



FRECON PLUS Rotary Screw Air Compressors



# Quality in details





# FRECON PLUS Rotary Screw Air Compressors

**BASE MOUNT VERSION** 





COMPACT VERSION (Includes, tank, dryer, pre & post filter)



# **COMMITTED TO EXCELLENCE**

**HERTZ** offers a complete range of compressors with proven quality through exceptional experience and know-how.

**HERTZ** FRECON PLUS series rotary screw air compressors provide highly efficient solutions. All **HERTZ** FRECON PLUS series compressor models are equipped with an exclusive **HERTZ** rotary screw block, manufactured with the most durable materials to ensure exceptional performance, efficiency and many years of operation.

# **CONTINUOUS SATISFACTION**

Thanks to continuous development and innovation of material, machining and assembly techniques, we're confident **HERTZ** FRECON PLUS series compressors will perform beyond your expectations.

# **USER FRIENDLY DESIGN**

All **HERTZ** models are manufactured to suit a broad range of applications, easy & minimum maintenance, have long maintenance intervals and low operating costs. All spare parts are easily accessible from several CAPS service locations nationwide.

#### WORLDWIDE DISTRIBUTION

**HERTZ** offers the most reliable solutions for all kind of applications worldwide. The brand is represented by subsidiary companies and authorised partners in over 50 countries, with CAPS Australia the national sales and service agent in Australia.





# **ROTARY SCREW BLOCK**

- New generation rotary screw blocks, designed with latest technological tools like "Computational Fluid Dynamics (CFD)" and "Finite Element Method (FEM)" and manufactured using high-end manufacturing techniques, provide high efficiency, durability and low energy consumption with new rotor profile and lobe combination.
- Each block contains new generation bearing system in which the bearings with three times more load carrying capacity than the standard designs are employed.
- The new rotor profile reduces air leakage with optimal lobe combination and decreases the torque needed to operate, less energy is needed to operate which leads to lower operating costs.

### MAIN MOTOR AND DRIVE SYSTEM

- High efficiency MEPS2 class IP55 motors working with 3 phase/50Hz power inlet are used as standard in the FRECON PLUS series.
- Aside from driving motor with star-delta connection and soft starter, motor speed is adjusted according to the airflow demand by the invertor which adjusts the supply frequency of the motor leading to less energy consumption.
- The rotor shaft is driven by direct-drive with a flexible coupling placed between rotary screw block and main motor shaft.
- As a result the mechanical transmission losses are lower.
- The direct-drive mechanism is approximately three percent more efficient than the belt-pulley mechanism and it is mostly maintenance-free.
- The absence of belt and pulley means noise and vibration levels become noticeably lower.

# **AIR SUCTION SYSTEM**

- Developed by using sophisticated engineering analysis tools like FEM and "Fluid Dynamics".
- Simple design consisting of three control block units, a solenoid valve and a control cylinder, periodical maintenance services of the suction regulators are done easily and quickly.
- First class materials used in the suction regulator manufacturing provide reliable operating performance up to 8000 hours.
- The suction valve is fully perpendicular when opened, providing almost straight and unidirectional airflow and increased air outlet area by 25%. This new profile design of the suction regulator gives low pressure drops and high performance.
- Two stage air suction filter system consisting of replaceable front-panel filter from micro-glass fiber, replaceable cassette type air intake filter with paper element minimizes the problems caused in dirty environments by providing clean air for the rotary screw block and the cooling system.

### **AIR / OIL SEPARATORS**

- More effective separation, deep bedded and meshed separation layers.
- These separators have high performance design providing three-stage separation.
- Less than 3 mg/m³ of oil density is transferred with compressed air during separation.



### **COOLING SYSTEM**

- Aluminium combi cooler with long-life bar/plate system guarantees trouble-free operation in all conditions.
- Four-way thermostatic valve lengthens the lifecycle of oil and eliminates the risks of malfunctioning by preventing condensation at low temperatures.
- New blade profiles are supported with silent and effective axial fans operated by a standalone electric motor.
- New fan seats provide easy access and short time periods for clean-up during maintenance.
- Effective efficient cooling is achieved with variable speed drive (VSD) fan motor.

(except FRECON 5-18 PLUS and water cooled models)

#### **ELECTRICAL SYSTEM**

- FRECON PLUS series has LCD control panel indicating operational and service functions in a way that users from every level of experience can easily understand.
- Mechanical safety systems are supported with PLC controlled safety switches and relays to increase reliability.

