Atlas Copco Air Compressors

ZR/ZT55-90-FF & ZR/ZT75-90 VSD-FF

Oil-free rotary screw compressor series with Variable Speed Drive and Full Feature variants



TOTAL INTEGRATION MAXIMUM ENERGY SAVINGS



The Energy Saving concept



The thorough needs assessment

Real savings rely on facts. Atlas Copco consultants assess the air demand profile of your application and suggest the best compressor selection for the job.

The right core technology Atlas Copco masters every compression principle and provides the most energy efficient technology

for the required pressure and flow.

η-drive

0

stage of R&D, manufacturing, installation and after sales service.

The shortest route to maximizing your profitability is to minimize operational cost. Because energy consumption is the major factor in a

compressor's life cycle cost, the focus in the design of the new Atlas Copco Z-compressors is on saving energy in every conceivable way. This focus is the basis for a total product development concept that encompasses every



Energy Circle

The best drive arrangement

Fixed speed machines are fine when they can run at full load most of the time. But when air demand fluctuates, the Variable Speed Drive can achieve substantial savings of up to 35 %.



The innovative accessories

The integrated IMD adsorption dryer offers high quality dry air with the lowest pressure drop and uses the heat of the compressor for regeneration. Two features that lead to significant energy savings.



Z - THE RIGHT CHOICE



Complete safety

The lowest energy cost

Energy recovery

Heat from the compression

process can be recovered and put to good use in endothermic processes, heating of buildings etc.



The highest reliability



The professional follow-up

An Atlas Copco Service Contract will ensure you of the correct preventative maintenance, immediate response and genuine spare parts... all over the globe.

Safe Process and environment free from contamination

Simple 100 % oil-free air = no filters needed

Efficient No filter pressure drop = less energy

The trouble-free installation & commissioning

An Atlas Copco oil-free Z-compressor is truly plug-and-play. Put the machine on a flat floor, connect the power line and the compressed air outlet... and push the start button.



The fully optimized system

A multi-compressor installation can be centrally controlled, to achieve a tight pressure band and the lowest overall energy cost.

Oil-free air, a matter of common sense

The Total Reliability concept



An energy efficient machine saves money only if it runs reliably around the clock. And not just today, but day after day, year after year; with minimal service interventions and long overhaul intervals.

For over a century, Atlas Copco has been building machines that stand the test of time. With the proven Z-compressors, reliability has never been so timeless.

Reliability Circle



The complete solution

Compressor, dryer, drive, filters, control system... they all carry the same mark of quality: the Atlas Copco logo.



The experienced partner

Atlas Copco is the world leader in compressed air technology, with over 100 years of experience in air compression systems.

The integrated design

Internal piping, integral air dryer, integrated Variable Speed Drive, 100 % matched components, consolidated controls... the only way to ensure total reliability.







Pushing the limits in energy efficiency





Pushing the limits in safety









Pushing the limits in **reliability**

Proven Z-technology in one package

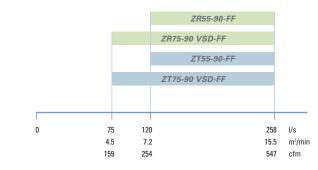
The ZR/ZT55-90 range comes in water and aircooled versions, both with a robust and reliable design, easy to service and environmentally friendly. Installation is straightforward and no special foundations are required.

Within this range, the Total Energy Saving Concept takes solid form in the new ZR/ZT55-90 VSD-FF compressors. They combine two of the biggest energy savers within the Full Feature VSD compressor pack itself: the IMD dryer and the Variable Speed Drive.

Excellence by design

- Completely oil-free no risk of oil-contaminated air
- No oil in the condensate
- Completely ready-to-use package
- Easy, low cost installation no foundations
- Air and watercooled versions
- Low cooling water consumption with watercooled variant
- Few consumables low maintenance
- Proven reliability
- True performance as per ISO 1217, Annex C, Ed. 3
- Flexible as a base load or a top load machine
- Consistent performance over the lifetime
- Operator and service friendly
- Silenced package
- Very low vibration level
- Energy saving Variable Speed Drive & Full Feature versions available
- Integrated IMD dryer in FF version

ZR/ZT55-90-FF and ZR/ZT75-90 VSD-FF Capacity range (50 & 60 Hz)

