hertz
KOMPRESSOREN

IMPETUS

Double Stage Rotary Screw Air Compressor

30-100 HP

30-571 cfm

30-100 HP

100-125-150-175 psi

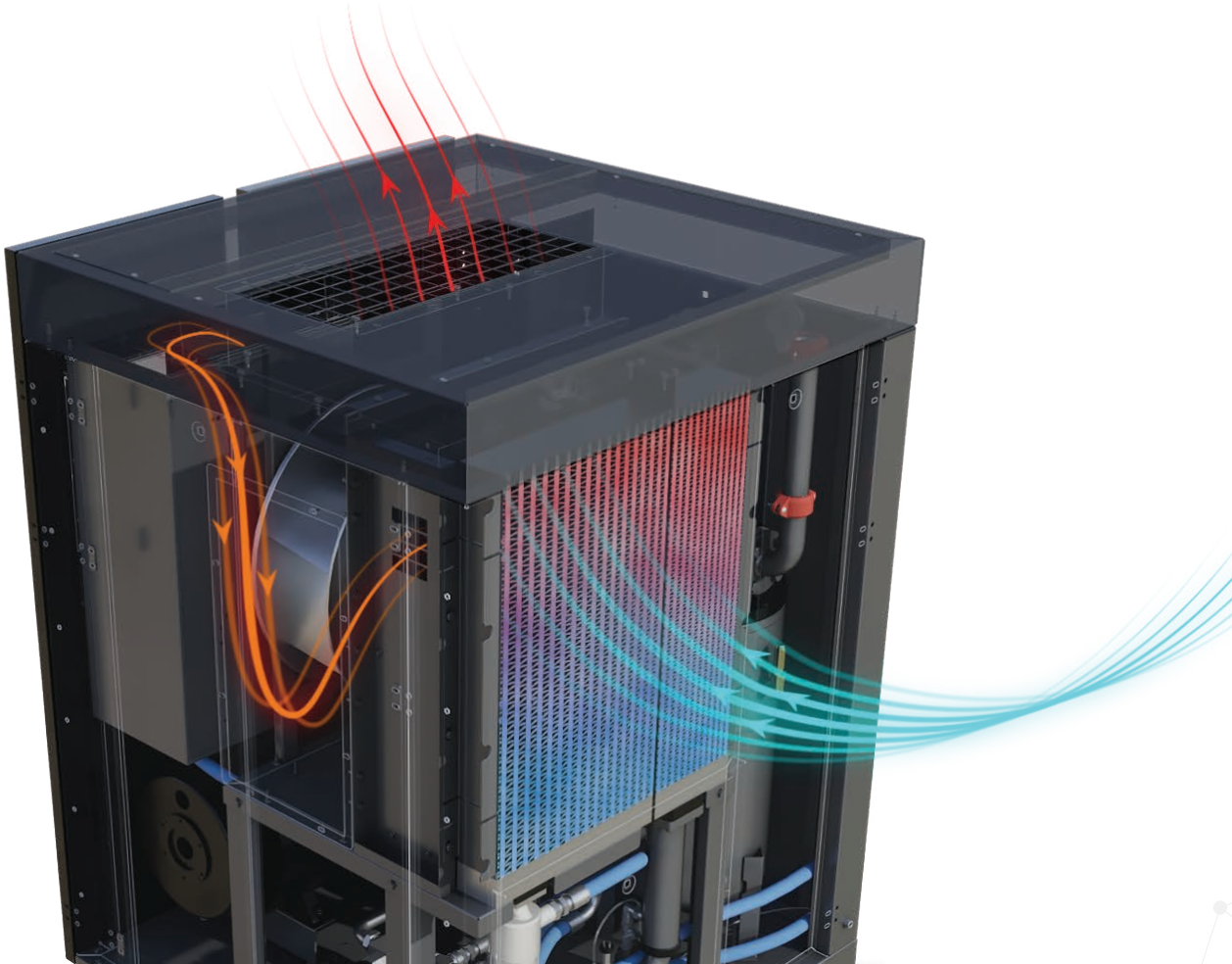
CAGI

IMPETUS SERIES

Oil Injected, Two-Stage, Direct Coupled, Fixed/Variable Speed

Rotary Screw Air Compressors

Next gen compact compressors maximize your energy saving, minimize your total cost of own.

