L&W COMPRESSORS

Product Range

High performance and economic high pressure solutions
Made in Germany

www.lw-compressors.com

Solid Growth

Lenhardt & Wagner is one of the leading and renowed companies in the market of high-pressure applications. A worldwide network of L&W agencys and service centers ensures a steady growth of the company. The flat and manageable corporate structure allows us to identify any weaknesses directly and act immediately. Our personal approach and a direct line to the customers here are essential.

During the last three decades the range of L&W products could be advanced consistently and new markets are created. This is mainly due to our investment in the development and optimization of the product range and a partnership with our importers. In addition to Breathing Air Compressors and related peripheral equipment we offer also compressors, storage and filter for the necessary high-pressure which is required for natural gas filling stations. High-pressure inert gases such as argon, helium or nitrogen for industrial applications including welding and laser cutting, and for general laboratory use are also among our skills.

Our balanced growth is based on a long-term and strategic planning that allows us still sufficient freedom of action for rapid reaction in cases of need. Based on continues expansion of the Asian market, with new agencys in Singapore and China, we could already significantly increased our sales and improve our services.

Trust the experts, trust to L&W.

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Compressor Overview

Type	Mobility	Capacity			Prime mover	Drive power		Page
		[l/min]	[Nm³/h]	[cfm]		[kW]	[HP]	
LW 100 E / E1 ECO	Mobile	100	6.0	3.5	1- / 3-Phase power	2.2	3.0	6
LW 100 B ECO	Mobile	100	6.0	3.5	Gasoline	4.5	6.0	7
LW 100 E / E1	Mobile	100	6.0	3.5	1- / 3-Phase power	2.2	3.0	8
LW 100 B	Mobile	100	6.0	3.5	Gasoline	4.5	6.0	9
LW 160 E / E1	Mobile	160	9.6	5.6	1- / 3-Phase power	4.0	5.5	10
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LW 100 E ECO / LW 100 E1 ECO

The LW 100 ECO compressors are lightweight, reliable and ideal for mobile use. They are made of 100% proven elements from our successful LW 100 series. The main components such as e.g. Motor, compressor block, filter system and filling device are used completely from this series. The steel piston rings in the compressor stages provide long term consistent delivery performance (fill time).

Specifications

» Electro motor
» Power cable with plug
» Start/Stop Switch
» Aluminium frame
» Manual condensate drain
» Pressure maintaining and non return valve
» 1 x Filling hose c/w filling valve and pressure gauge
» Intermediate coolers
» Oil- / Water separators after 2nd and 3rd stage
» Safety valves after for each stage
» All pistons with piston rings
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Carrying handles
» Filling valve holder
» Additional filling hose c/w filling valve
» Automatic condensate drain
» Automatic stop at final pressure c/w hour counter
» Switch over device for 200 or 300 bar
» Motor protection switch
» Special voltages / frequencies on request
» Conversion set: Petrol-/electro version

Difference to the Standard-Model

» Frame in a aluminium (Standard: s/s)
» No carrying handles
» Unpainted compressor block
» No filling valve holder

LW 100 E ECO

Technical Data

	LW 100 E ECO	LW 100 E1 ECO
Type:	Air cooled piston compressor	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	100 / 6 / 3.5	100 / 6 / 3.5
Max. Pressure [bar]:	330	330
RPM [1/min]:	2300	2300
No of cylinders / No of stages:	3 / 3	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 230V / single phase / 50Hz
Drive power [kW] / [HP]:	2.2 / 3.0	2.2 / 3.0
Cooling air requirement [Nm³/h]:	660	660
Lubrication type:	Splash oil	Splash oil
Oil capacity [litre]:	0.5	0.5
Operating temperature [°C]:	+5°C to +45°C	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	108 (at +20°C / approx. 18 h)	108 (at +20°C / approx. 18 h)
Dimensions L x W x H [cm]:	67 x 40 x 40	67 x 40 x 40
Weight [kg]:	39	42
Noise level (measured at 1 m) [dB]:	82	82

[1] In accordance with EN 12021

LW 100 B ECO

The LW 100 ECO compressors are lightweight, reliable and ideal for mobile use. They are made of 100% proven elements from our successful LW 100 series. The main components such as e.g. Motor, compressor block, filter system and filling device are used completely from this series. The steel piston rings in the compressor stages provide long term consistent delivery performance (fill time).

Specifications

- Petrol compressor c/w pull start and auto cut off at low oil level
- Aluminium frame
- Manual condensate drain
- Pressure maintaining and non return valve
- 1 x Filling hose c/w filling valve and pressure gauge
- Intermediate coolers
- Oil- / Water separators after 2nd and 3rd stage
- Safety valves after for each stage
- All pistons with piston rings
- Filling pressure to your choice (200 or 300 bar)
- Connections to your choice
  (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
- Breathing air purification an accordance to EN 12021

Options

- Carrying handles
- Filling valve holder
- Additional filling hose c/w filling valve
- Automatic stop at final pressure c/w hour counter
- Switch over device for 200 or 300 bar
- Conversion set: Petrol-/electro version

Difference to the Standard-Model

- Frame in a aluminium (Standard: s/s)
- No carrying handles
- Unpainted compressor block
- No filling valve holder

LW 100 B ECO

Technical Data

	LW 100 B ECO
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	100 / 6 / 3.5
Max. Pressure [bar]:	330
RPM [1/min]:	2300
No of cylinders / No of stages:	3 / 3
Prime mover type:	4 stroke drive motor
Drive power [kW] / [HP]:	3.6 / 4.9
Cooling air requirement [Nm³/h]:	1080
Lubrication type:	Splash oil
Oil capacity [litre]:	0.5
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	86 (at +20°C / approx. 16h)
Dimensions L x W x H [cm]:	67 x 40 x 40
Weight [kg]:	39
Noise level (measured at 1 m) [dB]:	96

[1] In accordance with EN 12021

LW 100 E / LW 100 E1

The LW 100 E / E1 is a particularly lightweight and reliable breathing air compressor. It is designed for mobile use and impresses with its flexibility combined with low maintenance requirements and maintenance costs. It is resistant to seawater, due to the painted block and the stainless steel frame. This making it ideal for your air supply in seawater environment. The steel piston rings in the compressor stages provide long term consistent delivery performance (fill time).

Specifications

- Electro motor
- Power cable with plug
- Start/Stop Switch
- Stainless steel frame
- Manual condensate drain
- Pressure maintaining and non return valve
- 1 x Filling hose c/w filling valve and pressure gauge
- Intermediate coolers
- Oil- / Water separators after 2nd and 3rd stage
- Safety valves after for each stage
- All pistons with piston rings
- Filling pressure to your choice (200 or 300 bar)
- Connections to your choice
  (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
- Breathing air purification an accordance to EN 12021

Options

- Additional filling hose c/w filling valve
- Automatic condensate drain
- Automatic stop at final pressure c/w hour counter
- Switch over device for 200 or 300 bar
- Motor protection switch
- Special voltages / frequencies on request
- Conversion set: Petrol-/electro version

LW 100 E1

LW 100 E

Technical Data

	LW 100 E	LW 100 E1
Type:	Air cooled piston compressor	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	100 / 6 / 3.5	100 / 6 / 3.5
Max. Pressure [bar]:	330	330
RPM [1/min]:	2300	2300
No of cylinders / No of stages:	3 / 3	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 230V / single phase / 50Hz
Drive power [kW] / [HP]:	2.2 / 3.0	2.2 / 3.0
Cooling air requirement [Nm³/h]:	660	660
Lubrication type:	Splash oil	Splash oil
Oil capacity [litre]:	0.5	0.5
Operating temperature [°C]:	+5°C to +45°C	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	108 (at +20°C / approx. 18 h)	108 (at +20°C / approx. 18 h)
Dimensions L x W x H [cm]:	67 x 40 x 40	67 x 40 x 40
Weight [kg]:	43	43
Noise level (measured at 1 m) [dB]:	82	82

[1] In accordance with EN 12021

LW 100 B

The gasoline-powered LW 100 B is a particularly lightweight and reliable air compressor. It's a very low maintenance compressor and ideal for mobile use. Due to the seawater resistant stainless steel frame and the painted block it is very popular in seawater environments. The steel piston rings in the compressor stages provide long term consistent delivery performance (fill time).

Specifications

- Petrol compressor c/w pull start and auto cut off at low oil level
- Stainless steel frame
- Manual condensate drain
- Pressure maintaining and non return valve
- 1 x Filling hose c/w filling valve and pressure gauge
- Intermediate coolers
- Oil- / Water separators after 2nd and 3rd stage
- Safety valves after for each stage
- All pistons with piston rings
- Filling pressure to your choice (200 or 300 bar)
- Connections to your choice
  (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
- Breathing air purification an accordance to EN 12021

Options

- Additional filling hose c/w filling valve
- Automatic stop at final pressure c/w hour counter
- Switch over device for 200 or 300 bar
- Conversion set: Petrol-/electro version

Difference to the ECO-Model

- Stainless steel frame (ECO: alloy)
- Inclusive the carrying handles
- Painted compressor block
- Inclusive filling valve holder

LW 100 B

Technical Data

	LW 100 B
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	100 / 6 / 3.5
Max. Pressure [bar]:	330
RPM [1/min]:	2300
No of cylinders / No of stages:	3 / 3
Prime mover type:	4 stroke drive motor
Drive power [kW] / [HP]:	3.6 / 4.9
Cooling air requirement [Nm³/h]:	1080
Lubrication type:	Splash oil
Oil capacity [litre]:	0.5
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	86 (at +20°C / approx. 16 h)
Dimensions L x W x H [cm]:	67 x 40 x 40
Weight [kg]:	43
Noise level (measured at 1 m) [dB]:	96

[1] In accordance with EN 12021

LW 160 E / E1

The user-friendly LW 160 E / E1 with electric drive is ideal for mobile applications or occasional filling operations. It comes wired with power cable, plug and phase selector. The model differs in E and E 1 (E- three pase / E1-single phase version).

Specifications

- Electro Motor
- Power cable with plug and phase selector
- Start/Stop Switch
- Stainless steel frame
- Manual condensate drain
- Pressure maintaining and non return valve
- 1 x Filling hose c/w filling valve and pressure gauge
- Intermediate coolers
- Oil- / Water separators after 2nd and 3rd stage
- Safety valves after each stage
- Filling pressure to your choice (200 or 300 bar)
- Connections to your choice
  (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
- Breathing air purification an accordance to EN 12021

Options

- Additional filling hose c/w filling valve
- Automatic condensate drain
- Automatic stop at final pressure c/w hour counter
- Switch over device for 200 or 300 bar
- Motor protection switch
- Special voltages / frequencies on request
- Conversion set: Petrol-/electro version

LW 160 E

Technical Data

	LW 160 E	LW 160 E1
Type:	Air cooled piston compressor	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	160 / 9.6 / 5.6	160 / 9.6 / 5.6
Max. Pressure [bar]:	330	330
RPM [1/min]:	1450	1450
No of cylinders / No of stages:	3 / 3	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 230V / single phase / 50Hz
Drive power [kW] / [HP]:	4.0 / 5.5	3.7 / 5.0
Cooling air requirement [Nm³/h]:	1200	1200
Lubrication type:	Splash oil	Splash oil
Oil capacity [litre]:	0.8	0.8
Operating temperature [°C]:	+5°C to +45°C	+5°C to +45°C
Filter capacity [m³ at +20°C] [1)]:	180 (at +20°C / approx. 19 h)	180 (at +20°C / approx. 19 h)
Dimensions L x W x H [cm]:	78 x 42 x 56	78 x 42 x 56
Weight [kg]:	90	90
Noise level (measured at 1 m) [dB]:	84	84

[1)] In accordance with EN 12021

LW 190 B

The user-friendly compressor with 4-stroke power in a compact design is a popular alternative for expeditions and safaris. The LW 190 B is portable and therefore ideal for mobile applications or occasional filling operations.

