A SERIES





### A SERIES ROTARY VANE AIR COMPRESSORS Compressed air solutions for high savings

Compressed air plays a critical role in nearly every industrial manufacturing process and represents as much as 15% of the total energy consumed in production. Since 1923, Pneumofore rotary vane compressors have been **legendary for performing reliably over multiple decades at a very competitive cost of operation.** Substantial energy savings, low maintenance needs, trouble-free operation, and easy installation – all result from the simplicity of the rotary vane design and from Pneumofore's innovative technology. Today, this unique expertise has culminated in the A Series: versatile, durable, high-efficiency, high-performance air compressors ranging from 5,5 to 630 kW installed power. Demanding excellence at every level, Pneumofore clients worldwide choose this turnkey solution to enjoy **guaranteed performance**, to achieve the **lowest possible Life Cycle Cost**, and to realize a **fast return on investments**.

### TECHNOLOGY



# high efficiency and low maintenance

The rotary vane design, Pneumofore's core competency, guarantees lasting durability, consistent air purity, and high savings in energy and maintenance costs. Requiring **no transmission gears or belts**, the simplicity of this layout with **direct coupling** from motor to air end and **only two roller bearings** for moving the core parts provides the following advantages: limited friction, decreased power loss, minimized damage potential, and **reduced maintenance needs**. Alone the idle running, with lubrication through suction, reduces the energy requirements to 18%, compared to other screw or vane machines with 30% to 70% consumption. The vanes' **active sealing**, a feature specific to Pneumofore technology, ensures constant performance and high efficiency even after decades of operation in harsh environments. And Pneumofore's patented system of **intensive coolant injection** maintains low air and oil temperatures during compression, resulting in **lower power consumption** and **higher air purity** without coolant vapor contamination.

### PRODUCTS

# durability, and reliability over decades

The A Series air compressors were designed to meet the highest needs for trouble-free, constant performance in any type of setting. They are preferably installed as machines for constant operation, best if 24/7. With a pressure range from 2,5 to 10 bar(g) and a capacity range from 67 to 5.360 m<sup>3</sup>/h, these air-cooled units provide **flexibility** for industrial applications with no compromise in durability. The high efficiency aluminium coolers, the thermoregulation system for the coolant flow, and the motor fan maintain the installed components at a low temperature and guarantee **stable performance even in extreme climate conditions**. The A Series come in three different versions for each model, according to the delivered pressure range, and in a variety of customized versions to better suit the manufacturing process requirements. To prove the point, the A Series air compressors are supplied with an **optional warranty of up to 5 years**.

### ENVIRONMENT



# machines that fit **customers' needs**

Easy to install and deploy, the A Series air compressors are truly "Plug&Play". Their fully automatic operation, their compact footprint, and their low noise level provide a trouble-free integration into the process. The **air-cooling** system of the A Series compressors, as opposed to water-cooled systems, drastically cuts down the installation costs and eliminates expenses related to water connections, water treatment and disposal. Fully compliant with major international regulations for safety and ergonomics, every unit in the A Series also ensures environmental protection through superior purity of delivered air and condensate with a residual coolant carryover of less than 1 mg/m<sup>3</sup>. Various built-in features reduce the units' noise level, enable heat recovery, and facilitate easy, safe operation – all contributing to a better working environment.

### MAIN FEATURES

### ROTARY VANE TECHNOLOGY

The simplest and most reliable solution for compressed air production

Hard aluminium alloy vanes for heavy duty 24/7 operation

Active sealing for higher efficiency and constant performance

Only two bearings and few moving parts for low temperature and low maintenance needs

Direct coupling to 4-poles motor at 1.450 rpm for 50 Hz, with IP55 protection. Low rotation speed and long durability

#### PERFORMANCE AND RELIABILITY

Designed to produce sufficient compression in a single stage, resulting in a **high compression ratio**. Intensive coolant injection for improved performances