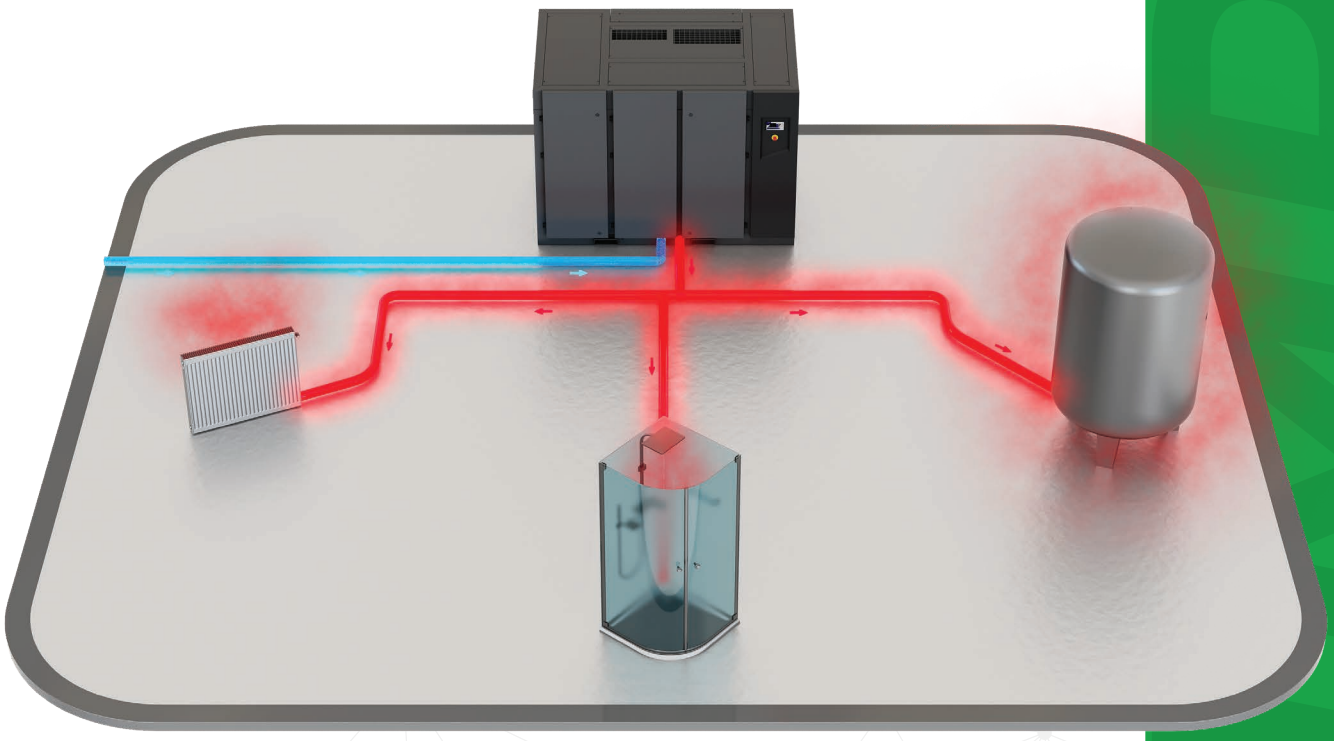


General Features

- IE4 efficiency-class electric motors in fixed speed models
- IE5 efficiency-class IPM electric motors in variable speed models
- Two-stage screw block
- Water cooling (37 kW and above)
- Variable and fixed speed motor power options
- Soft start with variable speed power transmission
- Heat recovery (optional)
- Operating with low noise level
- Integrated dryer (optional)

Heat Recovery Options For Even More Savings

- In compressor, a high amount of heat is released during the compression of the air.
- A large amount of heat is recovered with a suitable oil/water exchanger placed at the oil tank outlet of the compressor. The hot water obtained with the heat recovery can be used in many areas in your facilities.
- By directing the hot air coming out of the compressor, a room can be heated when heating is required, or hot air can be given outside with thermostatic control, in accordance with seasonal changes. In this way, savings from the heating system and natural gas are provided.
- 80% of the compressor's total energy consumption can be recovered.