Specifications

» 4 stroke drive motor c/w pull start and auto cut off at low oil level
» Steel frame c/w carrying handles
» Manual condensate drain
» Inclusive air intake pipe
» Pressure maintaining and non return valve
» 1 x Filling hose c/w filling valve and pressure gauge
» Intermediate coolers
» Stainless steel pipes
» Oil- / Water separators after 2nd and 3rd stage
» Safety valves after each stage
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Additional filling hose c/w filling valve
» Automatic stop at final pressure
» Switch over device for 200 and 300 bar
» Hour counter
» Conversion set: Petrol-/electro version

LW 190 B with optional 200/300 bar module

Technical Data

	LW 190 B
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	190 / 11.4 / 6.7
Max. Pressure [bar]:	330
RPM [1/min]:	1900
No of cylinders / No of stages:	3 / 3
Prime mover type:	4 stroke drive motor (pull start)
Drive power [kW] / [HP]:	6.0 / 9.0
Cooling air requirement [Nm³/h]:	1800
Lubrication type:	Splash oil
Oil capacity [litre]:	0.8
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	150 (at +20°C / approx. 13 h)
Dimensions L x W x H [cm]:	92 x 43 x 57
Weight [kg]:	94
Noise level (measured at 1 m) [dB]:	93

[1] In accordance with EN 12021

LW 225 E

User-friendly compressor with electric motor and in a compact design. The portable LW 225 E is ideal for mobile applications or occasional filling operations.

Specifications

» Electro motor
» Power cable with plug and phase selector
» Start/Stop Switch
» Steel frame c/w carrying handles
» Manual condensate drain
» Pressure maintaining and non return valve
» 1 x Filling hose c/w filling valve and pressure gauge
» Intermediate coolers
» Stainless steel pipes
» Oil- / Water separators after 2nd and 3rd stage
» Safety valves after each stage
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Additional filling hose c/w filling valve
» Automatic condensate drain
» Automatic stop at final pressure
» Switch over device for 200 and 300 bar
» Hour counter
» Special voltages / frequencies on request
» Conversion set: Petrol-/electro version

LW 225 E

Technical Data

	LW 225 E
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	225 / 13.5 / 7.9
Max. Pressure [bar]:	330
RPM [1/min]:	1850
No of cylinders / No of stages:	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	5.5 / 7.5
Cooling air requirement [Nm³/h]:	1650
Lubrication type:	Splash oil
Oil capacity [litre]:	0.8
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	200 (at +20°C / approx. 15 h)
Dimensions L x W x H [cm]:	78 x 45 x 56
Weight [kg]:	92
Noise level (measured at 1 m) [dB]:	87

[1] In accordance with EN 12021

LW 245 B

User-friendly compressor with 4-stroke power and in a compact design. The portable LW 245 B is ideal for mobile applications or occasional filling operations. He is a popular compressor for expeditions and safaris.

Specifications

» 4 stroke drive motor c/w pull start and auto cut off at low oil level
» Steel frame c/w carrying handles
» Manual condensate drain
» Inclusive air intake pipe
» Pressure maintaining and non return valve
» 1 x Filling hose c/w filling valve and pressure gauge
» Intermediate coolers
» Stainless steel pipes
» Oil- / Water separators after 2nd and 3rd stage
» Safety valves after each stage
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Additional filling hose c/w filling valve
» Automatic stop at final pressure
» Switch over device for 200 and 300 bar
» Hour counter
» Conversion set: Petrol-/electro version

LW 245 B

Technical Data

	LW 245 B
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	245 / 14.7 / 8.7
Max. Pressure [bar]:	330
RPM [1/min]:	2000
No of cylinders / No of stages:	3 / 3
Prime mover type:	4 stroke drive motor (pull start)
Drive power [kW] / [HP]:	6.0 / 9.0
Cooling air requirement [Nm³/h]:	1800
Lubrication type:	Splash oil
Oil capacity [litre]:	0.8
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	166 (at +20°C / approx. 11.3 h)
Dimensions L x W x H [cm]:	92 x 43 x 57
Weight [kg]:	99
Noise level (measured at 1 m) [dB]:	93

[1] In accordance with EN 12021

LW 170 E Nautic / LW 200 E Nautic

The user-friendly electric-powered compressor in a compact design makes this compressor ideal for stationary filling operations. Due to crash frame, carrying handles and lifting, the LW 170 E Nautic is also easy to use as a mobile system. Optional it is available with seawater-resistant lightweight aluminum frame.

Specifications

» Electro motor
» Power cable with plug and phase selector
» Bedienpaneel mit Laufkontrollleuchte, Not-Aus und Start/Stopp Schalter
» Hour counter and integrated pressure gauge
» Crash frame c/w 4 carrying handles and sling eyes (Colour: RAL 6026)
» Manual condensate drain
» 2 self-venting lever operated filling valves c/w hoses and connections
» Pressure maintaining and non return valve
» Stainless steel intermediate coolers
» Stainless steel pipes
» Oil- / Water separators after 2nd and 3rd stage
» Safety valves after each stage
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Two additional filling hoses
» Automatic condensate drain
» Automatic stop at final pressure
» Auto start system
» 200 and 300 bar parallel filling pressures
» Motor protection switch
» Additional high pressure outlet
» Special voltages / frequencies on request
» Aluminium frame (AL-Version)

LW 200 E Nautic

Technical Data

	LW 170 E Nautic	LW 200 E Nautic
Type:	Air cooled piston compressor	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	170 / 10.2 / 6.0	200 / 12.0 / 7.0
Max. Pressure [bar]:	330	330
RPM [1/min]:	1530	1650
No of cylinders / No of stages:	3 / 3	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	4.0 / 5.5	5.5 / 7.5
Cooling air requirement [Nm³/h]:	1200	1650
Lubrication type:	Splash oil	Splash oil
Oil capacity [litre]:	0.8	0.8
Operating temperature [°C]:	+5°C to +45°C	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	180 (at +20°C / approx. 16 h)	200 (at +20°C / approx. 17 h)
Dimensions L x W x H [cm]:	103 x 50 x 73	103 x 50 x 73
Weight [kg]:	135 / 115 (Al)	137 / 117 (Al)
Noise level (measured at 1 m) [dB]:	85	86

[1] In accordance with EN 12021

LW 170 D Nautic

The user-friendly compressor Nautic LW 170 D with Yanmar diesel engine in a compact design, is used by marine biologists and dive boats, as well as military, police, rescue and disaster relief groups. It is very robust and due to carrying handles perfectly suited for mobile applications. Optional it is available with seawater-resistant lightweight aluminum frames.

Specifications

- Yanmar L70 4.8 kW diesel motor c/w 12 V elektric start (additional pull start)
- Instrument panel c/w key start and generator warning lamp
- Hour counter and integrated pressure gauge
- Crash frame c/w 4 carrying handles and sling eyes (Colour: RAL 6026)
- Manual condensate drain
- 2 self-venting lever operated filling valves c/w hoses and connections
- Stainless steel diesel tank (Capacity: 7 hours running time)
- Inclusive intake pipe
- Pressure maintaining and non return valve
- Stainless steel intermediate coolers
- Stainless steel pipes
- Oil- / Water separators after 2nd and 3rd stage
- Safety valves after each stage
- Filling pressure to your choice (200 or 300 bar)
- Connections to your choice
  (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
- Breathing air purification an accordance to EN 12021

Options

- Two additional filling hoses
- Automatic condensate drain
- Automatic stop at final pressure
- 200 and 300 bar parallel filling pressures
- Motor protection switch
- Additional high pressure outlet
- Aluminium frame (AL-Version)

LW 170 D AL Nautic

Technical Data

	LW 170 D Nautic
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	170 / 10.2 / 6.0
Max. Pressure [bar]:	330
RPM [1/min]:	1530
No of cylinders / No of stages:	3 / 3
Prime mover type:	Air cooled diesel engine (electric start)
Drive power [kW] / [HP]:	4.8 / 6.5
Cooling air requirement [Nm³/h]:	1650
Lubrication type:	Splash oil
Oil capacity [litre]:	0.8
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	150 (at +20°C / approx. 14.7 h)
Dimensions L x W x H [cm]:	103 x 50 x 73
Weight [kg]:	150 / 125 (AL)
Noise level (measured at 1 m) [dB]:	92

[1] In accordance with EN 12021

LW 320 E AL Nautic

The LW 320 E Al Nautic is designed for mobile use but also suitable for stationary applications. It can optionally be used as a fully automatic stationary system by adding the available extras. It comes fully wired with star/delta system and with a light-weight and seawater resistant aluminum frame.

Specifications

- Electro motor
- Seawater resistant aluminum-frame (Colour: RAL 7004)
- Crash frame c/w 4 carrying handles and sling eyes
- Hour counter and integrated pressure gauge
- Manual condensate drain
- 4 x Filling hose c/w filling valve
- Pressure maintaining and non return valve
- All pistons c/w steel piston rings
- Low pressure oil pump
- Oil- / Water separators in stainless steel
- Safety valves after each stage
- Filling pressure to your choice (200 or 300 bar)
- Connections to your choice
  (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
- Breathing air purification an accordance to EN 12021

LW 320 E Nautic

Options

- Automatic condensate drain
- Automatic stop at final pressure
- Auto start system
- 200 and 300 bar parallel filling pressures
- Additional high pressure outlet
- Oil pressure gauge
- Wheel set
- Special voltages / frequencies on request

LW 320 E Nautic - Rear view

Technical Data

	LW 320 E AL Nautic
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	320 / 19.2 / 11.3
Max. Pressure [bar]:	350
RPM [1/min]:	1580
No of cylinders / No of stages:	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	7.5 / 10.2
Cooling air requirement [Nm³/h]:	2250
Lubrication type:	Oil pump + Splash oil
Oil capacity [litre]:	1.8
Oil pressure [bar]:	3.0 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1)]:	900 (at +20°C / approx. 46 h)
Dimensions L x W x H [cm]:	129 x 74 x 60
Weight [kg]:	175
Noise level (measured at 1 m) [dB]:	83

[1)] In accordance with EN 12021

LW 320 B AL Nautic

The LW 320 B Al Nautic is designed for mobile use but also suitable for stationary applications. It can optionally be used as a fully automatic stationary system by adding the available extras. It comes ready to start with 4 stroke Vanguard motor and with a lightweight and seawater resistant aluminum frame.

