

KINNEY® KMBD™ Mechanical Boosters

Mechanical boosters are used to “supercharge” vacuum pumps to greatly extend pump performance. This allows for much faster pumping speeds and deeper vacuum levels. KMBD mechanical boosters from Tuthill Vacuum & Blower Systems are utilized worldwide in the manufacture of chemicals, petrochemicals, plastics, semiconductors and wood composites as well as food processing, vacuum furnace applications and many other general applications in industry.

Optional Materials and Coatings Available

Standard construction materials include cast iron housing, end plates and port fittings with ductile iron rotors and shafts. In addition to standard construction, the following materials are available:

Special Materials

Ductile Iron
Steel
Stainless Steel
Hastelloy®

Special Coatings

Armoloy® electrochromium
Nickel
Ryton® polyphenylene sulfide (PPS)

Low Mechanical Noise

Every KMBD mechanical booster is designed to operate at 82 dB(A) or less at blank-off (open field; motor and background noise excluded)

Individually Tested

Every KMBD mechanical booster is fully factory run tested, including blank-off test and heat run to assure you of the highest quality. Tuthill Vacuum & Blower Systems goes the distance to insure that your mechanical booster meets our rigid ISO 9001 registered quality standards.

Material Specifications:

Housing: Cast iron

End Plates: Cast iron

End Covers: Cast iron

Rotors: Ductile iron

Shafts: Ductile iron cast integrally with rotors

Drive Shaft: KMBD 200/400 - Ductile iron

All others - SAE 4140 forged alloy steel

Bearings:

Gear end - All models: Double row ball, both rotors

Back end - KMBD 200/400 – 4500: Cylindrical roller
KMBD 5500 – 10000: Double row ball

Drive Shaft:

KMBD 200/400 – 720: Double row ball

KMBD 850 – 2700: Single row ball

KMBD 2900 – 4500: Cylindrical roller

KMBD 5500 – 10000: Spherical roller

Gears: Heat-treated alloy steel, helical cut and precision ground

Seals: Drive shaft – Mechanical

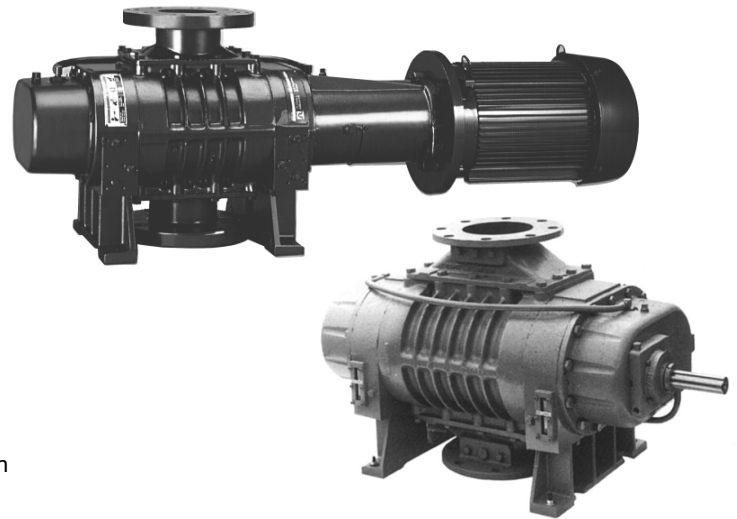
Rotor shafts – Non-contacting slinger
(Mechanical seals optional)

Lubrication:

KMBD 200/400 – 2700: Oil splash system, both ends

KMBD 2900 – 7300: Oil splash system standard,
Integral pressure lube optional

KMBD 800 – 10000: Integral pressure lube standard



Water-cooled End Plates

All vertical flow KMBD 200/400 – 2700 models are available with Tuthill Vacuum & Blower Systems' exclusive optional water cooled end plates to provide cooling of lubricating oil with 0.1-1.0 GPM (0.4-4.0 L/min) cooling water for high performance applications. Specify “E” suffix.

All KMBD 2900 – 4500 models with either vertical or horizontal flow are supplied with water-cooled end plates as standard.

Advantages of water-cooled end plates include:

- Reduced oil vapor back-streaming
- Lower mechanical noise
- Higher allowable cut-in points
- Lower discharge temperatures
- Increased pumping speed
- Higher staging ratios
- Extended oil, bearing, gear and seal life

Versatile Drive Configurations

KMBD Mechanical Boosters are supplied with a heavy-duty drive shaft for either direct coupled or belt-driven applications.

