

Atlas Copco

Low pressure oil-free air compressors



ZE/ZA 2-6 (VSD)

22-500 kW/40-700 hp



Atlas Copco

Providing continuous productivity at the lowest operational cost

As the cornerstone of many production processes, low pressure compressed air is essential to keep the production going. Atlas Copco's full range of low pressure oil-free air solutions offers a combination of high reliability and energy efficiency, providing a 100% certified supply of oil-free air for a broad spectrum of industrial applications.

Pneumatic Conveying

Exceptional reliability for industrial processing facilities



In activities such as fly ash or cement production, dense phase pneumatic conveying is used to transport goods. A reliable stream of low pressure 100% certified oil-free compressed air is essential to keep the production running smoothly. To maximize productivity in these often harsh and dusty environments, Atlas Copco's reliable ZE/ZA compressors incorporate the latest technologies in the most solid design.

Fermentation

Essential purity for pharmaceutical plants, breweries & chemical plants



Compressed air supplies oxygen to bacteria during fermentation to produce chemicals such as citric acid. The presence of even small oil traces will kill the bacteria and contaminate the end product. As the compressed air comes into direct contact with the process, air purity is vital. Atlas Copco's ZE/ZA oil-free air compressors are certified according to ISO 8573-1 CLASS 0 (2001), which stands for zero risk of contamination, zero risk of damaged or unsafe products and zero risk of losses from operational downtime.

Glass Industry

High efficiency for glass blowing facilities



Mold cooling is one of the steps in the glass blowing process which requires high-quality low pressure oil-free air at the lowest operating cost. Atlas Copco ZE/ZA compressors provide a constant air flow with pressure ratings of up to 4 bar(e). With the promise of low energy consumption and continuous operation, these compressors create opportunities to obtain a competitive advantage.

Flue Gas Desulphurization

Cost efficiency & reliability for coal-fired power plants



In coal-fired power plants, a continuous flow of low pressure air is used to remove sulphur dioxide from the exhaust flue gases. To guarantee uninterrupted pollution control and make sure these plants are up and running 24/7, the used compressed air solution needs to be highly reliable and energy-efficient. Atlas Copco's low pressure ZE/ZA compressors fulfill this demand by offering a constant air flow at minimal energy costs.



Keeping your production up and running

Especially in harsh and dusty environments, a reliable supply of compressed air is critical to ensure production continuity. Every ZE/ZA is designed, manufactured and tested to comply with ISO 9001 stipulations. The totally enclosed IP55 motor is built to ensure continuous operation and exceptional reliability in dusty and humid environments.

Driving down energy costs

Energy costs can amount to 80% of the Life Cycle Costs of a compressor. The generation of compressed air can account for more than 40% of a plant's total electricity costs. Fully compliant with ISO 14001 standards, the ZE/ZA range helps to reduce costs: the EFF1 motor and compression element with Teflon rotor coating and cooling jackets provide the highest air volume at the lowest energy consumption. The integrated Variable Speed Drive (VSD) technology offers approximately 35% extra energy savings by automatically tuning compressor flow to the precise air demand.

Protecting your reputation and production

In virtually any application, oil contamination of the air supply causes serious productivity issues and increases costs. As the first manufacturer to receive ISO 8573-1 CLASS 0 (2001) certification for its oil-free air compressors, Atlas Copco has set a new standard in air purity. Focusing on the protection of critical applications as well as today's increasing quality demands, Atlas Copco offers TÜV-certified 100% oil-free air.

Assuring your peace of mind

Through continuous investment in our competent, committed and efficient service organization, Atlas Copco ensures superior customer value by maximizing productivity. With a presence in over 160 countries, we offer professional and timely service through interaction and involvement. Uptime is guaranteed by dedicated technicians and 24/7 availability.

Easy installation

Delivered ready for use, ZE/ZA compressors come as all-in-one packages including a powerful controller and integrated aftercooler. The compact design eliminates the need for extras and reduces installation to an absolute minimum, saving you time and money. Built for easy integration in your existing compressed air network, the ZE/ZA compressors are up and running in no time.

The preferred choice for total reliability and efficiency



1 State-of-the-art screw compression element

- Unique Teflon coating results in increased efficiency, higher pressures up to 4 bar(e)/58 psig, longer lifetime and protection against corrosion.
- Cooling jackets improve reliability and efficiency by ensuring rotor clearances are always kept to the absolute minimum.
- Efficient shaft sealing eliminates the risk of oil leakage, reduces wear, and guarantees 100% oil-free air.

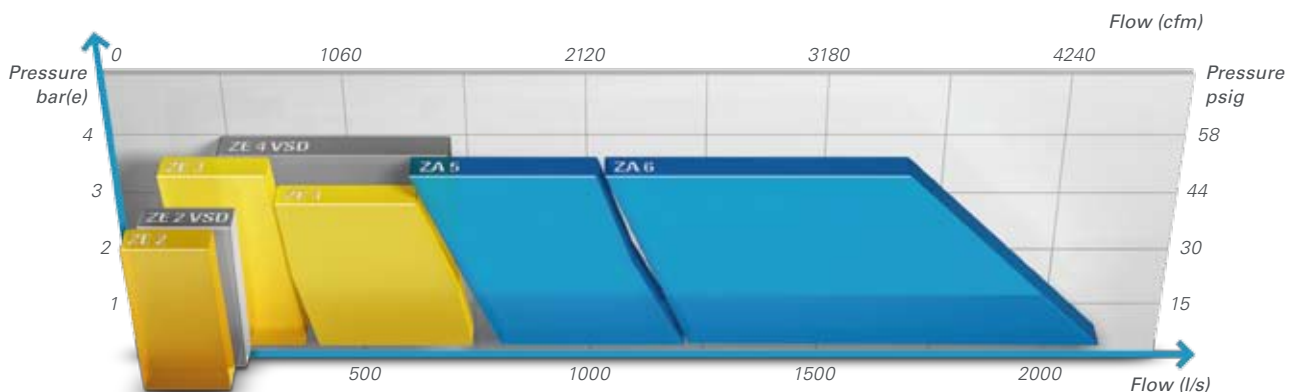


2 Advanced element bearings

- Assuring constant reliability, the element bearings remain stable under varying load conditions.
- Durability is a given: two axial bearings limit internal leakage losses by maintaining small clearances between the rotor surfaces.
- The bearings adapt easily to changing loads, providing the flexibility and efficiency to make production processes run smoothly.



ZE / ZA range overview





3 Control and monitoring

- To keep a firm grip on costs, the advanced Elektronikon® system allows you to monitor overall system performance with service indications, malfunction alarms and safety shutdowns. The multi-language text display is easy to use.
- For extra flexibility, the Elektronikon can be integrated into existing process control systems.
- To increase efficiency and minimize downtime, two control algorithms (*Dynamic Pressure Limit Control* and *Dynamic Speed Limit Control*) tune setpoint pressure and operating speeds to element discharge temperature.



4 High-precision drive system

- Even in dusty and humid environments, the high-efficiency IP55 motor (*efficiency class EFF1*) offers assured operation.
- Transmission losses are low, noise and vibration levels are decreased and element lifetime is prolonged thanks to the AGMA Q13/DIN Class 5 gears in the main drive.
- Since no pulleys are used, the replacement of belts and misalignment of elements is avoided, while mechanical losses are limited.



5 Air-cooled aftercooler (*ZE only*)

- User-friendliness is increased and costs reduced thanks to easy installation and easy access for cleaning.
- The highly efficient cooling reduces energy consumption and dryer loads.

Water-cooled aftercooler (*ZA only*)

- Corrosion-resistant stainless steel tubing.
- The risk of leaks is eliminated thanks to highly reliable robot welding.
- Aluminium star insert increases heat transfer.
- Cooling water outside tubes guided by baffles:
 - no dead zones – limited fouling;
 - no degradation in cooler performance;
 - easy cleaning;
 - very long service intervals.

CLASS 0: the industry standard



Oil-free air is used in all kinds of industries where air quality is paramount for the end product and production process. These applications include food and beverage processing, pharmaceutical manufacturing and packaging, chemical and petrochemical processing, semiconductor and electronics manufacturing, the medical sector, automotive paint spraying, textile manufacturing and many more. In these critical environments, contamination by even the smallest quantities of oil can result in costly production downtime and product spoilage.

First in oil-free air technology

Over the past sixty years Atlas Copco has pioneered the development of oil-free air technology, resulting in a range of air compressors and blowers that provide 100% pure, clean air. Through continuous research and development, Atlas Copco achieved a new milestone, setting the standard for air purity as the first manufacturer to be awarded ISO 8573-1 CLASS 0 certification.

Eliminating any risk

As the industry leader committed to meeting the needs of the most demanding customers, Atlas Copco requested the renowned TÜV institute to type-test its range of oil-free compressors and blowers. Using the most rigorous testing methodologies available, all possible oil forms were measured across a range of temperatures and pressures. The TÜV found no traces of oil at all in the output air stream. Thus Atlas Copco is not only the first compressor and blower manufacturer to receive CLASS 0 certification, but also exceeds ISO 8573-1 CLASS 0 specifications.

CLASS	Concentration total oil (aerosol, liquid, vapor) mg/m ³
0	As specified by the equipment user or supplier and more stringent than class 1
1	< 0.01
2	< 0.1
3	< 1
4	< 5

Current ISO 8573-1 (2001) classes (the five main classes and the associated maximum concentration in total oil content).

CLASS 0 means:

- Zero risk of contamination.
- Zero risk of damaged or unsafe products.
- Zero risk of losses from operational downtime.
- Zero risk of damaging your company's hard-won professional reputation.