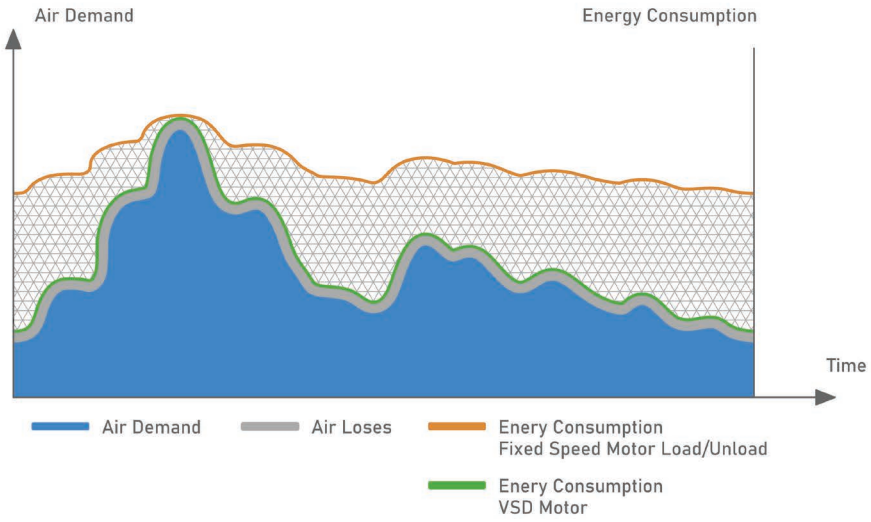


What is VSD Technology?

Some of industrial operations, the demand for compressed air is variable.

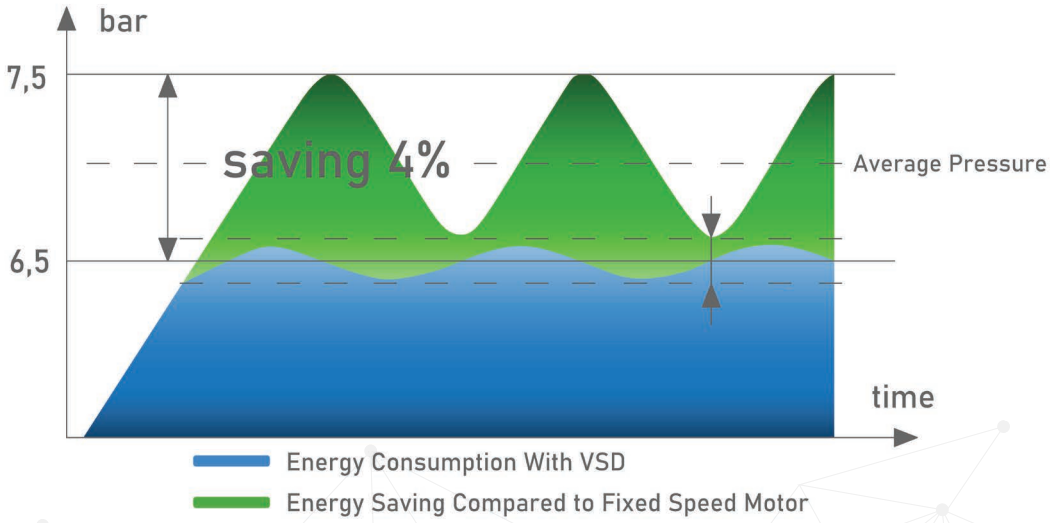
In such conditions our compressors automatically adjust the compressor's operating speed to match air production to demand in real time, saving significant amounts of energy.

A traditional fixed speed air compressor can only operate at full capacity. Fixed speed compressors consume a lot of energy when less air is required and some of the energy is wasted.

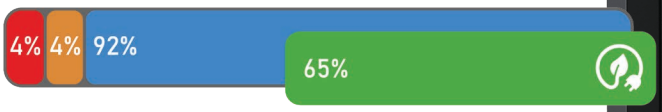


Why Hertz VSD?

- Whereas VSD compressor works only according to the amount of need, it reduces the energy cost.
- There is no need to unload, which saves both time and energy.
- Air system pressure is more consistent and also lower, minimizing energy consumption and air leaks.
- Motor and inverter are specially designed to provide maximum efficiency.
- The motors have successfully passed tests performed in the harshest conditions such as high temperature and high pressure.
- Variable speed compressors vibrate less than the other models used in the market.



