Kirloskar
Pneumatic

RECIPROCATING COMPRESSOR

Engineering for Next Generation


Steel


Oil & Gas


Textile


Food & Beverages


Pharmaceutical


Power

A Future Filled with Potential!

Kirloskar Pneumatic Company Limited (KPCL), founded in 1958, is one of the core company of the Kirloskar Group of companies. A pioneer in compressed air and gas solutions that includes Air Compressors, Air Conditioning and Refrigeration Systems, Process Gas Systems, Vapour Absorption Systems and Industrial Gear Boxes, KPCL has grown over the last 60-years, driven by a rich legacy in manufacturing and industrial innovation.

With a strong global presence, KPCL's state-of-the-art facility in Pune undertakes research & development, manufacturing, assembly, testing, meteorology and other business processes. Focusing on continually evolving and developing our offerings, KPCL has led the way in developing sophisticated, hi-tech, future-ready products and solutions for further strengthening our long-standing relationships with our customers.

Relentless innovation and smart future-ready, dependable solutions

In-House Technology and Infrastructure

Kirloskar Pneumatic has state-of-the-art manufacturing facilities to consistently manufacture customer-centric solutions and deliver orders promptly and reliably.

Our manufacturing facilities are ISO certified and it is well equipped with in house foundry, CNC and VMC machining center, grinding machines, paint shop, NABL accredit testing facility. It helps maintain high precision and tolerances, towards meeting the highest quality standard product under supervision of an expert team. All of this guarantees that customers will receive world-class goods that meet their needs efficiently.

Industries we serve


Air Separation


Chemical


Gas- Petrochemical Refinery


Power & Ash Handling


PET Blowing


Sugar & Co-Generation


Steel


Cement & Ready Mix


Pharmaceuticals


Food & Beverages


Fertilizer


Textile

Why

Kirloskar's Reciprocating Air/Gas Compressors?

Kirloskar's Horizontal Balanced Opposed Piston air & gas compressors are the result of extensive know-how and experience of more than six decades in design, manufacture, supply and installation of air & gas compressors of various design, capacities and pressures for a number of applications. Due to wide modular design, our compressors can meet any combination of capacity and pressure, as indicated in this catalogue. Compressors up to 6 stages with capacity ranging from 3 M3/min to 176 m3/min and pressure range up to 400 kg/cm^2 g

Our proud experience gathered over many years enable us to design & supply compressors units tailored to customer needs as per the application requirements. These machines mostly conform to the latest edition of API-618 with certain deviations

These compressors have been designed for minimum power consumption, lower operating temperatures and maximum efficiency, making them one of the most cost-effective & efficient machines.

A highly experienced team provides comprehensive service from initial consultation to on-site commissioning.

Endurance

Reliability and efficiency in adverse conditions
High altitudes
High temperatures