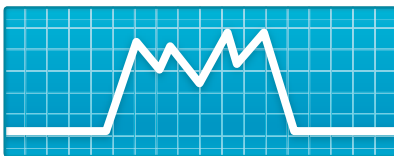
VSD: driving down energy costs

Energy consumption typically represents over 80% of a compressor's and blower's Life Cycle Cost. Looking continuously to innovate and reduce customer costs, Atlas Copco pioneered the Variable Speed Drive technology (VSD) in 1994. VSD stands for major energy savings, while protecting the environment for future generations. Due to our ongoing investments in R&D, Atlas Copco offers the widest range of integrated VSD compressors and blowers on the market.

Varying air demand in 92% of all installations

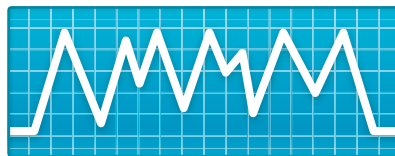
In almost every production environment, air demand fluctuates depending on different factors (*time of the day, week or even month*). Extensive measurements and studies of compressed air demand profiles show that 92% of all compressor and blower installations have substantial variations in air demand. Only 8% of all installations have a more stable air demand. Tests prove that even in this case, VSD compressors and blowers save energy.

Profile 1



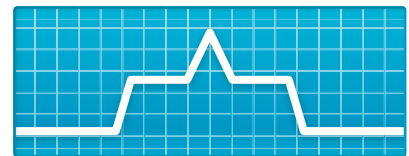
- 64% of all installations
- Factory working 24 hrs/day: low demand at night & high demand during the day

Profile 2

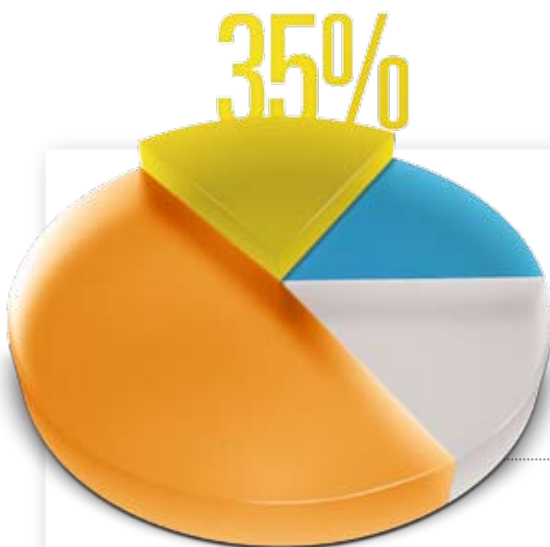


- 28% of all installations
- Factory working 2 shifts/day, no weekend work: erratically varying air demand

Profile 3



- 8% of all installations
- Factory working 2 shifts/day, no weekend work: typical 'fixed' speed application



Energy savings of up to 35%

Atlas Copco's VSD technology closely follows the air demand by automatically adjusting the motor speed. This results in large energy savings of up to 35%. The Life Cycle Cost of a compressor and blower can be cut by an average of 22%. In addition, lowered system pressure with VSD minimizes energy use across your production dramatically.

Total compressor and blower Life Cycle Cost

- Energy
- Investment
- Energy savings with VSD
- Maintenance

Find out how much you can save

Atlas Copco can help you map the load/air demand profile of your current compressor and blower installation and indicate potential energy savings with VSD compressors and blowers. **For more information, please contact your local Atlas Copco representative.**

Optimize your system

With the ZE/ZA, Atlas Copco provides an all-in-one standard package incorporating the latest technology in a built-to-last design. To further optimize your ZE/ZA's performance or to simply tailor it to your specific production environment, optional features are available.

Scope of supply

Air circuit

- Air intake filter and silencer
- Flexible air intake
- Full load/no load regulator
- Outlet air silencer
- Discharge expansion joints
- Coated rotors
- AGMA class 13; DIN class 5 gears
- Outlet air flange
- Integral blow-off
- Check valve
- Safety valve

Oil circuit

- Supplied oil-filled
- Completely pre-piped oil circuit
- Built-in oil breather system

Cooling circuit

- Complete water circuit
- Single-point inlet and outlet connections
- Back-flush arrangement for cooler cleaning

Connections

- ANSI flanges
- DIN flanges

Electrical components

- IP55 water and dust-proof TEFC motor
- Pre-mounted electric motor
- Pre-mounted electric cubicle
- Elektronikon® control and monitoring system
- Built-in starter

Framework

- Sound-insulated enclosure
- Base frame with forklift slots

Mechanical approval

- ASME approval
- CE approval

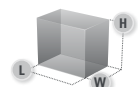
Additional features & options

ADDITIONAL FEATURES	Air-cooled		Water-cooled		Air-cooled VSD		Water-cooled VSD
	ZE 2	ZE 3-4	ZA 2	ZA 5-6	ZE 4 VSD	ZE 2 VSD	ZA 2 VSD
GENERAL							
Water-cooled variant		■					
Stainless steel cooler			■	■			■
MOTOR							
PT1000 Thermal Protection (≥ 90 kW motor)					■		
Thermistors in windings (<90 kW motor)					■		
OPTIONS	Air-cooled		Water-cooled		Air-cooled VSD		Water-cooled VSD
	ZE 2	ZE 3-4	ZA 2	ZA 5-6	ZE 4 VSD	ZE 2 VSD	ZA 2 VSD
GENERAL							
Unload noise reduction		■					
Excluding full load/no load regulator	■	■	■	■		■	■
Heavy duty inlet filter				■			
Water-cooled variant (<i>stainless steel cooler</i>)		■					■
Automatic water shut-off			■	■			
Hot Air variant	■	■	■	■	■	■	■
Anchor pads	■	■	■	■	■	■	■
Teflon-free element	■		■			■	■
SPM bearing monitoring	■	■	■	■	■	■	■
IT network					■	■	■
MOTOR							
Anti-condensation heaters	■	■	■	■	■	■	■
PT1000 Thermal Protection (≥ 90 kW motor)	■	■	■	■			
Thermistors in windings (<90 kW motor)	■	■	■				
Excluding motor		■		■			
FRAMEWORK							
Canopy extension for high voltage motor				■			
Excluding canopy		■		■			
CERTIFICATES							
Performance test certificate	■	■	■	■	■	■	■
Witnessed performance test	■	■	■	■	■	■	■
OTHER OPTIONS							
Air booster	■		■			■	■
Nitrogen booster	■		■			■	■
Air-cooled version				■			

Technical specifications

ZE 2 air-cooled & ZA 2 water-cooled – 50 Hz

	Gear designation	ZE 2 air-cooled - 50 Hz					ZA 2 water-cooled - 50 Hz					
		A	C	E	G	I	A	C	E	G	I	
	Unloaded power	kW	9	10	11	11	12	9	10	11	11	12
	Sound pressure level at max. 2.0 bar(e)	dB(A)	69	70	71	72	73	69	70	71	72	73
	Sound pressure level at max. 3.5 bar(e)	dB(A)	69	72	73	74	76	69	71	73	74	76
1.00 bar(e)	Free Air Delivery	l/s	73	98	146	193	256	72	97	145	191	254
		m³/h	263	351	527	694	922	260	348	522	688	915
	Outlet temperature	°C	95	99	103	117	138	89	93	98	113	134
	Shaft power	kW	12.2	15.6	23.6	32.8	48.5	11.9	15.3	23.1	32.2	47.5
Motor size	kW	22	22	55	55	55	22	22	55	55	55	
1.25 bar(e)	Free Air Delivery	l/s	72	97	145	192	255	71	96	144	190	253
		m³/h	260	348	523	690	918	257	344	518	683	910
	Outlet temperature	°C	103	107	112	123	141	97	101	106	120	138
	Shaft power	kW	13.0	17.0	26.0	35.0	51.0	13.0	16.7	25.0	34.4	50.1
Motor size	kW	22	22	55	55	55	22	22	55	55	55	
1.50 bar(e)	Free Air Delivery	l/s	71	96	144	191	254	70	95	143	189	251
		m³/h	257	345	520	686	914	253	340	514	679	905
	Outlet temperature	°C	111	116	120	130	145	104	109	114	127	143
	Shaft power	kW	14.6	18.6	27.6	37.6	54.1	14.2	18.2	26.9	36.8	53.0
Motor size	kW	22	22	55	55	75	22	22	55	55	75	
1.75 bar(e)	Free Air Delivery	l/s	71	95	144	190	253	69	94	142	187	250
		m³/h	255	342	516	682	910	250	337	509	674	900
	Outlet temperature	°C	119	124	128	136	150	112	117	122	134	149
	Shaft power	kW	16.0	20.0	30.0	40.0	57.0	15.5	19.6	28.9	39.2	55.9
Motor size	kW	22	22	55	55	75	22	22	55	55	75	
2.00 bar(e)	Free Air Delivery	l/s	70	94	143	189	252	68	93	140	186	249
		m³/h	252	339	513	679	906	246	333	505	670	895
	Outlet temperature	°C	126	132	135	143	155	119	125	130	141	155
	Shaft power	kW	17.3	21.8	31.8	42.8	60.4	16.7	21.2	31.0	41.7	59.0
Motor size	kW	22	30	55	55	75	22	30	55	55	75	
2.25 bar(e)	Free Air Delivery	l/s	69	94	142	188	251	67	92	139	185	247
		m³/h	249	337	510	675	902	243	329	501	665	890
	Outlet temperature	°C	134	140	144	150	161	126	133	138	148	161
	Shaft power	kW	18.7	23.5	34.1	45.5	63.8	18.1	22.8	33.1	44.3	62.2
Motor size	kW	22	30	55	55	75	22	30	55	55	75	
2.50 bar(e)	Free Air Delivery	l/s	69	93	141	187	250	66	91	138	184	246
		m³/h	247	334	507	672	898	239	326	497	661	886
	Outlet temperature	°C	142	148	152	158	167	133	140	146	156	167
	Shaft power	kW	20.2	25.3	36.4	48.3	67.2	19.4	24.4	35.2	46.9	65.4
Motor size	kW	22	30	55	55	75	22	30	55	55	75	
2.75 bar(e)	Free Air Delivery	l/s	68	92	140	186	249	66	90	137	182	245
		m³/h	245	332	505	669	895	236	322	493	656	881
	Outlet temperature	°C	151	158	161	166	175	140	149	154	163	174
	Shaft power	kW	21.7	27.1	38.7	51.1	70.8	20.8	26.0	37.4	49.5	68.8
Motor size	kW	30	30	55	55	75	30	30	55	55	75	
3.00 bar(e)	Free Air Delivery	l/s	68	92	139	185	248	65	89	136	181	243
		m³/h	243	330	502	666	891	233	319	489	652	876
	Outlet temperature	°C	163	170	171	176	183	154	156	163	172	182
	Shaft power	kW	23.6	29.0	41.1	54.1	74.4	22.4	28.0	39.6	52.3	72.2
Motor size	kW	30	30	55	75	90	30	30	55	75	90	
3.25 bar(e)	Free Air Delivery	l/s	67	91	139	184	247	64	88	135	180	242
		m³/h	241	328	499	663	888	229	315	485	648	871
	Outlet temperature	°C	181	181	182	186	192	171	171	172	180	189
	Shaft power	kW	25.3	31.0	43.6	57.1	78.1	24.0	29.8	41.8	55.0	75.6
Motor size	kW	30	30	55	75	90	30	30	55	75	90	
3.50 bar(e)	Free Air Delivery	l/s	67	91	138	183	246	63	87	134	179	241
		m³/h	239	326	497	660	885	226	312	482	644	867
	Outlet temperature	°C	201	198	195	197	202	191	188	182	189	197
	Shaft power	kW	26.8	32.6	46.1	60.1	81.9	25.3	31.4	44.1	57.8	79.1
Motor size	kW	30	30	55	75	90	30	30	55	75	90	