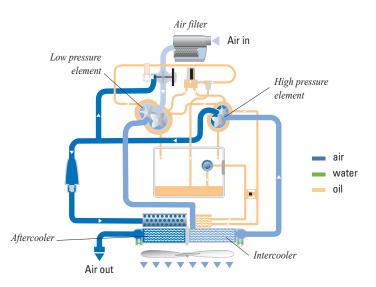


ZT: Aircooled / ZR: Watercooled / VSD: Variable Speed Drive / FF: Full Feature See data pages for range details

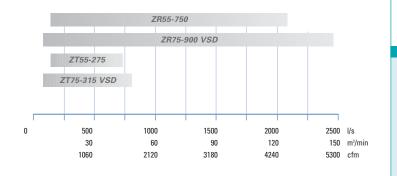
Aircooled ZT55-90 VSD with integrated VSD



Aircooled ZT: air/oil/coolant flow



Complete ZR/ZT range

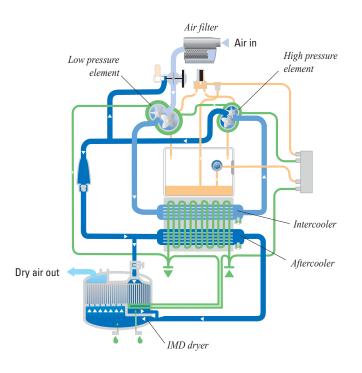


Watercooled ZR55-90 VSD-FF

Integrated VSD, Full Feature version with IMD dryer



Watercooled ZR-FF: air/oil/coolant flow



Complete scope suiting all needs

Many features are included as standard. Some applications may also need or benefit from additional options.

Standard

\square	Air intake filter and silencer
\mathbb{M}	Air intake flexible
\square	Stainless steel inter and aftercooler cores*
\square	Inter and aftercooler water traps and electronic drains
\mathbb{M}	Outlet air silencer
\square	Terminal expansion joints - air and water side
\square	Outlet air flange
\square	Complete water circuit*
\square	Single point inlet and outlet connection
\mathbb{M}	Back-flush arrangement for cooler cleaning*
\square	Complete oil circuit pre-piped
\square	Built-in oil breather system
\square	AGMA class 13, DIN class 5 gears
\square	Electric motor pre-mounted
\square	IP 55 motors
\square	Starters
\square	Pre-mounted electrical and VSD cubicles
\square	Silencing canopy
\square	Skid with no need for foundations
\square	Electronic drains
\square	Suppression of emissions/harmonic distortions (in VSD)
Opt	ions

Options

- □ Integrated IMD dryer in FF version (as variant)
- □ Integrated VSD version (as variant)
- □ Energy recovery**
- □ Automatic water shut-off valve*
- □ Anti-condensation heater for motor
- $\hfill\square$ Thermistor motor winding protection
- □ Wooden packaging
- □ IT network for VSD

* For watercooled versions

** Only for watercooled versions with free-standing MD dryers

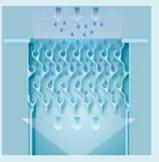
Superior design in every detail



Proven Z-technology

- 100 % oil-free rotary screw compression
- ► high quality air
- low speed to capacity ratio
- ► high overall efficiency
- no oil disposal problems downstream







Water separator

- the aluminium-labyrinth system efficiently separates the condensate from the compressed air
- ▶ electronic drains are offered as standard
- ▶ low moisture carry-over protects downstream equipment
- ▶ better dryer performance

Effective electronic water drains

- sensitive and precise operation
- ► reliable solid state actuation
- ► no loss of air
- ► alarm for malfunction on
 - the Elektronikon® display





Advanced Elektronikon® control and monitoring system

- overall system performance status with pro-active service indications, alarms for malfunctions and safety shutdowns
- multi-language selectable display
- ► all monitoring and control functions via one interface
- ► wide communication possibilities
- ▶ integration possible in many process control systems (field bus system)

Superior element bearings

- high stability under varying load conditions
- ► easily adapt to changing loads
- no need for pre-lubrication/ stabilisation time





High precision gears according

- Iow transmission losses
- ► low noise and vibration
- complete interchangeability





Gearbox breathing system

- ▶ simple filter combined with venturi system
- ▶ keeps the oil inside the gearbox
- ▶ no oil fumes in the atmosphere



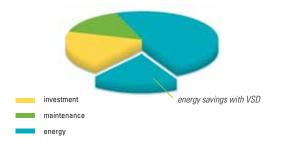
High efficiency cooling (watercooled ZR compressor)

- ▶ tubes of special corrosion resistant stainless steel (R249)
- ► star profile increases heat transfer
- ► very low approach temperatures
- ▶ nearly perfect intercooling saves energy
- ▶ enhanced water removal reduces moisture carry-over and dryer loads

Why Variable Speed Drive (VSD) compressors ?

