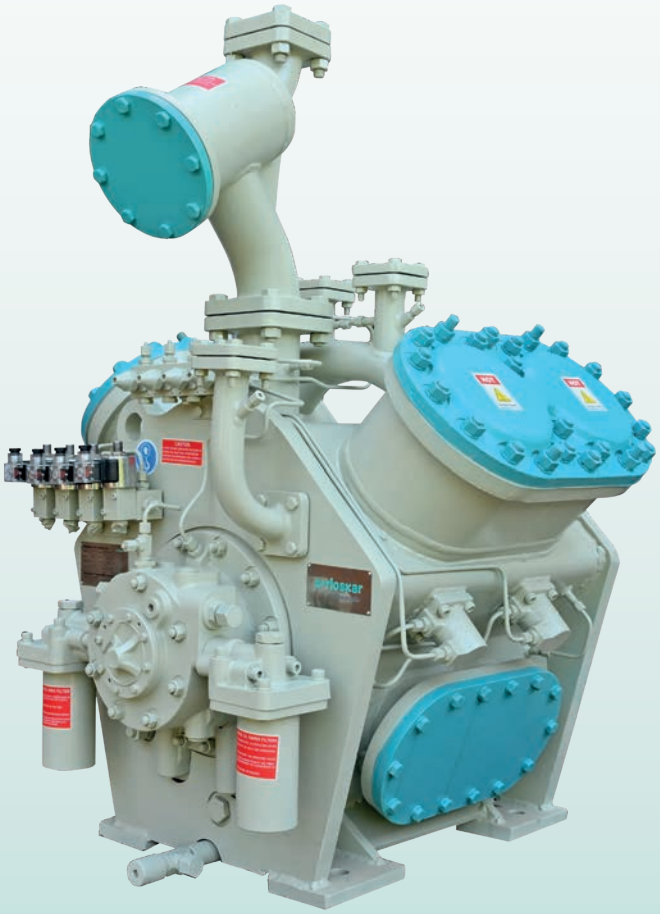
Kirloskar Pneumatic

VITEZA

KZX Series - Reciprocating Refrigeration Compressors




DAIRY & ICE CREAM


FOOD PROCESSING


BREWERY & BEVERAGE


PHARMACEUTICALS


FERTILIZERS & CHEMICALS


FISH & MEAT PROCESSING

VITEZA
KZX Series - Reciprocating Refrigeration Compressors

The VITEZA, KZX Series of reciprocating refrigeration compressors is engineered to set new industry standards. These compressors cater to a wide range of industrial refrigeration needs across various sectors, including Dairy and Ice Cream, Food Processing, Cold Storage, Ice Plants, Beverages & Breweries and Fish &z Meat Processing plants. The KZX series is designed to operate with NH3, R22, R134a, R404A, and R507 Refrigerants.

Superior COP (Coefficient of Performance) values at full and part load operation, compact and robust design to its low energy consumption and wide operating range are some of the key features of the KZX Series refrigeration compressors. Additionally, the KZX Series refrigeration compressors guarantee uninterrupted performance and optimize cost of ownership.

Experience excellence with the Kirloskar KZX Series – the epitome of efficiency, reliability, and performance in industrial refrigeration.

- High coefficient of performance (COP), with excellent performance even under part load conditions
- Capacity control for each cylinder which greatly reduces operating cost & to match the cooling load at any given time
- KRMS integration with VFD offers step less capacity control
- Large suction chamber is provided to reduce the pressure drop and to minimize effect of suction gas superheating
- Robust crankcase design ensures low noise and vibration
- Externally mounted suction gas strainer make service and maintenance easy

Technical Specification

Sr. No.	Description	Unit	KZX4	KZX6
1	Cylinder	Nos.	4	6
2	Dimensions (L X W X H)	mm	900 X 890 X 1180	1104 X 930 X 1180
3	Swept Volume @ 1500 RPM	m^3/hr	290	435
4	Bore x Stroke	mm	110 X 85	110 X 85
5	Weight (w/o Flywheel)	Kg	615	800