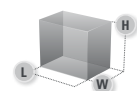


Dimensions (L x W x H): 2.18 x 1.45 x 2.18 m

Technical specifications

ZE 3 air-cooled- 50 Hz

	Gear designation		A	B	C	D	E	F	G	H	I	J	K	L	M
	Unloaded power	kW	15	16	17	19	20	21	23	24	25	27	29	31	33
	Sound pressure level at max. 2.0 bar(e)	dB(A)	74	74	74	74	74	74	74	74	74	74	75	75	75
	Sound pressure level at max. 3.5 bar(e)	dB(A)	76	76	76	76	76	76	76	76	76	76	77	77	77
1.00 bar(e)	Free Air Delivery	l/s		160	176	194	214	229	245	263	283	305	330	357	387
		m ³ /h		574	632	697	771	825	884	949	1020	1099	1186	1284	1394
	Outlet temperature	°C		102	103	104	105	106	107	107	108	109	110	112	114
	Shaft power	kW		26.0	28.2	30.6	33.5	35.6	38.0	40.7	43.8	47.2	51.1	55.6	60.8
	Motor size	kW		30	30	37	37	45	45	55	55	90	90	90	132
1.25 bar(e)	Free Air Delivery	l/s		159	175	193	213	228	244	262	282	303	328	355	385
		m ³ /h		571	629	693	766	820	879	943	1014	1093	1180	1277	1387
	Outlet temperature	°C		114	115	115	116	117	118	118	119	119	120	121	123
	Shaft power	kW		26.9	29.1	31.6	34.5	36.7	39.2	41.9	45.0	48.5	52.4	57.0	62.2
	Motor size	kW		30	30	37	37	45	45	55	55	90	90	90	132
1.50 bar(e)	Free Air Delivery	l/s		157	173	191	211	226	242	260	280	301	325	352	383
		m ³ /h		565	623	687	760	813	872	936	1006	1084	1171	1268	1377
	Outlet temperature	°C		128	128	128	128	128	129	130	130	130	131	132	134
	Shaft power	kW		28.4	30.7	33.3	36.3	38.6	41.2	44.1	47.3	50.9	55.0	59.7	65.1
	Motor size	kW		30	37	37	37	45	45	55	55	90	90	90	132
1.75 bar(e)	Free Air Delivery	l/s		155	171	189	209	224	240	258	277	299	323	350	380
		m ³ /h		558	616	680	752	805	863	927	998	1075	1162	1258	1367
	Outlet temperature	°C		141	140	140	139	138	138	139	139	139	141	142	145
	Shaft power	kW		30.3	32.7	35.5	38.8	41.2	43.9	46.9	50.3	54.1	58.5	63.4	69.1
	Motor size	kW		30	37	37	45	45	45	55	55	90	90	90	132
2.00 bar(e)	Free Air Delivery	l/s		153	169	187	207	221	238	255	275	296	320	347	377
		m ³ /h		552	609	672	744	797	855	919	989	1066	1152	1249	1357
	Outlet temperature	°C		154	153	152	152	151	151	150	149	149	150	152	155
	Shaft power	kW		32.5	35.2	38.2	41.6	44.2	47.1	50.3	53.9	58.0	62.6	67.8	73.9
	Motor size	kW		37	37	45	45	45	55	55	90	90	90	90	132
2.25 bar(e)	Free Air Delivery	l/s	133	152	167	185	205	219	235	253	272	294	318	344	
		m ³ /h	479	545	602	666	737	790	848	911	981	1058	1143	1239	
	Outlet temperature	°C	168	165	164	162	161	161	161	161	162	162	164	166	
	Shaft power	kW	31.8	35.0	37.8	41.1	44.8	47.6	50.7	54.1	58.0	62.3	67.2	72.8	
	Motor size	kW	37	37	45	45	45	55	55	55	90	90	90	90	
2.50 bar(e)	Free Air Delivery	l/s	132	150	166	183	203	218	234	251	270	292	315	342	
		m ³ /h	474	540	597	660	731	784	841	904	973	1050	1135	1231	
	Outlet temperature	°C	185	182	180	177	176	174	174	173	173	173	174	176	
	Shaft power	kW	34.1	37.6	40.7	44.1	48.1	51.1	54.4	58.1	62.2	66.9	72.1	78.1	
	Motor size	kW	37	45	45	45	55	55	55	90	90	90	90	90	
2.75 bar(e)	Free Air Delivery	l/s	131	149	165	182	202	216	232	250	269	290	313	340	
		m ³ /h	470	536	592	655	726	778	836	898	967	1044	1129	1224	
	Outlet temperature	°C	195	192	190	189	187	186	185	184	184	183	184	186	
	Shaft power	kW	36.5	40.3	43.6	47.3	51.5	54.7	58.2	62.2	66.6	71.5	77.0	83.4	
	Motor size	kW	37	45	45	55	55	55	90	90	90	90	90	90	
3.00 bar(e)	Free Air Delivery	l/s	132	151	167	185	205	219	235	253	273	294	318	345	
		m ³ /h	476	543	600	664	736	790	848	911	981	1059	1145	1242	
	Outlet temperature	°C	196	195	195	194	194	194	194	194	194	194	194	194	
	Shaft power	kW	38.9	42.9	46.3	50.3	54.8	58.1	61.9	66.0	70.7	75.9	81.7	88.4	
	Motor size	kW	45	45	55	55	55	90	90	90	90	90	90	90	
3.25 bar(e)	Free Air Delivery	l/s	131	150	166	183	203	218	234	252	271	293	317	343	
		m ³ /h	473	540	597	660	732	785	843	907	977	1054	1140	1236	
	Outlet temperature	°C	206	205	205	205	204	204	204	204	204	203	203	204	
	Shaft power	kW	41.0	45.2	48.8	52.9	57.6	61.2	65.1	69.4	74.3	79.7	85.8	92.7	
	Motor size	kW	45	45	55	55	90	90	90	90	90	90	90	132	
3.50 bar(e)	Free Air Delivery	l/s	130	149	164	182	202	217	233	251	270	291	315	342	
		m ³ /h	468	535	592	656	727	781	838	902	972	1049	1135	1231	
	Outlet temperature	°C	216	215	215	214	214	214	213	213	213	213	213	213	
	Shaft power	kW	42.6	47.0	50.8	55.0	59.9	63.6	67.6	72.1	77.0	82.6	88.9	96.0	
	Motor size	kW	45	55	55	55	90	90	90	90	90	90	90	132	
3.75 bar(e)	Free Air Delivery	l/s	128	147	163	180	200	215	231	249	268	290	314	341	
		m ³ /h	461	528	585	649	721	774	832	896	966	1043	1130	1226	
	Outlet temperature	°C	225	225	224	224	223	223	223	222	222	222	222	222	
	Shaft power	kW	44.8	49.3	53.2	57.7	62.8	66.6	70.8	75.4	80.6	86.4	92.9	100.3	
	Motor size	kW	45	55	55	90	90	90	90	90	90	90	132	132	
4.00 bar(e)	Free Air Delivery	l/s	125	144	160	177	197	212	229	246	266	288	312	339	
		m ³ /h	449	517	574	639	711	764	823	887	958	1036	1122	1219	
	Outlet temperature	°C	235	234	233	233	232	232	232	231	231	231	231	231	
	Shaft power	kW	47.3	52.1	56.3	61.0	66.3	70.3	74.7	79.6	85.1	91.2	98.0	105.7	
	Motor size	kW	55	55	90	90	90	90	90	90	90	132	132	132	



