

FIRST IN RELIABILITY FIRST IN CHOICE



METALEX SOLUTIONS ARE FOCUSED TO ACHIEVE LOW LIFECYCLE COST

PISTON COMPRESSOR

TUBE ICE MACHINE

VALVES

SPARE PARTS

AMMONIA PUMP

TURNKEY PROJECTS

A HISTORY OF EXCELLENCE

Established in 2001, Metalex has grown to become a leading product manufacturing and product engineering company.

METALEX manufactured REFRIGERATION RECIPROCATING COMPRESSORS, and has successfully expanded the Product Range to manufacture AIRCOOLED COMPRESSORS from 2 cylinder to 12 cylinders.

DIRECT DRIVE and complete PACKAGE UNIT are fast gaining acceptance owing to the most cost - effective range.

METALEX has earned a reputation as an Innovator with the launch of 1 CYLINDER COMPRESSOR in year 2000 - a completely In-house developed COMPRESSOR which has been gaining wide acceptance in the DAIRIES and CHILLING PLANTS across India. Constant Evolution and the desire to give optimum service to our customer has made METALEX develop and launch the TUBE ICE MACHINE in the Year 2011. Total Turnkey Solution range of Equipments consist of Low Pressure Receivers, High Pressure Receivers, Accumulators, Oil Separator and complete range of VALVES ensures a ONE-STOP for effective and optimum results. Each design pas maximum attention to plant safety.

Our experienced sales and technical staff offers knowledgeable and responsive customer service and that has been the instrumental to the phenomenal growth. We are proud to state that we do know each of our Customer and are constantly taking initiative to reinstate their loyalty in METALEX.

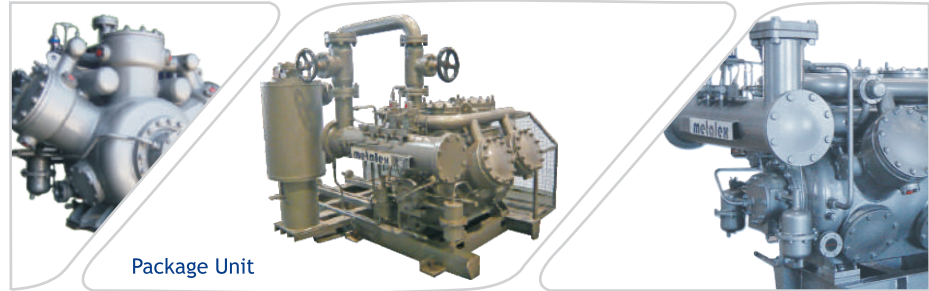
METALEX's 12500 sq. mt. of manufacturing space at CHAKAN - PUNE in MAHARASHTRA-INDIA features a well-equipped Manufacturing Unit and Quality Assurance Laboratory. Our manufacturing process utilizes stringent Quality Control Procedures and PROCESS CHARTS for each stage of manufacturing. Our highly efficient Sales Team manage the Distribution Process through SAP B1 to deliver reliable products on time to the network of Business Partners and Customers.

To meet your individual application requirements, METALEX provides Product and Project Solution for:

PISTON COMPRESSORS

The MX Series compressors are manufactured with advance knowledge in CNC Technology combined with detailed dimensional accuracies at par with internationally accepted Quality Standards- ISO 9001:2008 & CE.

MX Series is a range of high quality, heavy duty, open type reciprocating refrigeration compressors. These are designed to operate with Ammonia, R22, R134a, R404A, and other common new refrigerants. The MX Series Compressors are the first choice for continuous operation in Cold Storages, Ice & Chilling Applications, Process Plants, Lique-faction, Pharma-chem plants.



Package Unit

- Six Single Stage models with swept volumes from 135 m³/h for the cylinder to 1195 m³/h for the nine cylinder model.
- Six Two Stage models with different LP/HP volume ratio's and LP swept volumes from 265 m³/h up to 929 m³/h.