Air cooling system, for constant performance in any climate

Single stage pressure from 2,5 to 10 bar(g) with capacity from 67 to 5.360 m<sup>3</sup>/h

Sturdy construction with active sealing and few moving parts, easy to access and maintain, very reliable and durable

Thermoregulation of coolant flow, motor fan and high efficiency aluminium coolers for **constant performance**, even in extreme climate conditions **Reduced rotation speed** for less vibrations, noise and wear

Lower cycle temperatures to reduce wear, coolant consumption and leakage caused by dilation of parts. Less energy is needed for cooling and the purity of delivered air is enhanced

#### PLUG&PLAY

Ready-to-use machines that can be easily and directly connected to the air plant and the power supply, with no need of foundations Fully automatic operation for immediate use: intake valve, coolant temperature control, thermostat, auxiliary control switches and safety gauge No water connection needed

Complete and easy-to-use control panel

#### ENERGY AND COST SAVINGS

Air cooling system through an aluminium radiator and electric fan thermostat for operating without cooling water

#### No expenses for water connections, water treatment and disposal

No need of foundations and reduced installation investments

Less maintenance, with fewer parts suffering little wear. Single-stage rotary vane units offer cleaner and more reliable operation, significantly reducing maintenance costs

Direct axial coupling to the motor for high compression ratio and low rotation speed, with fewer moving parts, lower energy consumption and simplified maintenance

Patented coolant injection for low compression work and low power consumption

Idle running with lubrication for reducing the energy requirements to 18% of installed power

Return on investment shorter than 2 years when replacing water-cooled or screw air compressors

### ENVIRONMENT FRIENDLY

High efficiency with lower power consumption

**Coolant separation in 3 phases:** centrifugal separation, mechanical trap and final coolant separation through a borosilicate filter element with coolant recovery, resulting in a superior **purity of the compressed air** without treatment and residual coolant carry over of 1 mg/m<sup>3</sup>

 $\label{eq:compact} \textbf{Compact design} \text{ and reduced foot print for space economy}$ 

Long intervals for ordinary maintenance schedule

Closed-loop lubrication circuit to ensure negligible coolant consumption, to avoid the air and environment contamination with harmful substances and to reduce the maintenance

Soundproof canopy 80 dB(A) for low noise

## SPECIAL VERSIONS

Pneumofore compressed air solutions are also available in special versions to meet every industrial requirement.

A VS Series\_ with frequency converter to lower the power consumption and to ensure the constant pressure during the process

- A HC Series\_ air-cooled units for hot climates up to 55° C [131° F] with oversized cooling circuits, larger electrical motors and fans
- A W Series\_ water-cooled compressors for installation in sites with low or no ventilation
- A HR Series \_ vane compressors with both air and water-cooling for optimal seasonal heat recovery
- A S Series\_ customized machines and special versions. Tailored cabin size, skid, stainless steel or dedicated wiring for PLC

## PARTS AND ACCESSORIES





# A SERIES COMPRESSORS TECHNICAL DATA



### HIGHLIGHTS

Rotary Vane design for low Life Cycle Cost and fast payback time

Direct coupling and low rotation speed from 1045 to 1760 rpm

No need of periodic overhauling for the air end

Three operative pressure ranges

[2,5 to 4 bar(g) - 4 to 8 bar(g) - 8 to 10 bar(g)]

Air cooled - no foundation or water connections required

Variable Speed Drive and Hot Climate versions as option Patented intensive coolant injection