Specifications

- 4 stroke Vanguard drive motor 8.2 kW
- Seawater resistant aluminum-frame (Colour: RAL 7004)
- Crash frame c/w 4 carrying handles and sling eyes
- Hour counter and integrated pressure gauge
- Manual condensate drain
- 4 x Filling hose c/w filling valve
- Pressure maintaining and non return valve
- All pistons c/w stainless steel piston rings
- Low pressure oil pump
- Oil- / Water separators in stainless steel
- Safety valves after each stage
- Filling pressure to your choice (200 or 300 bar)
- Connections to your choice
  (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
- Breathing air purification an accordance to EN 12021

Options

- Automatic condensate drain
- Automatic stop at final pressure
- Auto start system
- 200 and 300 bar parallel filling pressures
- Additional high pressure outlet
- Oil pressure gauge
- Wheel set

LW 320 B Nautic Options: Automatic stop and automatic condensation drain, wheel set

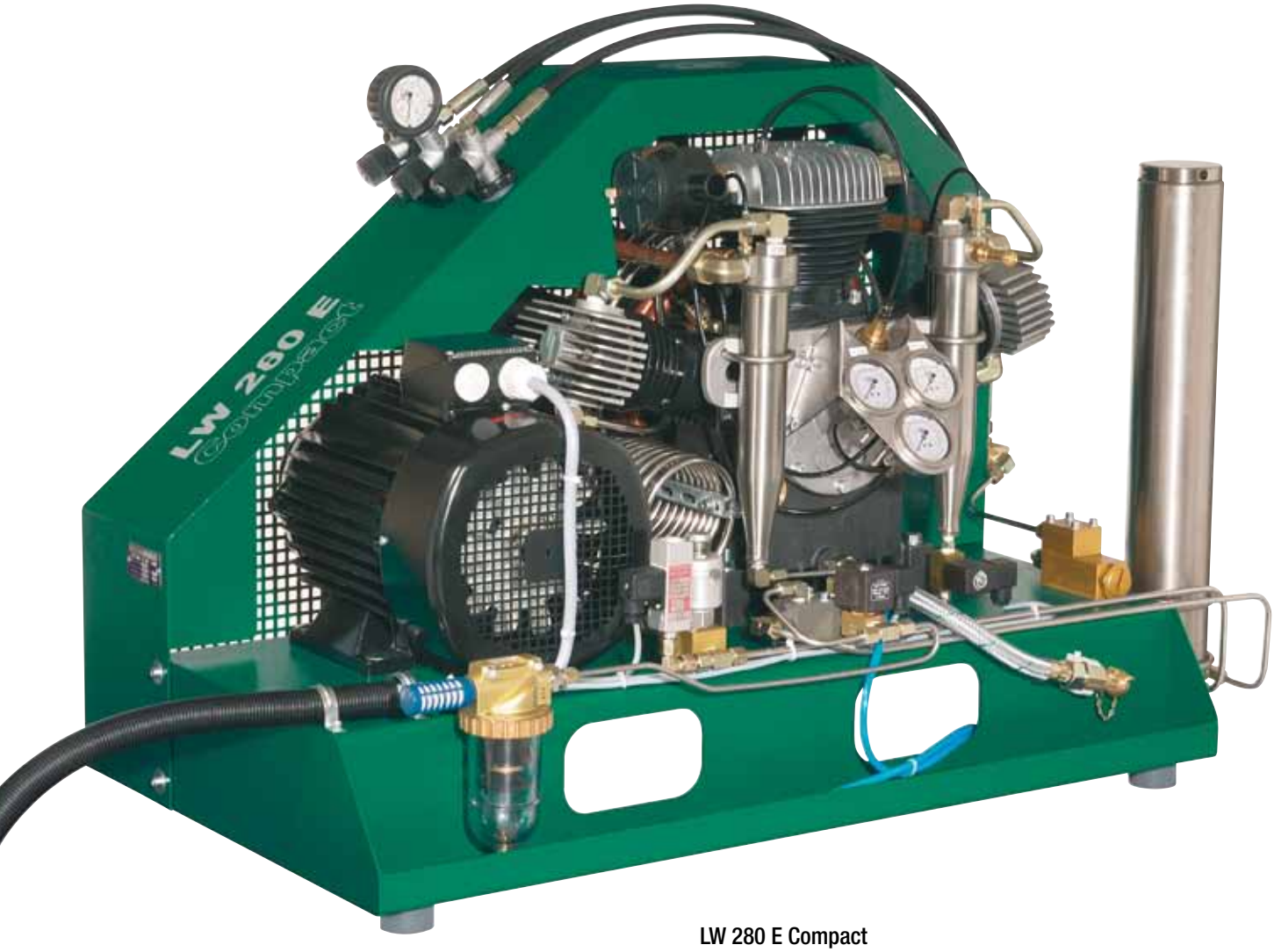
Technical Data

	LW 320 B AL Nautic
Type:	Luftgekühlter Kolbenkompressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	320 / 19,2 / 11,3
Max. Pressure [bar]:	350
RPM [1/min]:	1580
No of cylinders / No of stages:	3 / 3
Prime mover type:	4-Takt Verbrennungsmotor (Elektrostart)
Drive power [kW] / [HP]:	8,2 / 11,0
Cooling air requirement [Nm³/h]:	2460
Lubrication type:	Ölpumpe + Schleuderöl
Oil capacity [litre]:	1,8
Oil pressure [bar]:	3 (+/- 0,5)
Operating temperature [°C]:	+5°C bis +45°C
Filter capacity [m³ at +20°C] [1]:	750 (bei +20°C / ca. 39 h)
Dimensions L x W x H [cm]:	129 x 74 x 60
Weight [kg]:	167
Noise level (measured at 1 m) [dB]:	95

[1] In accordance with EN 12021

LW 230 E Compact / LW 280 E Compact / LW 320 E Compact

The Compact series is ideal for dive centers, ships and boats with limited space. Based on our 280 blocks, these compressors can be equipped individually and used as stationary system. They come fully wired with star/delta start system.



LW 280 E Compact
With options auto drain, auto stop, oil pressure and inter-stage pressure gauges and 2 extra filling hoses.

LW 230 E Compact / LW 280 E Compact / LW 320 E Compact

Specifications

» Electro motor
» Painted steel frame and fan belt guard (RAL 6026)
» Hour counter
» Start/ Stop and emergency stop switch
» Manual condensate drain
» 1 x Filling hose c/w filling valve
» Motor protection switch (LW 230 E Compact Optional)
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 3 x concentric suction/pressure valves
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Automatic condensate drain
» Automatic stop at final pressure
» Auto start system
» 200 and 300 bar parallel filling pressures
» Oil pressure gauge and intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Cylinder head temperature monitoring with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» Phase monitoring c/w shut down at wrong direction of rotation
» Additional high pressure outlet
» Power cable and plug
» Special voltages / frequencies on request

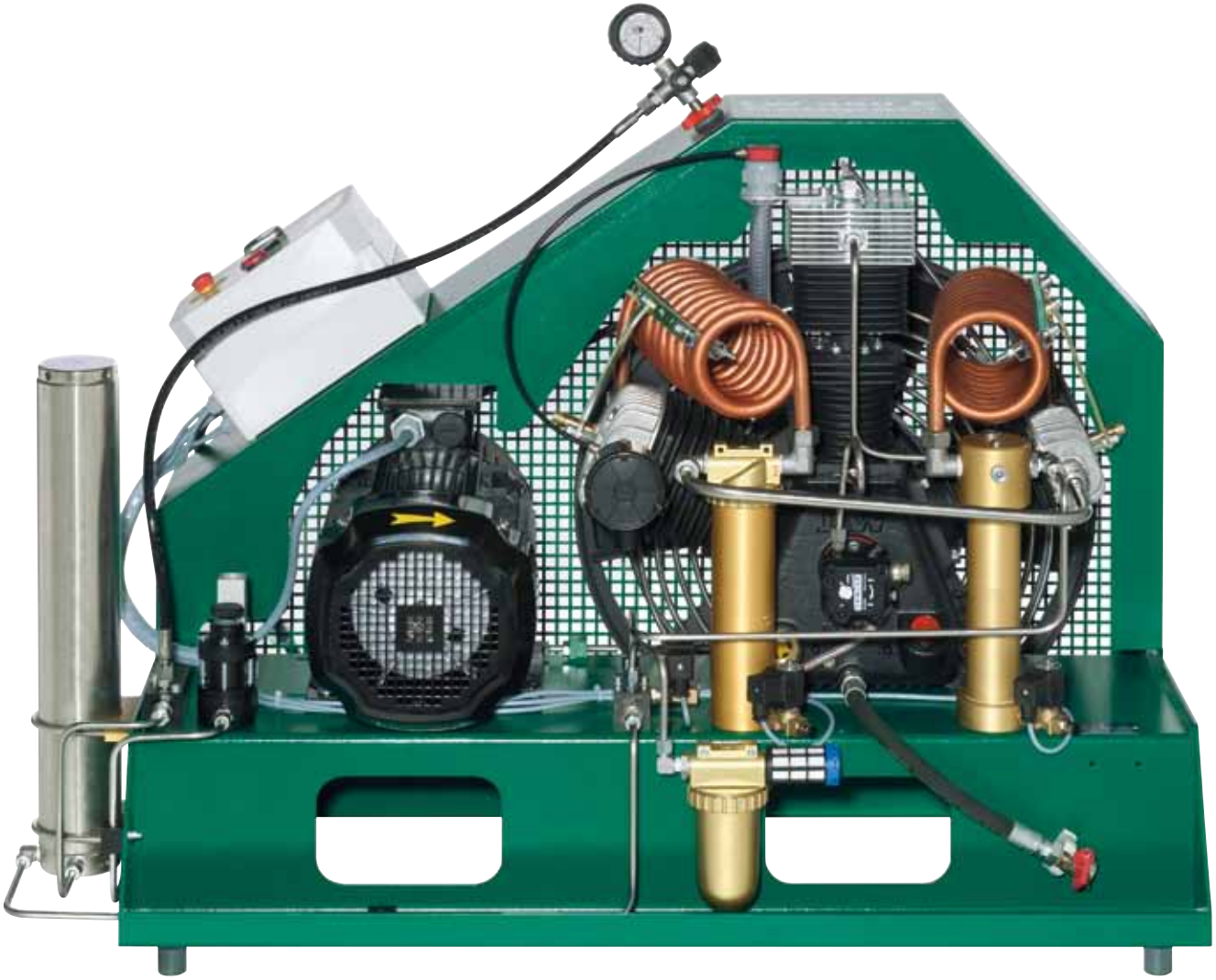
Technical Data

	LW 230 E Compact	LW 280 E Compact	LW 320 E Compact
Type:	Air cooled piston compressor	Air cooled piston compressor	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	230 / 13.8 / 8.1	280 / 16.8 / 9.9	320 / 19.2 / 11.3
Max. Pressure [bar]:	350	350	350
RPM [1/min]:	1080	1300	1450
No of cylinders / No of stages:	3 / 3	3 / 3	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	5.5 / 7.5	7.5 / 10.0	7.5 / 10.0
Cooling air requirement [Nm³/h]:	1650	2250	2250
Lubrication type:	Oil pump + Splash oil	Oil pump + Splash oil	Oil pump + Splash oil
Oil capacity [litre]:	1.8	1.8	1.8
Oil pressure [bar]:	3.0 (+/- 0.5)	3.0 (+/- 0.5)	3.0 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C	+5°C to +45°C	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	900 (at +20°C / approx. 72 h)	900 (at +20°C / approx. 54 h)	900 (at +20°C / approx. 46 h)
Dimensions L x W x H [cm]:	120 x 60 x 90	120 x 60 x 90	120 x 60 x 90
Weight [kg]:	195	205	195
Noise level (measured at 1 m) [dB]:	82	83	83

[1] In accordance with EN 12021

LW 450 E Compact

The LW 450 E Compact is ideal for dive centers, ships and boats with limited space. Based on our 450 block, these compressor can be equipped individually and used as stationary system. It comes fully wired with star/delta start system.



LW 450 E Compact with auto start system and automatic condensation drain

LW 450 E Compact

Specifications

» Electro motor
» Painted steel frame and fan belt guard (RAL 6026)
» Hour counter
» Start/ Stop and emergency stop switch
» Manual condensate drain
» 1 x Filling hose c/w filling valve
» Motor protection switch
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 3 x concentric suction/pressure valves
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Automatic condensate drain
» Automatic stop at final pressure
» Auto start system
» 200 and 300 bar parallel filling pressures
» Oil pressure gauge and intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Cylinder head temperature monitoring with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» Phase monitoring c/w shut down at wrong direction of rotation
» Additional high pressure outlet
» Power cable and plug
» Special voltages / frequencies on request

Technical Data

	LW 450 E Compact
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	450 / 27.0 / 15.9
Max. Pressure [bar]:	350
RPM [1/min]:	1100
No of cylinders / No of stages:	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	11.0 / 15.0
Cooling air requirement [Nm³/h]:	3300
Lubrication type:	Oil pump + Splash oil
Oil capacity [litre]:	2.2
Oil pressure [bar]:	2.2 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	900 (at +20°C / approx. 33 h)
Dimensions L x W x H [cm]:	130 x 60 x 90
Weight [kg]:	235
Noise level (measured at 1 m) [dB]:	83

[1] In accordance with EN 12021

LW 230 E / LW 280 E / LW 320 E

The LW 230 E / LW 280 E / LW 320 E is ideal for dive shops, diving clubs and diving schools, as well as medium-sized breathing air filling station. The three-stage compressor operates at low speed and is also suitable for continuous operation. It offers long service intervals, low maintenance costs and, through the oversized industrial components maximum reliability.
It comes fully wired with star/delta start cycle.