IS - 6 Aircooled Compressor

The Mx-Series at a glance:

- Better price/ Performance Ratio
- Compact
- Robust
- Reliable
- Efficient
- Service Friendly
- Low Noise Factor
- Light Weight > Cast Iron

Metalex Air Cooled Compressors - IS Series

ENGINEERING DATA FOR IS-SERIES

Type of Compressor		IS-2	IS-3	IS-4	IS-6
Cylinder Arrangement		V	W	2 x V	2 x W
Number of Cylinders		2			
Cylinder bore	mm	6.29 (160)			
Piston Stroke	mm	4.3 (110)			
Permissible speed RPM		V Belt Drive			
Swept volume of Suction gas at 1000 RPM cu.ft./min (Cu.m/hr)	m ³ /hr	265.9	398.5	531.1	796.5
Direction of Rotation/ looking from oil pump side		Clockwise			
Maximum discharge pressure	bar	295 (21)			

PERFORMANCE CHART FOR IS SERIES

Model	Ammonia (NH ₃)		Freon (R-22)		Ice Making Capacity Tones / 24 Hrs. with Ammonia	
	Capacity TR	Power Consumption	Capacity TR	Power Consumption	TPD	KW
IS-2	97.0	51.0	81.3	55.0	17.7	39.5
IS-3	145.5	75.5	121.9	82.0	26.4	58.0
IS-4	194.0	101.5	162.6	108.0	35.5	75.0
IS-6	291.0	151.22	243.9	161.0	52.8	110.2

IS Series Air Cooled Compressors



COMPRESSOR GENUINE PARTS



TECHNICAL DATA

Type of Compressor	MX100	MX200	MX300	MX400	MX600	MX900
Swept volume of Suction gas at 1000 RPM cu.ft./min (Cu.m/hr)	78 (135)	156.88 (265.9)	235.11 (398.5)	313.34 (531.1)	469.93 (796.5)	692.6 (1195)
Wt. of Compressor with flywheel in Pounds (kg)	714 (324)	1260 (572)	1340 (609)	1534 (697)	1950 (886)	2816 (1280)
Direction of Rotation/looking from oil pump side	CLOCKWISE					
Maximum discharge pressure (Bar)	16					

DIMENSIONAL DATA

Type of Compressor	MX100	MX200	MX300	MX400	MX600	MX900
Cylinder Arrangement	Vertical	V	W	2 X V	2 X W	3 X W
Number of Cylinders	1	2	3	4	6	9
Cylinder bore	(160 mm)					
Piston Stroke	(110 mm)					
Permissible speed RPM	Min. 500 RPM		V - BELT DRIVE			Max. 1000 RPM

Notes:

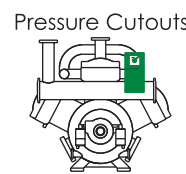
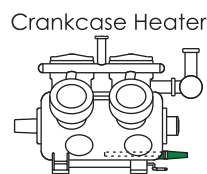
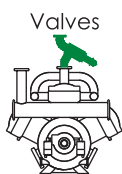
1. Capacity = Refrigeration Effect (Cooling Capacity) in kW/hr
2. Power = Power required at compressor shaft in kW
3. Capacity is at 1000 rpm
4. Power consumption and capacities are proportional to speed
5. Capacity is at 50 °C useful superheat for R-22
6. Capacity is at 50 °C nonuseful superheat gained in suction line for Nh3
7. Interpolation of ratings is permissible
8. For any condition outside the range given above please call



