



Enriching Lives

# KIRLOSKAR

## KRX Series - Screw Compressor Package

### Compressor applications

Industrial Refrigeration, Food & Beverage Processing, Preservation, Process Cooling...



## KIRLOSKAR GROUP

Kirloskar Group, a multibillion US Dollar entity, is one of the leading engineering conglomerates in India. It has more than hundred years of proven expertise in the specialist areas such as Refrigeration, Gas Compression, Marine HVACR, Power, Water, Air and Environmental Protection with a portfolio of world class industrial products and turnkey solutions. Kirloskar holds the reputé in the industry for its good business values and excellent customer satisfaction. Plants of Kirloskar group are accredited to ISO 9001-2000, ISO 14001, OHSAS and TS 16949 to produce world class products.

### Kirloskar Pneumatic Co. Ltd. (KPCL)

Founded in 1958 as a part of Engineering Conglomerate Kirloskar Group, KPCL is one of the most accomplished names in the HVACR business.

Due to its unique technological edge, KPCL has been enjoying customer preference for almost half a century, serving products & customised solutions in diverse fields like Refrigeration, Marine HVAC, Gas Compression, CNG, Air compression and Transmission.

### Certificates & Awards

- ISO 9001:2008
- ISO 14001:2004
- OHSAS 18001:2007
- Employer branding award
- CII Exim Brank award for strong commitment towards excellence
- CII Best Kaizen award
- CII Excellence in Energy Management

### KRX SCREW COMPRESSOR PACKAGE

- The KRX Screw packages are specially designed for industrial refrigeration and air conditioning applications. The package is factory wired and tested.
- The package can be used directly with DX or flooded chillers or vessels.
- Available in wide range from 50 kW to 1230 kW of refrigeration capacity.
- Designed as per KPCL's standard.
- Conducive to all refrigerants (NH3, R-22, R-134a, R290, R-404 A, R 407C, etc...).

### MAINTENANCE

- Extremely good operating life without major servicing
- Wide after sales network

### EASY INSTALLATION

- Easy to handle with four lifting eyes on the unit.

### OPERATION

- Designed for continuous heavy industrial duty.
- Simple to operate.

### STANDARD SCOPE OF SUPPLY

The XRV Screw Compressor is delivered along with a flexible metal coupling installed on machined plates. These screw compressors have steel rotors for a reliable service, manual Vi setting, capacity regulation by sliding valve from 100% to 10%.

### REFRIGERANT PIPING

- Suction stop & check valve
- Suction filter
- Discharge stop & check valve
- Suction/discharge equalising valve

### OIL SEPARATOR

The separator is self supporting the screw compressor and consists of:

- Oil electrical heating with thermostat
- Oil level sight glass
- Low oil level switch.
- High oil separation is achieved by a knit mesh wire pack.

### LUBRICATION CIRCUIT

- Removable oil filter of large capacity with service valves
- Oil injection system for the screw compressor

### OIL COOLING

- The standard system is water cooled oil cooler with standard amenities like vent drain valves etc.

### INSTRUMENTATION

230V - single phase: 50 hz including:

- Discharge Pressure Switch
- Discharge Thermostat
- Oil Filter Pressure Switch
- Discharge Pressure Gauge
- Differential Pressure Switch
- Suction Pressure Gauge
- Suction Pressure Switch

### OPTIONS

#### OIL COOLING

- 1) Thermosyphon – shell and tube oil cooler
- 2) Liquid refrigerant injection type equipped with:
  - Solenoid valve with filter
  - Thermostatic expansion valve
  - Stop valve

#### OIL SEPARATOR AND OIL FILTER

- Available with coalescing element
- Duplex filter with online change over valve

#### ECONOMIZER (SUPER FEED)

Suitable for Screw unit operating under  $-20^{\circ}\text{C}$ , it consists of heat exchanger (open flash or shell and coil). This shall be a loose supply to be installed at site.

#### ELECTRICAL MOTOR

IP55 motors (mounted & aligned on package) are having 'F' class insulation rotating at a speed of 3000 RPM (synchronous), B3 version, in compliance with I.E.C norms or as per IS standards.