LW 280 E

LW 280 E
incl. Inter stage pressure gauges and Oil temperature monitoring

LW 230 E / LW 280 E / LW 320 E

Specifications

» Electro motor
» Painted steel housing (RAL 6026)
» Automatic condensate drain with pressure free start/stop
» Automatic stop at final pressure
» Hour counter
» Operating panel with start/stop and condensate test button, as well emergency stop switch
» 4 x Filling hose c/w filling valve
» Motor protection switch (LW 230 E Optional)
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 3 x concentric suction/pressure valves
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Auto start system
» 200 and 300 bar parallel filling pressures
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Cylinder head temperature monitoring with auto shut down
» Oil temperature display with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» ECC control in remote control box
» Phase monitoring c/w shut down at wrong direction of rotation
» Additional high pressure outlet
» Power cable and plug
» Special voltages / frequencies on request

Technical Data

	LW 230 E	LW 280 E	LW 320 E
Type:	Air cooled piston compressor	Air cooled piston compressor	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	230 / 13.8 / 8.1	280 / 16.8 / 9.9	320 / 19.2 / 11.3
Max. Pressure [bar]:	350	350	350
RPM [1/min]:	1080	1300	1450
No of cylinders / No of stages:	3 / 3	3 / 3	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	5.5 / 7.5	7.5 / 10.0	7.5 / 10.0
Cooling air requirement [Nm³/h]:	1650	2250	2250
Lubrication type:	Oil pump + Splash oil	Oil pump + Splash oil	Oil pump + Splash oil
Oil capacity [litre]:	1.8	1.8	1.8
Oil pressure [bar]:	3.0 (+/- 0.5)	3.0 (+/- 0.5)	3.0 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C	+5°C to +45°C	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	900 (at +20°C / approx. 72 h)	900 (at +20°C / approx. 54 h)	900 (at +20°C / approx. 46 h)
Dimensions L x W x H [cm]:	110 x 64 x 98	110 x 64 x 98	110 x 64 x 98
Weight [kg]:	240	240	240
Noise level (measured at 1 m) [dB]:	82	83	83

[1] In accordance with EN 12021

LW 300 E / LW 450 E

The LW 300 E / LW 450 E is a very slow running compressor with very low maintenance intervals and maintenance costs. It can be used continuously and comes fully wired with star / delta connection. High reliability make this compressor the favorite of many users.

LW 450 E

LW 450 E Rear view

LW 300 E / LW 450 E

Specifications

» Electro motor
» Painted steel housing (RAL 6026)
» Automatic condensate drain
» Automatic stop at final pressure
» Hour counter
» Operating panel with start/stop and condensate test button, as well as emergency stop switch
» 4 x Filling hose c/w filling valve
» Motor protection switch
» Safety switch
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 3 x concentric suction/pressure valves
» Filling pressure of your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Auto start system
» 200 and 300 bar parallel filling pressures
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Cylinder head temperature monitoring with auto shut down
» Oil temperature display with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» ECC control in remote control box
» Phase monitoring c/w shut down at wrong direction of rotation
» Additional high pressure outlet
» Power cable and plug
» Special voltages / frequencies on request

Technical Data

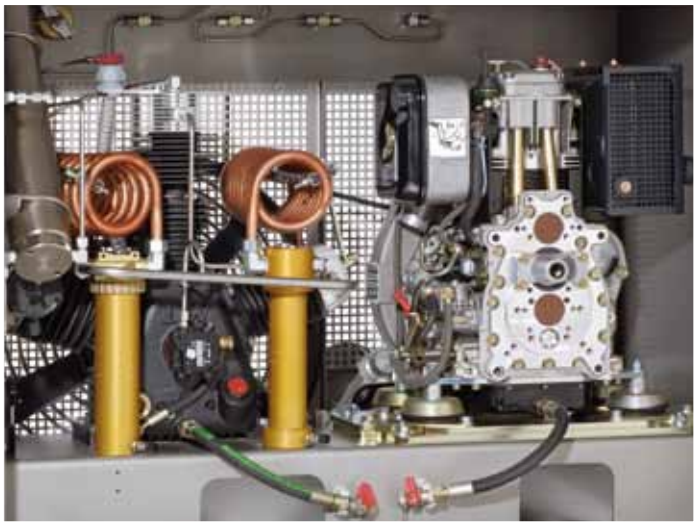
	LW 300 E	LW 450 E
Type:	Air cooled piston compressor	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	300 / 18.0 / 10.6	450 / 27.0 / 15.9
Max. Pressure [bar]:	350	350
RPM [1/min]:	800	1100
No of cylinders / No of stages:	3 / 3	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	7.5 / 10.0	11.0 / 15.0
Cooling air requirement [Nm³/h]:	2250	3300
Lubrication type:	Oil pump + Splash oil	Oil pump + Splash oil
Oil capacity [litre]:	2.2	2.2
Oil pressure [bar]:	2.2 (+/- 0.5)	2.2 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	900 (at +20°C / approx. 50 h)	900 (at +20°C / approx. 33 h)
Dimensions L x W x H [cm]:	118 x 64 x 98	118 x 64 x 98
Weight [kg]:	275	280
Noise level (measured at 1 m) [dB]:	82	83

[1] In accordance with EN 12021

LW 450 D Basic

Initially developed for the open dive boats in the Indian Ocean. Large capacity, slow running, stationary compressor which can be used independent of power supply with diesel drive. The compressor has a stainless steel frame and no electrics and is ideal for extreme applications such as open boats or harsh marine environments.

LW 450 D Basic



LW 450 D Basic Rear view

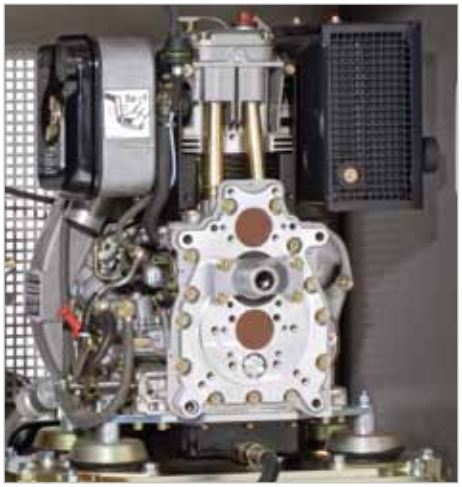
LW 450 D Basic

Specifications

» Hatz 10kW diesel engine in Hatz Silent Pack c/w hand start
» Original Hatz diesel tank
» Wet painted steel housing (RAL 7004)
» Manuel condensate drain
» Automatic idle speed selector when end pressure is reached (compressor switches to full speed)
» 4 x Filling hose and filling valve
» Pressure maintaining and non-return valve
» All pistons c/w steel piston rings
» Low pressure oil pump
» Oil- / water separators after each stage
» Safety valves after each stage
» 3 x concentric suction/pressure valves
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» 200 and 300 bar parallel filling pressures
» Oil pressure gauge
» Intermediate pressure gauges
» Electrical start
» Hour counter
» Oil pressure monitoring c/w auto shut down
» Automatic condensate drain
» Additional high pressure outlet



LW 450 D Basic prime mover

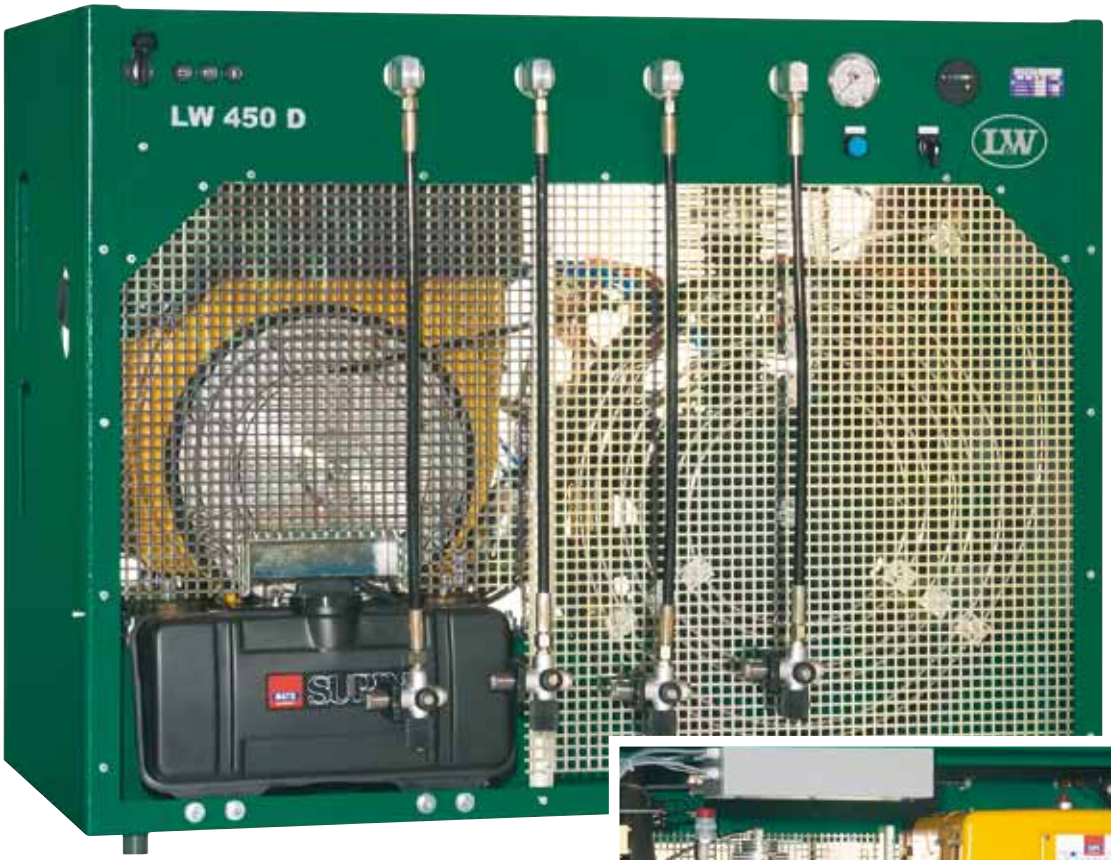
Technical Data

	LW 450 D Basic
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	450 / 27.0 / 15.9
Max. Pressure [bar]:	350
RPM [1/min]:	1100
No of cylinders / No of stages:	3 / 3
Prime mover type:	Diesel engine, electric start
Drive power [kW] / [HP]:	10.0 / 14.3
Cooling air requirement [Nm³/h]:	3300
Lubrication type:	Oil pump + Splash oil
Oil capacity [litre]:	2.2
Oil pressure [bar]:	2.2 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	750 (at +20°C / approx. 28 h)
Dimensions L x W x H [cm]:	127 x 74 x 100
Weight [kg]:	400
Noise level (measured at 1 m) [dB]:	95

[1] In accordance with EN 12021

LW 450 D

The LW 450 D is ideal for use on a remote island, a safari boat or in an autonomous truck. This 450 litre compressor is equipped with a hatz diesel motor, 12 volt control, automatic start, automatic condensate drain and an integrated filling unit with four hoses and filling valves. Compared to the basic version the standard Hatz Silent Pack provides a quieter operation of the compressor.