SINGLE STAGE COMPRESSORS - 1 TO 9 CYLINDERS

CAPACITY RATING CHART FOR SINGLE STAGE COMPRESSORS

Compressor Model	Refrigerant Evaporating Temp. in °C	NH3 Condensing Temperature				R-22 Condensing Temperature			
		35 °C		40 °C		35 °C		40 °C	
		Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW
MX-100	5	126.300	20.5	116.900	20.5	MX - 100 Capacity For Condensing Temp. Above 20 °C. Please Call Us.			
	0	103.400	20.2	76.250	20.2				
	-10	66.900	18.6	59.950	18.6				
	-20	39.950	15.5	-	15.5				
MX-200	5	283.6	46.3	271.86	51.8	250.58	51	237.56	55.3
	0	230.81	45.1	220.81	49.8	208.6	48.7	197.09	52.7
	-5	186.4	43.1	177.33	47	171	46.3	161.3	49.8
	-10	147.67	40.4	139.42	43.3	139.77	43.6	130.81	46.6
	-15	114.53	36.8	105.1	38.6	111.98	40.6	104.19	43
MX-300	5	424.53	68.5	407.79	76.7	375.93	75.5	356.28	82
	0	346.28	66.6	331.28	73.8	312.91	72.1	295.58	78
	-5	279.53	63.7	265.93	69.6	257.56	68.4	242.44	73.7
	-10	221.51	59.6	209.19	63.9	209.65	64.4	196.28	69
	-15	171.74	54.2	158.5	54.7	168.02	59.9	156.4	63.5
MX-400	5	566.05	90.6	543.72	101.6	501.28	100	475.12	108.6
	0	461.74	88.2	441.74	97.7	417.21	95.5	394.19	103.4
	-5	372.79	84.3	354.65	92.1	343.49	90.6	323.26	97.7
	-10	295.35	78.8	278.84	84.6	279.53	85.2	261.74	91.3
	-15	229.07	71.5	210.7	75	224.07	79.2	208.49	84
MX-600	5	849.07	134.8	815.7	151.3	751.98	148.9	712.67	161.8
	0	692.67	131.1	662.67	145.4	625.81	142.1	591.28	154
	-5	559.19	125.3	531.98	137	515.23	134.8	485	145.4
	-10	443.02	117.1	418.37	125.8	419.3	126.7	392.67	135.8
	-15	343.6	106.2	316.6	111.5	336.16	117.7	312.79	124.9
MX-900	5	1273.6	201.2	1223.6	226	1127.91	222.3	1069.07	241.7
	0	1039.07	195.7	993.95	217.1	938.72	212.1	886.98	229.9
	-5	838.84	186.9	798.02	204.5	772.91	201.1	727.44	217
	-10	664.65	174.6	627.56	187.6	629.07	189.1	589.07	202.7
	-15	515.35	158.3	474.3	165.8	504.19	175.5	469.19	186.3



Optional System Accesories



SPECIFICATION DATA

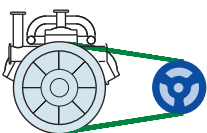
Type of Compressor		MX-210	MX-310	MX-420	MX-510	MX-720
Cylinder Arrangement		1XW	2XV	2XW	2XW	3XW
Number of Cylinders	mm	2/1	3/1	4/2	5/1	7/2
Cylinder bore	mm	160	160	160	160	160
Piston Stroke		110	110	110	110	110
Permissible speed RPM	Belt Drive from 400 to 1000rpm in steps of 50					
Swept volume of Suction gas at 1000 RPM cu.ft/min (Cu.m/hr)	m ³ /hr	265.4	398.1	530.8	663.5	928.9
Direction of Rotation/looking from oil pump side	Anti - Clockwise looking from flywheel end					
Maximum discharge pressure (Bar)	bar	21	21	21	21	21

