# Largo & Allegro Air Compressors



### LARGO & ALLEGRO 31-110





### ALUP's heritage

Founded in Germany in 1923, the company derives its name of the automotive products that were manufactured in the Köngen' mechanical workshop where ALUP came into existence: Auto-LUft-Pumpen. Only two years later, the first range of piston compressors was being developed, whilst in 1980 rotary screw compressors were added to the product offer.

Over time, experience grew and innovation prospered, leading to today's high quality product portfolio. As such, the name ALUP Kompressoren has become synonymous with innovative technology blended with a strong sense of tradition.

Today, ALUP Kompressoren is still operating out of its home town Köngen, where everything started in 1923.





### Driven by technology Designed by experience

Discover what happens when a passion for technology is fused with hands-on industrial experience. Designs evolve towards more practical installation and maintenance, giving you the freedom to focus on your job. Product ranges include the exact machine you need, with the right options for your performance needs. Return on investment is ensured, while your carbon footprint shrinks. And, because we stay close to our customers, we're one step ahead when your needs change.



# The power of the Largo & Allegro range

Largo & Allegro 31-110 screw compressors provide high-quality compressed air for a wide range of industrial applications. The result of continuous investment in product development, Largo & Allegro 31-110 compressors are built around three innovative features which make them stand out.

#### **Gearbox driven units**

- Highly energy-efficient, with no long-term loss.
- Energy consumption reduced by up to 3% compared to belt driven technology.

#### State-of-the-art controllers

- Full-colour graphic screen for Air Control 5.1 (on IVR machines).
- Intelligent unload cycle control.
- Wide range of timers to efficiently adapt to your needs 24/7.
- Outstanding communication possibilities.
- Fully compatible with Air Control family.

#### Modular design

• Ensuring ease of maintenance.





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# 10 reasons to choose Alup

Check out these innovative features and see how they provide you with high efficiency, ease of maintenance, low noise levels and outstanding cooling.



#### 1. Element and drive train

- Gearbox technology ensuring outstanding efficiency and continued reliability.
- Innovative design resulting in a smaller footprint.

#### 2. High efficiency motors

- IE3 / NEMA Premium efficiency motor (standard on fixed speed machines, optional on variable speed ones).
- IP55, insulation Class.

#### 3. Radial fan

- Low power consumption & reduced noise levels.
- Optimal cooling flow.
- Increased lifetime of oil, consumables and compressor.



#### 4. Standard enclosed intake filter

- · Low noise levels thanks to design and position of filter.
- Improved FAD due to air intake positioning.
- High quality filtration to maximize oil quality and protect your compression element.

#### 5. Air Control 5.1

- Standard on IVR machines, available as option for fixed speed machines.
- Intelligent unload cycles.
- Multiple clock settings for multiple pressure bands adapted to the air consumption.
- Fully compatible with Air Control family.
- Full-colour easy-to-use screen & extended communication possibilities.





#### 6. Solid inlet baffle

- Small installation footprint: the unit can be placed against a wall.
- Fitted with insulation foam to reduce noise.
- Optimized air flow for improved cooling.
- Added protection for the cooling fan.





#### 7. In-house designed oil separator vessel

- Integrated minimum pressure valve (MPV) eliminates risk of leakage.
- Long lifetime thanks to cast iron parts.
  - Designed for optimal oil separation.

#### 8. Separate inverter cubicle

- Easy access for maintenance and cleaning.
- Optimal cooling ensures a longer lifetime.

#### 9. Separate coolers

- Separate oil and air cooler for highquality cooling and long lifetime of the coolers.
- Gliding rails for easy and safe removal.
- Easy access for cleaning.





#### **10. Improved motor cooling**

- Separate cooling flow.
- Suitable for harsh conditions and temperatures up to 46°C.

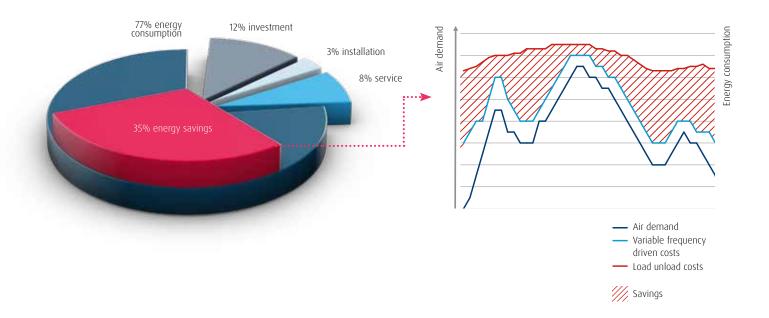
# **Optimize your energy consumption**

Did you know that energy costs represent about 70% of the total operating cost of your compressor over a 5-year period? That's why reducing the energy consumption of our compressed air installation should be a major focus.

