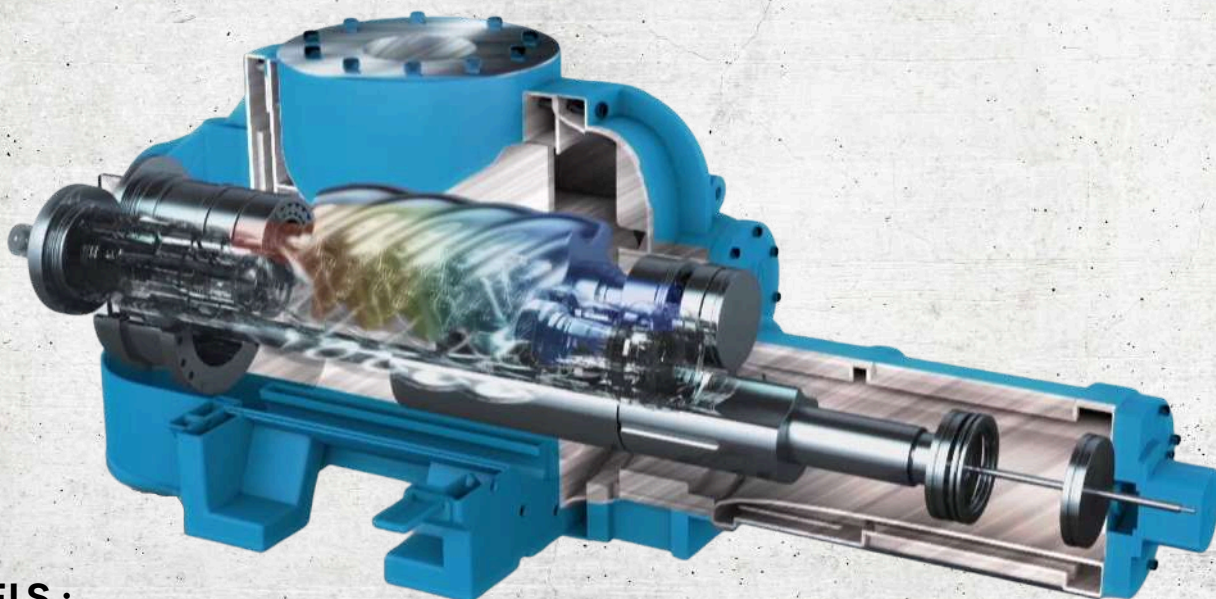


FRICK INDIA ENERGY SAVING, FULLY AUTOMATED ROTARY TWIN SCREW COMPRESSOR PACKAGES

FOR INDUSTRIAL REFRIGERATION



You still can't Beat the System when it's all FRICK INDIA



MODELS :

FIS - 255/305/384

FIS - 517/689

FIS - 890/1120/1384

FIS - 1600/2000

WORLD CLASS ROTARY TWIN SCREW COMPRESSOR BLOCKS

Frick India offers High energy efficient Twin Screw Compressor Blocks ranging from 414 CMH to 3250 CMH, manufactured in our ISO 9001:2015 certified high-precision manufacturing facility in Faridabad with a world-class performance testing facility as per ISO 917 standards.

CAPACITY CONTROL

Capacity control is achieved by using a movable slide valve. The slide valve moves axially with the rotors to provide fully modulating capacity control from 10% to 100% of full load capacity.

INHERENT DESIGN ADVANTAGES

"N" Profile Rotors are manufactured by M/s Holroyd using the latest technology.

- Advanced bearing technology
- Stepless Variable Volume Control
- Variable Capacity Control System
- Highly efficient three-stage oil separation system
- Fully automatic control by the Frick India Microtech System
- Proven Reliability
- TENDEM Single and Double Mechanical Seal

REFRIGERANTS USED

- Ammonia (R-717)
- Chlorodifluoromethane (R-22)
- Propane (R-290)
- 1,1,1,2 Tetra fluoroethane (R-134a)
- Hydrofluorocarbon Blends (R-404a; R-407c; R-507)
- Iso-butane (R-600a)
- Propylene (R-1270)
- Chloroethene (Vinyl Chloride Monomer)