up to **65%*** energy savings

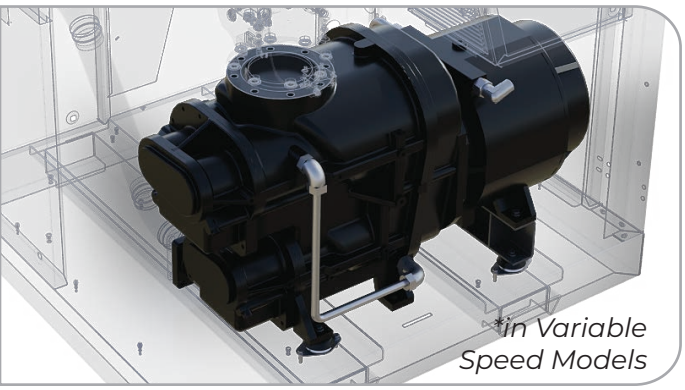


- Energy Consumption
- Energy Savings With VSD Motor
- Initial Investment
- Maintenance

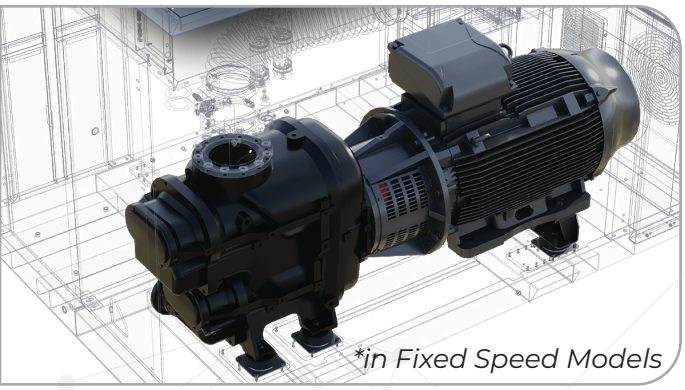
Electric Motor Drive*

- The drive and IMP meet the requirements of IES2 (EN50598)
- Functionality in a single unit
- Uses fewer components
- Long service life helps minimize environmental impact

*Applicable for variable speed models.



*in Variable Speed Models



*in Fixed Speed Models

Electric Motor

In Fixed Speed Models;

- IE4 energy efficiency-class electric motors
- Optimised air cooling
- Motors have B-class temperature increase

In Variable Speed Models;

- Ultra Premium IE5 energy efficiency-class electric motors
- Internal Permanent Magnet Motor (IPM)
- Compact design
- F-class insulation
- Optimum oil cooling at all speeds for high efficiency
- Grease-free lubricated motor bearings

Screw Block

- Direct coupled
- Two-stage screw produces energy efficiency by up to 10%
- Higher flow rate by up to 10% with two-stage screw
- With two-stage compression near isothermal compression
- Compact design with no power transmission element requirement in variable speed models
- Zero transmission losses by compact direct power transmission in variable speed models
- Thanks to low compression rate low axial and compression forces between screw blocks
- Thanks to low rotor speeds, a long service life
- Reliable operation thanks to elastomer coupling on fixed speed models
- Low noise and vibration levels

Intake Chamber

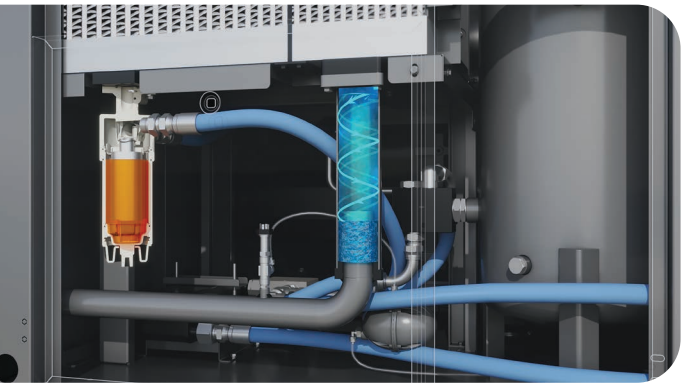
- High acoustic performance in noise dampening
- Insulated cold air intake for energy efficiency

Cooling System

- High cooling efficiency in compact air and oil heat exchangers
- Suitable design for operating up to 45°C
- Radial fan for high cooling efficiency (37 kW and above)
- Low noise level with low speed radial fans
- Cooling fan driver for maximum energy efficiency

Air Filter

- Two-stage filtration (Initial filtration/precision filtration)
- 99.9% efficiency in particle separation down to microns
- Low pressure loss (starting pressure fall<3mbar)
- Easy maintenance
- Long service life