#### ELECTRONIC CONTROL PANEL

A complete custom designed panel is available. This panel offers a complete control of the unit via electronic transmitters and readable output of temperatures and pressures.

#### HAZARDOUS AREA

For these applications, packages are available in Class I or II

#### AUTOMATIC VARIABLE VI

In order to improve efficiency of the package, a complete motorized automatic Vi control system is available on request.

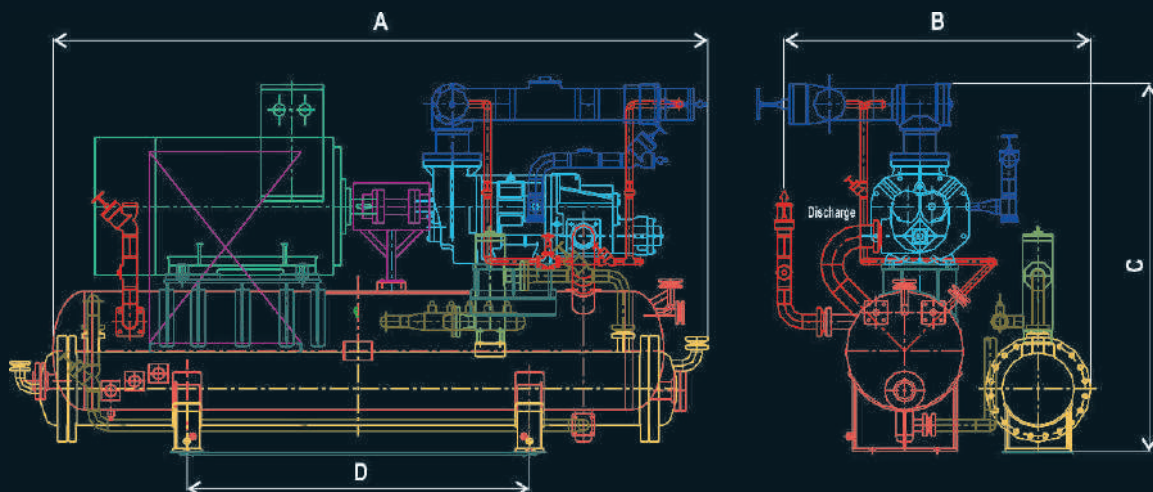
#### NOISE HOOD

Acoustic enclosure can be provided to limit sound pressure level

#### CONSTRUCTION CODE

KRX packages are available on request as per design code ASME Sec VIII, Div.1 with/without U code stamp.

KRX 12R, 161 AND 201 SERIES



## DIMENSIONS WEIGHTS AND VOLUMES OF KRX PACKAGES

Model	A mm	B mm	C mm	D mm	Weight kg	Suction valve	Discharge valve
KRX 12R1	2400	1140	1580	1600	833	80	65
KRX 12R3	2350	1200	1610	1600	1121	100	80
KRX 12R4	2900	1350	1650	1600	1550	100	80
KRX 12R5	2900	1400	1820	1600	1550	100	80
KRX 1616	3000	1550	1850	1800	2019	125	100
KRX 1619	3050	1600	1885	1800	2045	125	100
KRX 2011	3100	1560	1900	1800	2393	150	125
KRX 2014	3150	1613	1925	1800	2891	150	125
KRX 2016	3600	1600	1925	1800	2940	150	125
KRX 2019	3600	1613	1925	1800	2975	150	125

All dimensions are exclusive of motor. Net weight without oil cooler, oil charge and motor.  
All dimensions are given for information only. They include shell and tube oil cooler in any case, consult the general arrangement of your order