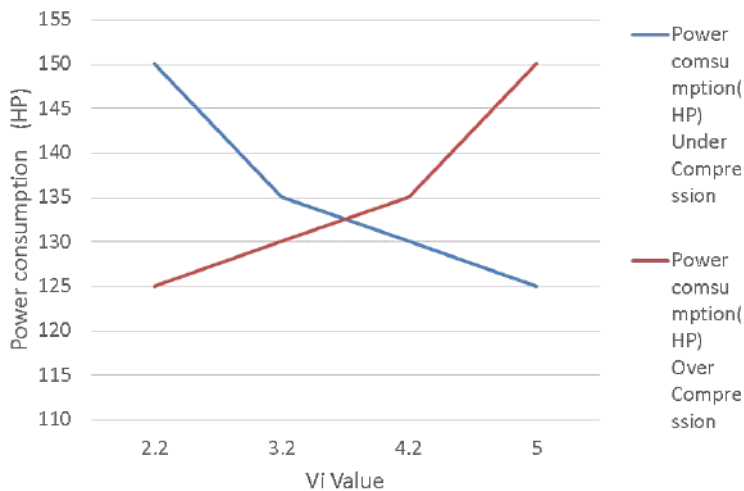


FULLY AUTOMATIC VARIABLE VOLUME RATIO CONTROL

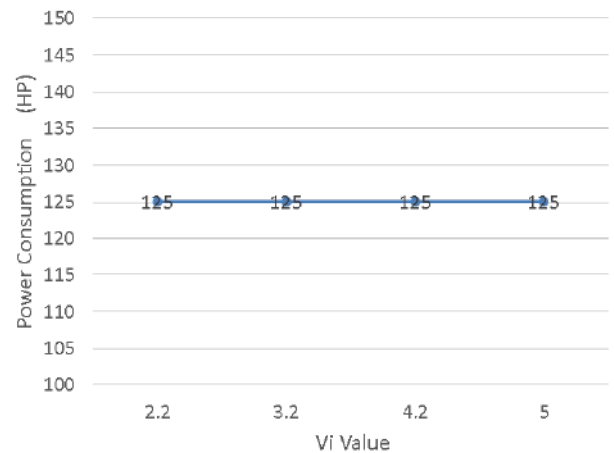
All Frick Screw Packages work under a wide range of operating conditions, with maximum power savings delivered by using Frick Variable Vi Technology, which matches external and internal pressure ratios. As per test records, fully automatic, variable volume-controlled packages are saving 5 to 15% of overall power consumption compared to fixed Vi Screw packages available in the market.



Fixed Vi ,Power consumption (125HP)



Variable Vi ,Power consumption(125HP)



ADVANCED "N" PROFILE ROTORS



The rotors are made from low-carbon steel forgings AISI 1045 to the exacting tolerance of the latest "N" profile manufactured by renowned U.K. company M/s Holroyd by using the latest technology under the technical know-how of "City University, London". The four-lobed male rotors are directly connected to the drivers. The six-lobe female rotor is driven by the male rotor on a thin oil film.



ADVANCED DE-SULPHURISING COMPOSITION AND TEMPERATURE CONTROLLED FOUNDRY

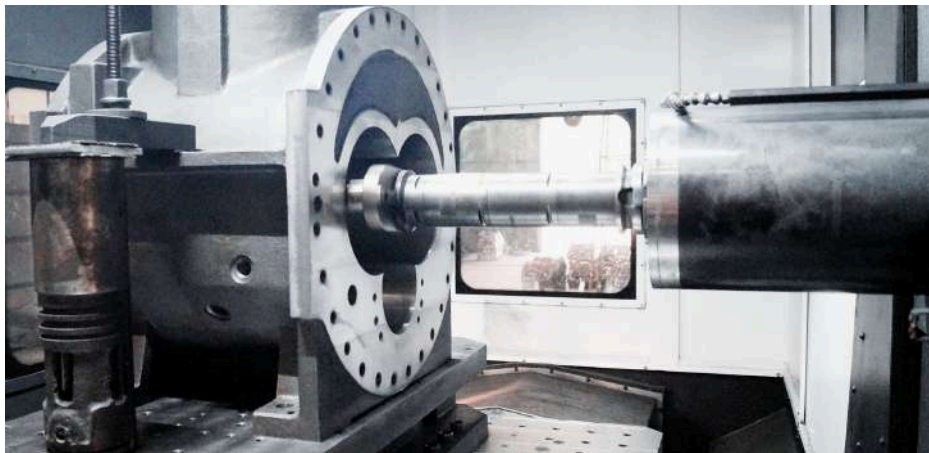
Frick India is committed to manufacturing the highest-quality third-generation compressors. The process starts with casting in our latest state-of-the-art foundry in our factory. All screw compressor castings are designed and tested to meet the requirements of ASHRAE 15-78 safety codes for 350 psig maximum discharge pressure. Fine grey and alloy cast iron casting as per ASTM A 48 and ASME SA 278 CL 35 and CL 40 to ensure structural integrity.