Rating Chart for KZX Single Stage Compressor

Models		KZX4				KZX6			
Refrigerant	Evaporating Temp °C	Condensing Temperature °C				Condensing Temperature °C			
		35°C		40°C		35°C		40°C	
		Qo 'kW'	Pe 'kW'	Qo 'kW'	Pe 'kW'	Qo 'kW'	Pe 'kW'	Qo 'kW'	Pe 'kW'
Ammonia	10	411.1	52.4	400.7	59.7	619.4	77.8	603.8	88.5
	5	340.9	51.9	327.8	58	513.6	77	493.6	86
	0	280	51.2	267	55.3	421.9	75.9	402.2	82.1
	-5	227.4	49.6	218.5	52.3	342.5	73.6	329.2	77.6
	-10	182	45.6	172.5	46.8	274.3	67.7	259.9	69.4
	-15	137.3	41.1	130.2	42.6	206.8	60.9	196.2	63.2
R22	10	370.9	62.5	349.8	68.6	558.9	92.8	527	101.8
	5	308.6	60.9	289.6	65.2	465	90.2	436.2	96.7
	0	255.7	58	240.3	61.8	385.4	86	362	91.7
	-5	208.3	54.7	196.4	57.4	313.9	81.2	295.8	85.2
	-10	168	50.6	157.7	52.4	253.1	75	237.4	77.8
	-15	133	45.6	124.3	47.1	200.3	67.7	187.2	69.9
	-20	103.9	40.9	96.9	41.5	156.7	60.6	146	61.5
R404a	0	224	57.2	204	60.3	337.6	84.8	307.4	89.4
	-5	180.4	53.6	163.2	56.2	271.9	79.5	245.9	83.3
	-10	143.6	49.8	128.5	51.6	216.4	73.9	193.6	76.5
	-15	111.6	45.3	99	46.5	168.2	67.2	149.2	69.0
	-20	85	40.4	74.2	40.8	128.1	59.9	111.8	60.5
R134a	10	191.6	38.8	179.7	40.3	288.7	57.5	270.8	59.8
	5	156.4	35.9	146.3	37.6	235.7	53.2	220.5	55.8
	0	126.4	33.6	117.4	35.5	190.5	49.8	176.9	52.6
	-5	100.7	31.4	93.2	33.1	151.8	46.6	140.5	49.1
	-10	79.1	29.3	72.5	30.2	119.2	43.5	109.3	44.8
	-15	60.8	26.2	54.9	26.6	91.6	38.9	82.7	39.4
	-20	45.1	23	40.4	23	68.0	34.1	60.9	34.1

Note:

1. Qo: Refrigeration effect (Cooling Capacity)
2. Pe: Power required at compressor shaft
3. Capacity is at 1500 RPM
4. Power consumption and capacities are proportional to the speed.
5. Capacity is at 0°C superheat for ammonia, 5°C for R22 & 134a, at 15°C for R404a refrigerant.
6. Interpolation of ratings is permissible
7. For any condition outside the range given above please refer to KPCL.

Rating Chart for KZX Two Stage Compressor Rating Chart for System C Inter-Stage Gas Cooler

Models		KZX31				KZX42			
Refrigerant	Evaporating Temp °C	Condensing Temperature °C				Condensing Temperature °C			
		35°C		40°C		35°C		40°C	
		Qo 'kW'	Pe 'kW'	Qo 'kW'	Pe 'kW'	Qo 'kW'	Pe 'kW'	Qo 'kW'	Pe 'kW'
Ammonia	-20	95	30.5	93.7	32.6	133.0	45.2	131.2	48.3
	-25	76.4	28	75.4	30	107.0	41.5	105.6	44.5
	-30	61.1	25.6	60.3	27	85.5	38.0	84.4	40.0
	-35	48	23	47.1	24.3	67.2	34.1	65.9	36.0
	-40	36.5	20.6	36.2	21.6	51.1	30.5	50.7	32.0
	-45	27.6	18	-	-	-	-	-	-
R22	-25	74.8	32.7	74.6	35	112.2	48.5	111.9	51.9
	-30	62.4	30.2	62	32	93.6	44.8	93.0	47.5
	-35	51.3	27.6	50.4	29.6	77.0	40.9	75.6	43.9
	-40	42	25.2	41.8	26.2	63.0	37.4	62.7	38.9
	-45	33.7	22.6	32.8	23.6	50.6	33.5	49.2	35.0
R404a	-25	74.8	40	72.4	42.2	112.2	59.3	108.6	62.6
	-30	64	36.8	61.2	38	96.0	54.6	91.8	56.4
	-35	52	33.1	50.4	34.4	78.0	49.1	75.6	51.0
	-40	42.4	30	40.8	31	63.6	44.5	61.2	46.0
	-45	33.8	26.8	32.6	27.7	50.7	39.7	48.9	41.1

Note:

1. Qo: Refrigeration effect (Cooling Capacity)
2. Pe: Power required at compressor shaft
3. Capacity is at 1500 RPM
4. Power consumption and capacities are proportional to the speed.
5. Capacity is at 0°C superheat for ammonia, 5°C for R22 & 134a, at 15°C for R404a refrigerant.
6. Interpolation of ratings is permissible
7. For any condition outside the range given above please refer to KPCL.

Approximate Ice Production Capacity with Ammonia Refrigerant at (-)15°C Evaporating Temp and 40°C Condensing Temperature.

Compressor Speed 'RPM'	KZX4		KZX6	
	Ice Produced in 24hrs 'Ton'	Required Shaft Power 'kW'	Ice Produced in 24hrs 'Ton'	Required Shaft Power 'kW'
600	7.4	18.4	14.9	27.7
1000	12.4	30.8	23.4	46.2
1450	17.8	44.8	32.9	67.2

*We reserve the right to modify the specifications in accordance with improved designs. Although every effort has been made to maintain accuracy in the data given, the figures are no way binding.

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