Dimensions (L x W x H): 2.99 x 1.96 x 2.24 m

Technical specifications

ZE 4 air-cooled – 50 Hz

	Gear designation		C	D	E	G	H	I	J	K	L	M	N
	Unloaded power	kW	34	38	41	44	47	51	53	57	60	62	65
	Sound pressure level at max. 2.0 bar(e)	dB(A)	76	76	76	76	76	77	77	77	77	77	77
	Sound pressure level at max. 3.5 bar(e)	dB(A)	79	79	79	79	79	79	79	79	79	79	79
1.00 bar(e)	Free Air Delivery	l/s		419	452	488	528	572	596	648	677	707	739
		m ³ /h		1510	1628	1758	1901	2060	2146	2334	2436	2545	2661
	Outlet temperature	°C		110	110	111	112	113	113	114	114	115	115
	Shaft power	kW		50.9	55.4	60.4	66.1	72.5	76.0	83.9	88.2	92.9	97.9
	Motor size	kW		90	90	132	132	132	132	200	200	200	200
1.25 bar(e)	Free Air Delivery	l/s		416	449	485	524	568	592	644	673	703	735
		m ³ /h		1497	1615	1744	1887	2046	2132	2319	2421	2530	2646
	Outlet temperature	°C		120	121	121	122	122	122	123	124	125	126
	Shaft power	kW		57.3	62.2	67.7	73.9	80.8	84.6	93.1	97.8	102.8	108.2
	Motor size	kW		90	90	132	132	132	132	200	200	200	200
1.50 bar(e)	Free Air Delivery	l/s		412	445	481	521	565	588	640	669	699	731
		m ³ /h		1484	1602	1731	1874	2032	2118	2305	2407	2515	2631
	Outlet temperature	°C		131	131	131	132	132	132	134	136	138	140
	Shaft power	kW		63.7	69.0	75.0	81.6	89.1	93.2	102.3	107.4	112.7	118.5
	Motor size	kW		90	90	132	132	132	132	200	200	200	200
1.75 bar(e)	Free Air Delivery	l/s		409	442	478	517	561	585	637	665	695	727
		m ³ /h		1473	1590	1719	1862	2020	2105	2292	2393	2502	2617
	Outlet temperature	°C		144	143	144	144	144	145	147	148	150	152
	Shaft power	kW		70.1	75.9	82.3	89.5	97.5	102.0	111.7	117.1	122.9	129.1
	Motor size	kW		90	90	132	132	132	132	200	200	200	200
2.00 bar(e)	Free Air Delivery	l/s		406	439	475	514	558	582	633	662	692	724
		m ³ /h		1463	1580	1709	1851	2009	2094	2280	2382	2490	2605
	Outlet temperature	°C		154	154	154	154	155	155	157	158	162	165
	Shaft power	kW		76.6	82.8	89.6	97.3	106.0	110.7	121.1	126.8	133.0	139.6
	Motor size	kW		90	90	132	132	132	132	200	200	200	200
2.25 bar(e)	Free Air Delivery	l/s	360	404	436	472	512	555	579	631	659		
		m ³ /h	1297	1454	1571	1700	1842	2000	2085	2271	2373		
	Outlet temperature	°C	168	167	166	165	166	166	166	168	170		
	Shaft power	kW	74.1	83.0	89.7	97.2	105.6	114.9	120.1	131.4	137.6		
	Motor size	kW	90	90	132	132	132	132	132	200	200		
2.50 bar(e)	Free Air Delivery	l/s	358	402	435	470	510	553	577	629	657		
		m ³ /h	1290	1447	1564	1693	1835	1992	2078	2264	2365		
	Outlet temperature	°C	180	179	178	178	178	177	177	179	180		
	Shaft power	kW	79.8	89.4	96.7	104.8	113.8	123.9	129.5	141.7	148.5		
	Motor size	kW	90	132	132	132	132	132	132	200	200		
2.75 bar(e)	Free Air Delivery	l/s	357	400	433	469	508	552	575	627	655		
		m ³ /h	1284	1441	1558	1687	1829	1986	2072	2258	2359		
	Outlet temperature	°C	193	192	191	191	191	191	191	192	192		
	Shaft power	kW	85.6	95.9	103.7	112.4	122.0	132.9	138.9	152.0	159.2		
	Motor size	kW	90	132	132	132	132	200	200	200	200		
3.00 bar(e)	Free Air Delivery	l/s	355	399	431	467	507	550	574	626	654		
		m ³ /h	1279	1436	1553	1681	1823	1981	2066	2252	2354		
	Outlet temperature	°C	204	204	204	204	201	202	202	203	204		
	Shaft power	kW	86.9	97.4	105.2	114.0	123.8	134.9	140.9	154.2	161.6		
	Motor size	kW	90	132	132	132	132	200	200	200	200		
3.25 bar(e)	Free Air Delivery	l/s	353	397	430	465	505	549	572	624	652		
		m ³ /h	1272	1429	1547	1675	1817	1975	2060	2246	2347		
	Outlet temperature	°C	214	214	214	214	211	212	212	213	213		
	Shaft power	kW	91.7	102.8	111.1	120.4	130.8	142.4	148.8	162.9	170.7		
	Motor size	kW	132	132	132	132	200	200	200	200	200		
3.50 bar(e)	Free Air Delivery	l/s	351	395	427	463	502	546	570	621	650		
		m ³ /h	1264	1421	1538	1667	1809	1966	2052	2237	2340		
	Outlet temperature	°C	224	224	224	224	221	222	222	223	223		
	Shaft power	kW	96.5	108.1	116.9	126.7	137.6	149.9	156.7	171.5	179.7		
	Motor size	kW	132	132	132	132	200	200	200	200	200		
3.75 bar(e)	Free Air Delivery	l/s	348	392	424	460	499	543	566	618	646		
		m ³ /h	1253	1410	1527	1655	1797	1954	2039	2224	2326		
	Outlet temperature	°C	234	233	233	233	230	231	231	232	232		
	Shaft power	kW	101.2	113.4	122.7	132.9	144.4	157.3	164.4	180.0	188.6		
	Motor size	kW	132	132	132	200	200	200	200	200	200		
4.00 bar(e)	Free Air Delivery	l/s	344	387	419	455	494	537	561	612			
		m ³ /h	1237	1393	1510	1637	1778	1935	2019	2204			
	Outlet temperature	°C	243	243	243	242	239	240	240	241			
	Shaft power	kW	105.9	118.7	128.4	139.1	151.1	164.7	172.1	188.4			
	Motor size	kW	132	132	132	200	200	200	200	200			



Dimensions (L x W x H): 2.99 x 1.96 x 2.24 m

Technical specifications

ZA 5 water-cooled – 50 Hz

	Gear designation		B	D	E	F	G	H
	Unloaded power	kW	50	62	67	72	79	86
	Sound pressure level at max. 2.0 bar(e)	dB(A)		70	70	71	71	71
	Sound pressure level at max. 3.5 bar(e)	dB(A)	73	73	73	75	75	
1.00 bar(e)	Free Air Delivery	l/s		897	958	1025	1101	1187
		m ³ /h		3229	3448	3691	3964	4271
	Outlet temperature	°C		94	95	95	96	97
	Shaft power	kW		105.0	113.0	122.0	133.0	145.0
	Motor size	kW		160	160	160*	160*	160*
1.25 bar(e)	Free Air Delivery	l/s		894	955	1023	1099	1184
		m ³ /h		3220	3439	3682	3955	4263
	Outlet temperature	°C		107	107	108	108	109
	Shaft power	kW		117.0	126.0	136.0	148.0	161.0
	Motor size	kW		160	160	160*	160*	200*
1.50 bar(e)	Free Air Delivery	l/s		890	951	1019	1095	1181
		m ³ /h		3205	3425	3670	3944	4253
	Outlet temperature	°C		119	119	120	120	121
	Shaft power	kW		129.0	139.0	150.0	163.0	177.0
	Motor size	kW		160	160	160*	200*	200*
1.75 bar(e)	Free Air Delivery	l/s		886	947	1015	1092	1178
		m ³ /h		3189	3410	3655	3931	4241
	Outlet temperature	°C		131	131	131	131	132
	Shaft power	kW		141.0	152.0	165.0	178.0	194.0
	Motor size	kW		160	160	200	200*	200*
2.00 bar(e)	Free Air Delivery	l/s		881	943	1011	1088	1175
		m ³ /h		3172	3394	3640	3917	4229
	Outlet temperature	°C		142	142	142	142	142
	Shaft power	kW		154.0	166.0	179.0	194.0	211.0
	Motor size	kW		160	200	200	200*	250*
2.25 bar(e)	Free Air Delivery	l/s	724	877	938	1007	1084	
		m ³ /h	2607	3156	3378	3626	3904	
	Outlet temperature	°C	154	153	152	152	152	
	Shaft power	kW	135.0	166.0	179.0	194.0	210.0	
	Motor size	kW	160	200	200	200	250*	
2.50 bar(e)	Free Air Delivery	l/s	720	873	935	1004	1081	
		m ³ /h	2591	3142	3365	3613	3891	
	Outlet temperature	°C	164	163	162	162	162	
	Shaft power	kW	145.0	179.0	193.0	209.0	227.0	
	Motor size	kW	160	200	200	250	250*	
2.75 bar(e)	Free Air Delivery	l/s	716	869	931	1000	1078	
		m ³ /h	2578	3129	3353	3601	3880	
	Outlet temperature	°C	175	173	172	172	171	
	Shaft power	kW	156.0	192.0	207.0	223.0	242.0	
	Motor size	kW	160	200	250	250	250*	
3.00 bar(e)	Free Air Delivery	l/s	700	853	915	984	1062	
		m ³ /h	2519	3071	3295	3544	3822	
	Outlet temperature	°C	192	192	193	195	197	
	Shaft power	kW	165.0	203.0	218.0	236.0	255.0	
	Motor size	kW	200	250	250	250	315	
3.25 bar(e)	Free Air Delivery	l/s	696	849	911	979	1056	
		m ³ /h	2507	3056	3278	3525	3802	
	Outlet temperature	°C	202	202	203	205	207	
	Shaft power	kW	174.0	214.0	230.0	248.0	269.0	
	Motor size	kW	200	250	250	315	315	
3.50 bar(e)	Free Air Delivery	l/s	692	844	906	974	1050	
		m ³ /h	2491	3039	3260	3506	3780	
	Outlet temperature	°C	211	211	212	214	217	
	Shaft power	kW	183.0	224.0	241.0	260.0	282.0	
	Motor size	kW	200	250	250	315	315	
3.75 bar(e)	Free Air Delivery	l/s	675	833	893	958	1028	
		m ³ /h	2430	2998	3215	3449	3700	
	Outlet temperature	°C	220	220	221	223	226	
	Shaft power	kW	194.0	237.0	254.0	274.0	296.0	
	Motor size	kW	200	250	315	315	315	
4.00 bar(e)	Free Air Delivery	l/s	658	821	881	942	1006	
		m ³ /h	2369	2957	3171	3393	3621	
	Outlet temperature	°C	229	229	230	232	235	
	Shaft power	kW	205.0	249.0	267.0	287.0	310.0	
	Motor size	kW	250	315	315	315	355	