Optional Motor Mounting Flanges

All KMBD 200/400 – 4500 & 7300 models are available with flange adapters for mounting either a NEMA C-face motor (up to 75 HP) or an IEC D-flange motor (up to 55 kW) directly to the mechanical booster, eliminating the need for a separate base mounted assembly and coupling guard for the mechanical booster. Specify “C” suffix.

Metric Availability

All KMBD Mechanical Boosters are available with metric drive shaft and process connections.

Worldwide Sales and Service

With sales offices and service facilities located on six continents, you can be assured of availability and service for your KMBD Mechanical Boosters.

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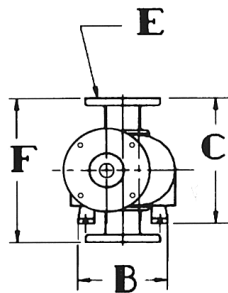
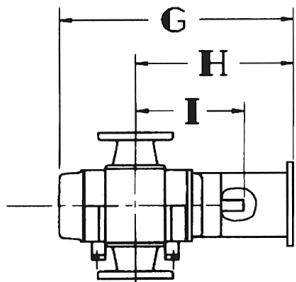
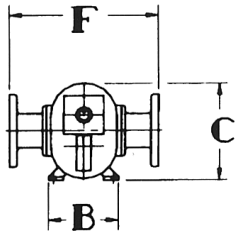
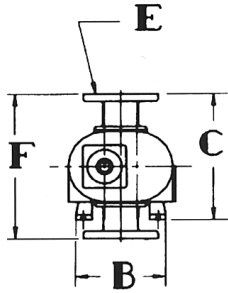
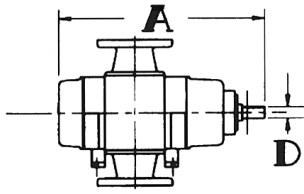
TUTHILL
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KMBD™ Vacuum Boosters Dimensional Table

Values shown are approximate and should not be used for construction.
 Certified drawings are available through your local Tuthill Vacuum & Blower Systems Sales Professional.



MODEL	DISPL. CFM / m ³ /h	A	B	C	D	E	F	G	H	I
KMBD 200/400	400 / 680	24.63	9.00	12.94	1.125	4" ANSI	14.88	26.69	17.06	14.00
		25.25	7.00	10.06						
KMBD 540	540 / 918	27.69	12.00	15.50	1.125	4" ANSI	15.00	27.63	16.56	13.88
		27.69	9.00	12.25						
KMBD 720	720 / 1223	30.69	12.00	15.50	1.125	4" ANSI	15.00	30.63	18.06	15.38
		30.69	9.00	12.25						
KMBD 850	800 / 1359	29.19	16.00	20.50	1.375	6" ANSI	20.00	29.00	17.63	14.13
		29.81	12.25	16.38						
KMBD 1200	1200 / 2039	32.69	16.00	20.50	1.375	6" ANSI	20.00	32.50	19.38	15.88
		33.31	12.25	16.38						
KMBD 1600	1600 / 2720	35.69	16.00	20.50	1.375	6" ANSI	20.00	35.50	20.88	17.38
		36.31	12.25	16.38						
KMBD 2000	2000 / 3400	39.69	16.00	20.50	1.375	8" ANSI	20.00	39.50	22.88	19.38
		40.31	12.25	16.38						
KMBD 2700	2700 / 4590	45.69	16.00	20.50	1.375	10" ANSI	20.00	45.50	25.88	22.38
		46.31	12.25	16.38						
KMBD 2900	3000 / 5100	51.69	17.50	25.63	2.375	10" ANSI	23.50	45.31	19.94	23.38
				25.75						
KMBD 3600	3600 / 6117	55.69	17.50	25.63	2.375	12" ANSI	23.50	49.31	21.94	25.38
				25.75						
KMBD 4500	4600 / 7816	60.69	17.50	25.63	3.125	12" ANSI	23.50	54.31	24.44	27.88
				25.75						
KMBD 5400	5500 / 9400	61.50	22.88	28.25	3.125	14" ANSI	30.69	-	-	-
			13.81	32.69						
KMBD 7300	7300 / 12400	70.4	22.68	25.75	3.125	16" ANSI	25.00	69.90	38.90	-
			13.56	31.40						
KMBD 8000	9400 / 16000	86.75	33.75	29.31	3.500	18" ANSI	26.00	-	-	-
			20.38	40.50						
KMBD 10000	12700 / 21600	98.75	33.75	29.31	3.500	20" ANSI	26.00	-	-	-
			20.38	40.50						

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