# **CANOPY DESIGN**

- Canopy design requires minimum floor space.
- Ergonomic design provides easy access for maintenance service by enabling access to every part of the compressor.
- Easily demountable-mountable service covers.
- Vibration pads produced from special rubber material to eliminate vibration.
- Electrostatic powder coat paint that is durable against corrosion and impacts.
- Flameproof foam canopy overlay that minimizes noise.

# SAFETY AND WARNING SYSTEMS

- Main motor and fan motor overload control.
- Phase order, absence and instability control.
- Main motor overheat monitoring with PTC.
- · Rotary screw overheat control.
- High pressure control.
- · Separator clogging warning system.
- · Intake filter warning system.
- Safety valve for separator tank.
- · High pressure safety valve.
- · Emergency stop button.
- Maintenance time warning system.

# **STANDARD FEAUTURES**

- High efficiency rotary screw block
- MEPS 2, IP55 main motor suitable for invertor application.
- Heavy-duty invertor.
- · Direct-drive system with flexible coupling.
- VSD fan motor.

(except FRECON 5-18 PLUS and water cooled models)

- Demountable acoustic canopy.
- · Rigid base plate.
- · Micro-glass fiber pre-filter in EU3 norm.
- Air/oil separator providing ≤3 mg/m³ oil density and its tank.
- Dry type air intake filter at 3 micron resolution.
- Full flow oil filter at 10 micron resolution.
- Electro-pneumatic on-off controlled suction valve.
- Minimum pressure switch.
- Thermostatic valve.
- Fast discharge valve and its silencer.
- PLC control unit with LCD panel.



# **OPTIONS**

- · Water cooling system
- Water + air (hybrid) cooling system with heat recovery
- Oil heater
- Cold start
- Water separator with automatic drainage system



	MODEL <sup>®</sup>	PRESSURE [bar]			CAPACITY	MOTOR	CONNECTION	DIMENSIONS [mm]			WEIGHT	NOISE <sup>®</sup>
		Maximum	Nominal	Minimum	[lt/min]	POWER [kW/HP]	SIZE	Width	Depth	Height	[kg]	[dBA]
	FRECON 5 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	910 750 640	5.5 / 7.5	1/2"	1100	650	950	235	69
	FRECON 7 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	1200 1000 830	7.5 / 10	1/2"	1100	650	950	255	70
	FRECON 11 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	1800 1610 1300	11/15	3/4"	1172	730	1000	305	69
	FRECON 15 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	2850 2330 2070	15/20	3/4"	1172	730	1000	345	71 / 70
	FRECON 18 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	3500 3000 2600	18.5/25	1"	1275	850	1465	465	71 / 70
	FRECON 22 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	4000 3500 2800	22/30	1"	1275	850	1465	500	71 / 70
	FRECON 30 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	5300 4600 4000	30/40	1 1/4"	1575	1030	1755	695	71 / 70
	FRECON 37 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	6800 5800 5000	37 / 50	1 1/4"	1575	1030	1755	715	71 / 70
	FRECON 45 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	7600 6800 5900	45/60	1 1/4"	1575	1030	1755	945	73/72
	FRECON 55 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	9900 8200 7400	55 / 75	1 1/2"	2000	1200	1810	1290	75 / 74
	FRECON 75 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	12900 10900 9600	75/100	1 1/2"	2000	1200	1810	1390	77 / 76
	FRECON 90 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	16800 14400 12300	90 / 125	2"	2500	1400	2037	2020	78 / 77
	FRECON 110 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	20100 17300 15000	110/150	2"	2500	1400	2037	2380	78/77
	FRECON 132 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	24300 20300 18100	132 / 175	2 1/2"	2765	1805	2000	2555	78 / 77
	FRECON 160 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	28200 24600 21700	160/220	2 1/2"	2765	1805	2000	2760	78/77
	FRECON 200 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	37500 32300 28800	200 / 270	NW80	3250	2250	2450	4460	79 / 78
	FRECON 250 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	45200 38500 33500	250 / 340	NW100	3250	2250	2450	5600	79/78
	FRECON 315 PLUS	7.5 10.0 13.0	7.0 9.5 12.5	5.5 5.5 5.5	54100 44300 38000	315 / 430	NW100	3250	2250	2450	6000	79 / 78

<sup>1.</sup> Values are recorded in reference conditions which are 1 bar absolute air pressure, 960 relative humidity, 20°C inlet air temperature, 71°C thermostatic valve set temperature and use of Smartoil.

HERTZ KOMPRESSOREN reserves its rights to make changes in its products and specifications without prior notice.

Refers to free air delivery measured according to ISO 1217:2009, Annex C standard.

Refers to sound pressure level measured according to ISO 2151:2004 and ISO 9614/2 with ± 3 dB(A) tolerance. Second values are for 13 bar versions.



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