CAPACITY RATING CHART FOR DOUBLE STAGE COMPRESSORS

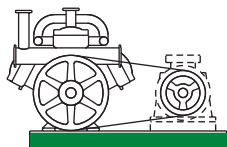
Compressor Model	Refrigerant Evaporating Temp. in °C	Nh3 Condensing Temperature				R-22 Condensing Temperature			
		35 °C		40 °C		35 °C		40 °C	
		Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW
MX-210	-20	122.3	41.4	121.4	44.4	-	-	-	-
	-25	97.5	37.4	96.8	40.3	97.3	45.4	96	48.3
	-30	76.8	33.8	76.1	36.3	81.1	41.4	80	44.1
	-35	59.7	30.2	59.1	32.2	67	37.6	66	40.1
	-40	45.7	26.6	45.4	27.8	54.6	34.1	53.8	36.3
	-45	34.3	23.4	-	-	44	30.7	43.3	32.6
	-50	-	-	-	-	34.9	27.4	34.3	29
	-55	-	-	-	-	27.3	24.1	26.7	25.4
MX-310	-25	134.5	51.5	133.8	55	-	-	-	-
	-30	106.2	45.9	105.2	49.1	109	56.8	107.2	60
	-35	82.7	40.7	81.9	43.4	90.2	50.9	88.7	53.8
	-40	63.5	35.8	62.7	38.1	73.7	45.5	72.5	48.2
	-45	47.9	31.1	46.4	33.4	59.5	40.6	58.5	43
	-50	35	26.5	-	-	47.4	36	46.5	38.1
	-55	-	-	-	-	37.1	31.7	36.3	33.4
	-60	-	-	-	-	28.5	27.6	27.8	28.9
MX-420	-20	244.6	80.2	242.8	86.8	-	-	-	-
	-25	195.1	72.8	193.5	78.6	194.5	88.6	191.9	94.5
	-30	153.6	65.5	152.3	70.5	162.3	80.6	160	86
	-35	119.3	58.3	118.2	62.4	133.9	73.1	132	78.1
	-40	91.3	51.1	90.2	54.2	109.3	66.1	107.6	70.5
	-45	68.6	43.7	-	-	88	59.3	86.6	63.2
	-50	-	-	-	-	69.8	52.7	68.6	55.9
	-55	-	-	-	-	54.5	46.2	53.5	48.7
MX-510	-35	120.3	60.6	118.9	64	-	-	-	-
	-40	92.7	52.5	91.5	55.4	103.4	67.9	101.3	70.09
	-45	70.2	45.2	69.1	47.6	83.7	59	82	61.7
	-50	52.1	38.5	51.2	40.4	66.8	51.2	65.3	53.6
	-55	37.9	32.3	37.3	33.6	52.4	44.3	51.2	46.3
	-60	27.3	26.6	-	-	40.4	38.1	39.4	39.8
MX-720	-30	238.7	101.7	236.4	108.5	-	-	-	-
	-35	186.2	89.5	184.2	95.4	200.5	113.2	197.1	119.4
	-40	143	78.3	141.3	83.2	164.1	100.2	161.2	105.8
	-45	108.1	67.7	106.5	71.5	132.6	88.5	130.1	93.6
	-50	80.1	57.5	78.6	59.9	105.6	77.9	103.5	82.3
	-55	57.2	47.7	-	-	82.8	68.1	81	71.8

TWO STAGE COMPRESSORS - 1 TO 9 CYLINDERS

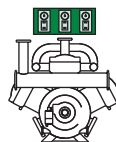
Belt & Motor Pulleys



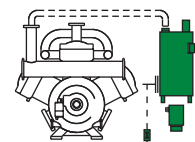
Base Frame



Pressure Gauge



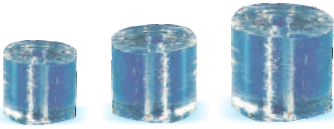
Oil Separator



TUBE ICE MACHINE



Standard Sizes of Tube ice



- 16mm
- 25mm
- 36mm

for Specific Tube Ice requirement Please Call.

•Metalex Tube Ice Machines are designed specifically to Freeze Ice automatically in vertical tubes, hot pressure gas thaws tubes and the ice is cut by specially designed cutter. All surfaces in contact with water or ice are of stainless steel or other rust - resistant materials. Heavy duty framing, automatic operation optional PLC and the best guarantee in the business makes Metalex TIX machines the FIRST CHOICE for perfect ice applications.

- Manufactured in accordance with the A.S.M.E. Code.
- Environmentally Friendly Refrigerant R404A.

Metalex Tube Ice are suitable for application like Fish Seafood Processing, Chemicals and Dye Processing and Produce Cooling Application.

Motors (HP)							
	07 Tons	13 Tons	15 Tons	20 Tons	25 Tons	30 Tons	60 Tons
Tube Ice Model	TIX-07	TIX-13	TIX-15	TIX-20	TIX-25	TIX-30	TIX-60
Compressors Model	MX 100	MX 200	MX 200	MX 300	MX 400	MX 600	MX 900
Compressor Motor (HP)	25	50	60	75	80	150	250
Cooling Tower (TR)	30	60	80	100	100	150	250
Water Storage Recommended (Ltrs)	14,000	26,000	30,000	40,000	50,000	60,000	1,20,000

*Note: The Machine Performance data is just a guideline for specific details & higher capacity please contact us.



VALVES

Cast steel construction, accepts flow in both directions. Can be used for most refrigerants including ammonia & non-corrosive gases. Available in "L" and "Y" type with direct welded option, and are tested at 30 bar pressure & operating temp. range of -40 °C to +120 °C. Sizes available are from 3/4 inch to 6 inches.

All Valves undergo a Strict Quality audit process to meet the IS: 11132-1985 Standards.