REFRIGERANT	MODEL	HIGH PRESSURE CONDENSING TEMPERATURE 40°C EVAPORATING TEMPERATURE °C										BOOSTER -10°C	
		-40		-30		-20		-10		0		-40°C	
		Qo kW	Pa (kW)	Qo kW	Pa (kW)	Qo kW	Pa (kW)	Qo kW	Pa (kW)	Qo kW	Pa (kW)	Qo kW	Pa (kW)
NH3	KRX 12R1	44	42	74	45	117	50	158	52	239	54	47	12
	KRX 12R3	90	57	106	61	166	68	222	71	333	74	70	17
	KRX 12R4	82	70	135	76	210	84	280	88	418	92	93	22
	KRX 12R5	99	84	162	90	252	100	334	106	499	111	105	26
	KRX 1616	102	84	163	92	248	101	335	106	505	110	105	25
	KRX 1619	124	100	197	110	301	121	406	126	610	132	128	30
	KRX 2011	155	118	245	129	370	143	485	152	722	161	163	37
	KRX 2014	216	151	341	165	515	183	675	195	1004	204	221	46
	KRX 2016	239	171	376	187	567	208	745	221	1109	234	244	52
KRX 2019	264	192	416	206	628	227	825	241	1227	253	267	57	
R-22	KRX 12R1	52	43	86	48	131	53	161	54	236	56	74	16
	KRX 12R3	76	59	123	65	184	73	224	74	326	77	101	22
	KRX 12R4	97	74	156	82	230	92	281	93	408	97	125	28
	KRX 12R5	117	88	185	98	273	110	335	110	485	115	148	33
	KRX 1616	118	94	186	105	273	116	338	110	494	114	153	32
	KRX 1619	144	112	225	126	330	139	408	132	595	137	184	38
	KRX 2011	183	127	279	144	403	160	479	156	692	162	209	45
	KRX 2014	254	165	387	185	560	206	666	200	962	208	290	58
	KRX 2016	281	186	428	210	618	233	735	227	1062	236	321	65
KRX 2019	310	208	472	229	682	253	814	247	1175	259	355	72	
With Economizer													

Qo : Refrigeration Capacity; Pa: absorbed Power on shaft; Rotation Speed: 2975 rpm, 50 Hz; Suction Superheat: 5°C; Sub Cooling: 5°C (high stage)  
Water cooled oil cooler. Please consult us for any further information.