Oil Filter

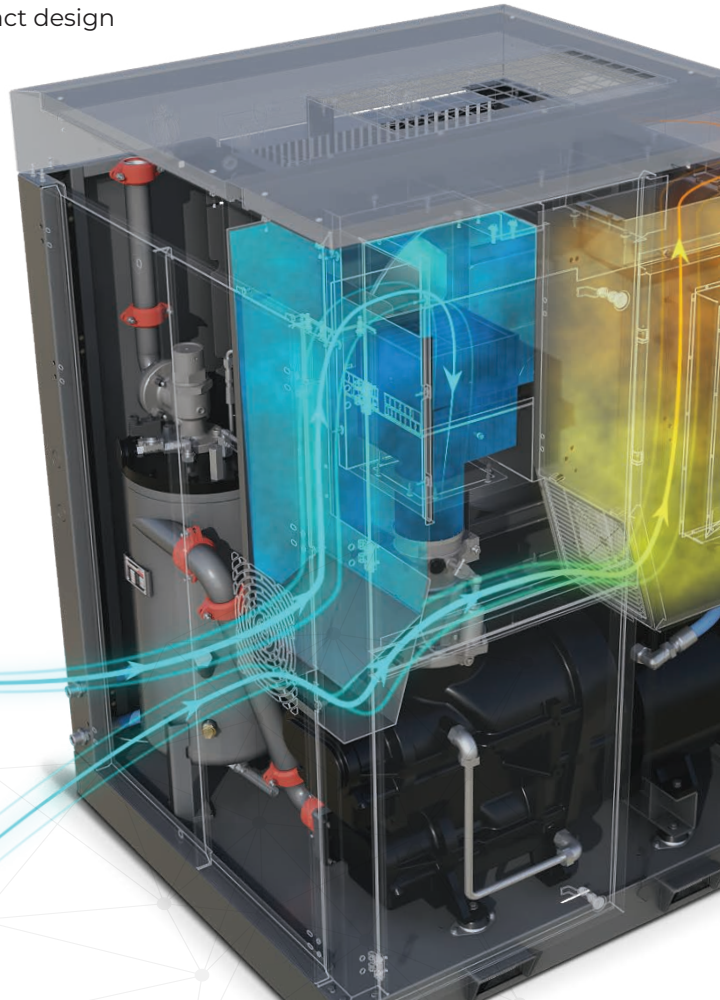
- Non-metallic, environmentally friendly and recyclable oil filter
- Aluminium housing
- Easy maintenance
- Compact design

Separator System

- Effective separator elements keep the amount of oil in the outlet air low (1-3 mg/m³) for high-quality compressed air
- Sep-n-sep type separator with enlarged surface area
- Easy to service
- High efficiency three stage air-oil separation system

Water Separator

- Compact, integrated, and unique design
- Separation performance is %99 even in very hot and humid conditions
- High energy efficiency with minimal pressure loss



Maintenance and Service

- The compressor's key components are specially designed to make servicing easy.
- Maintenance friendly internal design.
- Oil filter and air filters can be replaced easily
- The compressor oil cools the motor and lubricates the bearings so, no extra lubrication and maintenance are needed.
- Low-speed rotors produce less vibration and noise.
- Compact IPM motors keep the machine size small. This creates great advantages for unit placement.

Controller

In Fixed Speed Models;

- Without the need for an external main controller, ability to work synchronized for up to 5 compressors
- Weekly scheduler for starting / stopping the machine at 3 different time intervals can be individually set for each day of the week
- Internal ModBus communication
- User-friendly on-screen interface
- Alarm log records the last 20 alarms
- Periodic maintenance warnings and log records

In Variable Speed Models;

- 7" LED Display
- Group operation of up to 4 compressors
- Compact construction with integrated driver and controller
- Fast communication with ModbusTCP
- Ability to connect to customer DCS system via ModbusTCP
- Weekly scheduler for starting/stopping the machine at 2 different time intervals can be individually set for each day of the week
- Dual PID feature can run simultaneous PID for temperature and pressure
- Pressure PID ensures energy-efficient operation by maintaining the pressure at the desired level
- Temperature PID controls the fan speed to maintain the screw block's most efficient operating temperature
- All inverter and compressor control data are managed from a single point
- Possibility to choose Master/Slave compressor
- Ability to determine co-aging times of the system with selectable parameters
- Built-in phase sensor
- User-friendly on-screen interface