#### Variable speed technology

For the right application, variable speed technology, such as on the Allegro variable frequency drive compressor, can cut the energy bill of your compressor by up to 35%. The Allegro reduces energy consumption in the following ways:

- The variable frequency drive compressor matches air supply with demand therefore reducing energy consumption when the demand is lower. If the demand is stable then the Airlogic<sup>2</sup> controller guarantees a fixed set pressure.
- No unload cycles above 20% load.
- No peak current due to soft start.



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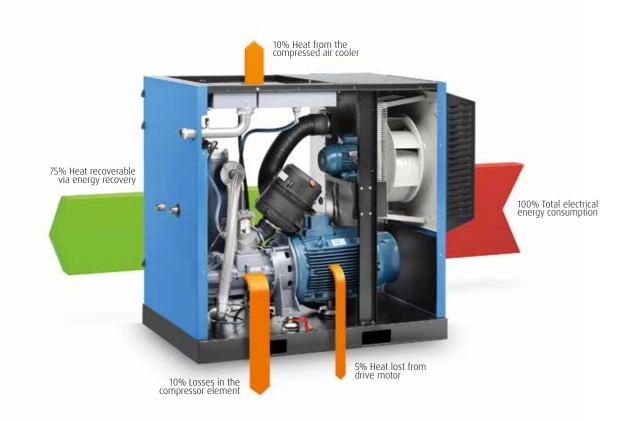
#### **Energy audit**

Knowing what compressor is right for your application is critical to minimizing the energy consumption. With our Energy Audit we can simulate your compressed air needs and then consult you on the best solution for your needs. For more information, please contact your local Alup representative.



#### **Energy recovery**

When air is compressed, heat is formed. The excess heat can be captured with an energy recovery option and channeled to other applications allowing you to save energy and cut costs. The energy recovery option integrates a heat exchanger on the oil circuit, which heats up the continuously pressurized water flow. The system is regulated automatically, and in case of limited water cooling capacity, the standard cooling system of the compressor will operate and backup the energy recovery device.



#### Intelligent graphic controller

The multiple control and monitoring features of the controller dramatically increases the compressor's efficiency and reliability. Efficiency is maximized by controlling the main drive motor and regulating the system pressure within a pre-defined and narrow pressure band.

#### Control and monitoring features:

- Warning indications.
- Graphical indication service plan.
- Integrated sequence for up to 6 compressors limiting the energy consumption and equalizing running hours across your whole system.
- Online visualization of running conditions.



# **Central controller technology**

For installations with multiple compressors, a costly cascade system with a wide pressure band used to be the only way to operate. Additionally, the running hours of the compressors were not synchronized making strategic servicing difficult. Install the ECOntrol6 or the integrated compressor control (with a license) and get simple, central control to reduce system pressure and energy consumption in installations of up to 4 or 6 compressors.



#### **Control features**

- Single pressure measurement point.
- Minimized pressure band.
- Stable system pressure.
- Equalization of running hours.
- Multiple IVR speed control.
- Clear and visual graphical display.
- Online monitoring and controlling possible.

### Enhanced air quality

Many people do not realize that the operating environment can have a major impact on the air quality at the compressor outlet. Even in a dedicated compressor house the inlet air can contain particulate or moisture which can have a negative impact on the production.

Largo & Allegro 30-75 compressors are available with an integrated dryer option, which offers significant advantages compared to a stand-alone dryer:

- Condensation removal at source minimizing pipework corrosion.
- Reduced footprint, up to 1/3rd of a stand-alone dryer.
- Intelligent dryer control, controlled by the Air Control 5.1.
- Higher operating temperatures compared to stand-alone.
- Single service visit, reducing maintenance costs.
- No installation cost.





# **Options to optimize your operations**



Every installation is different, therefore we offer you a wide range of options to enable you to personalize your Largo & Allegro 31-110 compressor to your needs.

