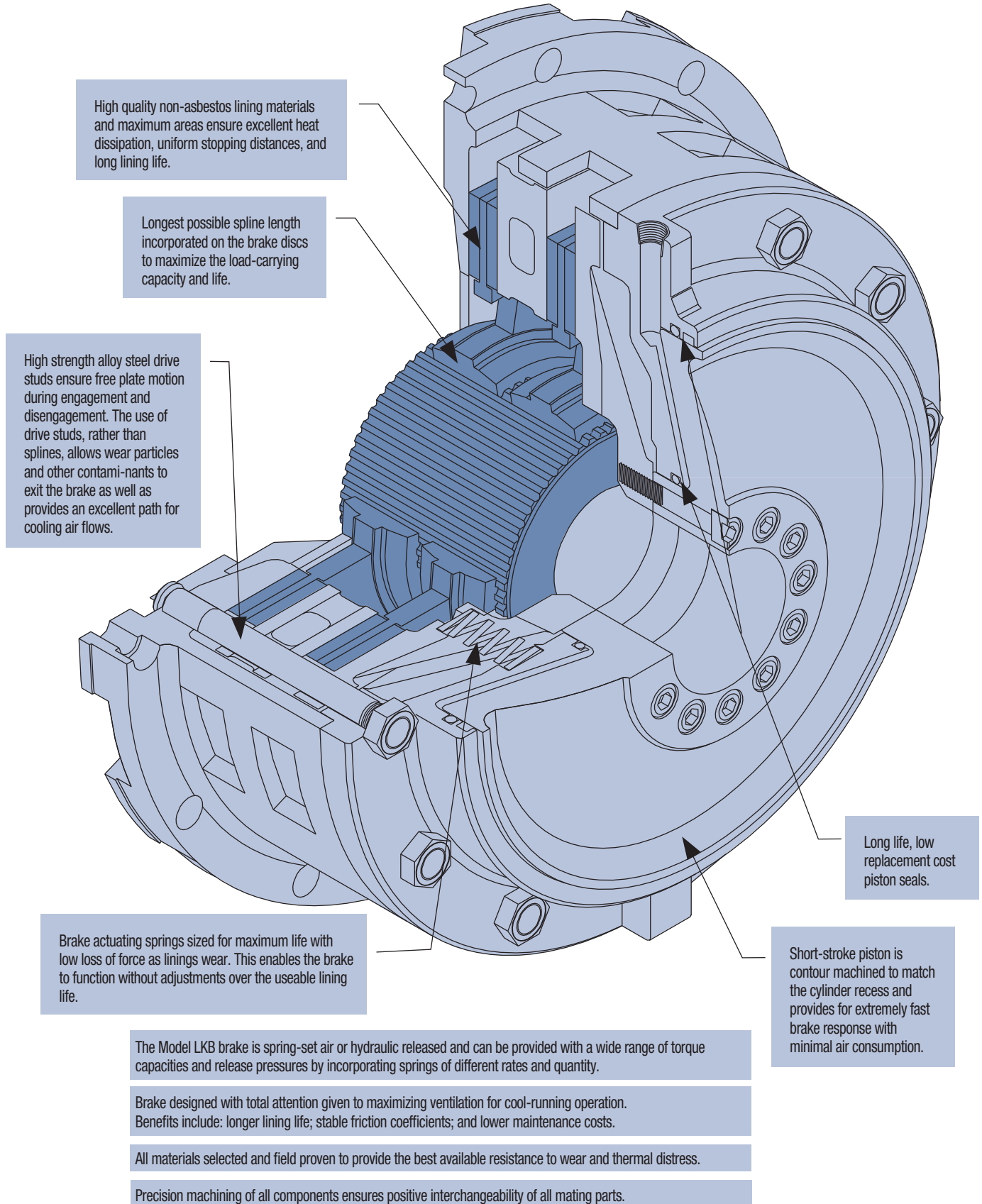




**MODEL LKB**  
*Spring Set -  
Air Released Brakes*

# LKB Spring-Set Air or Hydraulic Released Brake Design Features



High quality non-asbestos lining materials and maximum areas ensure excellent heat dissipation, uniform stopping distances, and long lining life.

Longest possible spline length incorporated on the brake discs to maximize the load-carrying capacity and life.

High strength alloy steel drive studs ensure free plate motion during engagement and disengagement. The use of drive studs, rather than splines, allows wear particles and other contaminants to exit the brake as well as provides an excellent path for cooling air flows.

Brake actuating springs sized for maximum life with low loss of force as linings wear. This enables the brake to function without adjustments over the useable lining life.

Long life, low replacement cost piston seals.

Short-stroke piston is contour machined to match the cylinder recess and provides for extremely fast brake response with minimal air consumption.

The Model LKB brake is spring-set air or hydraulic released and can be provided with a wide range of torque capacities and release pressures by incorporating springs of different rates and quantity.

Brake designed with total attention given to maximizing ventilation for cool-running operation. Benefits include: longer lining life; stable friction coefficients; and lower maintenance costs.