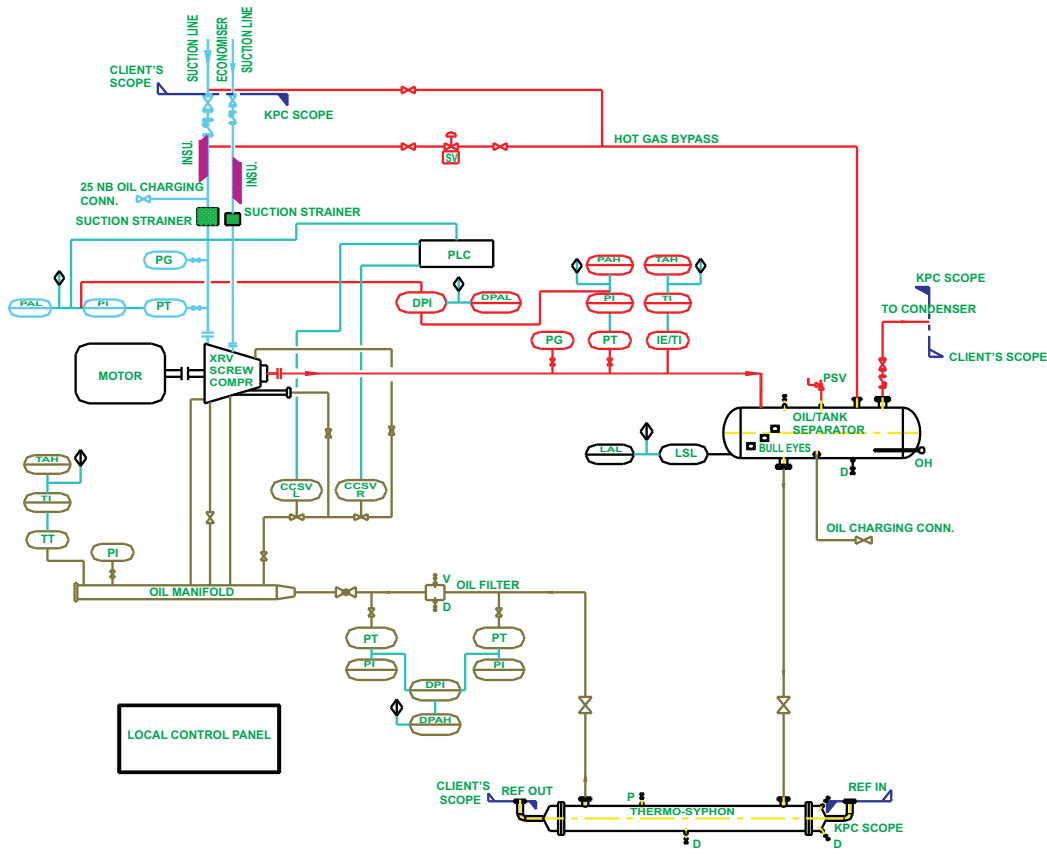


### TECHNICAL DATA

MODELS	SWEPT VOLUME (M <sup>3</sup> /hr), 50 hz	SWEPT VOLUME (M <sup>3</sup> /hr), 60 hz	NOISE LEVEL* (dba)
KRX 12R1	293	352	81
KRX 12R3	397	476	89
KRX 12R4	489	586	91
KRX 12R5	576	691	93
KRX 1616	593	712	84
KRX 1619	710	852	84
KRX 2011	840	974	84
KRX 2014	1070	1284	85
KRX 2016	1219	1463	86
KRX 2019	1348	1618	86

\*Noise Level is measured under "free field condition" at 1 meter from the package.

# P & I DIAGRAM FOR COMPRESSOR SKID



Any data or other information in this brochure shall be deemed to be a general description of product properties and shall not be binding upon KPCL.  
 Binding product specifications may be agreed by KPCL in bids, proposals tenders or other offers issued in response to inquiries or calls for tenders or other invitations to bid.

## Kirloskar Refrigeration

**KIRLOSKAR PNEUMATIC CO. LTD.**

Regd. Office: Hadapsar Industrial Estate, Pune 411 013.

Factory: Saswad, Taluka Purandhar, District: Pune 412 302.

Phone: 020-26727000

Fax: 020-2687 0514/0297

Email: [acref@kpcl.net](mailto:acref@kpcl.net)



### Indian Offices:

- Ahmedabad 079-27511898, 27540030
- Chennai 044-28192092/3066
- Cochin 0484-2664725
- Hyderabad 040-23260743/6
- Kolkata 033-22119080/81
- Lucknow 0522-2624367, 2627120
- Mumbai 022-25175656/1135
- New Delhi 011-46561666/67
- Pune 020-26727000
- Visakhapatnam 099480 98619

### Overseas Offices:

Sri Lanka, Bangladesh, Malaysia, Vietnam, Phillippines, Thailand, Indonesia, Iran, Iraq, Oman, UAE, Saudi Arabia, Sudan, Turkey, Australia, South Africa, Kenya

- [kpclahd@vsnl.net](mailto:kpclahd@vsnl.net)
- [kpclarchn@airtelbroadband.in](mailto:kpclarchn@airtelbroadband.in)
- [titusj@kpcl.co.in](mailto:titusj@kpcl.co.in)
- [hyd2\\_kpclhyd@sancharnet.in](mailto:hyd2_kpclhyd@sancharnet.in)
- [kpclcal@vsnl.com](mailto:kpclcal@vsnl.com)
- [kpcllkn@airtelbroadband.com](mailto:kpcllkn@airtelbroadband.com)
- [kpclmum79@mtnl.net.in](mailto:kpclmum79@mtnl.net.in)
- [srivastavaamit@airtelmail.in](mailto:srivastavaamit@airtelmail.in)
- [acref@kpcl.net](mailto:acref@kpcl.net)
- [rajsekharbv@kpcl.co.in](mailto:rajsekharbv@kpcl.co.in)

Visit us at: [www.kirloskarkpcl.com](http://www.kirloskarkpcl.com)

KRX000005E0211