Because a VSD compressor precisely follows the varying air demand that is typical in most production facilities, it dramatically reduces the energy bill and provides many additional benefits. The result is a fast payback of the investment and huge yearly savings long after that.

Because energy constitutes the biggest portion of the life cycle cost of a compressor, these savings have a significant impact on the operational costs of your compressed air system.



Predicting your savings

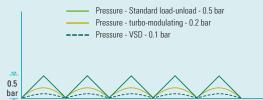
Call upon the expertise of Atlas Copco specialists and have an assessment carried out in your factory. A detailed report will show your current operation and the achievable savings when adding a VSD solution to your compressed air system.



Direct energy savings of up to 35 %

- Low load operation of a VSD compressor does not result in energy losses or in blowing off compressed air to the atmosphere.
- ► Load/no load transition losses are eliminated.
- The precise pressure control of the VSD compressor allows a tighter and often lower discharge working pressure, resulting in reduced energy consumption.

STABLE NET PRESSURE



Process pressure

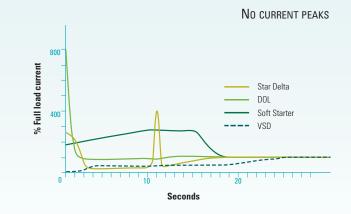
Indirect savings

- The lowered net pressure obtained by the VSD compressor provides additional yearly savings:
 - other base-load compressors will consume up to
 5 % less energy
 - leak losses always present in compressed air systems are significantly reduced: e.g. leakage at 6 bar(e) would be 13 % less than at 7 bar
 - many compressed air applications consume less air at a reduced pressure, similar to leak reduction

In addition to the direct savings, the combination of above elements could add up to another 10 % energy savings on the complete compressed air installation.

Additional VSD benefits

- The constant net pressure provides stability for all processes making use of compressed air.
- ▶ Current peaks during start-up are eliminated
 - VSD compressors can be started and stopped without limitation
 - frequent start-stops no longer lead to current peak penalties
 - the electrical installation can often be rated for a lower current, meaning savings in investment.



Integrated VSD - The only way

All Atlas Copco VSD compressors are EMC tested and certified. External sources do not influence the compressor operation, nor does the compressor disturb other equipment via emissions or via the power supply line.

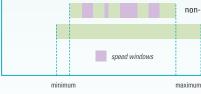
The Elektronikon[®] system controls both the compressor and the integrated converter; this ensures maximum machine safety and allows easy networking of the compressor.

Mechanical enhancements are made to ensure that gears and bearings receive proper lubrication at all speeds and that all components operate well below critical vibrations.



The machine is tested for the complete speed range to eliminate all "speed windows" that can jeopardize the energy savings and the stable net pressure.

OPERATING RANGE

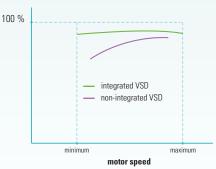


non-integrated solution
Atlas Copco integrated solution

flow

Special attention is given to the electric motor, which is specifically designed for VSD operation (inverter duty motors). Bearings are protected against induced bearing currents and both motor and converter are perfectly tuned to obtain the best efficiency over the entire speed range.

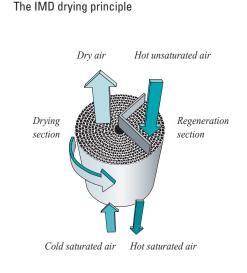
COMBINED MOTOR/CONVERTER EFFICIENCY



The Full Feature compressor – a compact, all-in-one quality air solution

The Full Feature concept is a total installation, providing dry compressed air out of the box. Integrating the IMD dryer and its Variable Speed Drive on VSD models, this compact package offers high quality air at the lowest cost with the highest reliability:

- The IMD adsorption dryer eliminates the moisture before it enters the air net, ensuring a reliable process and an impeccable end product. No external energy is needed for the IMD to dry the air, resulting in large savings over the years.
- The pressure drop is minimal, which again cuts down the operating cost.
- Significantly reduced floor space thanks to the efficient integration of the dryer into the compressor canopy:
 -20 % for the aircooled ZT FF
 -40 % for the watercooled ZR FF.
- The Full Feature compressor is a pre-wired and pre-piped solution, ready to use.