### A400 and A35 open view

Model		Pressure Range			Capacity				Nominal Power				Absorbed Power *				Idle Running Power				sions	Noise		Weight	
				50 Hz 60 Hz		50 Hz 60 H			Hz	-lz 50		Hz 60 Hz		50 Hz		60 Hz		LxWxH		50 Hz 60 Hz					
		bar(g)	PSI(g)	m³/h	cfm	m³/h	cfm	kW	HP	kW	HP	kW	HP	kW	HP	kW	HP	kW	HP	mm	inch	db	(A)	kg	lbs
A10	A10.4	2,5-4	36-58	70	41	83	49	5,5	7,5	7,5	10	5,5	7,5	6,4	8,7	1	1,4	1,4	1,9	1.275	50				661
	A10.8	4-8	58-116	68	40	75	45	7,5	10	11	15	7,8	10,6	9	12,2	1,4	1,9	1,9	2,6	706	28	72	73	300	
	A10.10	8-10	116-145	67	40	74	44	9	12	11	15	8,9	12,1	10,3	14	1,6	2,2	1,9	2,6	1.600	63				
A20	A20.4	2,5-4	36-58	106	62	126	74	9	12	11	15	9,1	12,4	11	15	1,7	2,3	1,9	2,6	1.275	50	72	73	340	750
	A20.8	4-8	58-116	102	60	115	68	11	15	15	20	12	16,3	14,3	19,5	2	2,7	2,4	3,3	706	28				
	A20.10	8-10	116-145	101	59	113	66	15	20	18,5	25	13	17,7	15,6	21,2	2,7	3,7	3,4	4,6	1.600	63				
A30	A30.4	2,5-4	36-58	175	103	207	122	15	20	18,5	25	15,1	20,5	18,1	24,6	2,8	3,8	3,5	4,8	1.275	50		73	420	926
	A30.8	4-8	58-116	168	99	189	112	18,5	25	22	30	18,8	25,6	22,6	30,7	3,4	4,6	4,1	5,6	706	28	72			
	A30.10	8-10	116-145	167	98	187	110	22	30	30	40	21,8	29,7	26,2	35,6	4,1	5,6	4,8	6,5	1.700	67				
A35	A35.4	2,5-4	36-58	210	124	249	146	18,5	25	22	30	18,8	25,6	22,6	30,7	3,4	4,6	4,1	5,6	1.275	50	73	74	440	970
	A35.8	4-8	58-116	204	120	230	135	22	30	30	40	22,3	30,3	26,8	36,5	4,1	5,6	4,8	6,5	706	28				
	A35.10	8-10	116-145	202	118	227	133	30	40	37	50	26,2	35,6	31,4	42,7	5,5	7,5	6,4	8,7	1.700	67				
A60	A60.4	2,5-4	36-58	362	213	429	252	30	40	37	50	30,4	41,4	36,5	49,7	5,5	7,5	6,5	8,8	1.385	50	72	73	1.015	2.238
	A60.8	4-8	58-116	355	209	408	240	37	50	45	60	37,4	50,9	44,9	61,1	6,8	9,2	7,7	10,5	1.280	41				
	A60.10	8-10	116-145	353	208	405	238	45	60	55	75	42,9	58,4	51,5	70,1	8,2	11,2	9,2	12,5	2.000	75				
A90	A90.4	2.5-4	36-58	560	329	663	390	45	60	55	75	45,4	61,8	54,6	74,3	7,7	10,5	9.2	12.5	1.385	54				
	A90.8	4-8	58-116	550	324	633	372	55	75	75	100	56,5	76,9	67,8	92.2	9.4	12,8	11,9	16.2	1.280	51	73	74	1.250	2.756
	A90.10	8-10	116-145	548	322	628	369	75	100	90	125	66	89,8	79,2	107,8	12,8	17,4	16,4	22,3	2.000	87				
A120	A120.4	2,5-4	36-58	860	506	990	599	75	100	90	125	75,4	102,6	90,5	123,1	12,7	17,3	16,5	22,4	2.065	81				
	A120.4	4-8	58-116	755	444	868	510	75	100	90	125	76	102,0	91,2	124,1	12,7	17,3	16,5	22,4	1.080	42	74	75	1.600	3.527
	A120.10	8-10	116-145	752	442	861	506	90	125	110	150	90.3	122,9	108.4	147,5	15,2	20,7	20	27,2	2.150	79				
A150	A120.10	2,5-4	36-58	1.030	606	1.230	724	90	125	110	150	90	122,9	108,4	146,9	15,2	20,7	20	27,2	2.350	90	77	78	2.100	4.630
