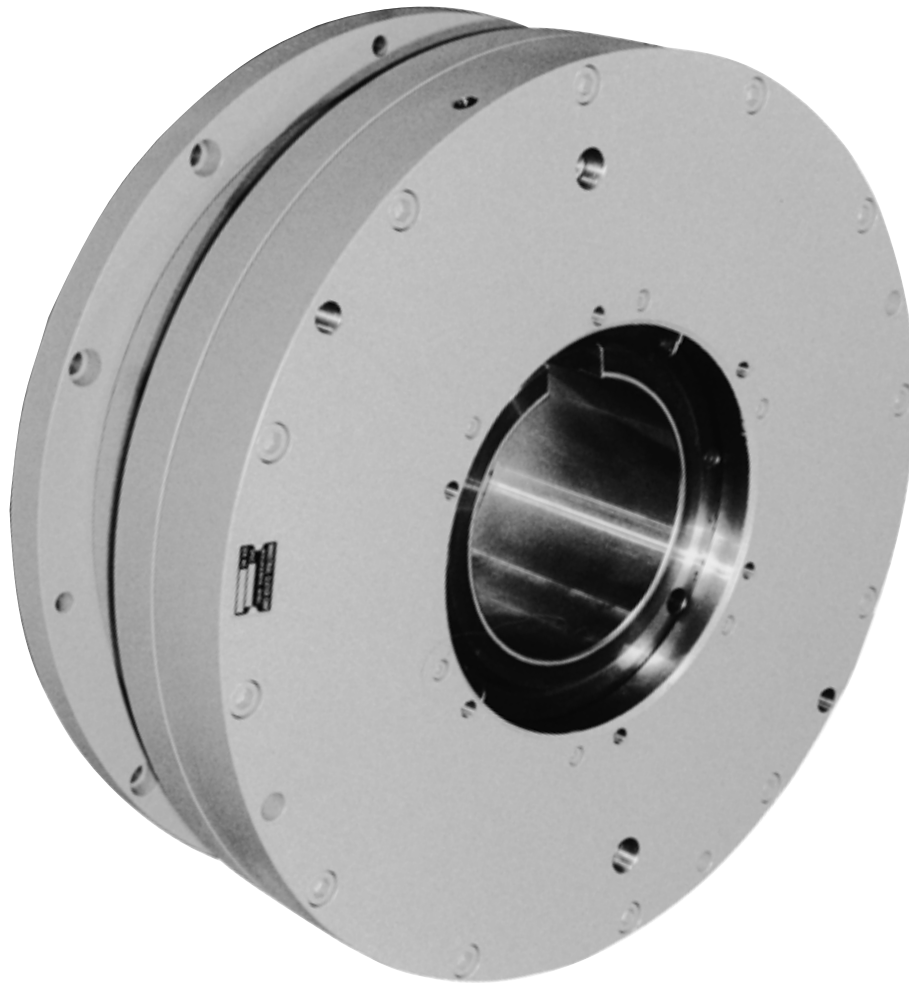


Industrial Clutch Products



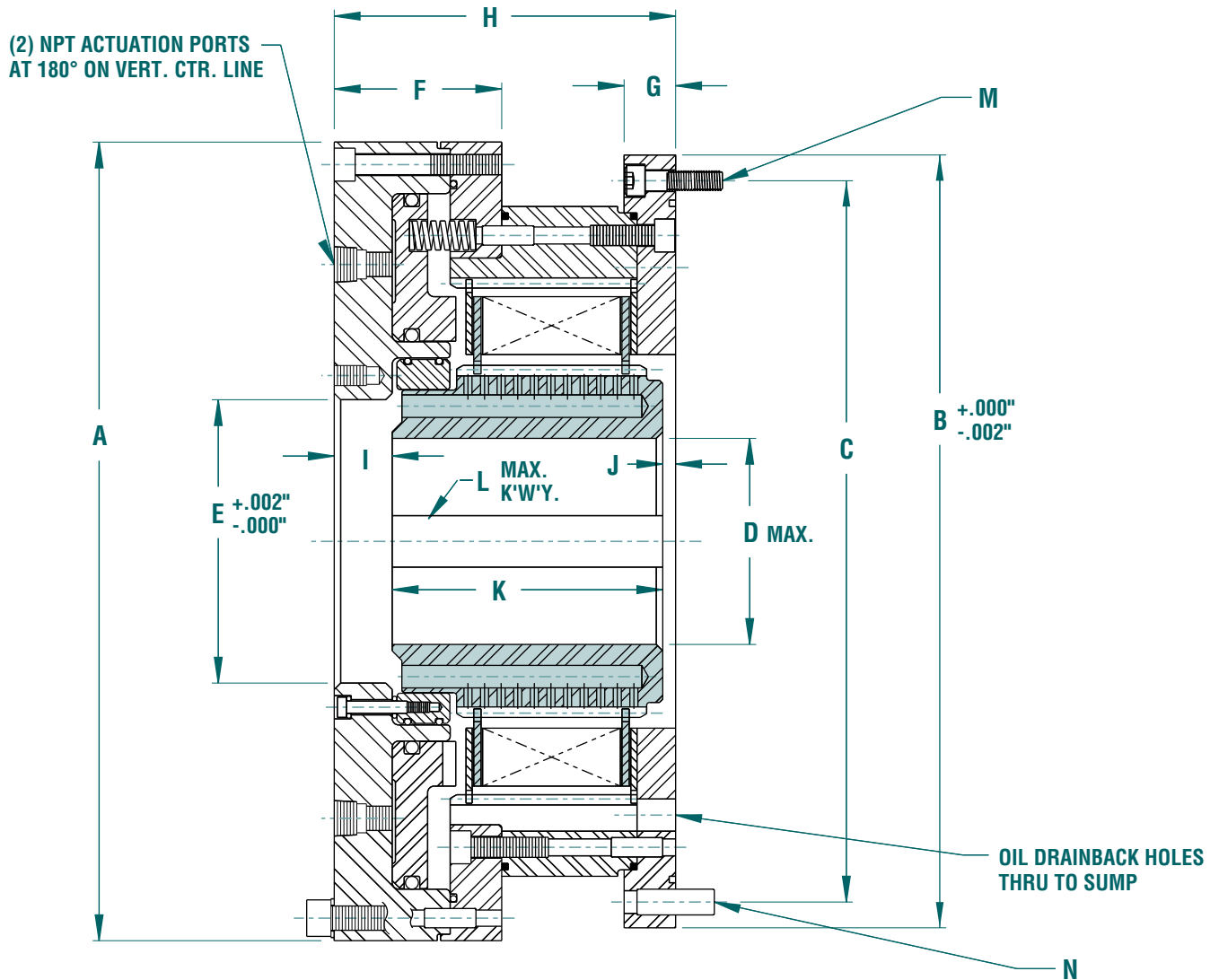
MODEL HBA

Air or Hydraulically Actuated Brakes

MODEL HBS

Spring-Set Air or Hydraulically Released Brakes

Model HBA



DIMENSIONAL DATA

All dimensions in inches

Brake Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
HBA-8	13.25	12.875	12.000	3.000	4.000	2.63	0.84	5.88	0.75	0.19	4.94	0.75	(8) - M8	(4) - .375
HBA-10	15.50	15.000	14.000	4.000	5.500	3.25	1.00	6.63	1.13	0.25	5.25	1.00	(8) - M10	(4) - .500
HBA-13	21.25	19.750	18.750	6.000	8.750	3.50	1.13	7.31	1.19	0.13	6.00	1.50	(8) - M12	(4) - .500
HBA-15	24.50	23.500	22.000	6.500	8.750	4.13	1.38	9.31	1.25	0.25	7.81	1.50	(8) - M16	(4) - .625
HBA-16	27.50	25.500	24.000	7.500	10.000	4.25	1.38	9.44	1.38	0.25	7.81	1.50	(8) - M16	(4) - .750
HBA-18	30.25	28.750	27.000	8.000	11.000	4.69	1.75	11.84	1.56	0.50	9.78	1.50	(8) - M20	(4) - 1.00
HBA-20	32.25	31.000	29.250	9.000	12.000	5.06	1.88	12.28	1.63	0.63	10.03	1.50	(8) - M20	(4) - 1.00

NOTES: 1.) Use certified drawing dimensions only for final layouts.
2.) DXF and IGES files available upon request.

3.) Dimensions subject to change without notice.
4.) All threaded fasteners are metric.