Reliable

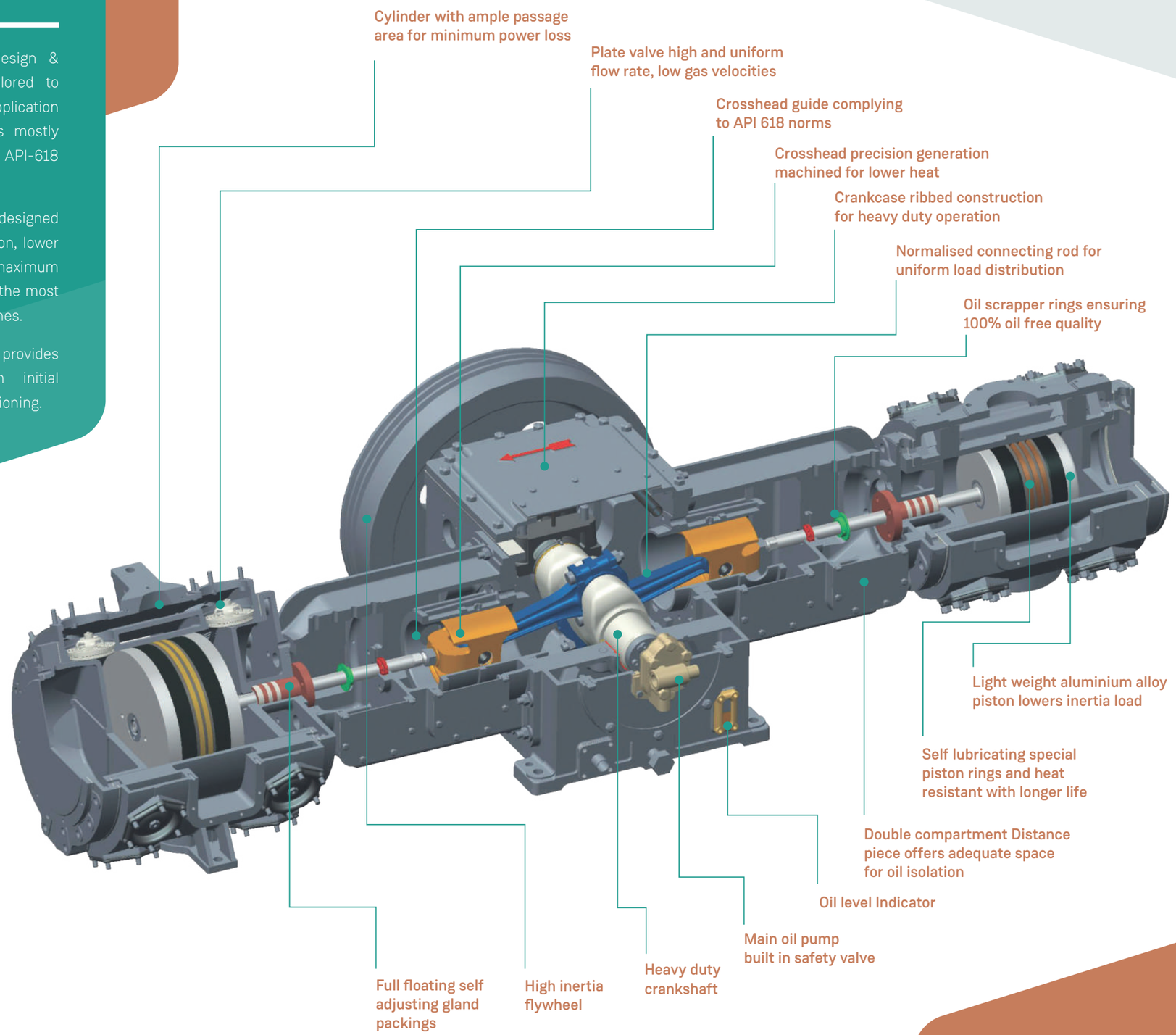
Pre tested compressor packages
Extensive testing for tortional and inertia forces
Low vibration design
Advance PLC- control system

Easy To Install

Ready to install- quick startup
No special foundations or anti-vibration precautions
Lower footprint
Minimal water and electrical connections

Energy Efficient

Optimum design to deliver maximum flow/kW
Lower total operating cost
Lower life cycle cost



Revolutionary Zero Coupled Medium Pressure

Reciprocating Compressor

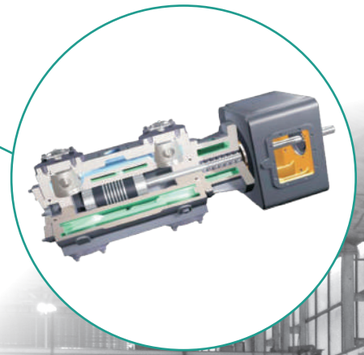
(Water-Cooled / Air-Cooled)

100% Oil - Free Air

Strategically designed crosshead housing and long-distance piece with efficient oil scrapper ensures separation of oil from compression chamber.

» Efficient & wear resistance scraper rings isolate oil to the first compartment of the distance piece.

» Piston rings & guiding rings are made from PTFE for longer duty cycle. Provision for extra wide guide rings reduces wear & tear of the rings.

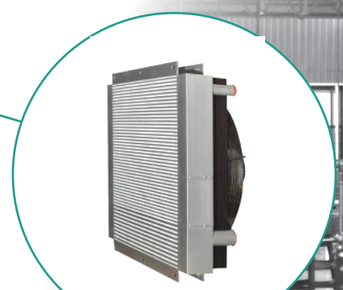


Optional Air cooled

» Air cooled unit are offered at sites where water availability and quality is an issue

» Uniquely designed Aluminium block fin type combi air-cooled inter/after cooler and radiator in single frame

» Unique moisture separator ensures no risk of condensed water in downstream.



Smart Control & Monitoring (HMI)

» The compressors come with inbuilt microprocessor-controlled starter cum control panel

» Real time will be displayed on the controller for any alarm to be retained up two weeks

» Starters are Type 2 co-ordination- under short circuit conditions, the contractor or starter shall prevent damage to the installation or person.