All materials selected and field proven to provide the best available resistance to wear and thermal distress.

Precision machining of all components ensures positive interchangeability of all mating parts.

## Model LKB-221 Brakes installed on a series of 250-ton presses

Photo courtesy of CNB



## Low Inertia LKB Brake Description

The Model LKB spring-set brakes incorporate all of the design features of the LK style clutch and have been in existence equally as long. They are the perfect companion to the LK clutch if the application requires a clutch and a brake since both units are extremely fast in response, have low air consumption, and contribute the lowest possible inertia to the system that must be started and stopped.

The separate clutch-brake combination has been applied in the metal forming industry on presses, press-brakes, and shears, for over forty years and are long-living, easy to maintain and require no adjustment for wear. The units rugged simplicity and fast-acting repeatable response makes them an ideal choice for such applications.

Being ruggedly designed, and capable of dissipating large thermal loads, the Model LKB brakes are also used frequently as primary working brakes, safety brakes, and holding brakes for a multitude of loads found in many areas of the heavy industrial marketplace. Cranes, shovels, draglines, drilling equipment, oilfield machinery,

conveyors, and mining equipment are but a few of such applications.

The Model LKB brakes are available with many options. Torque capacities can be changed through the use of springs with different rates and quantities. The unit may be provided with chambers suitable for pneumatic or hydraulic release. Totally enclosed housings for adverse environments and limit switch monitoring of brake release and wear are available. Units modified to operate vertically may also be provided. The list of modifications that have been applied to the Model LKB brakes is long and the above are but a few. Industrial Clutch Products can assist in providing the most suitable unit for your application.

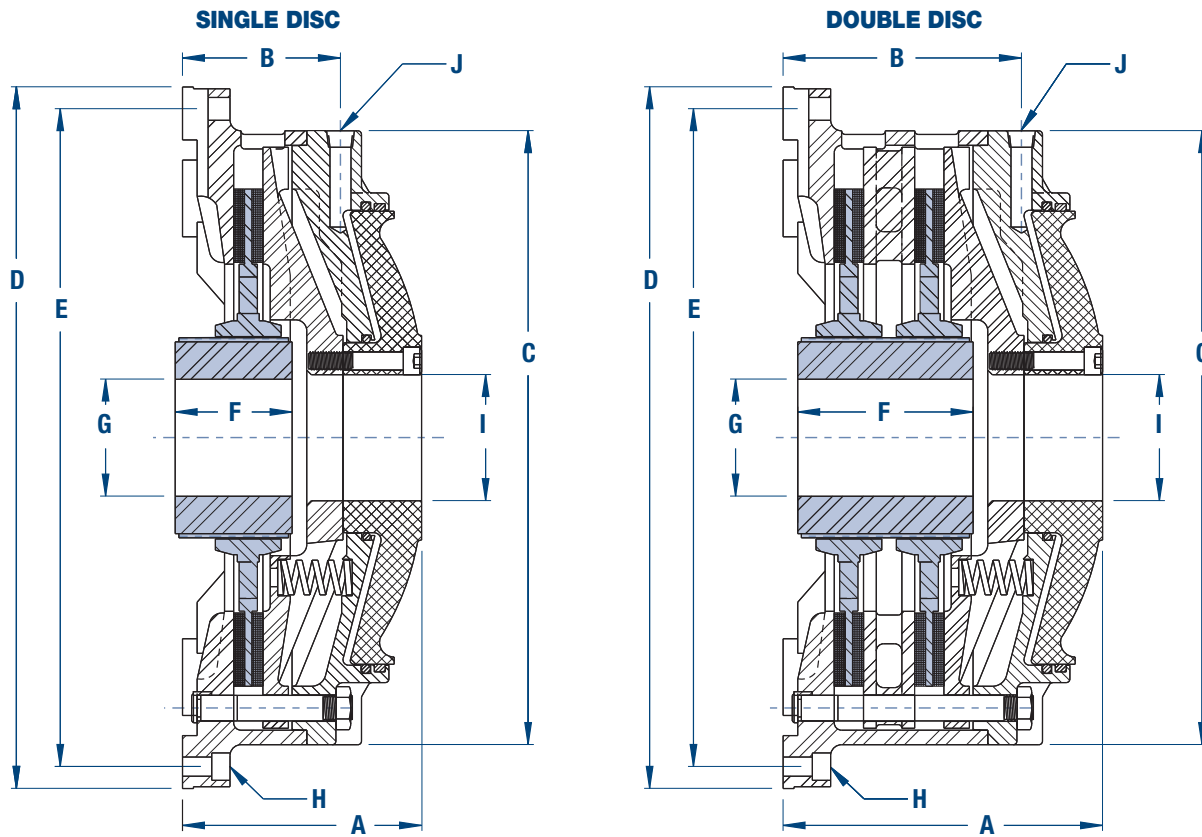
Modifications of the original and well designed LKB brakes have expanded this product's usefulness to many areas of industry. The complete range of sizes covers loads and speeds common to metalforming, mining, material handling, oilfields, and the marine marketplaces.