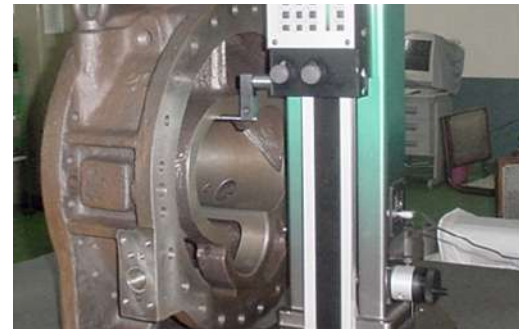
HIGH PRECISION MACHINING CENTER

Frick India uses state-of-the-art CNC machining systems to meet the highest possible accuracy in order to produce high-efficiency compressors. We use state-of-the-art horizontal machining centres to produce casing in order to achieve accuracy.



QUALITY ASSURANCE

Frick India inspects 100% of compressor parts with high-precision instruments.



Frick India will do performance tests of all Compressors to measure efficiency, noise and vibration as per ISO 917:1090 (E) and IS 10431 standards



ASSEMBLY SECTION FOR SCREW COMPRESSOR BLOCKS

Assembly of high efficiency Screw blocks and packages have been performed by technical engineers at an advanced and upgraded manufacturing facility at our factory.



MBM 255
336.2 kW
433 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.

MBM 305
395.5 kW
518 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.

MBM 384
497.7 kW
652 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.

MBM 517
666.2 kW
878 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.

MBM 689
888.7 kW
1171 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.



MBM 890
1200 kW
1512 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.

MBM 1120
1511 kW
1903 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.

MBM 1384
1867.6 kW
2351 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.

MBM 1600
2150.6 kW
2718 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.

MBM 2000
2708.2 kW
3398 m³/hr.
@-5 Deg C SST &
40 Deg C SDT;
50 Hz.

CUSTOM BUILT FRICK INDIA ROTARY TWIN SCREW COMPRESSOR PACKAGES

- Standard units are designed for use on ammonia, halocarbon, and hydrocarbon refrigerants at pressure ratios up to 26:1 and for economical operations with ratio of 20:1
- The oil separator is a horizontal, three-stage design with an integral sump. Two sight glasses are located in the reservoir section and one in the coalescing section. Two 1000-watt heaters maintain oil temperature at a minimum of 40 Deg C during compressor shutdown in the winter season and are replaceable without shutting the compressor down
- Coalecer filter elements are provided for the final gas/oil separation of particles down to less than 1 micron
- The compact, vibration-free Frick India rotary screw compressor packages are designed for all industrial refrigeration and air-conditioning requirements.
- Superior quality Two numbers of microfilters are located downstream of the pump to eliminate dust particles and are cleanable without shutting down the compressor
- Frick India offers MBM Series Rotary Twin Screw Compressor Packages in ten high-efficiency models, ranging in capacity from 433 CMH to 3398 CMH at 2950 RPM as well as 521 CMH to 4089 CMH at 3550 RPM
- Lubrication System: The standard high-stage unit is furnished with a close-coupled positive displacement pre-lube pump for start up only. The cycling full-lube pump operates only when the suction-discharge differential is not sufficient to provide adequate lubrication and will shut off automatically to conserve pump motor power when not required
- Variable Volume Ratio Control: Using volume ratio technology to operate based on operating parameters saves energy. Low maintenance and fewer moving parts
- The speed of the compressors is automatically controlled by VFDs
- Premium-efficient (IE4) motors will be supplied as an option
- All critical and operating parameters are automatically controlled by the Frick India Microtech System.
- Three-Stage Oil Separation System
- High-quality micro-oil filtration
- Dual Safety Valve and Frick India Oil Filter
- Compact Design



FRICK INDIA MICROTECH SYSTEM

Frick India offers the Frick Microtech System for fully automated plants. This system works with high efficiency and high performance either in automatic or manual mode, which is extremely safe and easy. The main advantages are:

- Improve the quality and precision
- Increase in productivity
- Cost reduction
- Reliable performance
- Maintain an accurate temperature
- Control your power efficiency
- Read and capture data
- Run the system in ideal condition
- Reduce plant breakdown
- More safety for your plant
- Avoid monotonous work



GENUINE SPARE PARTS

Frick India offers maintenance, operation, and training with easily available spares as required for the smooth function and efficiency of refrigeration systems.