#### **Air quality**

- Internal water separator reduces up to 90% of the condensate in the compressed air.
- Automatic drain ensures no air loss during condensate removal (only in combination with internal water separator).
- Tropical thermostatic valve for use in humid and hot conditions.
- High-efficiency air intake pre-filtration panel avoids dust entering the compression element, protecting internal components and extending the compressor lifetime.

#### **Energy saving**

• Energy recovery pack - recovers up to 75% of the energy formed during the compressor process heat, which can be used to heat up water for boilers, showers etc.

#### **Safety**

- Wrong rotation direction control protects the compressor from possible damage when the power supplied by the energy provider is unreliable.
- Water shut-off valve outside the canopy for water- cooled machines.
- The oil pre-heater guarantees a certain oil temperature in the oil vessel to avoid condensation.

#### **Control and monitoring**

- ECO 4/6i integrated multiple compressor control for 4/6 compressors.
- Remote monitoring for additional convenience.



#### Service to protect your investment

Regular maintenance of your machines by factory trained technicians using original parts, will optimize your operations and extend the life-time of your compressors.

# **Technical data**

speed wor	Max. working	Reference working	Fre	e Air Deliv	very	Motor	DOWOF	Noise	Cooling	Weight		Compressed air output		
	pressure	pressure	@ refe	rence con	ditíons*	MOLOI	power	level**	volume	std	Т	diameter		
Model	bar	m³/min	m³/h	l/s	cfm	kW	hp	dB(A)	m³/h	kg	kg	"		
LARGO 31	7,5	7	353	98	208	30	40	66	5400					
	8,5	8	320	89	189	30	40	66	5400	790	975	1"1/2		
	10	9,5	288	80	170	30	40	65	5400					
LARGO 37	7,5	7	418	116	246	37	50	67	5760					
	8,5	8	398	111	234	37	50	67	5760		1055			
	10	9,5	364	101	214	37	50	66	5760	870		1"1/2		
	13	12,5	295	82	174	37	50	66	5760					
LARGO 45	7,5	7	497	138	293	45	60	68	7200					
	8,5	8	472	131	278	45	60	68	7200	875				
	10	9,5	432	120	254	45	60	67	7200		875	875	875	875 1060
	13	12,5	369	102	217	45	60	67	7200					
LARGO 55	7,5	7	608	169	358	55	75	70	9000	4420	1130 1403			
	8,5	8	576	160	339	55	75	70	9000			414 (5		
	10	9,5	540	150	318	55	75	69	9000	1130		1"1/2		
	13	12,5	447	124	263	55	75	69	9000					
LARGO 75	7,5	7	781	217	460	75	100	71	12600					
	8,5	8	763	212	449	75	100	71	12600	1017	1590	21		
	10	9,5	680	189	401	75	100	70	12600	1317		2"		
	13	12,5	582	162	343	75	100	70	12600					
LARGO 76	7,5	7	882	245	519	75	100	69	12600					
	8,5	8	834	232	491	75	100	69	12600	4570		2.4		
	10	9,5	742	206	437	75	100	68	12600	1570	NA	2"		
	13	12,5	629	175	370	75	100	68	12600					
LARGO 90	7,5	7	1026	285	604	90	125	70	14760					
	8,5	8	1001	278	589	90	125	70	14760	— — 1600				
	10	9,5	882	245	519	90	125	69	14760		NA	2"		
	13	12,5	721	200	425	90	125	69	14760					
LARGO 110	7,5	7	1238	344	729	110	150	74	14760					
	8,5	8	1181	328	695	110	150	74	14760					
	10	9,5	1073	298	632	110	150	73	14760	- 1800	1800	2"		
	13	12,5	907	252	534	110	150	73	14760					

\* Unit performance measured according to ISO 1217, Annex C, latest edition.

\*\* Noise level measured according to ISO 2151 with optional baffle.

All technical data for air-cooled machines without integrated dryer. For technical data of water-cooled machines or machines with integrated dryer, please contact your local salesforce.