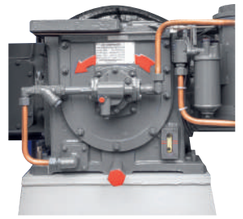
» IOT based smart control & monitoring system for real time data monitoring are available as optional scope. With this live monitoring of compressor data , graphical display of major parameters, alarms and trip history , alerts for maintenance will be made available on web / Via SMS

Vibration Free Performance

» The revolutionary zero coupled design for two stage reciprocating compressors

» The cylinders are opposed to one another, with crank-throws set at 180 Deg. The weights of the reciprocating parts of opposing cylinders are equalised, therefor there are no horizontal or vertical imbalanced forces.

» Due to closely spaced crank-pin centres, the movement (horizontal couple) is very small



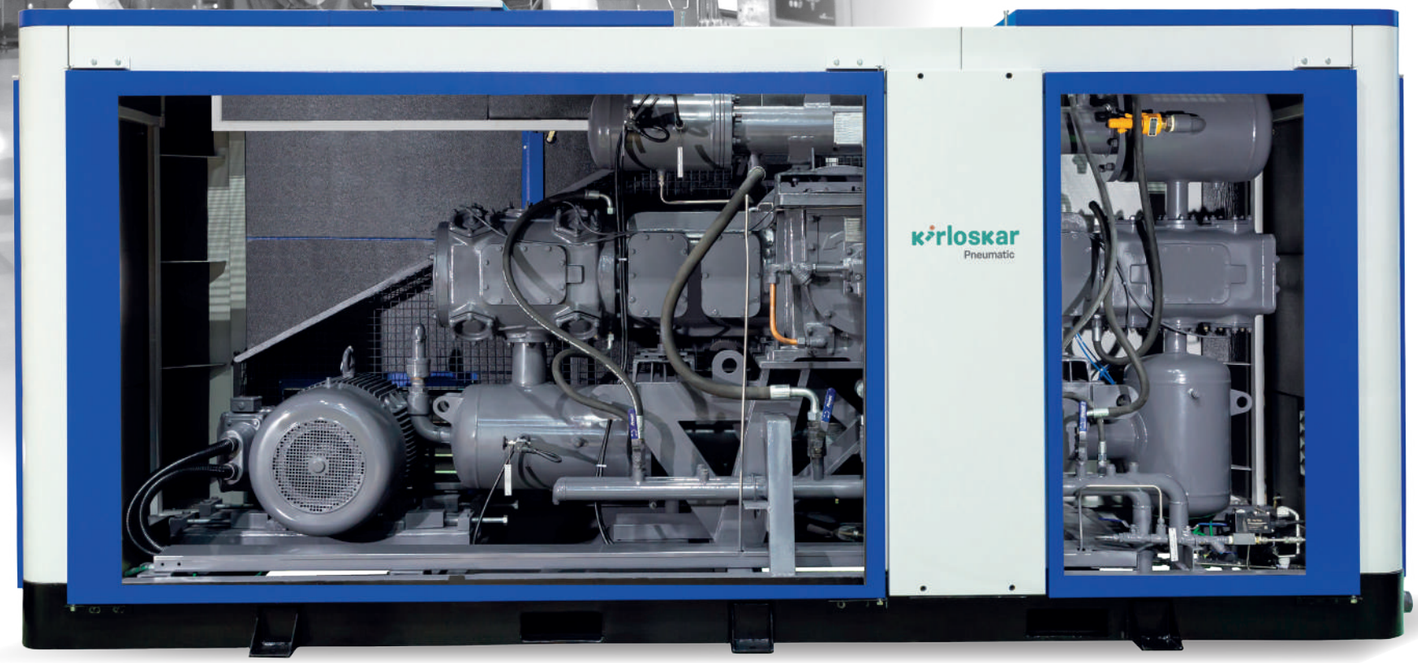
Canopy (Optional)

» Acoustically designed, modular metallic canopy for silent operations

» Specially designed canopy to facilitate effective ventilation

» Easy accessibility to internal components

» Can be opened when the compressor is in operation



Gas Compressors: Customized Solution

With our unmatched expertise in engineered machines, we can provide complete end to end solutions for compressors. Our wide range of reciprocating gas compressors can handle a wide variety of the gases and gas mixtures tailor to specific requirements of your processes.