* DOL-starter



Dimensions (L x W x H): 3.90 x 2.35 x 2.75 m

Technical specifications

ZA 6 water-cooled – 50 Hz

	Gear designation		C	D	E	F	G	H	J	M	K	L
	Unloaded power	kW	89	99	107	116	126	137	151	158	166	175
	Sound pressure level at max. 2.0 bar(e)	dB(A)		73	73	73	73	73	76	76	76	76
	Sound pressure level at max. 3.5 bar(e)	dB(A)	75	75	77	77	79	79	80	80		
1.00 bar(e)	Free Air Delivery	l/s		1255	1354	1461	1576	1700	1835	1906	1981	2058
		m³/h		4517	4874	5258	5673	6121	6605	6863	7131	7409
	Outlet temperature	°C		93	94	94	95	95	96	96	96	97
	Shaft power	kW		139.0	153.0	168.0	186.0	206.0	229.0	242.0	256.0	271.0
	Motor size	kW		160*	160*	200*	200*	250*	250*	315*	315*	315*
1.25 bar(e)	Free Air Delivery	l/s		1252	1352	1458	1573	1696	1829	1899	1972	2047
		m³/h		4508	4866	5250	5663	6107	6584	6836	7098	7369
	Outlet temperature	°C		106	106	107	107	107	108	108	108	109
	Shaft power	kW		158.0	172.0	189.0	207.0	228.0	252.0	265.0	280.0	296.0
	Motor size	kW		200*	200*	200*	250*	250*	315*	315*	315*	315*
1.50 bar(e)	Free Air Delivery	l/s		1250	1350	1456	1570	1693	1823	1892	1963	2036
		m³/h		4499	4858	5243	5654	6093	6563	6810	7065	7328
	Outlet temperature	°C		119	118	118	119	119	120	120	120	120
	Shaft power	kW		177.0	192.0	209.0	228.0	250.0	275.0	289.0	304.0	320.0
	Motor size	kW		200*	200*	250*	250*	315*	315*	315*	315*	355*
1.75 bar(e)	Free Air Delivery	l/s		1247	1347	1454	1568	1689	1817	1884	1953	2024
		m³/h		4490	4851	5235	5644	6080	6542	6784	7032	7287
	Outlet temperature	°C		130	130	130	130	130	130	130	130	131
	Shaft power	kW		196.0	213.0	231.0	251.0	274.0	300.0	315.0	331.0	348.0
	Motor size	kW		250*	250*	250*	315*	315*	315*	355*	355*	
2.00 bar(e)	Free Air Delivery	l/s		1245	1345	1452	1565	1685	1811	1877	1944	2013
		m³/h		4481	4843	5227	5635	6066	6521	6758	7000	7247
	Outlet temperature	°C		141	141	140	140	140	141	141	141	141
	Shaft power	kW		216.0	233.0	252.0	274.0	298.0	326.0	341.0	357.0	375.0
	Motor size	kW		250*	250*	315*	315*	315*	355*	355*		
2.25 bar(e)	Free Air Delivery	l/s	1101	1242	1343	1450	1563	1681	1806	1870		
		m³/h	3965	4472	4836	5220	5625	6052	6501	6732		
	Outlet temperature	°C	153	152	151	151	151	150	151	151		
	Shaft power	kW	209.0	232.0	250.0	270.0	293.0	318.0	346.0	362.0		
	Motor size	kW	250	250*	315*	315*	315*	355*	355*	500		
2.50 bar(e)	Free Air Delivery	l/s	1098	1240	1341	1448	1560	1677	1800	1863		
		m³/h	3953	4463	4828	5212	5615	6038	6479	6706		
	Outlet temperature	°C	163	162	161	161	160	160	160	160		
	Shaft power	kW	224.0	249.0	267.0	288.0	311.0	337.0	367.0	383.0		
	Motor size	kW	250	315	315*	315*	355*	355*	500	500		
2.75 bar(e)	Free Air Delivery	l/s	1094	1237	1339	1445	1557	1674	1794	1855		
		m³/h	3940	4454	4820	5204	5606	6025	6458	6680		
	Outlet temperature	°C	174	172	171	170	170	169	169	169		
	Shaft power	kW	243.0	269.0	289.0	311.0	335.0	363.0	394.0	411.0		
	Motor size	kW	250	315	315*	355*	355*	450	500	500		
3.00 bar(e)	Free Air Delivery	l/s	1095	1227	1323	1426	1538	1658	1788	1857		
		m³/h	3943	4417	4763	5135	5535	5968	6436	6684		
	Outlet temperature	°C	189	190	190	191	191	192	194	194		
	Shaft power	kW	255.6	284.0	305.5	329.4	356.1	386.1	420.0	438.7		
	Motor size	kW	315	315	315*	355*	400	450	500	500		
3.25 bar(e)	Free Air Delivery	l/s	1092	1223	1319	1422	1533	1653	1783	1852		
		m³/h	3931	4404	4749	5120	5520	5952	6419	6667		
	Outlet temperature	°C	199	199	200	200	201	202	203	203		
	Shaft power	kW	270.4	300.3	322.8	347.8	375.7	407.1	442.6	462.2		
	Motor size	kW	315	315	355	400	400	450	500	500		
3.50 bar(e)	Free Air Delivery	l/s	1089	1220	1315	1418	1529	1649	1778	1847		
		m³/h	3919	4391	4735	5106	5505	5936	6402	6650		
	Outlet temperature	°C	208	208	209	209	210	211	212	212		
	Shaft power	kW	285.3	316.5	340.1	366.2	395.4	428.2	465.2	485.6		
	Motor size	kW	315	355	355	400	450	450	500	500		
3.75 bar(e)	Free Air Delivery	l/s	1084	1215	1310	1413	1523	1643	1772			
		m³/h	3904	4373	4716	5085	5484	5914	6381			
	Outlet temperature	°C	217	217	217	218	218	219	221			
	Shaft power	kW	300.1	332.8	357.4	384.8	415.3	449.5	488.2			
	Motor size	kW	315	355	400	400	450	500	500			
4.00 bar(e)	Free Air Delivery	l/s	1080	1210	1305	1407	1517	1637				
		m³/h	3888	4356	4697	5065	5463	5893				
	Outlet temperature	°C	226	226	226	226	227	228				
	Shaft power	kW	314.9	349.0	374.7	403.3	435.1	470.9				
	Motor size	kW	355	400	400	450	450	500				

