
hertz
KOMPRESSOREN

# IMPETUS

## Double Stage Rotary Screw Air Compressor

90-315 kW

# IMPETUS SERIES

Hertz Impetus Series two stage screw compressors provide compressed air suitable for your needs with its superior technological equipment, modern design and high energy savings. With the Impetus VSD Series, we can meet your compressed air needs with energy savings up to 65%. It is specially designed to meet all your needs from 90 to 315 kW.

5,2-62,67 m³/min

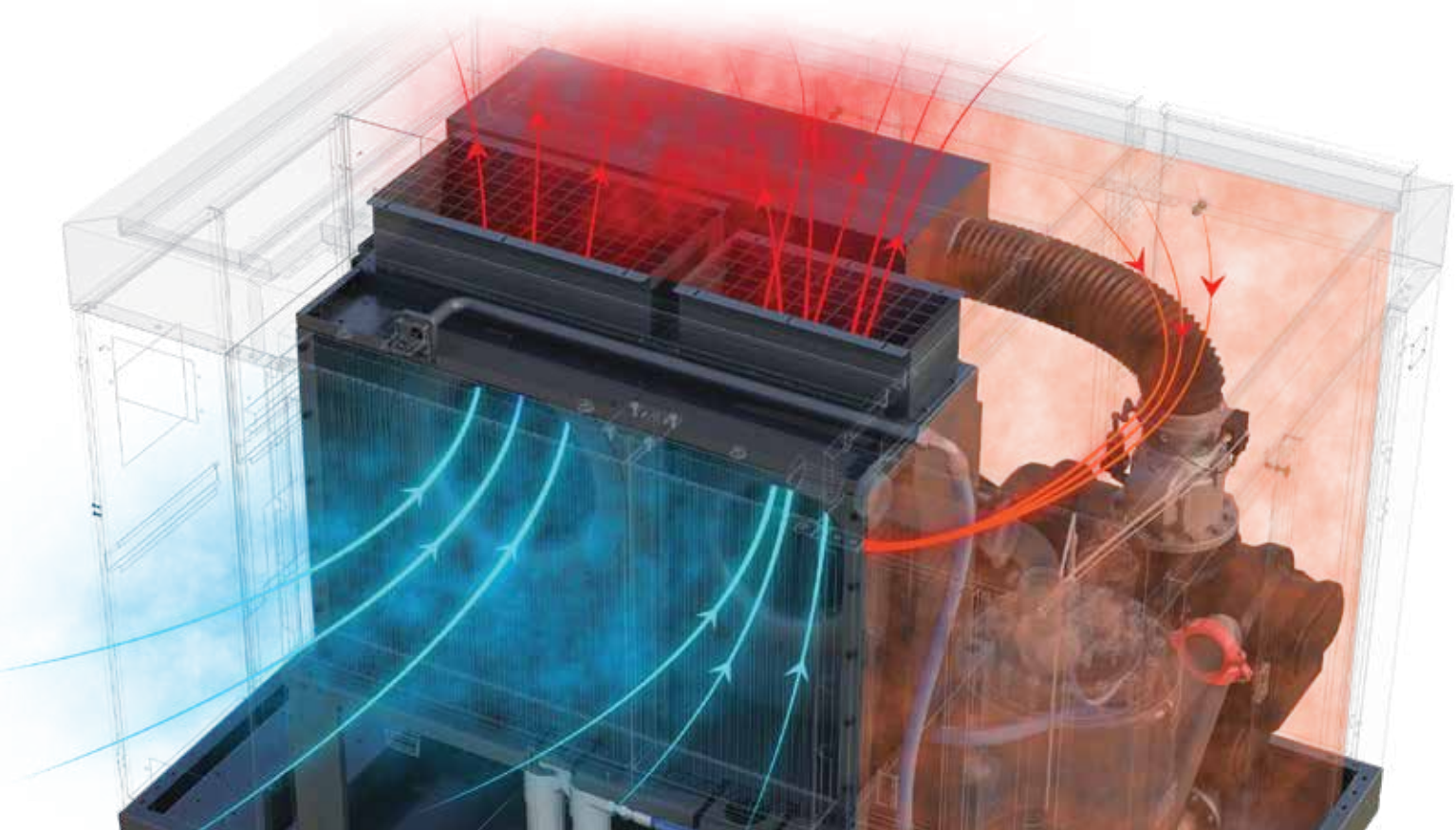
90-315 kW

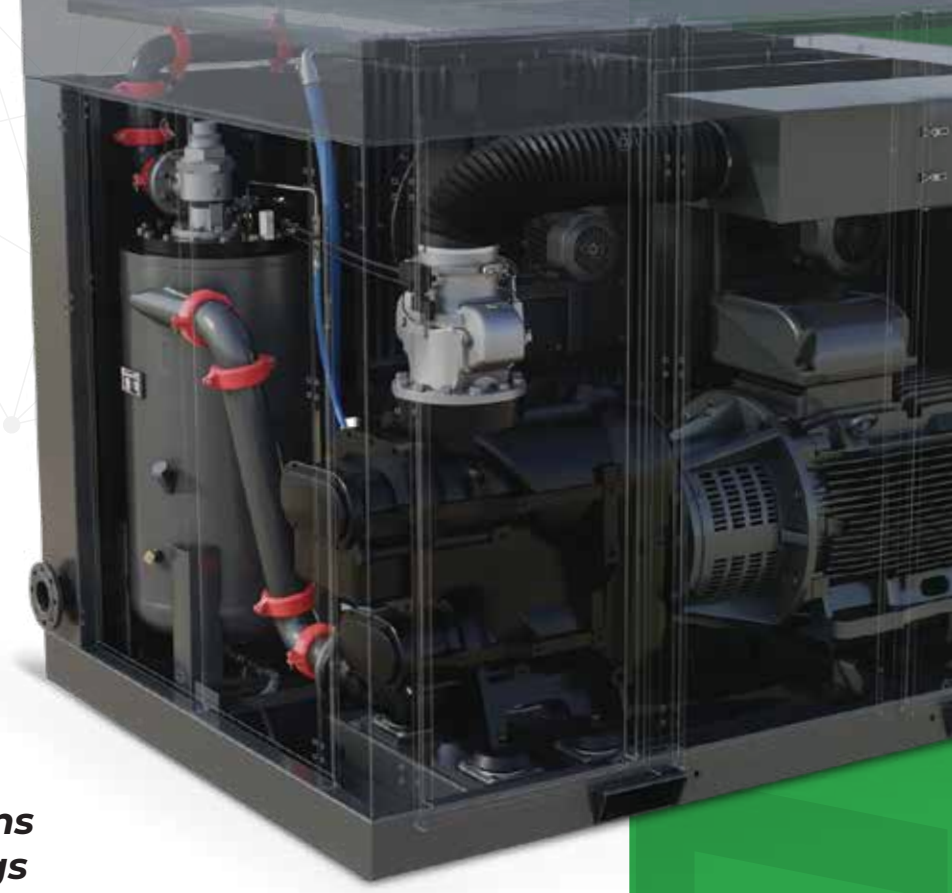
7,5-8,5 10-13 bar


# IMPETUS SERIES

*Oil Injected, Two-Stage, Direct Coupled, Fixed/Variable Speed*
***Rotary Screw Compressors***