Certification

- Motor and driver meet the requirements of IEC2 (EN50598) and CE certificates

60 Hz

Model	Pressure		Capacity*				Motor Power	Connection	Dimensions (in.)			Weight	Noise
			Minimum		Maximum								
	psi	bar	cfm	m³/min	cfm	m³/min	HP/kW		Length	Width	Height	lbs	dB (A)
IMPETUS VSD 22	100	6,9	36	1,02	152	4,31	30/22	NPT 1 1/4"	38	43	62	1654	72
	125	8,6	35,3	1	138	3,91							
	150	10,3	30	0,85	123	3,47							
IMPETUS VSD 30	100	6,9	61,4	1,74	220	6,22	40/30	NPT 1 1/4"	38	43	62	1929	72
	125	8,6	55,1	1,56	203	5,76							
	150	10,3	52,3	1,48	181	5,12							
IMPETUS VSD 37	100	6,9	62,5	1,77	271	7,68	50/37	NPT 1 1/2"	47	49	73	2690	71
	125	8,6	57,9	1,64	242	6,85							
	150	10,3	60,4	1,71	214	6,05							
IMPETUS VSD 45	100	6,9	81,6	2,31	327	9,26	60/45	NPT 1 1/2"	47	49	73	3087	72
	125	8,6	74,9	2,12	291	8,25							
	150	10,3	72,7	2,06	250	7,08							
IMPETUS VSD 55	100	6,9	98,2	2,78	410	11,61	75/55	NPT 2"	55	57	77	3572	72
	125	8,6	92,2	2,61	369	10,46							
	150	10,3	78	2,21	323	9,15							
IMPETUS VSD 75	100	6,9	121	3,42	571	16,16	100/75	NPT 2"	55	57	77	3880	72
	125	8,6	120	3,41	512	14,49							
	150	10,3	120	3,39	449	12,71							

60 Hz

Model	Pressure		Capacity*		Motor Power	Connection Size	Dimensions (in.)			Weight	Noise
	psi	bar	cfm	m³/min	HP/kW		Length	Width	Height	lbs	dB (A)
IMPETUS 22	100	7,5	140	3,96	30/22	NPT 1 1/4"	65,7	35,4	62,2	2326	70
	125	8,5	130	3,68							
	150	10,3	112	3,17							
	175	13	88	2,49							
IMPETUS 30	100	7,5	214	6,05	40/30	NPT 1 1/4"	65,7	35,4	62,2	2690	70
	125	8,5	179	5,06							
	150	10,3	159	4,5							
	175	13	136	3,85							
IMPETUS 37	100	7,5	244	6,9	50/37	NPT 1 1/2"	75,1	53,4	73,2	3946	63
	125	8,5	221	6,25							
	150	10,3	210	5,94							
	175	13	176	4,98							
IMPETUS 45	100	7,5	320	9,06	60/45	NPT 1 1/2"	75,1	53,4	73,2	4542	63
	125	8,5	280	7,92							
	150	10,3	240	6,79							
	175	13	207	5,86							
IMPETUS 55	100	7,5	380	10,77	75/55	NPT 2"	87,4	61,6	77,4	4894	66
	125	8,5	379	10,74							
	150	10,3	331	9,37							
	175	13	289	8,18							
IMPETUS 75	100	7,5	535	15,15	100/75	NPT 2"	87,4	61,6	77,4	5710	70
	125	8,5	500	14,16							
	150	10,3	466	13,2							
	175	13	394	11,16							

- Unit performances measured in reference conditions which are 1 bar /14.5 psig absolute air pressure, %0 relative humidity, 20°C /68 °F inlet air temperature, 71°C/160 °F thermostatic valve set temperature and use of Smartoil.
- Hertz 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 and E standard.

** Refers to sound Pressure level measured according to ISO 2151:2008 and ISO 3744:2010 with ± 3 dB(A) tolerance.

CAGI Compressed Air & Gas Institute www.cagi.org PERFORMANCE VERIFICATION PROGRAM

HERTZ KOMPRESSOREN GLOBAL
export@hertz-kompressoren.com
www.hertz-kompressoren.com

HERTZ KOMPRESSOREN GmbH
Kronacherstr. 60, 96052 Bamberg
Tel: +49 951 96 43 13 88 Fax: +49 951 96 43 13 50
info@hertz-kompressoren.de

HERTZ KOMPRESSOREN USA Inc.
11910 Mount Holly-Huntersville Road
Huntersville, NC 28078 USA
Tel : +1 704 579 59 00 - info@hertz-kompressoren.us