OPERATIONAL DATA

Brake Model	Static Torque (lb.-in.)	Dynamic Torque (lb.-in.)	Act. Vol. (in. ³)	Weight Outer (lbs.)	Weight Inner (lbs.)	WR ² Inner (lb.-ft. ²)	Maximum RPM
HBA-8	63,000	45,000	10.6	148.6	29.5	1.43	4,000
HBA-10	105,000	75,000	19.2	227.7	48.2	3.48	3,400
HBA-13	280,000	200,000	37.7	411.0	106.0	15.75	2,400
HBA-15	420,000	300,000	50.0	719.0	152.0	28.68	2,150
HBA-16	595,000	425,000	66.0	900.0	197.0	45.30	1,900
HBA-18	770,000	550,000	97.0	1,385.0	308.0	84.80	1,750
HBA-20	1,035,000	740,000	135.0	1,655.0	356.0	119.40	1,600

NOTES: 1.) Operating pressure: 100 PSIG

2.) Torque capacities can be modified. Consult engineering.

3.) Consult factory for service factors required per application.

4.) Consult factory for oil flow requirements per application and shaft oil hole diameters.

MODEL HBA BRAKE DESCRIPTION

The Model HBA brake is an oil immersed, air or hydraulically set brake designed to be mounted on a drive train shaft extension. In the majority of installations, the Model HBA brake utilizes the system's lubricating oil for cooling.

Cooling oil is fed into the brake at the cylinder end of the unit where it is directed into the oil distribution holes incorporated within the rotating hub for dispersal through-out the disc pack.

Unique friction plate grooving patterns, as well as the forced oil cooling feature, allow the Model HBA brake to dissipate the heat generated by stopping the high energy loads common to today's heavy duty industrial equipment.

All torque transmitting members are designed to withstand the rigors of the loads imposed. The unit incorporates high quality, time proven materials selected to provide strength, durability, and reliable performance.

The Model HBA housing contains the stationary plates of the disc pack. This housing is bolted to the stationary machine member and provides the grounding path for stopping the rotating components of the drive train when the disc pack is engaged. The housing also serves as a containment for the cooling oil and provides a path for the oil to return to the machine reservoir.

MODEL HBS BRAKE DESCRIPTION

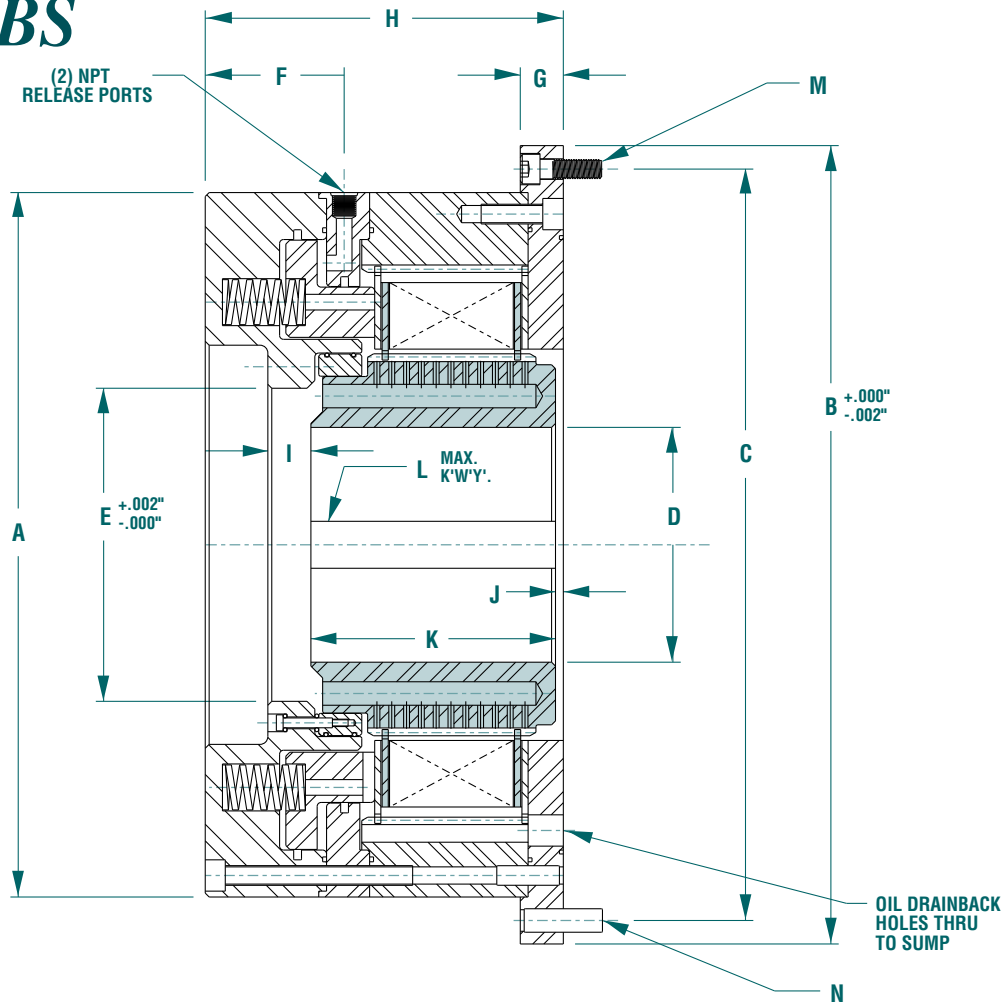
The Model HBS brake is identical to the Model HBA brake except the unit is designed to be spring-set and hydraulically or pneumatically released. This spring-set actuation feature makes it suitable for those applications requiring the presence of full braking torque in the event of loss of actuation pressure or machine power.