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



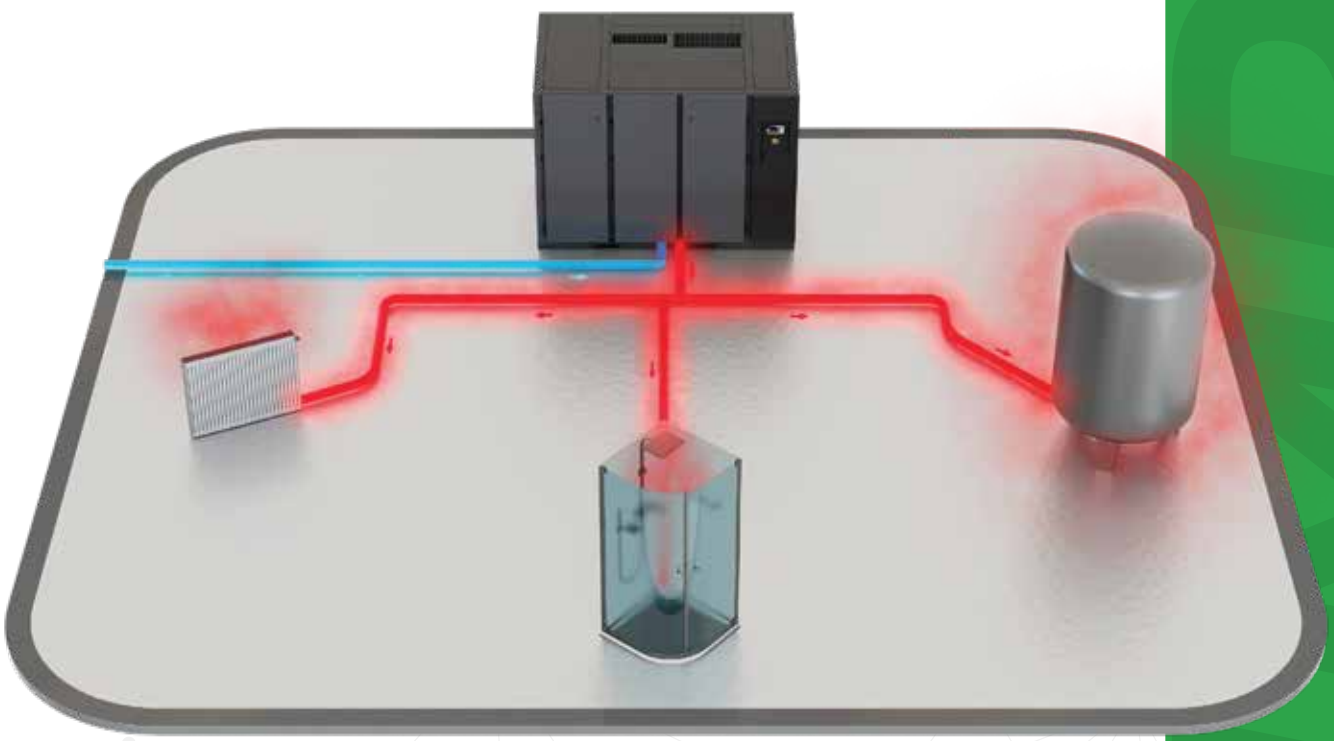


## General Features

- IE4 efficiency-class electric motors
- Two-stage screw block
- Variable and fixed speed motor power options
- Water cooling and heat recovery (optional)
- Operating with low noise level