* DOL-starter

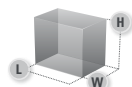


Dimensions (L x W x H): 3.90 x 2.35 x 2.75 m

Technical specifications

ZE 2 air-cooled – 60 Hz and ZA 2 water-cooled – 60 Hz

	Gear designation	ZE 2 air-cooled 60 Hz					ZA 2 water-cooled – 60 Hz					
		L	N	P	R	T	L	N	P	R	T	
	Unloaded power	hp	11	12	13	134	14	11	12	13	134	14
	Sound pressure level at max. 25.38 psig	dB(A)	69	71	71	72	73	69	69	71	72	73
	Sound pressure level at max. 50.75 psig	dB(A)	69	72	73	75	77	69	72	73	74	76
14.50 psig	Free Air Delivery	cfm	157	215	322	419	553	156	213	320	416	549
		m³/h	267	365	548	712	939	264	362	543	707	932
	Outlet temperature	°C	95	99	108	118	140	89.1	93.4	103	114	136
	Shaft power	hp	16.5	21.7	33.1	45.5	66.8	16.1	21.3	32.5	44.7	65.4
	Motor size	hp	40	40	75	75	75	40	40	75	75	75
18.13 psig	Free Air Delivery	cfm	155	213	320	417	550	153	211	317	413	545
		m³/h	264	362	544	708	935	243	339	518	679	902
	Outlet temperature	°C	103	108	116	124	142	97	102	111	121	140
	Shaft power	hp	18.1	23.7	35.8	48.7	70.4	17.7	23.2	35	47.7	68.9
	Motor size	hp	40	40	75	75	75	40	40	75	75	75
21.75 psig	Free Air Delivery	cfm	154	211	318	415	548	151	208	314	410	542
		m³/h	261	359	541	705	931	257	354	534	697	922
	Outlet temperature	°C	111	116	123	131	146	105	110	119	128	145
	Shaft power	hp	19.8	25.9	38.6	52.0	74.3	19.3	25.2	37.7	51	72.8
	Motor size	hp	40	40	75	75	100	40	40	75	75	100
25.38 psig	Free Air Delivery	cfm	152	210	316	413	545	149	206	312	408	539
		m³/h	258	356	537	701	926	253	350	530	693	917
	Outlet temperature	°C	119	124	131	137	151	112	118	126	135	150
	Shaft power	hp	21.6	28.0	41.4	55.5	78.6	21	27.3	40.5	54.2	76.8
	Motor size	hp	40	40	75	75	100	40	40	75	75	100
29.00 psig	Free Air Delivery	cfm	151	208	314	410	543	147	204	310	405	537
		m³/h	256	354	534	697	922	250	347	526	688	912
	Outlet temperature	°C	127	132	138	144	156	119	126	134	142	156
	Shaft power	hp	23.5	30.3	44.4	59.1	83.0	22.7	29.4	43.3	57.7	81.0
	Motor size	hp	40	40	75	75	100	40	40	75	75	100
32.63 psig	Free Air Delivery	cfm	149	206	313	409	541	145	202	307	402	534
		m³/h	253	351	531	694	918	246	343	522	684	907
	Outlet temperature	°C	135	140	146	151	162	126	133	142	149	162
	Shaft power	hp	25.3	32.6	47.5	62.9	87.6	24.5	31.6	46.1	61.2	85.3
	Motor size	hp	40	40	75	75	100	40	40	75	75	100
36.25 psig	Free Air Delivery	cfm	148	205	311	407	538	143	200	305	400	531
		m³/h	251	348	528	691	915	243	339	518	679	902
	Outlet temperature	°C	143	149	154	159	168	133	141	150	157	169
	Shaft power	hp	27.4	35.0	50.7	66.6	92.3	26.3	33.8	49.1	64.8	89.7
	Motor size	hp	40	40	75	75	100	40	40	75	75	100
39.88 psig	Free Air Delivery	cfm	146	204	309	405	536	141	198	302	397	528
		m³/h	249	346	525	688	911	240	336	514	675	897
	Outlet temperature	°C	151	158	163	167	176	141	149	158	164	175
	Shaft power	hp	29.5	37.5	53.9	70.5	97.1	28.0	36.0	52.0	68.0	94.0
	Motor size	hp	40	40	75	75	100	40	40	75	75	100
43.50 psig	Free Air Delivery	cfm	145	201	308	403	534	139	194	300	395	525
		m³/h	246	341	523	684	908	236	330	510	671	892
	Outlet temperature	°C	166	171	173	176	183	169	171	166	172	182
	Shaft power	hp	31.9	40.3	57.3	74.6	101.9	30.0	39.0	55.0	72.0	99.0
	Motor size	hp	40	40	75	100	120	40	40	75	100	120
47.13 psig	Free Air Delivery	cfm	143	199	306	401	532	136	191	298	392	523
		m³/h	243	338	520	681	904	232	325	506	666	888
	Outlet temperature	°C	182	182	184	186	192	181	181	175	181	190
	Shaft power	hp	34.2	42.6	60.6	78.7	107.0	32.0	41.0	58.0	76.0	104.0
	Motor size	hp	40	40	75	100	120	40	40	75	100	120
50.75 psig	Free Air Delivery	cfm	142	197	305	400	530	134	189	296	390	520
		m³/h	241	335	518	679	901	228	321	502	662	883
	Outlet temperature	°C	197	196	196	197	203	194	190	185	190	198
	Shaft power	hp	36.3	43.9	64.1	82.9	112.1	34.0	43.0	61.0	80.0	108.0
	Motor size	hp	40	40	75	100	120	40	40	75	100	120

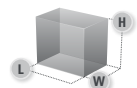


Dimensions (L x W x H): 2.18 x 1.45 x 2.18 m

Technical specifications

ZE 3 air-cooled – 60 Hz

	Gear designation		A	B	C	D	E	F	G	H	I	J	K
	Unloaded power	hp	23	26	28	30	32	34	36	38	40	43	46
	Sound pressure level at max. 25.38 psig	dB(A)	74	74	74	74	74	74	74	74	75	75	75
	Sound pressure level at max. 50.75 psig	dB(A)	76	76	76	76	76	76	76	76	77	78	
14.50 psig	Free Air Delivery	cfm	373	421	462	508	559	597	639	684	734	789	850
		m ³ /h	634	716	785	863	950	1015	1085	1162	1247	1341	1445
	Outlet temperature	°C	103	104	105	106	107	108	109	110	111	112	114
	Shaft power	hp	37.8	42.0	45.7	49.9	54.7	58.5	62.6	67.2	72.4	78.3	85.0
	Motor size	hp	50	50	60	75	75	125	125	125	125	200	200
18.13 psig	Free Air Delivery	cfm	371	419	460	505	556	594	635	680	730	785	846
		m ³ /h	630	712	781	858	945	1009	1079	1156	1240	1334	1437
	Outlet temperature	°C	115	116	116	117	118	119	119	120	121	122	123
	Shaft power	hp	39.1	43.3	47.1	51.4	56.3	60.1	64.2	68.9	74.2	80.1	86.9
	Motor size	hp	50	50	60	75	75	125	125	125	125	200	200
21.75 psig	Free Air Delivery	cfm	367	415	456	501	552	589	630	675	725	779	840
		m ³ /h	624	705	774	851	937	1001	1071	1147	1232	1324	1427
	Outlet temperature	°C	128	127	128	129	130	130	130	131	132	133	135
	Shaft power	hp	41.2	45.7	49.6	54.0	59.2	63.1	67.4	72.3	77.7	83.9	90.9
	Motor size	hp	50	50	60	75	75	125	125	125	125	200	200
25.38 psig	Free Air Delivery	cfm	363	411	451	496	547	584	625	670	719	774	834
		m ³ /h	617	698	766	843	929	993	1062	1138	1222	1314	1417
	Outlet temperature	°C	140	139	139	138	138	139	139	140	141	143	146
	Shaft power	hp	44.0	48.7	52.9	57.6	63.0	67.2	71.8	76.9	82.6	89.0	96.4
	Motor size	hp	50	50	60	75	75	125	125	125	125	200	200
29.00 psig	Free Air Delivery	cfm	359	406	446	491	542	579	620	664	713	768	828
		m ³ /h	610	690	759	835	920	984	1053	1129	1212	1304	1406
	Outlet temperature	°C	153	153	152	151	150	149	149	149	151	154	157
	Shaft power	hp	47.2	52.3	56.7	61.8	67.6	72.0	76.9	82.3	88.4	95.2	103.0
	Motor size	hp	50	50	60	75	75	125	125	125	125	200	200
32.63 psig	Free Air Delivery	cfm	355	402	442	487	537	574	615	659	708	762	
		m ³ /h	604	684	751	827	913	976	1045	1120	1203	1295	
	Outlet temperature	°C	164	162	161	161	161	162	162	163	165	167	
	Shaft power	hp	50.8	56.3	61.0	66.5	72.7	77.4	82.6	88.4	94.9	102.1	
	Motor size	hp	60	60	75	75	75	125	125	125	125	200	
36.25 psig	Free Air Delivery	cfm	352	399	439	483	533	570	610	655	703	757	
		m ³ /h	598	678	745	821	906	969	1037	1112	1195	1286	
	Outlet temperature	°C	180	177	175	174	173	173	173	174	176	178	
	Shaft power	hp	54.7	60.5	65.6	71.4	78.1	83.1	88.6	94.8	101.7	109.5	
	Motor size	hp	60	60	75	75	125	125	125	125	125	200	
39.88 psig	Free Air Delivery	cfm	350	396	436	480	530	566	607	651	699	752	
		m ³ /h	594	673	740	815	900	962	1031	1105	1188	1278	
	Outlet temperature	°C	190	188	187	185	184	184	183	184	185	188	
	Shaft power	hp	58.5	64.8	70.2	76.4	83.5	88.9	94.8	101.3	108.6	116.9	
	Motor size	hp	60	75	75	125	125	125	125	125	125	200	
43.50 psig	Free Air Delivery	cfm	354	402	442	487	537	575	616	660	709	763	
		m ³ /h	602	683	751	827	913	976	1046	1122	1205	1296	
	Outlet temperature	°C	195	194	194	194	194	194	194	194	194	194	
	Shaft power	hp	62.3	68.9	74.7	81.2	88.7	94.3	100.6	107.5	115.2	123.9	
	Motor size	hp	75	75	75	125	125	125	125	125	125	200	
47.13 psig	Free Air Delivery	cfm	352	399	439	484	535	572	613	657	706	761	
		m ³ /h	598	679	747	823	908	972	1041	1117	1200	1292	
	Outlet temperature	°C	205	205	204	204	204	203	203	203	203	204	
	Shaft power	hp	65.6	72.5	78.6	85.4	93.3	99.2	105.7	112.9	120.9	129.9	
	Motor size	hp	75	75	125	125	125	125	125	125	125	200	
50.75 psig	Free Air Delivery	cfm	349	397	437	481	532	569	610	654	703	756	
		m ³ /h	594	674	742	818	904	967	1036	1112	1195	1285	
	Outlet temperature	°C	215	214	214	214	213	213	213	213	213	213	
	Shaft power	hp	68.2	75.4	81.7	88.7	96.8	102.9	109.6	117.0	125.2	134.5	
	Motor size	hp	75	75	125	125	125	125	125	125	125	200	
54.38 psig	Free Air Delivery	cfm	345	393	433	478	528	566	606	651	700		
		m ³ /h	587	667	735	812	897	961	1030	1106	1189		
	Outlet temperature	°C	224	224	223	223	222	222	222	222	222		
	Shaft power	hp	71.6	79.1	85.6	92.9	101.3	107.6	114.6	122.3	130.8		
	Motor size	hp	75	75	125	125	125	125	125	125	125		
58.00 psig	Free Air Delivery	cfm	339	387	427	472	523	561	602	647	696		
		m ³ /h	576	657	725	802	889	953	1022	1099	1183		
	Outlet temperature	°C	234	233	232	232	231	231	231	231	231		
	Shaft power	hp	75.6	83.6	90.4	98.1	107.0	113.6	120.9	129.0	137.9		
	Motor size	hp	125	125	125	125	125	125	125	200	200		