Compliance to standard

Kirloskar Gas Compressors can be designed as per APR 618, API 11P, ISO 1940, ISO 10816, API 671, API 677, API 661, ASME Section VIII, TEMA, ASME B 31.1 & B 31.3, API RP 520, OSHA, IEC 60079, IEC 60529, IS 2148 and IS 4758 to name a few.

Gases Handled

- Dry Cracked Ammonia (Hydrogen Rich)
- Crude Gas (Mixture of C2F4 & R22)
- Tetrafluorethylene (TEF)
- Carbon Dioxide (Dry & Wet)
- Bone Dry Nitrogen
- Bio-Gas
- Natural Gas
- Argon
- LPG
- Ammonia
- Hydrogen
- Acetaldehyde
- Vinyl Chloride
- Feed Gas
- Methane
- Propane
- Inert Gases
- Freon
- Methyl Chloride

Note: For other gases please contact our nearest office / head office

Industries Served

Petrochemical, Oil Fields, Refineries, Fertilizer, Pulp & Paper, Food Processing, Chemicals.

Constructional Features

Main Frame: its heavy and ribbed construction rugged support for running gears. The rigid frame design and counter weighted crankshafts minimize vibration and provide for low moments and minimum foundation requirement.

Crankshaft: Forged from heat-treated high tensile strength alloy steel, the crankshaft is fully stress relieved. The bearing journals and crankpins are ground with precision and polished to meet exacting tolerances.

Cylinder: Cylinders materials includes cast iron, nodular iron, cast steel, fabricated carbon or stainless steel and forged steel which ensures that each cylinder provides maximum performance.

Cross Head: Box type machine finished crosshead are designed for maximum strength & ensures perfect guiding.

Connecting Rod: Connecting rods are designed for maximum strength & minimum weight. They are rifle – drilled for pressure lubrication of small end bearings

Piston & Piston Rods: Pistons are made of Al alloy or cast iron or other materials as per process. Opposed pistons are perfectly balanced to achieve stability of the machine piston rods are made of stainless steel designed to obtain maximum fatigue strength

Plate Valves: Superior valves , precise sizing & selection for each application for high efficiency & long lasting performance. Valves with greater flow area , ensuing pressure loss.

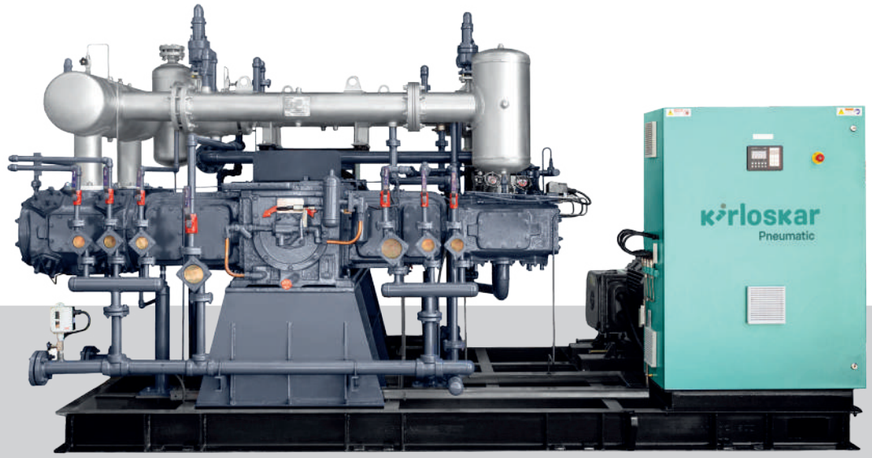
Note: Adaption to Gas Composition: Components valves, piston rods packaging, cylinders are specially selected according to the gas composition and humidity content of gas.

Wide Industrial Applications

Pressure Boosting | Gas Gathering | PSA Vapour Recovery Liquid Transfer | Gas Re-Injection

PET Compressor

Design to meet the PET Industry needs



Energy Efficient

Continuous Duty Operations

Lower Footprint

Environment Friendly

Smart Monitoring with IoT

Kirloskar's three/ four stage reciprocating compressors provides right flow, pressure & compressed air quality to maximize your productivity. Kirloskar's PET Compressors Provide:

- 100% Oil free air
- Integrated VFD for varying demand Patterns
- High efficiency reducing your lifecycle cost
- Reliable operation in tropical Indian environment
- Easy access of the machine for maintenance
- Robust construction enhances reliability
- Customizable configuration to meet any operational need.

Note: Accessories such as Canopied version, refrigerated air dryer, receiver tank, filters are available on request.