## 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.

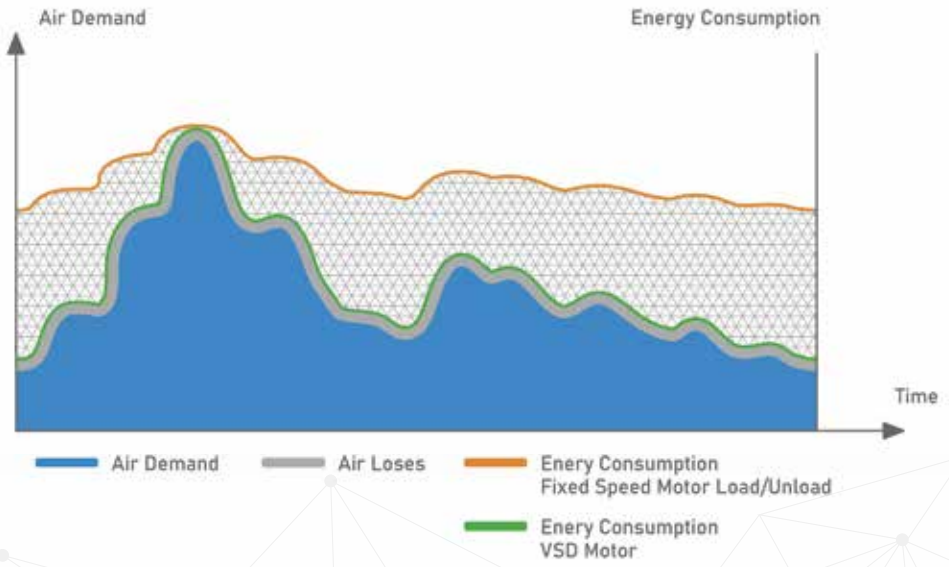



## VSD *What is VSD Technology?*

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

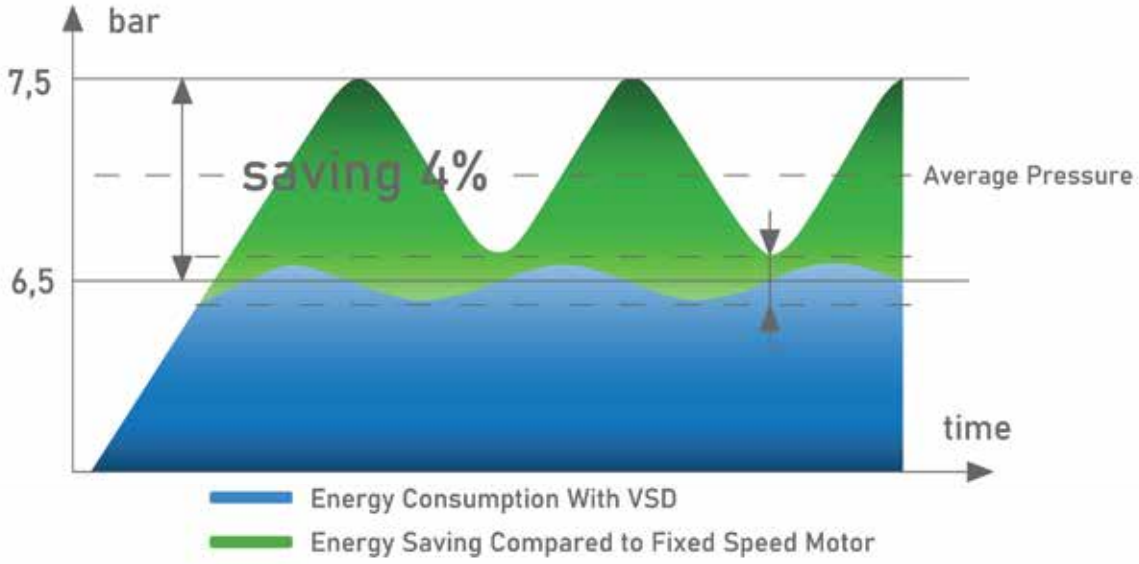
In such conditions our compressors automatically adjust the compressor's operating speed to match air production to demand in real time, saving significant amounts of energy.

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.




# IMPETUS

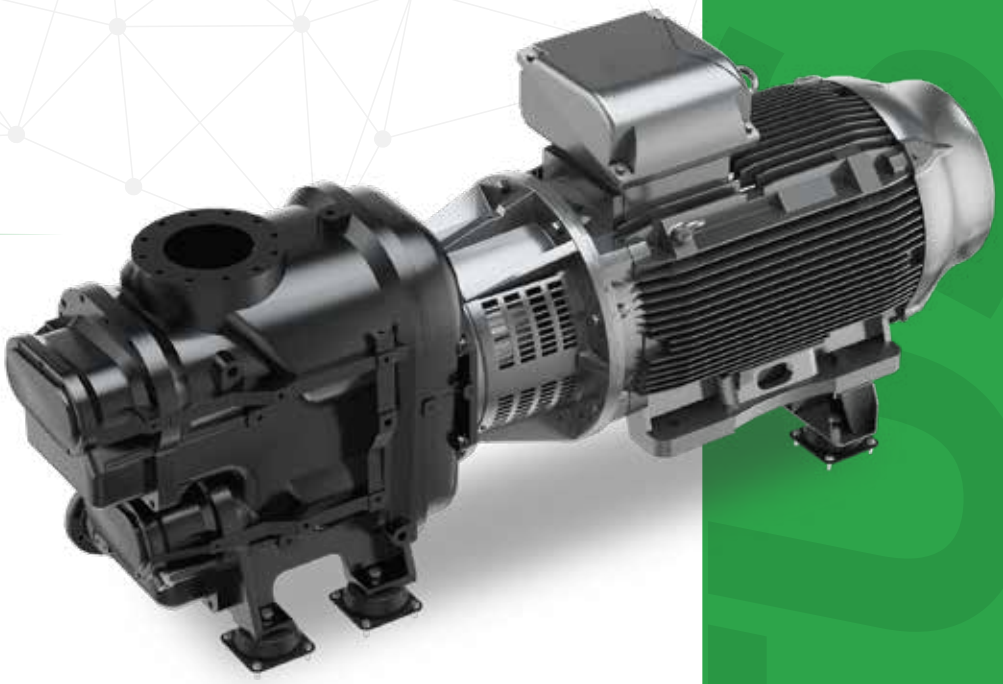
**IS THE NEW POWER TO MAKE THINGS HAPPEN**