**Several sizes of LKB brakes are used on the hoist, crowd, swing and propel functions for this 2.5 million lb. working weight electric mining shovel.**

Photo courtesy of Bucyrus International

# Model LKB



## DIMENSIONAL DATA

All dimensions in inches

LKB Model	Static Torque 60 PSI Release (lb.-in.)	Dynamic Torque 60 PSI Release (lb.-in.)	Weight Outer (lbs.)	Weight Inner (lbs.)	Weight Total (lbs.)	WR <sup>2</sup> Inner (lb.-ft <sup>2</sup> )	A	B	C	D	E	F	G Min. - Max.	H No.-Size	I	J
LKB-108	5,190	4,500	42	7	49	.20	5.06	3.19	10.50	12.25	11.25	2.00	1-1/8 - 2	8 - 3/8	2.13	1/2
LKB-208	9,565	8,290	61	13	74	.37	6.69	4.81	10.50	12.25	11.25	4.13	1-1/8 - 2	8 - 3/8	2.13	1/2
LKB-111	12,080	10,470	77	13	90	.980	5.69	4.06	14.25	16.50	15.25	2.75	1-1/8 - 2-3/4	8 - 1/2	3.13	1/2
LKB-211	24,160	20,940	97	28	125	1.950	7.28	5.81	14.25	16.50	15.25	4.38	1-3/4 - 2-3/4	8 - 1/2	3.13	1/2
LKB-113	16,865	14,615	125	35	160	2.06	6.63	4.56	16.63	18.88	17.63	4.00	2-1/4 - 3-1/4	8 - 5/8	4.63	1/2
LKB-213	35,785	31,015	168	52	220	3.77	8.44	6.44	16.63	18.88	17.63	4.50	2 - 3-3/4	8 - 5/8	4.63	1/2
LKB-117	37,230	32,265	272	58	330	9.78	8.31	5.44	21.00	24.00	22.50	4.00	2-1/4 - 4-1/2	12 - 5/8	4.00	1/2
LKB-217	74,460	64,530	324	111	435	18.32	11.13	8.13	21.00	24.00	22.50	6.00	2-5/16 - 4-1/2	12 - 5/8	4.00	1/2
LKB-121	72,860	63,145	318	72	390	18.55	8.56	5.31	25.00	28.25	26.75	3.63	2-3/4 - 4-1/2	12 - 3/4	6.00	3/4
LKB-221	145,720	126,290	436	139	575	36.32	11.13	8.31	25.00	28.25	26.75	6.00	2-5/16 - 4-1/2	12 - 3/4	6.00	3/4
LKB-125	114,160	98,940	589	131	720	38.78	10.50	6.25	29.75	32.50	31.00	5.00	3-3/4 - 5-3/4	12 - 3/4	7.25	3/4
LKB-225	228,323	197,880	708	226	934	74.91	13.75	9.50	29.75	32.50	31.00	7.25	3-3/4 - 5-3/4	12 - 3/4	7.25	3/4
LKB-130	210,510	182,440	1089	211	1300	90.00	12.88	7.25	35.50	39.00	37.00	5.00	4-5/8 - 7-1/2	12 - 7/8	8.25	3/4
LKB-230	378,460	328,000	1314	356	1670	172.00	16.13	10.50	35.50	39.00	37.00	7.13	4-5/8 - 7-1/2	12 - 7/8	8.25	3/4
LKB-135	274,660	238,040	1100	350	1450	181.00	10.69	6.81	40.00	39.25	36.38	6.00	5-1/8 - 9-5/8	24 - 1-1/32	17.00	3/4
LKB-235	519,090	449,880	1183	517	1700	327.00	13.13	9.25	40.00	39.25	36.38	7.13	5-1/8 - 9-5/8	24 - 1-1/32	17.00	3/4
LKB-142	482,450	418,120	3038	611	3649	509.00	13.70	10.73	48.75	48.00	44.00	6.00	6-1/2 - 12	24 - 1-3/4	18.75	1
LKB-242	906,760	785,860	3574	1015	4589	954.00	17.46	14.40	48.75	48.00	44.00	8.50	6-1/2 - 12	24 - 1-3/4	18.75	1
LKB-148	730,380	633,000	4225	894	5119	923.00	14.76	11.26	54.75	54.00	50.00	7.00	8 - 14	24 - 1-3/4	21.75	1
LKB-248	1,360,930	1,179,470	5004	1420	6424	1688.00	19.15	15.65	54.75	54.00	50.00	9.50	8 - 14	24 - 1-3/4	21.75	1

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.) The torques shown are at 60 PSI release and may be varied by the use of different springs and spring combinations. For further technical data and recommendations please consult our Engineering Department.

5.) Consult factory or refer to application information when selecting units.

6.) Hydraulic release also available. Consult factory.