High Pressure Compressor

Design to meet high pressure compression upto 250 bar

Highly Reliable

Maximum Energy Saving

Continuous Duty Operation

Lower Cost of Ownership

Kirloskar's reciprocating compressors will meet your needs for high pressure compression upto 250 bar. Sturdy and designed for continuous industrial operation to deliver air safely, constantly and at low cost.

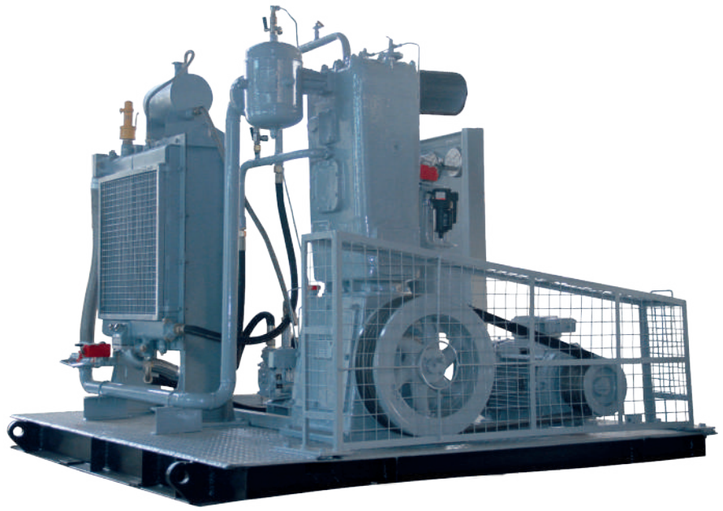
- Available up to 6 stages in balanced opposed/tandem design to meet your high pressure need.
- Double-acting cylinders minimize air leakages resulting in excellent volumetric efficiency. Low intercooler pressure drops result in lower pressure differential. This result in very energy-efficient operation.
- Low piston speed and low inter-stage temperatures preserve the internal components. This increases valves, rings and gaskets durability and there is no premature wearing. Long service intervals reduce maintenance time and cost.
- These Compressors can be foundation mounted or fitted on a skid and installed on a suitable industrial floor. Balanced opposed design reduces skid vibrations and provide stability of high-pressure air/gas pipes
- The advanced control system ensures safety and ease of operation by monitoring overall system performance through service indications, malfunction alarms and safety shutdowns.

Vertical Reciprocating Compressor

Energy efficient 100% oil free clean air

Oil Free Version with Water Cooled and Air-Cooled Heat Exchangers

- The compressors set the new standards for performance, efficiency, safety, reliability, sophistication and aesthetics.
- These are designed keeping the customer demand and applications in mind
- Compressors are engineered to run continuously round the clock with a few mandatory checks and with very minimal change of consumables
- Higher machine availability for the plant operation with minimal maintenance stoppage.
- Load/unload capacity control is provided which functions as per demand conditions.



Genuine Spares and Service

As good and efficient are our products, equally excellent are our spare parts along with our maintenance services that we offer through our offices and dealer network. Our dealer network and team of technicians are well equipped to handle all after-sales and support requirements for our products across India. We recommend using original spare parts for the compressors. The spares are generally supplied in pre-packaged kits for all items of a particular type of model and maintenance operation

Make the correct Choice

- Complies with OEM standards
- Ensures high performance of compressor
- Minimal service requirements
- Services and spares delivered with the lowest lead time
- In-house customer training facility
- Comprehensive field assistance
- Dedicated customer care center for quick response

Technical Specifications

Single Stage Water Cooled Reciprocating Compressor

Model	Capacity	Working Pressure	Motor Rating
	(FAD) CFM	kg/cm²g	kW*
HA2T-37-2.5-W/WS/A/AS*	413	2.5	37
HA2T-37-4-W/WS/A/AS*	313	4	37
HA2T-45-2.5-W/WS/A/AS*	510	2.5	45
HA2T-45-4-W/WS/A/AS*	384	4	45
HA2T-55-2.5-W/WS/A/AS*	624	2.5	55
HA2T-55-4-W/WS/A/AS*	470	4	55
HA2T-75-2.5-W/WS/A/AS*	834	2.5	75
HA2T-75-4-W/WS/A/AS*	625	4	75
HA2T-90-2.5-W/WS/A/AS*	973	2.5	90
HA2T-90-3-W/WS/A/AS*	849	3	90
HB2T-200-2.5-W/WS/A/AS	2181	2.5	200
HB2T-200-3.5-W/WS/A/AS	1880	3.5	200
QL-110-2.5-W/WS/A/AS	1269	2.5	110
QL-110-4-W/WS/A/AS	948	4	110
QL-132-2.5-W/WS/A/AS	1522	2.5	132
QL-132-4-W/WS/A/AS	1130	4	132
QL-160-3.5-W/WS/A/AS	1477	3.5	160
QL-160-4-W/WS/A/AS	1369	4	160
QL-180-4-W/WS/A/AS	1451	4	180