For longer life and low power costs, always use Frick India Genuine Spares.



SERVICING & SALES NETWORK

Frick India has an experienced team of highly skilled and specially trained engineers and technicians available 24/7 on a dedicated support basis to execute all types of industrial refrigeration and air conditioning work scopes installed by us.



VIZAG

PATNA

MUMBAI

COCHIN

CHENNAI

KOLKATA

NEW DELHI

JALANDHAR

HYDERABAD

AHMEDABAD

BANGALORE

APPLICATIONS 5°C TO (-) 60°C



10 TR of TUNA Freezing plant at (-)65°C with ammonia as Refrigerant



**Methanol Chilling Plant
20 TR of Methanol Chilling at (-)55°C**



1 Ton/Hr IQF at -45 Deg C, 2 Nos. 750 Kg/hr. Plate Freezers at (-)40°C, 120 Tons Flake Ice Machine with 2500 Ltr/hr. water chillers



**285 MT/Day Meat processing plant.
Plant Capacity : 1000 TR at Minus 32°C**



7500 MT Multi commodity , Multi temperature (-)25°C to 4°C fully automated cold storage with racking system.



2000 TR (7000 kW) ammonia refrigeration system for chilled water cold rooms (various application (-)10, (-)5, (-)2 and (-)15°C)