Advanced condition monitoring

One integrated control and monitoring system for compressor and dryer

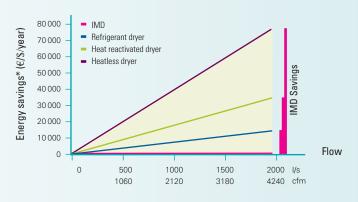


ZR90 VSD-FF

Energy savings with Full Feature

Direct Savings

The IMD drying process requires no external energy; over time this results in large savings.



* Assumptions: 1 kWh = 0.05 e/ s - 8000 h/year

Indirect Savings

Other than direct energy input, the pressure drop in dryers causes indirect energy consumption as well. IMD dryers have a very low pressure drop, which leads to a further reduction in energy cost.



Reliable technology for tough conditions



HAT version keeps cool in hot spots

Operating air compressors in very hot environments has been a challenge to plant engineers for many years. Often, the only solution was to order custom built units, at high additional expense and with long and unpredictable delivery times.

Standard solution

With the new ZT High Ambient Temperature (HAT) compressors, Atlas Copco offers an off-the-shelf standard solution. ZT HAT compressors operate comfortably at high intake and cooling air temperatures of up to 50 °C. Reliable operation is ensured by...

- ► adapted mechanical design
- forced component cooling
- ► proper motor sizing

The ZT HAT is a thoroughly tested package to prevent any uncertainties and surprises.

ContainAIR is out there

Be it for a temporary need or simply because there is no room inside your factory, Atlas Copco ContainAIR delivers air wherever you need it. Installed in a 15 ft. (4.6 m) container, ContainAIR has all the features of its stationary oil-free relatives, but adds flexibility and mobility.

Totally self-contained and rugged, it runs around the clock. Winterized versions are optional.

When the going gets tough, ContainAIR gets going.

True performance

Global presence Local service

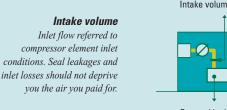
When specifying the true performance of an air compressor, at least three parameters must be considered: **Capacity** The standard to which the capacity is measured **Working pressure**

freedorie

The point where the delivery pressure is measured

Power consumption

The compressor power required at an effective working pressure (including all internal losses from inlet to outlet) The drive mode with regard to transmission losses.

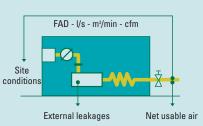


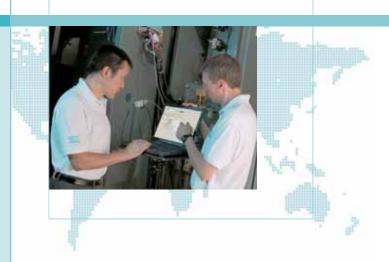
Intake volume - I/s - m³/min - cfm

Atlas Copco Z-compressors are measured according to ISO 1217, Annex C, Edition 3, stipulating the FAD measurement at the outlet of the package, net of all losses.

Atlas Copco specifications correspond to the capacity and pressure which the customer receives, not to what the compressor sucks in. Differences can be substantial.

Delivered volume FAD according to ISO 1217, Annex C, Edition 3. A Z-compressor truly gives what is promised.





Atlas Copco's Aftersales Service operation is unrivalled in the compressed air industry.

- High quality service is delivered locally: Atlas Copco's Aftersales is present in 150 countries around the world.
- Our service plans perfectly meet the requirements of your business and ensure a constant productivity at peak level.
- Consultancy services and on-site measurements help optimizing the complete air net, minimizing leak losses and maximizing energy savings.
- A sophisticated logistics concept brings genuine parts to your doorstep in record times, across the globe. After all, only genuine Atlas Copco parts, produced on the same assembly lines as your compressor, can guarantee a long lifetime and uninterrupted operation.