Note-
* Canopy version for all above models is available.
* Aircooled version with or without canopy for all above models are also available.
* Compressor of customized requirement of higher pressure, capacities are also available.

FAD is measured at the following working pressure:-
- 7.5 Kg/cm²g variants at 7 Kg/cm²g
- 10 Kg/cm²g variants at 9.5 Kg/cm²g
- 10.5 Kg/cm²g variants at 10 Kg/cm²g
- 12.5 Kg/cm²g variants at 12 Kg/cm²g
- 15 Kg/cm²g variants at 14.5 Kg/cm²g

Model last digit nomenclature:-
W/WS/A/AS - Water cooled/Water cooled with canopy/Air cooled/ Air cooled with canopy

Conditions considered:-
Ambient Temp. - 35 °C
Suction Pressure - 1.033 Kg/cm²A
Relative Humidity - 60%
Water Temp. - 32 °C
Performance as per IS:5456

* - Models available with zero couple version.
Capacity measurement at the outlet of the package

Two Stage Water Cooled Reciprocating Compressor

Model	Capacity	Working Pressure	Motor Rating
	(FAD) CFM	kg/cm²g	kW*
HY2T-22-7.5-W/WS/A/AS*	131	7.5	22
HY2T-22-10-W/WS/A/AS*	116	10	22
HY2T-22-12.5-W/WS/A/AS*	100	12.5	22
HY2T-22-15-W/WS/A/AS*	94	15	22
HY2T-30-7.5-W/WS/A/AS*	188	7.5	30
HY2T-30-10-W/WS/A/AS*	169	10	30
HY2T-30-12.5-W/WS/A/AS*	155	12.5	30
HY2T-37-7.5-W/WS/A/AS*	232	7.5	37
HY2T-37-10-W/WS/A/AS*	211	10	37
HY2T-45-7.5-W/WS/A/AS*	247	7.5	45
HY2T-45-10-W/WS/A/AS*	242	10	45
HY2T-45-12.5-W/WS/A/AS*	236	12.5	45
HA2T-30-7.5-W/WS/A/AS*	191	7.5	30
HA2T-30-10-W/WS/A/AS*	171	10	30
HA2T-30-12.5-W/WS/A/AS*	157	12.5	30
HA2T-30-15-W/WS/A/AS*	146	15	30
HA2T-37-7.5-W/WS/A/AS*	238	7.5	37
HA2T-37-10-W/WS/A/AS*	223	10	37
HA2T-37-12.5-W/WS/A/AS*	204	12.5	37
HA2T-45-7.5-W/WS/A/AS*	287	7.5	45
HA2T-45-10-W/WS/A/AS*	264	10	45
HA2T-45-12.5-W/WS/A/AS*	245	12.5	45
HA2T-45-15-W/WS/A/AS*	235	15	45
HA2T-55-7.5-W/WS/A/AS*	341	7.5	55
HA2T-55-10-W/WS/A/AS*	332	10	55
HA2T-55-12.5-W/WS/A/AS*	306	12.5	55
HA2T-55-15-W/WS/A/AS*	279	15	55
HA2T-75-7.5-W/WS/A/AS*	477	7.5	75
HA2T-75-10-W/WS/A/AS*	438	10	75
HA2T-75-12.5-W/WS/A/AS*	410	12.5	75
HA2T-75-15-W/WS/A/AS*	352	15	75
HA2T-90-7.5-W/WS/A/AS*	616	7.5	90
HA2T-90-10-W/WS/A/AS*	507	10	90
QM-110-7.5-W/WS/A/AS	762	7.5	110
QM-110-10-W/WS/A/AS	681	10	110
RM-132-7.5-W/WS/A/AS*	938	7.5	132
RM-160-7.5-W/WS/A/AS*	1138	7.5	160
RH-132-10.5-W/WS/A/AS	813	10.5	132
RH-160-10.5-W/WS/A/AS	984	10.5	160
HA2Te-37-7.5-W/WS/A/AS	250	7.5	37
HA2Te-37-15-W/WS/A/AS	187	15	37
HA2Te-45-7.5-W/WS/A/AS	312	7.5	45
HA2Te-45-10-W/WS/A/AS	275	10	45
HA2Te-45-12.5-W/WS/A/AS	253	12.5	45