LW 450 D

LW 450 D Rear view

LW 450 D

Specifications

» Hatz 10kW diesel engine in Hatz Silent Pack c/w electrical start
» Original Hatz diesel tank
» 12V electrical/pneumatic control
» Wet painted steel housing (RAL 6026)
» Condensate drain test switch, key switch for start/stop und speed selector
» Emergency stop switch
» Hour counter
» Diesel motor oil pressure and battery warning lamps
» Automatic condensate drain
» Automatic idle speed selector and condensate drain when end pressure is reached
» (compressor switches to full speed and drain valves close when empty tanks are opened)
» 4 x Filling hose and filling valve
» Pressure maintaining and non-return valve
» All pistons c/w steel piston rings
» Low pressure oil pump
» Oil- / water separators after each stage
» Safety valves after each stage
» 3 x concentric suction/pressure valves
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» 200 and 300 bar parallel filling pressures
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Cylinder head temperature monitoring with auto shut down
» Additional high pressure outlet

LW 450 D Silent Pack

Technical Data

	LW 450 D
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	450 / 27.0 / 15.9
Max. Pressure [bar]:	350
RPM [1/min]:	1100
No of cylinders / No of stages:	3 / 3
Prime mover type:	Diesel engine, silent pack, electric start
Drive power [kW] / [HP]:	10.0 / 14.3
Cooling air requirement [Nm³/h]:	3300
Lubrication type:	Oil pump + Splash oil
Oil capacity [litre]:	2.2
Oil pressure [bar]:	2.2 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	750 (at +20°C / approx. 28 h)
Dimensions L x W x H [cm]:	127 x 74 x 100
Weight [kg]:	400
Noise level (measured at 1 m) [dB]:	89

[1] In accordance with EN 12021

LW 570 E

The LW 570 E is a very slow running compressor with very low maintenance intervals and maintenance costs. It is suitable for continuous operation and comes fully wired with star / delta connection. The 4-stage compressor block is suitable for large, professional applications and allows a max. pressure up to 420 bar (as an option).

LW 570 E

LW 570 E Rear view

LW 570 E

Specifications

» Electro motor
» Painted steel housing (RAL 6026)
» Automatic condensate drain
» Automatic stop at final pressure
» Hour counter
» Operating panel c/w start/stop and condensate test buttons, as well as emergency stop switch
» 4 x Filling hose c/w filling valve
» Motor protection switch
» Safety switch
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 4 x concentric suction/pressure valves
» Filling pressure of your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Auto start system
» 200 and 300 bar parallel filling pressures
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Cylinder head temperature monitoring with auto shut down
» Oil temperature display with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» ECC control in remote control box
» Phase monitoring c/w shut down at wrong direction of rotation
» Additional high pressure outlet
» Power cable and plug
» Block heating device
» 420 bar Version
» Special voltages / frequencies on request

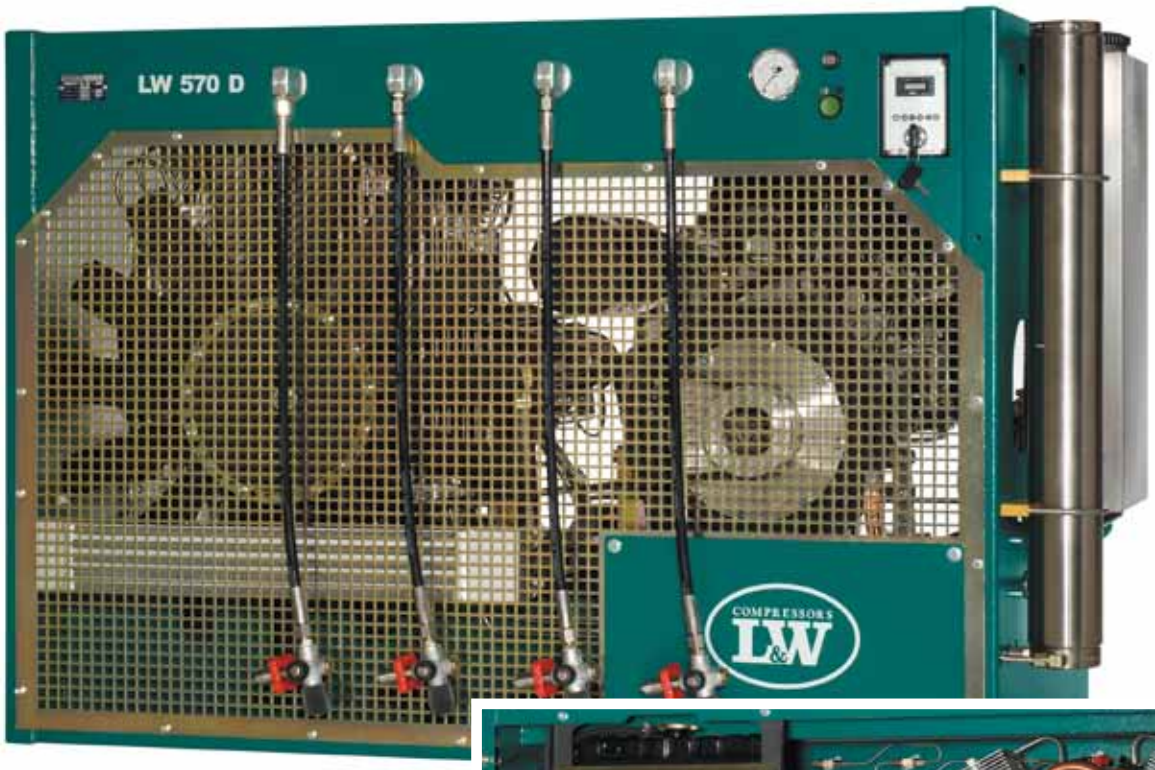
Technical Data

	LW 570 E
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	570 / 34.0 / 20.1
Max. Pressure [bar]:	350 / 420
RPM [1/min]:	1100
No of cylinders / No of stages:	4 / 4
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	15.0 / 20.0
Cooling air requirement [Nm³/h]:	4500
Lubrication type:	Oil pump + Splash oil
Oil capacity [litre]:	2.5
Oil pressure [bar]:	2.2 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	1200 (at +20°C / approx. 35 h)
Dimensions L x W x H [cm]:	125 x 72 x 98
Weight [kg]:	310
Noise level (measured at 1 m) [dB]:	83

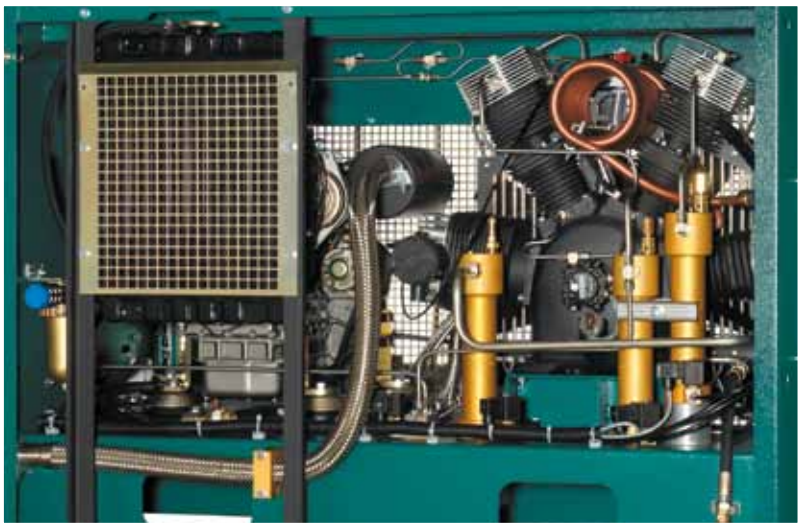
[1] In accordance with EN 12021

LW 570 D

The large-volume high-pressure compressor LW 570 D is ideal for use in industrial applications and for use on a remote island. The 570 litre compressor is equipped with a 12 volt control, electric start, automatic condensate drain and an integrated filling unit with four hoses and filling valves. It is a slow running diesel compressor with very low maintenance intervals and maintenance costs.



LW 570 D



LW 570 D Rear view

LW 570 D

Specifications

» Yanmar 12.9 kW water cooled 3cylinder diesel engine c/w electrical start
» 12V electrical/pneumatic control
» Stainless steel diesel tank, 15.7 litre capacity (approx. 4 hours running at full load)
» Wet painted steel housing (RAL 6026)
» Condensate drain test switch, key switch for start/stop und speed selector
» Emergency stop switch
» Hour counter
» Safety switch
» Diesel motor oil pressure and battery warning lamps
» Automatic condensate drain
» Automatic stop at final pressure
» 4 x Filling hose and filling valve
» Pressure maintaining and non-return valve
» All pistons c/w steel piston rings
» Low pressure oil pump
» Oil- / water separators after each stage
» Safety valves after each stage
» 4 x concentric suction/pressure valves
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» 200 and 300 bar parallel filling pressures
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Additional high pressure outlet
» 420 bar Version

Technical Data

	LW 570 D
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	570 / 34.0 / 20.1
Max. Pressure [bar]:	350 / 420
RPM [1/min]:	1100
No of cylinders / No of stages:	4 / 4
Prime mover type:	3 cylinder diesel engine, electric startt
Drive power [kW] / [HP]:	12.9 / 17.5
Cooling air requirement [Nm³/h]:	3900
Lubrication type:	Oil pump + Splash oil
Oil capacity [litre]:	2.5
Oil pressure [bar]:	2.2 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	1000 (at +20°C / approx. 30 h)
Dimensions L x W x H [cm]:	145 x 77 x 100
Weight [kg]:	520
Noise level (measured at 1 m) [dB]:	88

[1] In accordance with EN 12021

LW 720 E

The industrial compressor LW 720 E is suitable for breathing air applications and for large capacities. Low speed ensures continuous operation for long service intervals and reduced maintenance costs. The 4-stage compressor block is mounted on a painted steel panel and is designed for maximum operating pressure of 420 bar. The compressor unit comes fully wired with star/delta start system and includes 2 x 2.3 litre breathing air filter console for wall mounting.

LW 720 E with optional EEC control

LW 720 E

Specifications

» Electro motor
» Painted steel frame (RAL 6026)
» Painted steel fan guard (RAL 7004)
» Automatic condensate drain
» Automatic stop at final pressure
» Inclusive a remote control box for wall mounting
» Main-, Start/Stop- and condensate test buttons, as well as emergency stop switch
» Hour counter
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» High pressure outlet 10 l
» Motor protection switch
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 4 x concentric suction/pressure valves
» Filling pressure of your choice (200 or 300 bar)
» Inclusive 2 x 2.3 l filter console for wall mounting
» Breathing air purification in accordance to EN 12021

Options

» Auto start system
» Oil temperature display with auto shut down
» Cylinder head temperature monitoring with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» ECC control in remote control box
» Power cable and plug
» Block heating device
» 420 bar Version
» Special voltages / frequencies on request

Technical Data

	LW 720 E
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	720 / 43.2 / 25.4
Max. Pressure [bar]:	350 / 420
RPM [1/min]:	1100
No of cylinders / No of stages:	4 / 4
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	18.5 / 25.0
Cooling air requirement [Nm³/h]:	5550
Lubrication type:	Oil pump + Splash oil
Oil capacity [litre]:	4.0
Oil pressure [bar]:	4.0 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	2400 (at +20°C / approx. 56 h)
Dimensions L x W x H [cm]:	165 x 76 x 125
Weight [kg]:	600
Noise level (measured at 1 m) [dB]:	88

[1] In accordance with EN 12021

LW 1300 E

The LW 1300 E is designed for large industrial applications and is therefore a favorite compressor for breathing air requirements. Low speed ensured continuous operation, long service intervals and reduced maintenance costs. The compressor unit comes fully wired with star/delta start system and includes 3 x 2.3 litre breathing air filter console for wall mounting. The 4-stage compressor block is mounted on a painted steel frame and allows a working pressure of max. 420 bar (optional). The drive motor is connected to the compressor by a rubber coupling.