	A150.4	4-8	58-116	875	515	1.006	592	90	125		150	90	122,4		140,9	,	20,7	20	27,2	1.750	90 67				
	A150.8		116-145	871	515		589			110				105 129		15,5 17					75				
		8-10 2,5-4			835	1.001		110	150	132	175 200	110	149,7		175,5		22,8	24,5	33,3	1.900	-				
A180	A180.4 A180.8	4-8	36-58 58-116	1.420	653	1.634 1.277	962 751	132 110	175 150	150 132	175	133	181 151,2	153 127,8	208,2 173,9	20,1	27,3	27,5	37,4 33	2.570 1.570	101 62	78	79	2.300	5.071
	L	-		<u> </u>				-				111,1	,		<u> </u>	,	22,8	24,3				10	19	2.000	3.071
	A180.10	8-10	116-145	1.105	650	1.270	747	132	175	150	200	130	176,9	149,5	203,4	20,1	27,3	27,5	37,4	2.000	79				
A260 A400	A260.4	2,5-4	36-58	1.720	1.012		1.198	160	220	200	250		219,9	185,8	252,8	26,2	35,6	33,1	45	2.870	113	79	80	2.800	6.173
	A260.8	4-8	58-116	1.525	897	1.760	1.035		220		250	,	219,9	185,8	252,8	26,2	35,6	33,1	45	1.570	62				
	A260.10	8-10	116-145	1.518	893	1.740	1.023	200	270	250	300	192,8		221,7	301,6	32,6	44,3	42,1	57	2.210	79				
	A400.4	2,5-4	36-58	2.330	1.371	2.560	1.505	200	270	250	340	204	272,1	241	312,9	33,5	45,5	33,1	45	3.700	146			E 000	
	A400.8	4-8	58-116	2.300	1.354	2.300	1.354	250	340	250	340	255	346,9	256	348,3	40,8	57	40,8	55,5	2.250	89	79	80	5.800	12.78
	A400.10	8-10	116-145	2.285	1.345		1.345	315	430	315	430	305	415	308	419	54	68	54	73,4	2.330	91				
A520	A520.4	2,5-4	36-58		2.024	-	2.396	320	440	400	500	323	440	372	506	52	71	66	90	4.300	169				
	A520.8	4-8	58-116	3.050	1.794		2.070	320	440	400	500	323	440	372	506	52	71	66	90	2.250	89	79	80	5.200	11.464
	A520.10	8-10	116-145	3.036			2.046	400	540	500	600	386	525	443	603	65	89	84	115	2.330	91				
A800	A800.4	2,5-4	36-58	4.940	2.742		3.010	400	540	500	680	400	544	460	626	67	91	66	90	5.100	201	79	80	10.900	24.030
	A800.8	4-8	58-116	4.600	2.708		2.708	500	680	500	680	510	694	512	697	82	114	82	111	3.700	146				
	A800.10	8-10	116-145	4.570	2.690	4.570	2.690	630	860	630	860	610	830	616	838	108	136	108	147	2.330	91				

 $\label{eq:Hz} \begin{array}{l} \text{Hz}=\text{frequency} & \text{cfm and } m^{8}\text{h compressed air flow rated pressure.} \\ \text{At standard reference conform to ISO 8778:1 bar(a), 20^{\circ}\text{C}, 65\% \\ \text{Relative Humidity} \end{array}$ 

\*= Total machine absorbed power with class IE3 efficiency electric motors, all auxiliares included. Performance according to ISO 1217 : 2009 (E), Annex C



UNI EN ISO 9001 and UNI EN ISO 14001 certified



6 CE



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