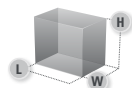


Dimensions (L x W x H): 2.99 x 1.96 x 2.24 m

Technical specifications

ZE 4 air-cooled – 60 Hz

	Gear designation		A	B	C	D	E	F	G	H	I	J	K
	Unloaded power	hp	35	39	41	46	49	51	53	57	61	64	70
	Sound pressure level at max. 25.38 psig	dB(A)		76	76	76	76	77	77	77	77	77	77
	Sound pressure level at max. 50.75 psig	dB(A)	79	79	79	79	79	79	79	79	79	79	77
14.50 psig	Free Air Delivery	cfm		908	975	1087	1170	1214	1261	1362	1473	1533	1665
		m ³ /h		1544	1657	1847	1988	2063	2142	2313	2502	2605	2828
	Outlet temperature	°C		110	110	111	112	113	113	114	114	115	115
	Shaft power	hp		70.0	75.8	85.7	93.3	97.4	101.8	111.3	122.1	128.0	141.2
	Motor size	hp		125	125	125	125	125	125	125	125	200	200
18.13 psig	Free Air Delivery	cfm		901	967	1079	1162	1206	1253	1353	1464	1524	1655
		m ³ /h		1530	1644	1833	1974	2049	2128	2299	2488	2590	2813
	Outlet temperature	°C		120	121	121	122	122	122	123	124	125	126
	Shaft power	hp		78.7	85.1	95.9	104.1	108.6	113.3	123.6	135.2	141.6	155.8
	Motor size	hp		125	125	125	125	125	125	200	200	200	200
21.75 psig	Free Air Delivery	cfm		893	960	1071	1154	1198	1244	1344	1455	1516	1646
		m ³ /h		1518	1631	1819	1960	2035	2114	2284	2473	2575	2797
	Outlet temperature	°C		131	131	131	132	132	132	134	136	138	140
	Shaft power	hp		87.4	94.3	106.0	114.9	119.7	124.8	135.9	148.4	155.2	170.3
	Motor size	hp		125	125	125	125	125	200	200	200	200	200
25.38 psig	Free Air Delivery	cfm		886	953	1064	1146	1190	1237	1337	1447	1507	1638
		m ³ /h		1506	1619	1807	1947	2023	2101	2271	2459	2561	2783
	Outlet temperature	°C		144	143	144	144	144	145	147	148	150	152
	Shaft power	hp		96.3	103.7	116.3	125.8	131.0	136.5	148.3	161.7	169.1	185.2
	Motor size	hp		125	125	125	200	200	200	200	200	200	200
29.00 psig	Free Air Delivery	cfm		880	947	1057	1140	1184	1230	1330	1441	1501	1631
		m ³ /h		1496	1609	1797	1937	2012	2090	2260	2448	2549	2771
	Outlet temperature	°C		154	154	154	154	155	155	157	158	162	165
	Shaft power	hp		105.1	113.0	126.6	136.8	142.3	148.1	160.8	175.1	182.9	200.1
	Motor size	hp		125	125	200	200	200	200	200	200	300	300
32.63 psig	Free Air Delivery	cfm	786	876	942	1052	1135	1179	1225	1325	1435		
		m ³ /h	1335	1487	1600	1788	1928	2003	2081	2250	2438		
	Outlet temperature	°C	168	167	166	166	166	166	166	168	170		
	Shaft power	hp	102.2	113.9	122.6	137.3	148.4	154.4	160.7	174.5	190.0		
	Motor size	hp	125	125	125	200	200	200	200	200	200		
36.25 psig	Free Air Delivery	cfm	781	871	938	1048	1130	1174	1221	1320	1431		
		m ³ /h	1328	1480	1593	1781	1920	1995	2074	2243	2431		
	Outlet temperature	°C	180	179	178	178	177	177	177	179	181		
	Shaft power	hp	110.1	122.7	132.1	147.9	159.9	166.4	173.3	188.2	205.0		
	Motor size	hp	125	125	200	200	200	200	200	200	300		
39.88 psig	Free Air Delivery	cfm	778	868	934	1045	1127	1171	1217	1317	1427		
		m ³ /h	1322	1475	1587	1775	1914	1989	2068	2237	2425		
	Outlet temperature	°C	193	192	191	190	190	191	191	192	193		
	Shaft power	hp	118.1	131.6	141.6	158.7	171.5	178.5	185.8	201.9	219.8		
	Motor size	hp	125	200	200	200	200	200	200	300	300		
43.50 psig	Free Air Delivery	cfm	775	865	931	1041	1124	1168	1214	1314	1424		
		m ³ /h	1316	1469	1581	1769	1909	1984	2062	2232	2419		
	Outlet temperature	°C	204	204	204	204	201	202	202	203	204		
	Shaft power	hp	119.9	133.5	143.7	161.0	174.1	181.1	188.6	204.8	223.1		
	Motor size	hp	125	150	150	200	200	200	200	250	300		
47.13 psig	Free Air Delivery	cfm	771	861	927	1038	1120	1164	1210	1310	1420		
		m ³ /h	1310	1463	1575	1763	1903	1978	2056	2226	2413		
	Outlet temperature	°C	214	214	214	214	211	212	212	213	214		
	Shaft power	hp	126.6	141.0	151.8	170.0	183.8	191.3	199.2	216.4	235.7		
	Motor size	hp	150	150	200	200	200	200	250	250	300		
50.75 psig	Free Air Delivery	cfm	766	856	922	1033	1115	1159	1205	1305	1415		
		m ³ /h	1302	1455	1567	1755	1894	1969	2048	2217	2404		
	Outlet temperature	°C	224	224	224	224	221	221	222	222	223		
	Shaft power	hp	133.1	148.4	159.7	179.0	193.5	201.4	209.7	227.8	248.1		
	Motor size	hp	150	200	200	200	200	250	250	250	300		
54.38 psig	Free Air Delivery	cfm	760	849	915	1026	1108	1152	1198	1297	1407		
		m ³ /h	1291	1443	1555	1742	1882	1957	2035	2204	2391		
	Outlet temperature	°C	234	233	233	233	230	231	231	232	233		
	Shaft power	hp	139.7	155.6	167.6	187.8	203.1	211.3	220.1	239.1	260.4		
	Motor size	hp	150	200	200	200	250	250	250	250	300		
58.00 psig	Free Air Delivery	cfm	750	840	905	1015	1097	1140	1186	1285	1395		
		m ³ /h	1275	1426	1538	1724	1863	1937	2015	2184	2370		
	Outlet temperature	°C	243	243	243	242	239	240	240	241	242		
	Shaft power	hp	146.1	162.8	175.3	196.5	212.5	221.1	230.3	250.2	272.6		
	Motor size	hp	150	200	200	200	250	250	250	300	300		



Dimensions (L x W x H): 2.99 x 1.96 x 2.24 m

Technical specifications

ZA 5 water-cooled – 60 Hz

	Gear designation		B	C	D	E	F
	Unloaded power	hp	62	69	77	83	90
	Sound pressure level at max. 25.38 psig	dB(A)	70	70	71	71	71
	Sound pressure level at max. 50.75 psig	dB(A)	73	73	75		
14.50 psig	Free Air Delivery	cfm	1903	2080	2283	2437	2608
		m ³ /h	3233	3533	3879	4141	4432
	Outlet temperature	°C	95	96	97	98	99
	Shaft power	hp	140.5	155.8	173.9	187.7	203.4
	Motor size	hp	200*	200*	200*	200*	250*
18.13 psig	Free Air Delivery	cfm	1898	2074	2278	2432	2604
		m ³ /h	3224	3524	3871	4132	4424
	Outlet temperature	°C	107	108	109	110	111
	Shaft power	hp	156.8	173.6	193.4	208.6	225.7
	Motor size	hp	200*	200*	200*	250*	250*
21.75 psig	Free Air Delivery	cfm	1889	2067	2271	2426	2598
		m ³ /h	3210	3511	3859	4121	4414
	Outlet temperature	°C	119	120	120	121	122
	Shaft power	hp	173.0	191.3	212.9	229.4	248.0
	Motor size	hp	200*	200*	250	250	300*
25.38 psig	Free Air Delivery	cfm	1879	2058	2263	2419	2591
		m ³ /h	3193	3496	3845	4109	4403
	Outlet temperature	°C	131	131	131	132	133
	Shaft power	hp	189.8	209.8	233.3	251.3	271.5
	Motor size	hp	200*	250	250	300*	300*
29.00 psig	Free Air Delivery	cfm	1869	2049	2255	2411	2585
		m ³ /h	3176	3480	3831	4096	4391
	Outlet temperature	°C	142	142	142	142	143
	Shaft power	hp	206.6	228.2	253.7	273.1	295.0
	Motor size	hp	250	250	300*	300*	422*
32.63 psig	Free Air Delivery	cfm	1860	2040	2247		
		m ³ /h	3160	3466	3818		
	Outlet temperature	°C	152	152	152		
	Shaft power	hp	223.6	247.2	275.0		
	Motor size	hp	250	300*	300*		
36.25 psig	Free Air Delivery	cfm	1852	2032	2239		
		m ³ /h	3146	3452	3805		
	Outlet temperature	°C	162	162	162		
	Shaft power	hp	240.6	266.1	296.3		
	Motor size	hp		300*	350*		
39.88 psig	Free Air Delivery	cfm	1844	2025	2233		
		m ³ /h	3134	3440	3793		
	Outlet temperature	°C	172	171	171		
	Shaft power	hp	257.5	284.8	316.9		
	Motor size	hp	300	300*	350*		
43.50 psig	Free Air Delivery	cfm	1810	1991	2199		
		m ³ /h	3076	3382	3736		
	Outlet temperature	°C	192	194	196		
	Shaft power	hp	272.2	300.6	334.1		
	Motor size	hp	300	350	350*		
47.13 psig	Free Air Delivery	cfm	1801	1980	2187		
		m ³ /h	3060	3365	3716		
	Outlet temperature	°C	202	203	206		
	Shaft power	hp	286.8	316.5	351.4		
	Motor size	hp	300	350	483		
50.75 psig	Free Air Delivery	cfm	1791	1970	2175		
		m ³ /h	3043	3346	3695		
	Outlet temperature	°C	211	213	216		
	Shaft power	hp	301.4	332.3	368.6		
	Motor size	hp	350	350	483		
54.38 psig	Free Air Delivery	cfm	1767	1941	2133		
		m ³ /h	3002	3298	3624		
	Outlet temperature	°C	220	222	225		
	Shaft power	hp	318.1	349.9	387.3		
	Motor size	hp	350	483	483		
58.00 psig	Free Air Delivery	cfm	1743	1913	2091		
		m ³ /h	2961	3251	3552		
	Outlet temperature	°C	229	231	234		
	Shaft power	hp	334.7	367.5	406.0		
	Motor size	hp	350	483	483		