## Screw Block

- Two-stage screw produces energy efficiency by up to 10%
- Higher flow rate by up to 10% comparing to single stage
- Direct coupled
- Reduced internal losses
- Thanks to low compression rate, low axial and compression forces
- Thanks to low rotor speeds, a long service life
- With two-stage compression near isothermal compression
- Reduced axial and compression forces resulting in longer screw and bearing service life

## Electric Motor

- IE4 efficiency-class electric motors
- Motors have B-class temperature increase
- Continuous operating feature



## Intake Chamber

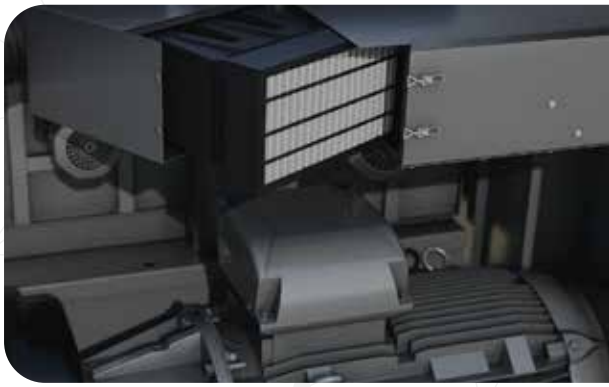
- Intake in cold air directly from the environment contributes to energy efficiency by up to 2%
- High energy efficiency with minimized intake pressure losses
- With improved acoustic designs result in low noise levels

## Cooling System

- High cooling efficiency in compact air and oil heat exchangers
- Suitable design for operating up to 45oC
- Low noise level with low speed radial fans
- Energy efficiency with optimum oil temperature thanks to VSD-controlled radial fan

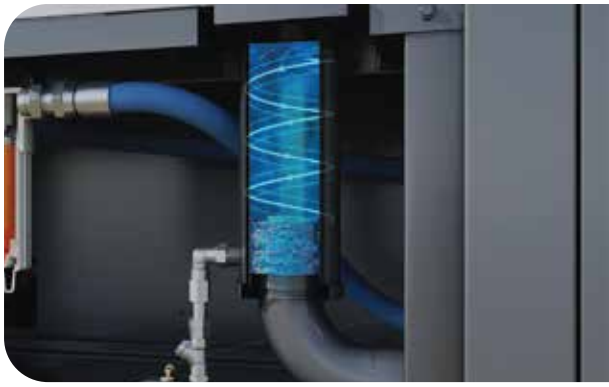
## Air Filter

- Protects the screw block by separating particles down to 3 microns
- Intake pressure loss: <2 mbar results in high efficiency throughout the maintenance period
- Easy maintenance
- Long service life



## Oil Filter

- Eco-friendly and recyclable oil filter
- Oil filter contains no metal alloys
- Aluminium housing
- Easy maintenance



## Water Separator

- Compact, integrated, and unique design
- Reliable initial separation (>% 99)
- High separation efficiency at high humidity and temperature
- Zero loss drain
- High energy efficiency with minimal pressure loss