LW 1300 E

LW 1300 E

Specifications

» Electro motor
» Painted steel frame (RAL 7004)
» Inclusive a remote control box for wall mounting
» Main-, Start/Stop- and condensate test buttons, as well as emergency stop switch
» Hour counter
» Automatic condensate drain
» Automatic stop at final pressure
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» High pressure outlet 10 l
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 4 x concentric suction/pressure valves
» Filling pressure of your choice (200 or 300 bar)
» Inclusive 3 x 2.3 l filter console for wall mounting
» Breathing air purification an accordance to EN 12021

Options

» Auto start system
» Oil temperature display with auto shut down
» Cylinder head temperature monitoring with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» ECC control in remote control box
» Power cable and plug
» Block heating device
» 420 bar Version
» Special voltages / frequencies on request

Technical Data

	LW 1300 E
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	1300 / 78.0 / 45.9
Max. Pressure [bar]:	350 / 420
RPM [1/min]:	985
No of cylinders / No of stages:	4 / 4
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	30.0 / 41.0
Cooling air requirement [Nm³/h]:	9900
Lubrication type:	Oil pump + Splash oil
Oil capacity [litre]:	4.9
Oil pressure [bar]:	3.0 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	3600 (at +20°C / approx. 46 h)
Dimensions L x W x H [cm]:	162 x 121 x 127.5
Weight [kg]:	1000
Noise level (measured at 1 m) [dB]:	89

[1] In accordance with EN 12021

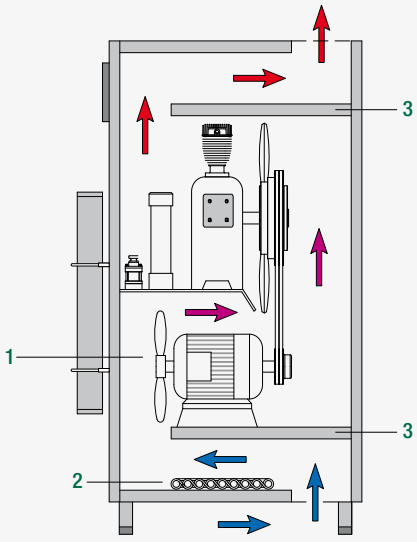
LW 230 ES / LW 280 ES / LW 320 ES

The LW 230 ES / LW 280 ES / LW 320 ES is ideal for dive shops, diving clubs and diving schools, as well as medium-sized breathing air filling station. The three-stage compressor is sound insulated and operates at low speed. It is also suitable for continuous operation. It offers long service intervals, low maintenance costs and, through the oversized industrial components maximum reliability. It comes fully wired with star/delta start cycle.

LW 280 ES - Inner view

LW 280 ES
with optional ECC control

The ES Silent Concept



Sound insulation is also heat insulation, manufacturing quiet compressors **and** keeping them cool is the ultimate objective. With the ES concept, we have benchmark sound insulation **and** benchmark cooling. The cross sectional view of the ES housing illustrates the key features.

1. A secondary ventilator provides additional thrust for the cooling air flow through the housing.
2. Additional final stage heat exchangers are the first component in the flow of cooling air into the housing.
3. The intermediate panels with sound insulation padding prevent the direct egress of sound waves out of the housing absorbing the majority of the noise.

LW 230 ES / LW 280 ES / LW 320 ES

Specifications

» Electro motor
» Painted steel housing (RAL 6026)
» Sound insulated housing
» Automatic condensate drain
» Automatic stop at final pressure
» Hour counter
» Operating panel with start/stop and condensate test button, as well emergency stop switch
» 2 x Filling hose and filling valve
» Motor protection switch (LW 230 ES Optional)
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 3 x concentric suction/pressure valves
» Filling pressure to your choice (200 or 300 bar)
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Auto start system
» Up to 6 additional hoses available
» 200 and 300 bar parallel filling pressures
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Cylinder head temperature monitoring with auto shut down
» Oil temperature display with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» ECC control
» Phase monitoring c/w shut down at wrong direction of rotation
» Additional high pressure outlet
» Power cable and plug
» Special voltages / frequencies on request

Technical Data

	LW 230 ES	LW 280 ES	LW 320 ES
Type:	Air cooled piston compressor	Air cooled piston compressor	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	230 / 13.8 / 8.1	280 / 16.8 / 9.9	320 / 19.2 / 11.3
Max. Pressure [bar]:	350	350	350
RPM [1/min]:	1080	1300	1450
No of cylinders / No of stages:	3 / 3	3 / 3	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	5.5 / 7.5	7.5 / 10.0	7.5 / 10.0
Cooling air requirement [Nm³/h]:	1650	2250	2250
Lubrication type:	Oil pump + Splash oil	Oil pump + Splash oil	Oil pump + Splash oil
Oil capacity [litre]:	1.8	1.8	1.8
Oil pressure [bar]:	3.0 (+/- 0.5)	3.0 (+/- 0.5)	3.0 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C	+5°C to +45°C	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	900 (at +20°C / approx. 72 h)	900 (at +20°C / approx. 54 h)	900 (at +20°C / approx. 46 h)
Dimensions L x W x H [cm]:	76 x 103 x 163	76 x 103 x 163	76 x 103 x 163
Weight [kg]:	330	330	330
Noise level (measured at 1 m) [dB]:	61	62	62 (measured at 1 m)

[1] In accordance with EN 12021

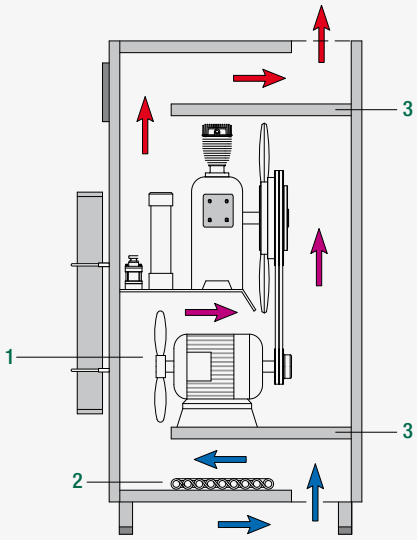
LW 300 ES / LW 450 ES

The LW 300 ES / LW 450 ES is a sound insulated and extremely slow running compressor with very low maintenance intervals and maintenance costs. It is suitable for continuous operation and ideal for use in work and public areas, as well as mixed residential and industrial buildings. It comes fully wired with star / delta connection. High reliability make this compressor the favorite of many users.

LW 450 ES
with optional Oil pressure gauge, Oil pressure monitoring c/w auto shut down and Intermediate pressure gauges

LW 450 ES Inner view

The ES Silent Concept



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1. A secondary ventilator provides additional thrust for the cooling air flow through the housing.
2. Additional final stage heat exchangers are the first component in the flow of cooling air into the housing.
3. The intermediate panels with sound insulation padding prevent the direct egress of sound waves out of the housing absorbing the majority of the noise.

LW 300 ES / LW 450 ES

Specifications

» Electro motor (E-Motor / 400V / 3 Phase / 50 Hz)
» Painted steel housing (RAL 6026)
» Sound insulated housing
» Automatic condensate drain
» Automatic stop at final pressure
» Hour counter
» Operating panel with start/stop and condensate test button, as well emergency stop switch
» Motor protection switch
» Safety switch
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 3 x concentric suction/pressure valves
» High pressure outlet 10L
» Connections to your choice
(DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Auto start system
» Up to 6 additional hoses available
» 200 and 300 bar parallel filling pressures
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Cylinder head temperature monitoring with auto shut down
» Oil temperature display with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» ECC control
» Phase monitoring c/w shut down at wrong direction of rotation
» Additional high pressure outlet
» Power cable and plug
» Special voltages / frequencies on request

Technical Data

	LW 300 ES	LW 450 ES
Type:	Air cooled piston compressor	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	300 / 18.0 / 10.6	450 / 27.0 / 15.9
Max. Pressure [bar]:	350	350
RPM [1/min]:	800	1100
No of cylinders / No of stages:	3 / 3	3 / 3
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	7.5 / 10.0	11.0 / 15.0
Cooling air requirement [Nm³/h]:	2250	3300
Lubrication type:	Oil pump + Splash oil	Oil pump + Splash oil
Oil capacity [litre]:	2.2	2.2
Oil pressure [bar]:	2.2 (+/- 0.5)	2.2 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	1200 (at +20°C / approx. 67 h)	1200 (at +20°C / approx. 44 h)
Dimensions L x W x H [cm]:	81 x 110 x 168	81 x 110 x 168
Weight [kg]:	390	390
Noise level (measured at 1 m) [dB]:	63	64

[1] In accordance with EN 12021

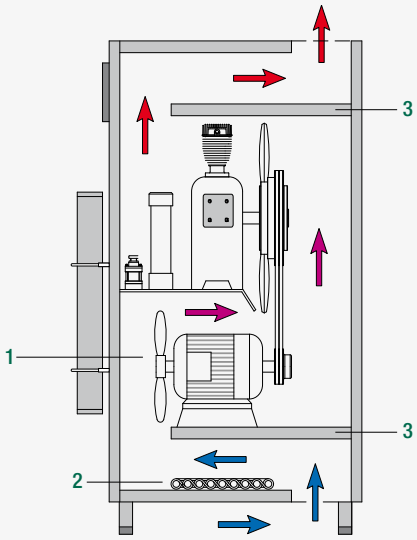
LW 570 ES

The sound insulated LW 570 ES is a very slow running compressor with very low maintenance intervals and maintenance costs. It is suitable for continuous operation and comes fully wired with star / delta connection. The 4-stage compressor block is very reliable and is used for large and professional applications. It allows a max. pressure of 420 bar (as an option).

LW 570 ES with optional ECC control

LW 570 ES Inner view

The ES Silent Concept



Sound insulation is also heat insulation, manufacturing quiet compressors **and** keeping them cool is the ultimate objective. With the ES concept, we have benchmark sound insulation **and** benchmark cooling. The cross sectional view of the ES housing illustrates the key features.

1. A secondary ventilator provides additional thrust for the cooling air flow through the housing.
2. Additional final stage heat exchangers are the first component in the flow of cooling air into the housing.
3. The intermediate panels with sound insulation padding prevent the direct egress of sound waves out of the housing absorbing the majority of the noise.