Technical data ZR/ZT55-90-FF compressor range

ZR/ZR-FF Watercooled oil-free	Free air delivery ⁽¹⁾		Installe	Installed motor		ng water mption ⁽²⁾	Pressure dewpoint ⁽⁴⁾	Sound pressure level ⁽⁵⁾	
compressors							ZR-FF		ZR-FF
Type	l/s	m³/min	cfm	kW	hp	ZR I/s	l/s	°C	dB(A)
50 Hz units ZR55 - 7.5	143	8.6	303	55	75	0.9	1.3	-24	65
ZR55 - 8.6	143	7.9	278	55	75	0.9	1.3	-24	65
					75				
ZR55 - 10	121	7.3	257	55	75	0.9	1.3	-25	65
60 Hz units	166	0.0	000		75	1	1.4	04	<u>сг</u>
ZR55 - 7.25	155	9.3	329	55	75	1	1.4	-24	65
ZR55 - 9	138	8.3	293	55	75	1	1.4	-25	65
ZR55 - 10.4	128	7.7	271	55	75	1	1.4	-25	65
50 Hz units									
ZR75 - 7.5	194	11.6	411	75	100	1.2	1.8	-26	65
ZR75 - 8.6	184	11.0	390	75	100	1.2	1.8	-26	65
ZR75 - 10	174	10.4	369	75	100	1.2	1.8	-27	65
60 Hz units									
ZR75 - 7.25	213	12.8	452	75	100	1.3	1.9	-26	65
ZR75 - 9	194	11.6	411	75	100	1.3	1.9	-27	65
ZR75 - 10.4	185	11.1	392	75	100	1.3	1.9	-27	65
50 Hz units									
ZR90 - 7.5	234	14.0	496	90	120	1.4	2.1	-27	65
ZR90 - 8.6	220	13.2	466	90	120	1.4	2.1	-28	65
ZR90 - 10	209	12.5	443	90	120	1.4	2.1	-28	65
60 Hz units									
ZR90 - 7.25	262	15.7	555	90	120	1.6	2.3	-26	65
ZR90 - 9	235	14.1	498	90	120	1.6	2.3	-28	65
ZR90 - 10.4	224	13.4	475	90	120	1.6	2.3	-29	65
ZT/ZT-FF Aircooled oil-free	Free air delivery $^{\scriptscriptstyle (1)}$		Installed motor		Installed fan motor		Pressure dewpoint ⁽⁴⁾	Sound pressure level ⁽⁵⁾	
compressors Type	l/s	m³/min	cfm	kW	hp	ZT kW	ZT-FF kW	ZT-FF °C	dB(A)
50 Hz									
ZT55 - 7.5	142	8.5	301	55	75	2	3.1	-28	72
ZT55 - 8.6	130	7.8	276	55	75	2	3.1	-28	72
ZT55 - 8.6 HAT ⁽⁶⁾	120	7.2	254	55	75	2	-	-	72
ZT55 - 10	120	7.2	254	55	75	2	3.1	-28	72
60 Hz									
ZT55 - 7.25	154	9.2	326	55	75	2	3.6	-28	72
ZT55 - 8.6 HAT ⁽⁶⁾	127	7.6	269	55	75		-	-	72
ZT55 - 9				00		2	-		
	137	8.2	290	55	75	2	3.6	-28	72
ZT55 - 10.4	137 127		290 269		75 75			-28 -29	
ZT55 - 10.4 50 Hz		8.2		55		2	3.6		72
50 Hz		8.2		55		2	3.6		72
50 Hz ZT75 - 7.5	127	8.2 7.6	269	55 55	75	2 2	3.6 3.6	-29	72 72
	127 193	8.2 7.6 11.6	269 409	55 55 75	75 100	2 2 3.6	3.6 3.6 4.7	-29 -30	72 72 72
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾	127 193 184	8.2 7.6 11.6 11.0	269 409 390	55 55 75 75	75 100 100	2 2 3.6 3.6	3.6 3.6 4.7 4.7	-29 -30 -30	72 72 72 72 72
50 Hz ZT75 - 7.5 ZT75 - 8.6	127 193 184 174	8.2 7.6 11.6 11.0 10.4	269 409 390 369	55 55 75 75 75 75	75 100 100 100	2 2 3.6 3.6 3.6 3.6	3.6 3.6 4.7 4.7	-29 -30 -30 -	72 72 72 72 72 72 72
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units	127 193 184 174	8.2 7.6 11.6 11.0 10.4	269 409 390 369	55 55 75 75 75 75	75 100 100 100	2 2 3.6 3.6 3.6 3.6	3.6 3.6 4.7 4.7	-29 -30 -30 -	72 72 72 72 72 72 72
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25	127 193 184 174 174 212	8.2 7.6 11.6 11.0 10.4 10.4 12.7	269 409 390 369 369 449	55 55 75 75 75 75 75 75	75 100 100 100 100	2 2 3.6 3.6 3.6 3.6 3.8	3.6 3.6 4.7 4.7 - 4.7	-29 -30 -30 - - -31	72 72 72 72 72 72 72 72