* DOL-starter



Dimensions (L x W x H): 3.90 x 2.35 x 2.75 m

Technical specifications

ZA 6 water-cooled – 60 Hz

	Gear designation		A	B	C	D	E	F	G	N	H	I
			92	102	110	123	133	144	157	164	172	180
	Unloaded power	hp										
	Sound pressure level at max. 25.38 psig	dB(A)		73	73	73	73	76	76	76	76	76
	Sound pressure level at max. 50.75 psig	dB(A)	75	77	77	77	79	79	80	80		
14.50 psig	Free Air Delivery	cfm		2744	2944	3268	3502	3753	4022	4163	4309	4460
		m³/h		4663	5001	5552	5950	6377	6833	7073	7321	7578
	Outlet temperature	°C		93	94	95	95	96	97	97	98	98
	Shaft power	hp		194.1	211.6	241.8	265.2	291.8	322.1	338.8	356.8	376.2
	Motor size	hp		200*	250*	250*	300*	300*	350*	350*	483*	483*
18.13 psig	Free Air Delivery	cfm		2739	2939	3262	3495	3743	4007	4145	4287	4433
		m³/h		4654	4993	5543	5938	6359	6807	7042	7283	7532
	Outlet temperature	°C		106	106	107	107	108	109	109	109	109
	Shaft power	hp		219.5	238.0	270.0	294.5	322.2	353.6	370.9	389.5	409.4
	Motor size	hp		300*	250*	300*	350*	350*	483*	483*	483*	483*
21.75 psig	Free Air Delivery	cfm		2734	2935	3257	3488	3733	3991	4126	4264	4406
		m³/h		4646	4986	5534	5927	6342	6782	7010	7245	7486
	Outlet temperature	°C		119	118	118	119	120	120	120	121	121
	Shaft power	hp		244.8	264.5	298.1	323.8	352.6	385.2	403.0	422.1	442.6
	Motor size	hp		300*	300*	350*	350*	483*	483*	483*	483*	483*
25.38 psig	Free Air Delivery	cfm		2730	2930	3252	3481	3723	3976	4108	4242	4379
		m³/h		4637	4978	5525	5915	6325	6756	6979	7207	7440
	Outlet temperature	°C		130	130	130	130	130	131	131	132	132
	Shaft power	hp		271.8	292.7	328.3	355.4	385.8	419.9	438.6	458.5	479.8
	Motor size	hp		300*	300*	350*	483*	483*	483*	483*	483*	
29.00 psig	Free Air Delivery	cfm		2725	2926	3247	3474	3713	3961	4089	4220	4352
		m³/h		4629	4971	5517	5903	6308	6730	6948	7169	7394
	Outlet temperature	°C		141	141	140	140	141	141	141	142	142
	Shaft power	hp		298.8	321.0	358.6	387.1	418.9	454.6	474.1	494.9	517.1
	Motor size	hp		350*	350*	483*	483*	483*	483*	700	600**	600**
32.63 psig	Free Air Delivery	cfm	2435	2720	2921	3242	3468	3703	3947	4071		
		m³/h	4137	4621	4963	5508	5891	6291	6705	6917		
	Outlet temperature	°C	153	152	151	151	151	151	151	151		
	Shaft power	hp	290.1	321.0	344.1	383.3	412.9	445.9	482.8	503.0		
	Motor size	hp	300*	350*	483	483*	483*	483*	700	700		
36.25 psig	Free Air Delivery	cfm	2429	2715	2917	3236	3460	3692	3932	4053		
		m³/h	4126	4613	4956	5499	5879	6274	6680	6886		
	Outlet temperature	°C	163	162	161	161	160	160	160	160		
	Shaft power	hp	310.9	343.2	367.3	408.0	438.7	472.9	511.0	531.8		
	Motor size	hp	350*	350*	483	483*	483*	700	700	700		
39.88 psig	Free Air Delivery	cfm	2422	2710	2912	3231	3453	3682	3917	4035		
		m³/h	4115	4604	4948	5490	5867	6256	6654	6855		
	Outlet temperature	°C	173	172	171	170	170	169	169	169		
	Shaft power	hp	337.0	371.1	396.5	439.4	471.7	507.6	547.5	569.3		
	Motor size	hp	350*	483	483	483*	617	700	700	700		
43.50 psig	Free Air Delivery	cfm	2415	2705	2908	3226	3446	3672	3901	4016		
		m³/h	4104	4596	4941	5481	5856	6239	6628	6824		
	Outlet temperature	°C	190	190	190	191	192	193	194	195		
	Shaft power	hp	355.2	392.2	419.9	466.6	501.9	541.1	584.9	608.8		
	Motor size	hp	422	422	476	601*	601	700	700	700		
47.13 psig	Free Air Delivery	cfm	2409	2700	2904	3221	3440	3662	3886	3998		
		m³/h	4092	4588	4933	5473	5844	6222	6602	6792		
	Outlet temperature	°C	199	199	200	200	201	202	204	204		
	Shaft power	hp	375.7	414.5	443.5	492.4	529.4	570.4	616.2	641.2		
	Motor size	hp	422	476	476	601	601	700	700	700		
50.75 psig	Free Air Delivery	cfm	2402	2695	2900	3216	3433	3652	3871	3978		
		m³/h	4081	4580	4926	5465	5833	6205	6576	6759		
	Outlet temperature	°C	208	208	209	210	210	211	213	213		
	Shaft power	hp	396.2	436.9	467.2	518.3	556.9	599.7	647.5	673.6		
	Motor size	hp	422	476	601	601	601	700	700	700		
54.38 psig	Free Air Delivery	cfm	2395	2691	2896	3212	3427	3642	3855			
		m³/h	4069	4572	4920	5457	5822	6188	6550			
	Outlet temperature	°C	217	217	218	218	219	220	221			
	Shaft power	hp	416.7	459.2	490.9	544.4	584.7	629.5	679.4			
	Motor size	hp	476	476	601	601	700	700	700			
58.00 psig	Free Air Delivery	cfm	2388	2686	2892	3207	3420	3632				
		m³/h	4057	4564	4913	5449	5811	6172				
	Outlet temperature	°C	226	226	226	227	227	228				
	Shaft power	hp	437.2	481.6	514.7	570.5	612.5	659.2				
	Motor size	hp	476	601	601	601	700	700				

* DOL-starter

** Medium voltage



Dimensions (L x W x H): 3.90 x 2.35 x 2.75 m

Technical specifications

ZE 2 VSD, ZA 2 VSD & ZA 4 VSD

ZE 2 VSD – 3.5 bar(e)

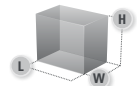
		Minimum	Maximum
Free Air Delivery	l/s	87	275
	cfm	183	582
	m ³ /h	311	989
Shaft power requirement	kW	31.8	92.3
Max. working pressure	bar(e)	3.5	
	psig	50.76	
Unloaded power	kW	12	
Noise level	dB(A)	78	



Dimensions (L x W x H): 2.63 x 1.45 x 2.18 m

ZA 2 VSD – 3.5 bar(e)

		Minimum	Maximum
Free Air Delivery	l/s	87	270
	cfm	184	572
	m ³ /h	313	972
Shaft power requirement	kW	31.5	90.2
Max. working pressure	bar(e)	3.5	
	psig	50.76	
Unloaded power	kW	12	
Noise level	dB(A)	78	



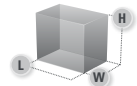
Dimensions (L x W x H): 2.63 x 1.45 x 2.18 m

ZE 4 VSD – 2 bar(e)

		Minimum	Maximum
Free Air Delivery	l/s	228	855
	cfm	483	1813
	m ³ /h	821	3078
Shaft power requirement	kW	46.0	159.0
Max. working pressure	bar(e)	2.5	
	psig	36.26	
Unloaded power	kW	21	
Noise level	dB(A)	75	

ZE 4 VSD – 3.5 bar(e)

		Minimum	Maximum
Free Air Delivery	l/s	218	812
	cfm	462	1721
	m ³ /h	785	2923
Shaft power requirement	kW	72.0	236.0
Max. working pressure	bar(e)	3.5	
	psig	50.76	
Unloaded power	kW	21	
Noise level	dB(A)	77	



Dimensions (L x W x H): 3.54 x 1.75 x 2.18 m



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