Three Stage Air/ Gas Compressor

	Model	Compressor Speed		Maximum Working Pressure		Free Air Delivery	
		RPM		kg/cm²g		m³/min	
		Min	Max	Min	Max	Min	Max
HA	3HA2T	400	750	16	40	2.7	8
	3HA2BIST	400	750	16	40	5.5	10.3
	3HA2TERT	400	750	16	40	2.9	5.6
	3HA4T	400	750	16	40	7.1	16
	3HA4BIST	400	750	16	40	8.4	16
	3HA4TERT	400	750	16	40	13.3	25.7

Four Stage Air/Gas Compressors

	Model	Compressor Speed		Maximum Working Pressure		Free Air Delivery	
		RPM		kg/cm²g		m³/min	
		Min	Max	Min	Max	Min	Max
HA	4HA2TERT	400	750	30	70	3.6	6.6
	4HA4T	400	750	30	70	5.3	10
	4HA4BIST	400	750	30	70	6.4	12
	4HA4QT	400	750	30	70	11.6	17.5
	4HA4PT	400	750	30	70	13.3	22
	4HA4TERT	400	750	30	70	7.4	14
HB	4HB4BIST	375	600	30	70	19.4	31.8
	4HB4BISNT	375	600	30	70	25	40.3
	4HB4TERT	375	600	30	70	30.7	49.7

Lubricated Compressors

Four Stage Air/Gas Compressors

	Model	Compressor Speed		Maximum Working Pressure		Free Air Delivery	
		RPM		kg/cm²g		m³/min	
		Min	Max	Min	Max	Min	Max
HA	4HA2TER	400	750	30	120	3.6	6.8
	4HA4	400	750	30	120	5.5	10.3
	4HA4BIS	400	750	30	120	6.6	12.3
	4HA4Q	400	750	30	120	11.9	18
	4HA4P	400	750	30	120	13.3	22
	4HA4TER	400	750	30	120	7.4	14
HB	4HB4BIS	375	600	30	120	19.4	31.8
	4HB4BISN	375	600	30	120	25	40.3
	4HB4TER	375	600	30	120	30.7	49.7

Five Stage Air/Gas Compressors

	Model	Compressor Speed		Maximum Working Pressure		Free Air Delivery	
		RPM		kg/cm²g		m³/min	
		Min	Max	Min	Max	Min	Max
HA	5HA4	400	750	120	250	3.8	8.3
	5HA4BIS	400	750	120	250	4.6	10
	5HA6	400	750	120	250	4.8	10.5
HB	5HB4BIS	375	600	120	250	18.6	39.7

Six Stage Air/Gas Compressors

	Model	Compressor Speed		Maximum Working Pressure		Free Air Delivery	
		RPM		kg/cm²g		m³/min	
		Min	Max	Min	Max	Min	Max
HA	6HA4	400	600	250	400	2.4	4

PET Compressors

Model	Stages	Maximum Working Pressure	Free Air Delivery		Motor Rating	
		kg/cm²g	m³/hr	cfm	kW	hp
PKE-05-RE	3	32	98	58	18.5	25
PKE-10-RE	3	32	190	112	30	40
PKE-20-RE	3	42	214	126	37	50
PKE-30-RE	3	42	282	166	45	60
PKE-40-RE	3	42	355	209	55	75
PKE-50-RE	3	42	471	277	75	100
PKE-60-RE	3	42	575	338	90	120
PKE-70-RE	3	42	707	416	132	180
PKE-80-RE	4	42	887	522	160	215
PKE-90-RE	4	42	1046	616	180	240
PKE-100-RE	4	42	1291	760	200	270
PKE-110-RE	4	42	1646	969	250	335

Vertical Reciprocating Compressor

Model	FAD Range		Maximum Working Pressure		Motor Rating	
	m³/min		kg/cm²g		kW	
TC-50	0.66	1.2	1	9	3.7	15
TC-100	1.2	2.3	1	9	5.5	22
TC-200	2.4	4.7	1	9	7.5	37

Note-

- All packaged versions include compressor, motor, aftercooler, control panel suitably mounted on deck. Air Dryer and Receiver are optional supplies.
- Self contained packaged versions include, in addition to above, a close circuit water cooling system thus eliminating the need for an external water supply.
- The above performances are given at sea levels and 30°C suction condition.
- Also available in silenced versions.
- FAD and Power tolerance as per IS-5456 latest edition.