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25 ZT75 - 8.6 HAT ⁽⁶⁾	127 193 184 174 174 212 184	8.2 7.6 11.6 11.0 10.4 10.4 12.7 11.1	269 409 390 369 369 449 390	55 55 75 75 75 75 75 75 75 75 75	75 100 100 100 100 100 100	2 2 3.6 3.6 3.6 3.6 3.6 3.8 3.8 3.8	3.6 3.6 4.7 4.7 - 4.7 5.6 -	-29 -30 -30 - -31 -31 -30 -30 -	72 72 72 72 72 72 72 72 72 72
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50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 9 ZT75 - 10.4 50 Hz units ZT90 - 7.5	127 193 184 174 174 212 184 194 184 233	8.2 7.6 11.6 11.0 10.4 10.4 12.7 11.1 11.6 11.0 14.0	269 409 390 369 369 449 390 411 390 494	55 55 75 75 75 75 75 75 75 75 75 90	75 100 100 100 100 100 100 100 100	2 2 3.6 3.6 3.6 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8	3.6 3.6 4.7 4.7 - 4.7 5.6 - 5.6 5.6 5.6 4.7	-29 -30 -30 - -31 -31 -31 -31 -31	72 72 72 72 72 72 72 72 72 72 72 72 72
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 9 ZT75 - 10.4 50 Hz units ZT90 - 7.5 ZT90 - 8.6	127 193 184 174 174 212 184 194 184 233 220	8.2 7.6 11.6 11.0 10.4 10.4 12.7 11.1 11.6 11.0 14.0 13.2	269 409 390 369 369 449 390 411 390 494 466	55 55 75 75 75 75 75 75 75 75 90 90	75 100 100 100 100 100 100 100 100 120	2 2 3.6 3.6 3.6 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8	3.6 3.6 4.7 4.7 - 4.7 5.6 - 5.6 5.6 5.6 4.7 4.7	-29 -30 -30 - -31 -31 -31 -31 -31 -31 -31 -32	72 72 72 72 72 72 72 72 72 72 72 72 72 7
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25 ZT75 - 7.25 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 9 ZT75 - 10.4 50 Hz units ZT90 - 7.5 ZT90 - 8.6 ZT90 - 8.6 HAT ⁽⁶⁾	127 193 184 174 174 212 184 194 184 233 220 208	8.2 7.6 11.6 11.0 10.4 10.4 12.7 11.1 11.6 11.0 14.0 13.2 12.5	269 409 390 369 369 449 390 411 390 494 466 441	55 55 75 75 75 75 75 75 75 75 90 90 90	75 100 100 100 100 100 100 100 100 120 120	2 2 3.6 3.6 3.6 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.6 3.6 3.6 3.6	3.6 3.6 4.7 4.7 - 4.7 5.6 5.6 5.6 5.6 4.7 4.7	-29 -30 -30 - -31 -31 -31 -31 -31 -31 -32 -	72 72 72 72 72 72 72 72 72 72 72 72 72 7
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 9 ZT75 - 10.4 50 Hz units ZT90 - 7.5 ZT90 - 8.6 ZT90 - 8.6 HAT ⁽⁶⁾ ZT90 - 10	127 193 184 174 174 212 184 194 184 233 220	8.2 7.6 11.6 11.0 10.4 10.4 12.7 11.1 11.6 11.0 14.0 13.2	269 409 390 369 369 449 390 411 390 494 466	55 55 75 75 75 75 75 75 75 75 90 90	75 100 100 100 100 100 100 100 100 120	2 2 3.6 3.6 3.6 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8	3.6 3.6 4.7 4.7 - 4.7 5.6 - 5.6 5.6 5.6 4.7 4.7	-29 -30 -30 - -31 -31 -31 -31 -31 -31 -31 -32	72 72 72 72 72 72 72 72 72 72 72 72 72 7