LW 570 ES

Specifications

» Electro motor
» Painted steel housing (RAL 6026)
» Sound insulated housing
» Automatic condensate drain
» Automatic stop at final pressure
» Hour counter
» Operating panel with start/stop and condensate test button, as well emergency stop switch
» Motor protection switch
» Safety switch
» Maintenance doors on both sides
» Pressure maintaining and non return valve
» All pistons c/w steel piston rings
» Low pressure oil pump and filter
» Oil- / Water separators in stainless steel
» Safety valves after each stage
» 4 x concentric suction/pressure valves
» High pressure outlet 10L
» Connections to your choice (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
» Breathing air purification an accordance to EN 12021

Options

» Auto start system
» Up to 6 additional hoses available
» 200 and 300 bar parallel filling pressures
» Oil pressure gauge
» Intermediate pressure gauges
» Oil pressure monitoring c/w auto shut down
» Cylinder head temperature monitoring with auto shut down
» Oil temperature display with auto shut down
» Puracon filter monitoring (Auto shut down also available)
» ECC control
» Phase monitoring c/w shut down at wrong direction of rotation
» Block heating device
» 420 bar Version
» Power cable and plug
» Special voltages / frequencies on request

Technical Data

	LW 570 ES
Type:	Air cooled piston compressor
Capacity [litre/min] / [Nm³/h] / [cfm]:	570 / 34.0 / 20.1
Max. Pressure [bar]:	350 / 420
RPM [1/min]:	1100
No of cylinders / No of stages:	4 / 4
Prime mover type:	E-Motor / 400V / 3 Phase / 50 Hz
Drive power [kW] / [HP]:	15.0 / 20.0
Cooling air requirement [Nm³/h]:	4500
Lubrication type:	Oil pump + Splash oil
Oil capacity [litre]:	2.5
Oil pressure [bar]:	2.2 (+/- 0.5)
Operating temperature [°C]:	+5°C to +45°C
Filter capacity [m³ at +20°C] [1]:	1200 (at +20°C / approx. 35 h)
Dimensions L x W x H [cm]:	81 x 110 x 168
Weight [kg]:	505
Noise level (measured at 1 m) [dB]:	64

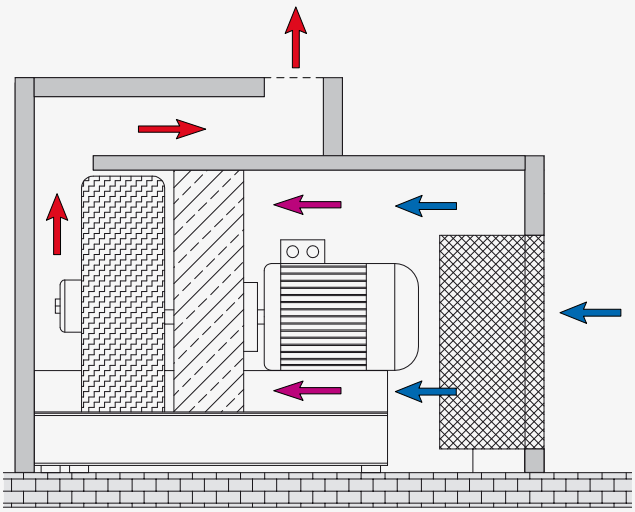
[1] In accordance with EN 12021

Sound insulated Housing LW 720 E / LW 1300 E

The housing is made of solid steel sheet and powder coated in RAL 7001. Insulated with fireproof acoustic insulating mats in 80 mm thick - the ideal noise protection. The housing is easy to open, so that the compressor can be reached without difficulty. For maintenance work. All functions can be operated from the outside.

Sound insulated Housing LW 1300 E

The ES Silent Concept



Sound insulation is also heat insulation, manufacturing quiet compressors **and** keeping them cool is the ultimate objective. With the ES concept, we have benchmark sound insulation **and** benchmark cooling. The cross sectional view of the ES housing illustrates the key features.

Sound insulated Housing LW 720 E / LW 1300 E

Designed for large applications, ideal for use in industrial facilities, workplaces, hotels and dive centers with a large breathing air requirements.

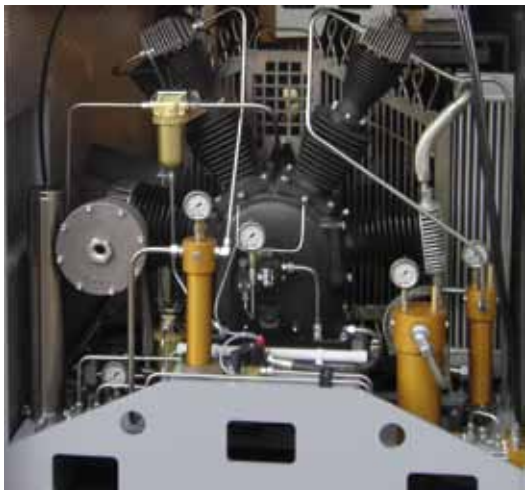
The Sound insulated Housing can be retrofitted to all LW 720 and 1300 models!

Sound insulated Housing LW 720 E

» Complete incl. Gauge-Panel and Gauge-Hose (for 1 Pressure Gauge)
» Including maintenance side door
» 73 dB at 1 m
» Color: RAL 7001
» Dimensions: 2200 x 1630 x 1550 mm

Sound insulated Housing LW 1300 E

» Complete incl. Gauge-Panel and Gauge-Hose (for 1 Pressure Gauge)
» Including maintenance side door
» 75 dB at 1 m
» Color: RAL 7001
» Dimensions: 2260 x 1720 x 1450 mm



Sound insulated Housing LW 1300 E - Interior

Sound insulated Housing LW 720 E – Operating Panel

Technical Data

Typ	L x W x H [mm]	Noise [dB]
Sound insulated Housing LW 720 E	2200 x 1630 x 1550	73
Sound insulated Housing LW 1300 E	2260 x 1720 x 1450	75

Options Overview

Typ	Automatic condensation drain	Automatic stop and hours counter	Auto Start	200/300 bar switch over device	200/300 bar parallel filling pressures	Conversion set (petrol/electric drive)	2 x filling hose	4 x filling hose	6 x filling hose	Puracon filter monitoring	Air Cooler Connection	Oil temperature monitoring	Oil pressure monitoring	Inter stage pressure gauges	Motor protection switches	Cylinder temperature monitoring	ECC controls	420 bar Version
LW 100 E ECO / E1 ECO / E / E1	○	○	○	○		○	○											
LW 100 B ECO / B	○	○		○		○	○											
LW 160 E / E1	○	○	○	○		○	○											
LW 170 E Nautic	○	●	○		○		●	○		○								
LW 170 D Nautic	○	●			○		●	○		○								
LW 190 B	○	○		○		○	○											
LW 200 E Nautic	○	●	○		○		●	○		○								
LW 225 E	○	○	○	○		○	○											
LW 230 E	●	●	○		○			●	○	○	○	○	○	○	●	○	○	
LW 230 ES	●	●	○		○		○	○	○	○	○	○	○	○	●	○	○	
LW 245 B	○	○		○		○	○											
LW 280 E / LW 320 E	●	●	○		○			●	○	○	○	○	○	○	●	○	○	
LW 280 E / LW 320 E Compact	○	○	○	○	○		○			○	○	○	○	○	●	○	○	
LW 280 ES / LW 320 ES	●	●	○		○		○	○	○	○	○	○	○	○	●	○	○	
LW 300 E	●	●	○		○			●	○	○	○	○	○	○	●	○	○	
LW 300 ES	●	●	○		○		○	○	○	○	○	○	○	○	●	○	○	
LW 320 E AL Nautic	○	●	○		○		●	○		○								
LW 320 B AL Nautic	○	●			○		●	○		○								
LW 450 E	●	●	○		○			●	○	○	○	○	○	○	●	○	○	
LW 450 E Compact	○	○	○	○	○		○			○	○	○	○	○	●	○	○	
LW 450 ES	●	●	○		○		○	○	○	○	○	○	○	○	●	○	○	
LW 450 D Basic	●	○			○			●	○	○	○	○	○	○	●	○	○	
LW 450 D	●	●			○			●	○	○	○	○	○	○	●	○	○	
LW 570 E	●	●	○		○			●	○	○	○	○	○	○	●	○	○	○
LW 570 ES	●	●	○		○		○	○	○	○	○	○	○	○	●	○	○	○
LW 570 D	●	●			○			●	○	○	○	○	○	○	●	○	○	○
LW 720 E	●	●	○		○					○	○	○	●	●	●	○	○	○
LW 1300 E	●	●	○		○					○	○	○	●	●	●	○	○	○

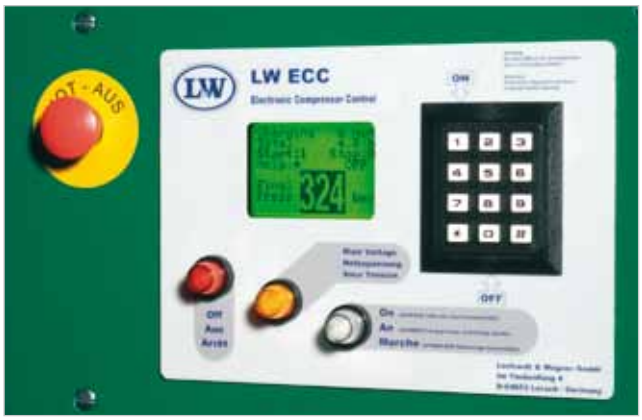
● Standard ○ Optional

Electronic Compressor Control - ECC

The L&W ECC (electronic compressor control) is available for all electric motor driven compressors from LW 230 and larger. The ECC replaces the standard electric/pneumatic control and offers the user a range of functions and interfaces only available with digital controls. The unit has an illuminated LCD display which can show various functions and values as selected on the numeric key board. An easy to follow menu accompanies the user through the menu points. The ECC software can be updated using a standard windows computer via the RS232 serial cable.
The ECC is available in metric or imperial versions and in German, English, French, Spanish, Dutch and Swedish languages.

Specifications

- Automatic condensation drain
- Full automatic mode (auto start and auto stop)
- Semi automatic mode (auto stop)
- Log book function with hours run, number of starts and max pressure
- Elapsed filling time (minutes)
- Final pressure
- 3 control LEDs for power on, compressor on, compressor off.
- Dual filling pressure display (for 200/232 and 300 bar compressors)
- Error warnings (e.g. „door is open“)
- Maintenance programme with hours countdown and required part numbers in display
- Test mode for leak check, safety valve test and solenoid test
- Interface for final pressure signal to external siren/light
- Interface for error signal to external sire/light



Options

- PIN number lock (prevents unauthorised compressor use)
- Oil temperature display and auto cut off
- Oil pressure monitoring and auto cut off
- Oil pressure display
- Cylinder head temperature display and auto cut off
- Ambient temperature monitoring < +5°C and/or > +50°C with auto cut off/start inhibitor
- Inter stage pressure monitoring (availabe for 3 and 4 stage compressors)
- Puracon interface with „change filter“ alarm in LCD display
- Motor overload protection switch with message in LCD display
- Inlet pressure monitoring with auto cut off

Auto start system

The auto start function allows operating the compressor optionally in automatic or semi-automatic mode by turning the selector switch.

Semi-automatic operation

Start the compressor by pushing the Start button. The compressor automatically shuts off when final pressure is reached.

Automatic operation

Start the compressor only once by pushing the Start button. The unit automatically shuts off when final pressure is reached. If outlet pressure decreases below the selected minimum pressure, the unit automatically restarts.

Oil pressure monitoring

Oil pressure gauge

The oil pressure gauge shows the compressor oil pressure during operation.

Oil pressure control

Controls oil pressure and shuts off the compressor automatically when oil pressure decreases below the selected pressure. This option provides additional security for compressors which operate over a longer period of time in a special compressor room.

Temperature monitoring

Oil temperature display

The oil temperature is maintained by a temperature sensor inside the compressor block during operation. The compressor automatically shuts off when oil temperature exceeds the maximum pressure of +120 °C. The red warning lamp „Oil Temperature Monitoring“ lights up.