# **Technical data**

Inverter driven version	Working pressure	air	lin. fre delive 7 bar)	ery	Max. free air delivery														
Madal	har	7	7	7	7	7	7	9.5	9.5	9.5	10	10	10	12.5	12.5	12.5	13	13	13
Model	bar	m³/h	l/s	cfm	m³/h	l/s	cfm	m³/h	l/s	cfm	m³/h	l/s	cfm	m³/h	l/s	cfm	m³/h	l/s	cfm
ALLEGRO 31	4-10	106	29	62	353	98	208	289	80	170	281	78	165	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	4-13	87	24	51	291	81	171	289	80	170	289	80	170	236	66	139	229	64	135
ALLEGRO 37	4-10	125	35	74	418	116	246	364	101	214	353	98	208	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	4-13	109	30	64	366	102	215	364	101	214	363	101	214	295	82	174	286	80	169
ALLEGRO 45	4-10	149	41	88	497	138	293	428	119	252	416	115	245	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	4-13	129	36	76	431	120	254	428	119	252	428	119	252	369	102	217	358	99	211
ALLEGRO 55	4-10	183	51	107	608	169	358	536	149	316	520	145	306	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	4-13	161	45	95	540	150	318	536	149	316	535	149	315	447	124	263	434	120	255
ALLEGRO 75	4-10	234	65	138	781	217	460	663	184	390	643	179	379	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	4-13	199	55	117	667	185	393	663	184	390	661	184	390	582	162	343	565	157	333
ALLEGRO 76	4-10	265	74	156	882	245	519	752	209	443	730	203	430	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	4-13	226	63	133	757	210	446	752	209	443	751	209	442	629	175	370	610	169	359
ALLEGRO 90	4-10	308	86	181	1026	285	604	846	235	498	821	228	483	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	4-13	254	71	150	851	237	501	846	235	498	845	235	497	721	200	425	700	194	412
ALLEGRO 110	4-10	343	60	106	1145	318	674	954	265	562	925	257	545	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	4-13	286	50	106	960	267	565	954	265	562	952	264	561	853	237	502	828	230	487

\* Unit performance measured according to ISO 1217, Annex C, latest edition. \*\* Noise level measured according to ISO 2151 with optional baffle.

All technical data for air-cooled machines without integrated dryer. For technical data of water-cooled machines or machines with integrated dryer, please contact your local salesforce.

		otor ower	Noise level **	Cooling air volume	We	Compressed air output diameter		
Madal	kW	ha	dp(A)	m <sup>3</sup> /h	v	VT		
Model	KW	hp	dB(A)	m³/h	kg	kg		
ALLEGRO 31	30	40	67	5400	9.40	1075	1111/2	
	30	40	66	5400	840	1025	1"1/2	
ALLEGRO 37	37	50	68	5760	- 920	1105	1"1/2	
	37	50	67	5760	920	1105	1 1/2	
ALLEGRO 45	45	60	69	7200	025	1110	1111/2	
	45	60	68	7200	925	1110	1"1/2	
ALLEGRO 55	55	75	71	9000	120.0	1470		
	55	75	70	9000	- 1200	1473	2"	
ALLEGRO 75	75	100	71	12600	1207	1//0		
	75	100	70	12600	1387	1660	2"	
ALLEGRO 76	75	100	70	12600	1(10		2"	
	75	100	69	12600	1640	NA	2"	
ALLEGRO 90	90	125	71	14760	1(70			
	90	125	70	14760	- 1670	NA	2"	
ALLEGRO 110	90	150	74	14760	4000		2"	
	90	150	73	14760	- 1900	NA	2"	



# **Dimensions**

	Length std	Length T	Width	Height
Model	mm	mm	mm	mm
ALLEGRO 31				
ALLEGRO 37	1420	2071	1060	1630
ALLEGRO 45				
ALLEGRO 55	1660	2510	1060	1630
ALLEGRO 75	1000	2510	1000	1050
ALLEGRO 76	1860	NA	1060	1630
ALLEGRO 90	1000	INA	1000	0201
ALLEGRO 110	2333	NA	1060	1630



#### DRIVEN BY TECHNOLOGY DESIGNED BY EXPERIENCE



CONTACT YOUR LOCAL ALUP KOMPRESSOREN REPRESENTATIVE





# Care. Trust. Efficiency.

#### Care.

Care is what service is all about: professional service by knowledgeable people, using high-quality original parts.

#### Trust.

Trust is earned by delivering on our promises of reliable, uninterrupted performance and long equipment lifetime.

#### Efficiency.

Equipment efficiency is ensured by regular maintenance. Efficiency of the service organization is how Original Parts and Service make the difference.

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