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 9 ZT75 - 10.4 50 Hz units ZT90 - 7.5 ZT90 - 8.6 ZT90 - 8.6 HAT ⁽⁶⁾ ZT90 - 10 60 Hz units	127 193 184 174 174 212 184 194 184 233 220 208 208 208	8.2 7.6 11.6 11.0 10.4 10.4 12.7 11.1 11.6 11.0 14.0 13.2 12.5 12.5	269 409 390 369 369 449 390 411 390 494 466 441 441	55 55 75 75 75 75 75 75 75 75 90 90 90 90 90	75 100 100 100 100 100 100 100 100 120 120	2 2 3.6 3.6 3.6 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8	3.6 3.6 4.7 4.7 - 4.7 5.6 5.6 5.6 5.6 4.7 4.7 4.7	-29 -30 -30 -31 -31 -31 -31 -31 -31 -32 - -32	72 72 72 72 72 72 72 72 72 72 72 72 72 7
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 9 ZT75 - 10.4 50 Hz units ZT90 - 7.5 ZT90 - 8.6 ZT90 - 8.6 HAT ⁽⁶⁾ ZT90 - 10 60 Hz units ZT90 - 7.25	127 193 184 174 174 212 184 194 184 233 220 208 208 208 208 208	8.2 7.6 11.6 11.0 10.4 10.4 12.7 11.1 11.6 11.0 14.0 13.2 12.5 12.5 12.5 12.5	269 409 390 369 369 449 390 411 390 494 466 441 441	55 55 75 75 75 75 75 75 75 75 90 90 90 90 90	75 100 100 100 100 100 100 100 100 120 120	2 2 3.6 3.6 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.6 3.6 3.6 3.6 3.6 3.6	3.6 3.6 4.7 4.7 - 4.7 5.6 5.6 5.6 5.6 4.7 4.7 4.7 - 4.7 5.6	-29 -30 -30 - -31 -31 -31 -31 -31 -31 -32 - -32 -32	72 72 72 72 72 72 72 72 72 72 72 72 72 7
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 9 ZT75 - 10.4 50 Hz units ZT90 - 7.5 ZT90 - 8.6 ZT90 - 8.6 HAT ⁽⁶⁾ ZT90 - 10 60 Hz units ZT90 - 7.25 ZT90 - 8.6 HAT ⁽⁶⁾	127 193 184 174 174 212 184 194 184 233 220 208 208 208 208 208	8.2 7.6 11.6 11.0 10.4 10.4 12.7 11.1 11.6 11.0 13.2 12.5 12.5 12.5 15.7 13.3	269 409 390 369 369 449 390 411 390 494 466 441 441 553 470	55 55 75 75 75 75 75 75 75 75 90 90 90 90 90 90 90	75 100 100 100 100 100 100 100 120 12	2 2 3.6 3.6 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.6 3.6 3.6 3.6 3.6 3.6 3.8 3.8 3.8	3.6 3.6 4.7 4.7 5.6 5.6 5.6 5.6 5.6 4.7 4.7 4.7 5.6 5.6	-29 -30 -30 -31 -31 -31 -31 -31 -31 -32 - -32 -32 -32 -32 -32 -32 -32	72 72 72 72 72 72 72 72 72 72 72 72 72 7
50 Hz ZT75 - 7.5 ZT75 - 8.6 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 10 60 Hz units ZT75 - 7.25 ZT75 - 8.6 HAT ⁽⁶⁾ ZT75 - 9 ZT75 - 10.4 50 Hz units ZT90 - 7.5 ZT90 - 8.6 ZT90 - 8.6 HAT ⁽⁶⁾ ZT90 - 10 60 Hz units ZT90 - 7.25	127 193 184 174 174 212 184 194 184 233 220 208 208 208 208 208	8.2 7.6 11.6 11.0 10.4 10.4 12.7 11.1 11.6 11.0 14.0 13.2 12.5 12.5 12.5 12.5	269 409 390 369 369 449 390 411 390 494 466 441 441	55 55 75 75 75 75 75 75 75 75 90 90 90 90 90	75 100 100 100 100 100 100 100 100 120 120	2 2 3.6 3.6 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.6 3.6 3.6 3.6 3.6 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8	3.6 3.6 4.7 4.7 - 4.7 5.6 5.6 5.6 5.6 4.7 4.7 4.7 - 4.7 5.6	-29 -30 -30 - -31 -31 -31 -31 -31 -31 -32 - -32 -32	72 72 72 72 72 72 72 72 72 72 72 72 72 7