## Oil Separator

- High separation efficiency thanks to larger surface area
- The Sep-n-Sep feature results in at least 30% lower pressure drop
- The oil separator tank and sensitive dual surface air oil separator keep the amount of oil at the compressed air outlet below 3 mg/m3

## Maintenance and Service

- The compressor's key components are specially designed to make servicing easy.
- Oil filter and air filters can be replaced easily
- Longer maintenance period due to less force on the bearings
- Low-speed rotors produce less vibration and noise

# Easy Maintenance

*Service Friendly*


## Controller

- 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
- Dual PID feature on inverter-equipped models can run simultaneous PID for temperature and pressure
- Pressure PID on inverter-equipped models ensures energy-efficient operation by maintaining the pressure at the required level
- Temperature PID on inverter-equipped models controls the fan speed to maintain the screw block's most efficient operating temperature
- On inverter-equipped models, all inverter and compressor control data are managed from a single point
- Internal ModBus communication
- User-friendly on-screen interface
- Alarm log records the last 20 alarms
- Periodic maintenance warnings and log records

## Certification

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

| Model | Pressure | | Capacity* | | Motor | Connection Size | Dimensions (mm) | | | Weight | Noise |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | bar | psi | m3/min | cfm | kW/HP | | Length | Width | Height | kg | dB (A) |
| IMPETUS 90 | 7,5 | 110 | 18,42 | 650 | 90/125 | DN65 | 2775 | 1805 | 1926 | 3660 | 75 |
| | 8,5 | 125 | 14,72 | 520 | | | | | | | |
| | 10 | 145 | 14,65 | 517 | | | | | | | |
| | 13 | 190 | 13,65 | 482 | | | | | | | |
| IMPETUS 110 | 7,5 | 110 | 23,89 | 844 | 110/150 | DN65 | 2775 | 1805 | 1926 | 4000 | 75 |
| | 8,5 | 125 | 21,76 | 768 | | | | | | | |
| | 10 | 145 | 18,49 | 653 | | | | | | | |
| | 13 | 190 | 14,57 | 515 | | | | | | | |
| IMPETUS 132 | 7,5 | 110 | 26,25 | 927 | 132/180 | DN80 | 2950 | 1950 | 2000 | 4500 | 75 |
| | 8,5 | 125 | 26,07 | 921 | | | | | | | |
| | 10 | 145 | 23,62 | 834 | | | | | | | |
| | 13 | 190 | 21,82 | 771 | | | | | | | |
| IMPETUS 160 | 7,5 | 110 | 31,72 | 1120 | 160/220 | DN80 | 2950 | 1950 | 2000 | 5000 | 76 |
| | 8,5 | 125 | 31,29 | 1105 | | | | | | | |
| | 10 | 145 | 25,78 | 910 | | | | | | | |
| | 13 | 190 | 25,60 | 904 | | | | | | | |
| IMPETUS 200 | 7,5 | 110 | 43,49 | 1536 | 200/270 | DN 100 | 3500 | 2250 | 2350 | 6220 | 78 |
| | 8,5 | 125 | 40,70 | 1437 | | | | | | | |
| | 10 | 145 | 34,77 | 1228 | | | | | | | |
| | 13 | 190 | 30,62 | 1081 | | | | | | | |
| IMPETUS 250 | 7,5 | 110 | 53,40 | 1886 | 250/340 | DN 100 | 3500 | 2250 | 2350 | 9120 | 79 |
| | 8,5 | 125 | 50,49 | 1783 | | | | | | | |
| | 10 | 145 | 42,15 | 1524 | | | | | | | |
| | 13 | 190 | 40,53 | 1431 | | | | | | | |
| IMPETUS 315 | 7,5 | 110 | 62,67 | 2213 | 315/430 | DN 100 | 3500 | 2250 | 2350 | 9400 | 80 |
| | 8,5 | 125 | 56,95 | 2011 | | | | | | | |
| | 10 | 145 | 55,18 | 1949 | | | | | | | |
| | 13 | 190 | 44,13 | 1558 | | | | | | | |

- Unit performances measured in reference conditions which are 1 bar absolute air Pressure, %0 relative humidity, 20°C inlet air temperature, 71°C 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 E standard.