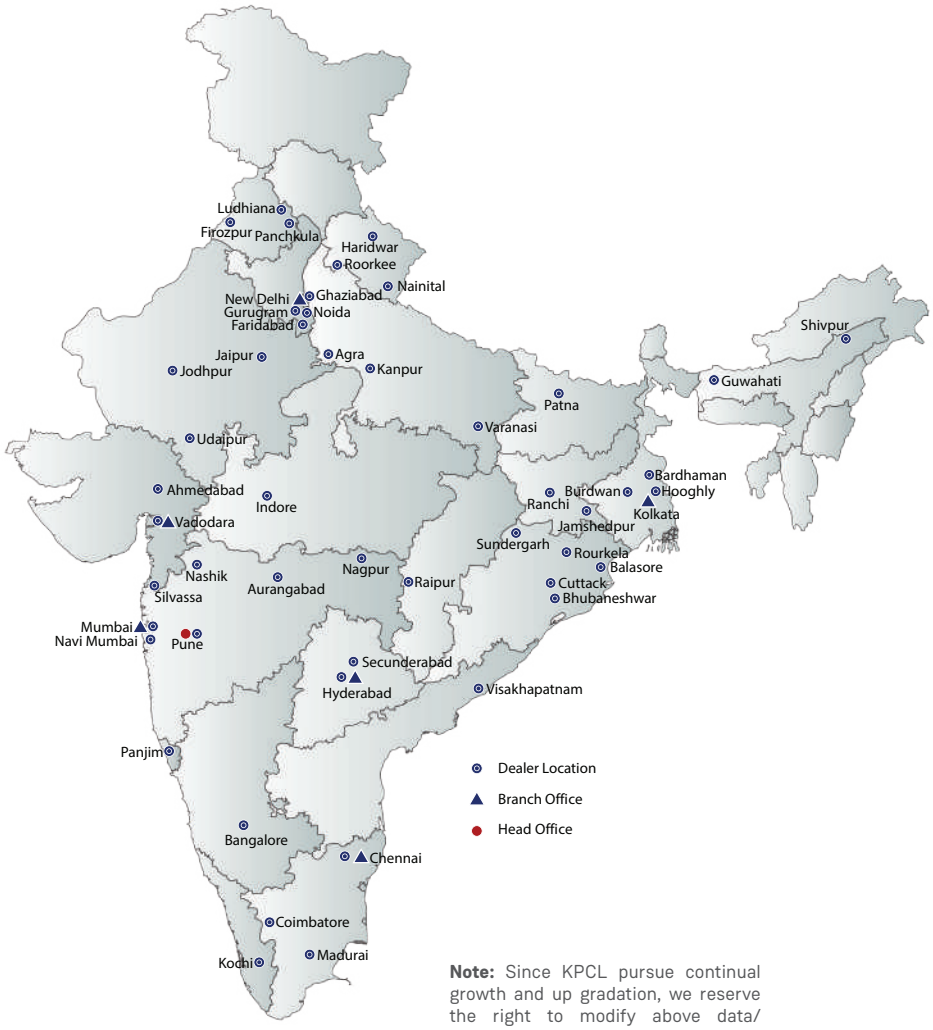
* Compressor of customized requirement of higher pressure, capacities are also available.

After Market Support

At KPCL, we believe in an extended relationship with our customers far beyond the sale of the product. We support the product and its maintenance throughout its life. Our well spread dealer network all over India supports the maintenance of our products.

Our Air Compressor Division (ACD) provides aftersales service for products in warranty and out of warranty, through the Head Office which is wide spread across our network of branch offices, channel partners, and service franchisees. The spare parts division caters to the need of all spare parts of reciprocating compressors, centrifugal compressors, screw compressors, railway brake compressors and high-pressure compressors.

Training is provided at the client site location after commissioning of our compressor system. As per the agreement with clients, our Customer Training Center conducts seminars and service workshops for the client representatives at our Head Office.



Note: Since KPCL pursue continual growth and up gradation, we reserve the right to modify above data/ specifications in accordance with improved design

Kirloskar Pneumatic Company Limited

A Kirloskar Group Company

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