Technical data ZR/ZT75-90 VSD-FF compressors

ZR VSD / ZR VSD-FF Watercooled oil-free	Free air delivery ⁽¹⁾			Cooling water consumption ⁽²⁾		Pressure dewpoint ⁽⁴⁾	Sound pressure level ⁽⁵⁾	
compressors				ZR ZR-FF		ZR-FF	ievei	
Types – 50/60 Hz	l/s	m³/min	cfm	l/s	l/s	°C	dB(A)	
ZR75 VSD-9 bar (e)				1.25	1.92	-30	65	
Max ⁽³⁾	220	13.2	466					
Min	75	4.5	159					
ZR75 VSD-10.4 bar (e)				1.25	1.92	-30	65	
Max ⁽³⁾	198	11.9	420					
Min	98	5.9	208					
ZR90 VSD-9 bar (e)				1.25	1.92	-30	65	
Max ⁽³⁾	258	15.5	547					
Min	75	4.5	159					
ZR90 VSD-10.4 bar (e)				1.25	1.92	-30	65	
Max ⁽³⁾	232	13.9	492					
Min	98	5.9	208					
ZT VSD / ZT VSD-FF Aircooled oil-free compressors		ree air delivery (1)				Pressure dewpoint ⁽⁴⁾ ZT-FF	Sound pressure level ⁽⁵⁾	
Types – 50/60 Hz	l/s	m³/min	cfm			°C	dB(A)	
ZT75 VSD-9 bar (e)						-30	72	
Max (3)	220	13.2	466					
Min	75	4.5	159					
ZT75 VSD-10.4 bar (e)						-30	72	
Z1/5 VSD-10.4 bar (e)								
Max ⁽³⁾	198	11.9	420					
	198 98	11.9 5.9	420 208			_		
Max ⁽³⁾						-30	72	
Max ⁽³⁾ Min						-30	72	
Max ⁽³⁾ Min ZT90 VSD-9 bar (e)	98	5.9	208			-30	72	
Max ⁽³⁾ Min ZT90 VSD-9 bar (e) Max ⁽³⁾	98 258	5.9 15.5	208 547			-30	72 72	
Max ⁽³⁾ Min ZT90 VSD-9 bar (e) Max ⁽³⁾ Min	98 258	5.9 15.5	208 547					

(1) Reference Conditions:

Dry air

Absolute inlet pressure 1 bar (a)

Cooling and air intake temperature 20 °C

Nominal working pressure

Performance of the compressor package measured according to ISO 1217,

Third Edition, Annex C

(2) Cooling water temperature rise of 15 °C

Dimensions & weight



Compressor pack units	Weight (approx.)	D A	imension B	is C
Туре 50/60 Hz	kg	mm	mm	mm
ZR55	1580	2100	1376	1900
ZR75	1655	2100	1376	1900
ZR90	1720	2100	1376	1900
ZT55	1580	2100	1376	2150
ZT75	1655	2100	1376	2150
ZT90	1720	2100	1376	2150
ZR75 VSD	1940	2550	1376	1980
ZT75 VSD	1940	2550	1376	2150
ZR90 VSD	1940	2550	1376	1980
ZT90 VSD	1940	2550	1376	2150

(3) (4) Max. capacity is at reference pressure and not at max. pressure Pressure dewpoint is specified for - 20 °C cooling air/water temperature

- relative humidity of 60 %
- nominal working pressure
- load level of minimum 50 %
- For VSD: at reference speed
- \pm 3 dB(A) according to Pneurop PN 8 NTC 2.2 test code measured at a distance of 1 m and according to ISO 2151:2004 and using ISO 9614-2 (5)

(6) Maximum intake / cooling air temperature is 50 °C for HAT versions

Conversions

- 1 kg = 2.2 lbs

- 1 mm = 0.039 inch - °F = °C x 9/5 + 32

Compressor	Weight	D	ıs	
Full Feature units	(approx.)	А	В	С
Туре 50/60 Hz	kg	mm	mm	mm
ZR55 FF	1830	2100	1376	1900
ZR75 FF	1905	2100	1376	1900
ZR90 FF	1970	2100	1376	1900
ZT55 FF	2180	2800	1376	2150
ZT75 FF	2255	2800	1376	2150
ZT90 FF	2320	2800	1376	2150
ZR75 VSD-FF	2190	2550	1376	1980
ZT75 VSD-FF	2540	3190	1376	2150
ZR90 VSD-FF	2190	2550	1376	1980
ZT90 VSD-FF	2540	3190	1376	2150



ISO 9001 A consistent quality earned us the industry's leadership and the customer's trust.



ISO 14001 Atlas Copco's Environmental Management System forms an integral part of each business process.

Never use compressed air as breathing air without prior purification in accordance with local legislation and standards. What sets Atlas Copco apart as a company is our conviction that we can only excel in what we do, if we provide the best possible know-how and technology to really help our customers produce, grow and succeed.

There is a unique way of achieving that - we simply call it the Atlas Copco way. It builds on **interaction**, on long-term relationships and involvement in the customers' process, needs and objectives. It means having the flexibility to adapt to the diverse demands of the people we cater for.

It's the commitment to our customers' business that drives our effort towards increasing their productivity through better solutions. It starts with fully supporting existing products and continuously doing things better, but it goes much further, creating advances in technology through innovation. Not for the sake of technology, but for the sake of our customer's bottom line and peace-of-mind.

That is how Atlas Copco will strive to remain the first choice, to succeed in attracting new business and to maintain our position as the industry leader.