INDUSTRIES



Dairy and Ice Cream Industry



Food and Agriculture Industry



Beverages, Brewery and Distillery Industry



Meat and Poultry Industry



Fisheries and Sea Food Industry



Chemical and Pharmaceutical Industry

SPECIFICATIONS

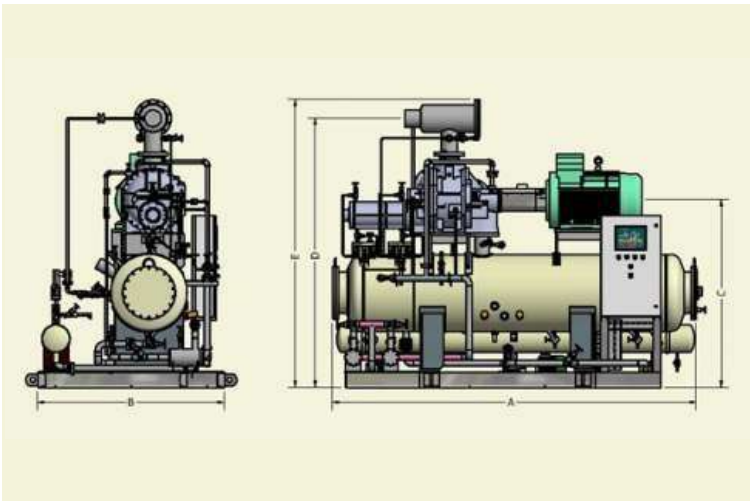
	High Stage (50 Hz.)				High Stage (60 Hz.)				Low Stage (Booster) 50 Hz					Low Stage (Booster) 60 Hz					
	@ -5°C SST & 40 SDT				@ -5°C SST & 40 SDT				@ -40°C SST & -5 SDT					@ -40°C SST & -5 SDT					
Models	CMH	Kw	BKw	BKw/Kw	Models	CMH	Kw	BKw	BKw/Kw	Models	CMH	Kw	BKw	BKw/Kw	Models	CMH	Kw	BKw	BKw/Kw
MBM 255	433	336.2	87.4	0.91	MBM 255	521	404.5	105.2	0.91	MBM 255B	433	86	23.1	0.94	MBM 255B	433	103.5	27.8	0.94
MBM 255E	433	373.2	90	0.86	MBM 255E	521	449.1	109.6	0.86						MBM 255B	433	103.5	27.8	0.94
MBM 305	518	395.5	102.9	0.91	MBM 305	624	475.9	123.8	0.91	MBM 305B	518	101.4	27.2	0.94	MBM 305B	518	122.1	32.7	0.94
MBM 305E	518	439	107.1	0.86	MBM 305E	624	528.3	129	0.86						MBM 305B	518	122.1	32.7	0.94
MBM 384	652	497.7	129.5	0.91	MBM 384	785	599.1	155.9	0.91	MBM 384B	652	127.7	34.3	0.94	MBM 384B	652	153.7	41.3	0.94
MBM 384E	652	552.4	134.9	0.86	MBM 384E	785	664.9	162.3	0.86						MBM 384B	652	153.7	41.3	0.94
MBM 517	878	666.2	165.7	0.87	MBM 517	1057	802.1	199.5	0.87	MBM 517B	878	171.3	43.6	0.89	MBM 517B	878	206.7	52.5	0.89
MBM 517E	878	739.5	172.6	0.82	MBM 517E	1057	889.9	207.7	0.82						MBM 517B	878	206.7	52.5	0.89
MBM 689	1171	888.7	221	0.87	MBM 689	1409	1069.4	266	0.87	MBM 689B	1171	228.5	58.1	0.89	MBM 689B	1171	274.8	70	0.89
MBM 689E	1171	985.9	228.6	0.82	MBM 689E	1409	1186.6	276.9	0.82						MBM 689B	1171	274.8	70	0.89
MBM 890	1512	1200	288.8	0.85	MBM 890	1820	1444.3	347.6	0.85	MBM 890B	1512	304.6	75.3	0.87	MBM 890B	1512	366.7	90.7	0.87
MBM 890E	1512	1331.6	300.8	0.79	MBM 890E	1820	1602.7	362	0.79						MBM 890B	1512	366.7	90.7	0.87
MBM 1120	1903	1511	363.4	0.85	MBM 1120	2290	1818.7	437.8	0.85	MBM 1120B	1903	383.6	94.9	0.87	MBM 1120B	1903	461.9	114.2	0.87
MBM 1120E	1903	1677	378.8	0.79	MBM 1120E	2290	2018.3	455.9	0.79						MBM 1120B	1903	461.9	114.2	0.87
MBM 1384	2351	1867.6	449.5	0.85	MBM 1384	2830	2247.4	541	0.85	MBM 1384B	2351	474.3	117.3	0.87	MBM 1384B	2351	570.8	141.2	0.87
MBM 1384E	2351	2072.5	468.1	0.79	MBM 1384E	2830	2494.1	563.3	0.79						MBM 1384B	2351	570.8	141.2	0.87
MBM 1600	2718	2150.6	518.1	0.85	MBM 1600	3271	2588	623.4	0.85	MBM 1600B	2718	546.2	135.1	0.87	MBM 1600B	2718	657.4	162.5	0.87
MBM 1600E	2718	2328.3	539	0.81	MBM 1600E	3271	2801.8	648.7	0.81						MBM 1600B	2718	657.4	162.5	0.87
MBM 2000	3398	2708.2	652.4	0.85	MBM 2000	4089	3258.9	785.1	0.85	MBM 2000B	3398	687.7	170.1	0.87	MBM 2000B	3398	827.6	204.7	0.87
MBM 2000E	3398	2932	678.8	0.81	MBM 2000E	4089	3528.4	816.9	0.81						MBM 2000B	3398	827.6	204.7	0.87

Notes : a) Allow 48 inch / 122 Cm free Space required on motor end to pull out Coalescer element.

b) Dimension and Performance Data given is for Ammonia Units Only. For other refrigerants pl use FISCom Software or Contact Factory.

c) All Specifications are subject to Change without Notice

DIMENSIONS



DIMENSIONS (mm) & Weight (Kgs.)						
MODEL	A	B	C	D	E	WT.
MBM-255	3060	1650	1465	2175	2330	2208
MBM-305	3060	1650	1465	2175	2330	2219
MBM-384	3060	1650	1465	2175	2330	2350
MBM-517	3555	1800	1610	2320	2475	2716
MBM-689	3610	1800	1610	2320	2475	2850
MBM-890	3610	1850	1850	2660	2850	4900
MBM-1120	3610	1850	1850	2660	2850	5100
MBM-1384	3610	1850	1850	2660	2850	6350
MBM-1600	3933	1950	2070	2967	3180	6700
MBM-2000	4272	2036	2253	3160	3370	6890



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