| Model | Pressure | | Capacity* | | | | Motor Power | Connection Size | Dimensions (mm) | | | Weight | Noise |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Minimum | | Maximum | | | | | | | | |
| | bar | psi | m3/min | cfm | m3/min | cfm | kW/hp | | Length | Width | Height | kg | dB (A) |
| IMPETUS VSD 90 | 7,5 | 110 | 5,38 | 189 | 18,44 | 651 | 90/125 | DN65 | 2775 | 1805 | 1926 | 3835 | 75 |
| | 8,5 | 125 | 5,36 | 189 | 17,33 | 612 | | | | | | | |
| | 10 | 145 | 5,24 | 185 | 15,87 | 560 | | | | | | | |
| | 13 | 190 | 5,15 | 181 | 13,66 | 482 | | | | | | | |
| IMPETUS VSD 110 | 7,5 | 110 | 7,08 | 250 | 23,12 | 816 | 110/150 | DN65 | 2775 | 1805 | 1926 | 4200 | 75 |
| | 8,5 | 125 | 6,9 | 243 | 21,68 | 766 | | | | | | | |
| | 10 | 145 | 6,88 | 242 | 20,2 | 713 | | | | | | | |
| | 13 | 190 | 6,82 | 240 | 17,25 | 609 | | | | | | | |
| IMPETUS VSD 132 | 7,5 | 110 | 7,94 | 280 | 27,88 | 985 | 132/180 | DN80 | 2950 | 1950 | 2000 | 4675 | 75 |
| | 8,5 | 125 | 7,9 | 278 | 26,4 | 932 | | | | | | | |
| | 10 | 145 | 7,59 | 268 | 24,51 | 866 | | | | | | | |
| | 13 | 190 | 7,5 | 264 | 21,35 | 754 | | | | | | | |
| IMPETUS VSD 160 | 7,5 | 110 | 8,5 | 299 | 32,45 | 1146 | 160/220 | DN80 | 2950 | 1950 | 2000 | 5300 | 76 |
| | 8,5 | 125 | 8,25 | 291 | 30 | 1059 | | | | | | | |
| | 10 | 145 | 8,39 | 296 | 28 | 989 | | | | | | | |
| | 13 | 190 | 9,14 | 322 | 24,98 | 882 | | | | | | | |
| IMPETUS VSD 200 | 7,5 | 110 | 11,8 | 416 | 42,86 | 1514 | 200/270 | DN 100 | 3500 | 2250 | 2350 | 6550 | 78 |
| | 8,5 | 125 | 11,8 | 416 | 39,94 | 1410 | | | | | | | |
| | 10 | 145 | 11,6 | 410 | 37,01 | 1307 | | | | | | | |
| | 13 | 190 | 11,4 | 402 | 30,54 | 1079 | | | | | | | |
| IMPETUS VSD 250 | 7,5 | 110 | 17,34 | 612 | 52,41 | 1851 | 250/340 | DN 100 | 3500 | 2250 | 2350 | 9400 | 79 |
| | 8,5 | 125 | 17,12 | 604 | 49,13 | 1735 | | | | | | | |
| | 10 | 145 | 16,76 | 591 | 45,86 | 1620 | | | | | | | |
| | 13 | 190 | 17,33 | 612 | 38,84 | 1372 | | | | | | | |
| IMPETUS VSD 315 | 7,5 | 110 | 16,86 | 595 | 62,01 | 2190 | 315/430 | DN 100 | 3500 | 2250 | 2350 | 9680 | 80 |
| | 8,5 | 125 | 16,85 | 595 | 59,31 | 2095 | | | | | | | |
| | 10 | 145 | 16,81 | 593 | 55,24 | 1951 | | | | | | | |
| | 13 | 190 | 30,33 | 1071 | 45,96 | 1623 | | | | | | | |

- Unit performances measured in reference conditions which are 1 bar absolute air Pressure, %0 relative humidity, 20°C inlet air temperature, 71°C thermostatic valve set temperature and use of Smartoil.
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* Refers to free air delivery measured according to ISO 1217:2009, Annex E standard.

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