SALIENT FEATURES

- Full Port Opening
- Compact Design
- Replaceable Teflon Valve Seat
- Stainless Steel Spindles
- Low Torque & Pressure Drops
- Optional Backseat Arrangement
- Corrosion Resistant Hand Wheels
- Optional Electronics Controls



These non-return valves can be used with ammonia & other non-flammable refrigerants for ensuring correct direction of flow, suitable for refrigerants lines, where pulsation occurs, creates dampening effect.



L.P. RECEIVER

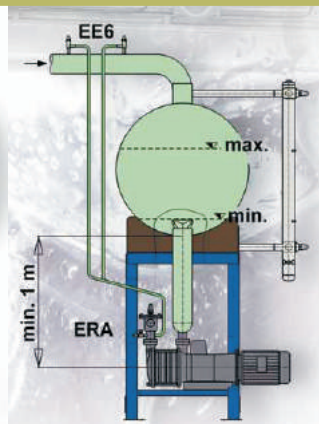
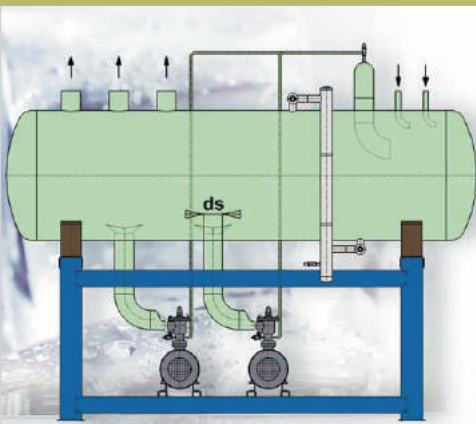


MX L. P. Receiver Advantages

- Even refrigerant distribution
- Pressure drops prevention in system
- Compressors Protection from Liquid Hammer
- Evaporator hot gas defrosting without disturbing the system
- Protection from fluctuating ambient & condensing conditions
- Ease of operation & Low maintenance.

The Metalex liquid ammonia circulation systems are developed keeping in view the rugged Indian atmosphere and operating conditions.

Please contact our sales office for your requirement in customized size and specification.



AMMONIA PUMP

Quality and Reliability is Integral at Metalex.

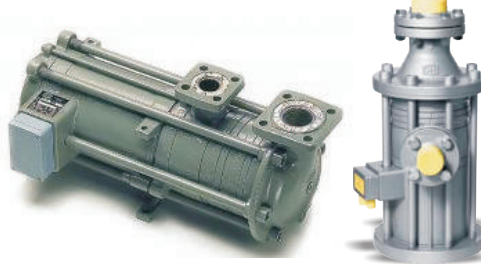


GP Series



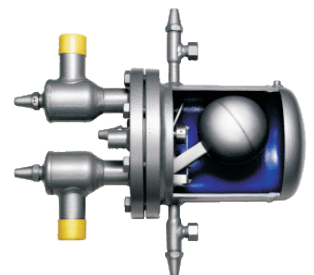
- GP type five models
- GP41/42, 51/51A/52
- GP Pumps for a capacity range from 1 to 16 m³/h and delivery heads of up to 70 m.

HRP Series



- HRP six models
- HRP3232, 5040, 5050, 8050,
- 8050/2 (R404a), 100.80
- Three design pressures
- Pn40, PN65, PN90 bar

High Side Float Regulators



- HR1-HR4 (for HFC's)
- HS30-HS50 (for Co2)
- WP2HR-WP3HR for Ammonia Heat Pumps
- HR1-BW condensate draining

metalex represents WITT - Germany Products for ammonia refrigeration in India, Bangladesh, Srilanka And Nepal.

witt@metalexgroup.com

Metalex Cryogenics Ltd.

EQUIPMENT MANUFACTURING &
PROJECT ENGINEERING COMPANY.

A-407, Bhakti Plaza, Bremen Square,
Aundh, Pune - 411007. MH. India.

e-mail: sales@metalexgroup.com -

— = 50 Hz = 1450 resp. 960 Upm
— = 60 Hz = 1740 resp. 1150 Upm

- - - ganz gedrosselten Zustand vermeiden
- - - fully throttled condition to be avoided
- - - Evitar un estrangamiento total
- - - Evitar un condición total restringido

Typ	type	type	tipo
Upm	Rpm	Rpm	Rpm