USAGES

- Any type of industrial equipment that requires braking of high speed-high energy loads with maximum reliability and longevity.
- Those applications that must operate in adverse environments due to the Model HBA and HBS brake's totally enclosed features.
- Tensioning control systems.

Propeller shaft brakes, winch holding brakes, mining safety brakes (Model HBS), conveyors, lumber and paper making equipment are some examples of where these brakes can be applied. They are particularly suited to mounting directly to gear cases. This allows sharing of the lubrication and cooling system as well as provides system compactness and a professional design appearance.

Model HBS



DIMENSIONAL DATA

All dimensions in inches

Brake Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
HBS-8	11.25	12.875	12.000	3.000	4.000	2.75	0.84	7.25	0.75	0.19	4.94	0.75	(8) - M8	(4) - .375
HBS-10	14.25	15.000	14.000	4.000	5.500	3.38	1.00	8.13	1.13	0.25	5.25	1.00	(8) - M10	(4) - .500
HBS-13	17.50	19.750	18.750	6.000	8.750	3.69	1.13	9.00	1.19	0.13	6.00	1.50	(8) - M12	(4) - .500
HBS-15	20.50	23.500	22.000	6.500	8.750	4.31	1.38	11.31	1.25	0.25	7.81	1.50	(8) - M16	(4) - .625
HBS-16	22.50	25.500	24.000	7.500	10.000	4.44	1.38	11.44	1.38	0.25	7.81	1.50	(8) - M16	(4) - .750
HBS-18	25.50	28.750	27.000	8.000	11.000	4.88	1.75	14.38	1.56	0.50	9.78	1.50	(8) - M20	(4) - 1.00
HBS-20	27.50	31.000	29.250	9.000	12.000	5.31	1.88	14.88	1.63	0.63	10.03	1.50	(8) - M20	(4) - 1.00

NOTES: 1.) Use certified drawing dimensions only for final layouts.
2.) DXF and IGES files available upon request.

3.) Dimensions subject to change without notice.
4.) All threaded fasteners are metric.

OPERATIONAL DATA

Brake Model	Static Torque (lb.-in.)	Dynamic Torque (lb.-in.)	Act. Vol. (in. ³)	Weight Outer (lbs.)	Weight Inner (lbs.)	WR ² Inner (lb.-ft. ²)	Maximum RPM
HBS-8	37,000	26,500	6.8	135	29.5	1.43	4,000
HBS-10	63,000	45,000	12.3	205	48.2	3.48	3,400
HBS-13	168,000	120,000	24.1	370	106.0	15.75	2,400
HBS-15	245,000	175,000	32.0	650	152.0	28.68	2,150
HBS-16	350,000	250,000	42.2	815	197.0	45.30	1,900
HBS-18	455,000	325,000	62.0	1250	308.0	84.80	1,750
HBS-20	605,000	435,000	86.0	1495	356.0	119.40	1,600

NOTES: 1.) Release pressure: 400 PSIG
2.) Torque capacities can be modified. Consult engineering.
3.) Consult factory for service factors required per application.

4.) Consult factory for oil flow requirements per application and shaft oil hole diameters.