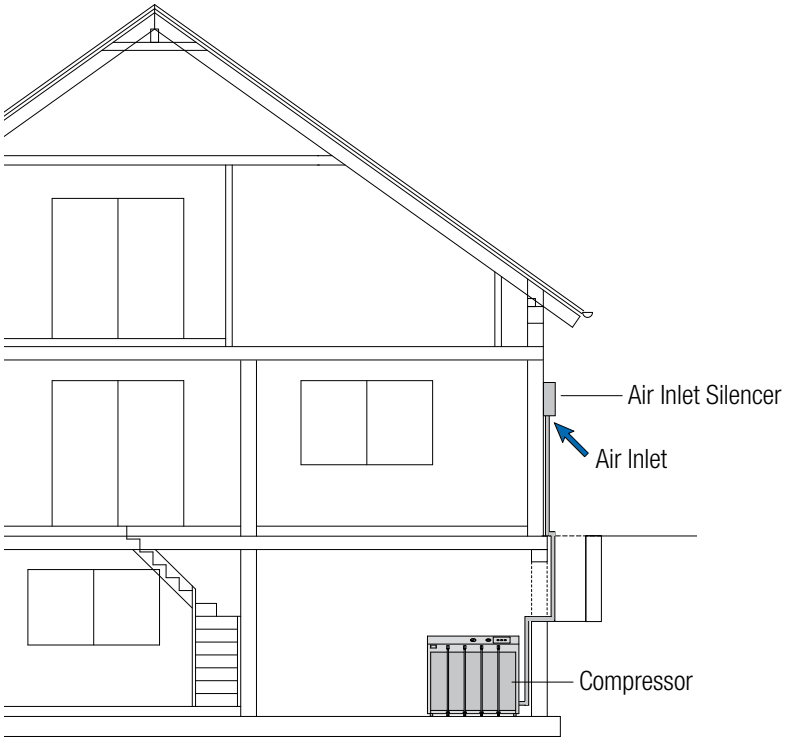
Cylinder head - temperature monitoring

The cylinder head temperature is maintained by a temperature sensor at the cylinder head of the high pressure stage during operation. The compressor shuts off automatically when cylinder head temperature exceeds the maximum pressure of +160° C. The red warning lamp „Cylinder Head Temperature Monitoring“ lights up.

Air Inlet Silencer

Fresh air, intaken from outside of the building, provokes an intake noise which is generated by the inlet valve. We recommend using an inlet silencer to reduce the intake noise to a minimum. The silencer is delivered with a special mount for wall mounting.

40 x 26 x 60 cm, 24 kg



Condensation Collecting Tank

The 60 l tank is equipped with an active carbon filter to collect condensate odourlessly and quietly. The condensate can be easily transported in the collecting tank and disposed environmentally sound.

The flexible connection hoses are fitted with quick-couplings, to allow easy separation from the compressor. The tank is equipped with a level gauge to indicate max. filling level. Two sturdy carrying handles ensure a safe transportation.

Ø 40 x 80 cm, 20 kg

Puracon Filter Monitoring

The usage of a humidity controller is the most reliable and economic method for filter monitoring. L&W Puracon filter monitoring systems can be ordered optionally for a new unit or can be easily integrated retroactively into existing filling stations.

Puracon Mobile M200 / M300

Puracon Mobile M200 / M300 is used for manual humidity monitoring during filling procedures or to check the equipment before diving. The humidity value can be controlled during the entire filling procedure. Exceeding of the limits will be indicated by a red LED. The Puracon Mobile M200 / M300 can be connected directly between cylinder and filling hose (no installation work on the compressor required).

Pressure Ranges: M200: 150 to 250bar / M300: 250 to 350bar

- Adjustable measuring speed
- Auto shut down (battery saving mode)
- Pressure compensation
- Higher accuracy by new temperature compensation
- Applicable without installation work on the compressor
- Storage of max. humidity value
- Alarm LED - freely adjustable limit

Puracon Stationary ECO

Puracon Stationary ECO is a cost-efficient solution for humidity monitoring during the filling procedure.
The Puracon Stationary ECO can be connected directly to the high-pressure line after the humidity filter. The humidity value can be observed during the entire filling procedure. Exceeding of the limits will be indicated by a red LED.

- Adjustable measuring speed
- Auto shut down (battery saving mode)
- Pressure compensation
- Higher accuracy by new temperature compensation
- Storage of max. humidity value
- Alarm LED - freely adjustable limit

Technical Data

	Puracon Mobile		
	M 200	M 300	Puracon Stationary ECO
Operating pressure	150 to 250 bar	250 to 350 bar	150 to 350 bar - adjustable pressure range
Power supply	2 x AAA LR03 alk. battery	2 x AAA LR03 alk. battery	2 x AAA LR03 alk. battery
Connector	Standard G5/8	Standard G5/8	G1/4 thread
Protection rating	IP64	IP64	IP64
Operating temperature	-10°C to +40°C	-10°C to +40°C	-10°C to +40°C
Dimensions	60 x 90 x 40 mm	60 x 90 x 40 mm	60 x 90 x 40 mm

Puracon Filter Monitoring

Puracon Stationary PRO

Puracon Stationary PRO is the professional solution for humidity monitoring during the filling procedure. The PRO version provides separated sensor and display unit. The sensor is connected directly to the high-pressure line after the humidity filter and is linked to the display unit via a data cable.

Specifications

» Stainless steel sensor housing with screw joint and G¼“ inlet and outlet
» Display unit (120 x 120 x 60 mm) for wall mounting with sensor cable (length: 2 m)
» Power supply cable (length: 1.2 m) with CE plug 230 V AC ~ 50/60 Hz (12/24V DC versions available)
» Digital LCD display with humidity display in mg/m³ and error warnings
» Pressure compensation
» 3 monitoring LEDs, adjustable limits
» Optional 4 - 20 mA interface output
» Language can be selected in German, English, French or Spanish
» Sensor cables with 5, 10, 15 or 30 m available for surcharge
» Approved up to 420 bar

Available versions

» 230 V AC
» 12 V DC
» 24 V DC
» Eex with ATEX certification

Technical Data

	Puracon Stationary PRO
Operating pressure	150 to 420 bar - adjustable pressure range
Power supply	240VAC / optional 12V or 24VDC
Connector	Sensor: G1/4 thread
Protection rating	IP64
Operating temperature	-10°C to +40°C

LW Air Cooler +3 °C

Filter capacity and filter life, an important theme with financial implications for industrial applications where cost control is vital. The life of a filter is strongly influenced by temperature. Example: LW 450 E at +20 °C outlet temperature has a filter life of approx. 33 hrs, at +35 °C this time is reduced to just 11 hours!

If the gas is cooled down after the final compression stage, e.g. from 35 °C to 3 °C, the life of the filter cartridge can be extended many times over.

The coolers are available as independent units with water separators, automatic condensation drain with timer and silencer, or as the economical. LW Air Cooler BASIC for connection to a compressor with final stage oil/water separator and drain.

The L&W refrigeration dryers (Air Coolers) can pay for themselves within 1 season by saving filter cartridge costs. To monitor the exact state of the filter, we recommend the L&W Puracon moisture controller.

Specifications

» Ready to connect to automatic, noise reduced condensation drain
» (basic version without automatic condensation drain)
» Digital temperature display in °C
» Painted steel housing (RAL 6026)
» Power supply cable for 230 V~ 50 Hz connection incl. CE plug (60 Hz versions available on demand)

Air Coolers are available in 2 pressure ranges:
Standard version up to 350 bar, Basic versions up to max. 420 bar.
All units up to 2850 litres/min are suitable for wall mounting.
The units are maintenance free with environment friendly CFC-free refrigeration fluids.

LW AC 450-900

Technical Data

Model	Max. flow [m³/h] / [l/min]	Working pressure [bar]	Power consumption [kw]	Cooling air requirement [m³/h]	Mount case	Refigeration fluid	W x D x H [mm]	Weight [kg]
LW AC 450 Basic	27 / 450	350 / 420	0.42	390	Wall mount	R 134a	330 x 250 x 700	39
LW AC 450	27 / 450	350	0.42	390	Wall mount	R 134a	330 x 250 x 700	48
LW AC 900 Basic	54 / 900	350 / 420	0.56	570	Wall mount	R 404 a	330 x 250 x 700	41
LW AC 900	54 / 900	350	0.56	570	Wall mount	R 404 a	330 x 250 x 700	50
LW AC 1350 Basic	81 / 1350	350 / 420	0.6	900	Wall mount	R 404 a	500 x 430 x 840	50
LW AC 1350	81 / 1350	350	0.6	900	Wall mount	R 404 a	500 x 430 x 840	59
LW AC 1950	117 / 1950	350	0.7	1140	Wall mount	R 404 a	500 x 430 x 840	74
LW AC 2850	171 / 2850	350	0.9	1800	Wall mount	R 404 a	500 x 430 x 840	106
LW AC 3650	219 / 3650	350	2.2	2200	Free standing	R 404 a	800 x 670 x 1350	164
LW AC 5400	324 / 5400	350	3.6	3400	Free standing	R 404 a	800 x 670 x 1350	196
LW AC 7000	420 / 7000	350	4.3	4200	Free standing	R 404 a	800 x 670 x 1350	224

Filter Panels

For purifying, drying and oil removal of air and gases.

The high pressure filter housings are certified and documented in accordance with current pressure vessel regulations to a maximum working pressure of 350 bar (5250 psi) and 420 bar (6200 psi).

The assembly is mounted on a sturdy wall panel and piped ready for connection with a pressure maintaining and non-return valve. If required, the inlet can be secured with a pressure relief valve.

These panels are the preferred choice for filtration remote from the compressor and are ideal for multiple compressor installations especially when using a central refrigeration dryer or for upgrading an outdated filter system.

The filter housings are available in the sizes 1.7, 2.3, 10 litres volume. Cartridges are available for breathing air, breathing air with additional CO/CO_2 filter, drying, active charcoal, natural gas drying and more.

Filter Panel 1 x 10 ltr.
without Pressure maintaining valve

Specifications

» Nickel plated steel filter housing(s) with 1 drain tap on each panel
» Steel frame and housing, powder coated in RAL 6026
» Pressure maintaining and non-return valve, connection G 1/4”
» Inlet connector thread, connection G 1/4”

Options

» Safety valve
» Puracon filter monitoring
» Div. filter cartridges

Filter Panel 2 x 2.3 ltr.
incl. Pressure maintaining valve

Technical Data

Filter panel	Capacity at +20°C [m³]	W x H x D [mm]	Weight [kg]	Max WP [bar]
1 x 1.7 l	900	270 x 570 x 180	27	350
2 x 1.7 l	1800	430 x 570 x 180	44	350
3 x 1.7 l	2700	560 x 570 x 180	61	350
1 x 2.3 l	1200	270 x 815 x 180	32	350
2 x 2.3 l	2400	430 x 815 x 180	54	350
3 x 2.3 l	3600	560 x 815 x 180	76	350
1 x 2.3 l	1200	270 x 815 x 180	38	420
2 x 2.3 l	2400	430 x 815 x 180	67	420
3 x 2.3 l	3600	560 x 815 x 180	95	420
1 x 10 l	8400	1116 x 320 x 460	165	350
1 x 10 l + 1 x 2.3 l	9600	1116 x 320 x 720	180	350
2 x 10 l	16800	1116 x 320 x 700	265	350
2 x 10 l + 1 x 2.3 l	18000	1116 x 320 x 1000	315	350

Storage Cylinders

Storage tanks are frequently used to provide extra filling capacity during peak periods (with or without cascade filling panels). Ideally, the storage pressure should be higher than the filling pressure, 300 bar storage systems are the most common. A fully automatic control system for compressors is recommended (e.g. ECC). L&W provides different storage systems in modular design, starting from 10 m³ storage volume up. Our cascade filling panels are available for one to four stages operation. Tell us your requirements and we will calculate your individual system.

Specifications

- Stationary steel tanks 10 year hydro test, powder coated in accordance with EN 1089/3
- Powder coated according to EN 1089/3
- Special paintings on request
- 50 l tank size
- Operation pressure: 200, 300 and 350 bar
- Operation pressure: 420 and 500 bar on request
- Painted steel housing (RAL 6026)
- Connected according to customer's specifications
- Modular construction to accommodate future expansions

Technical Data

Cylinders	Capacity [m³]	W x H x D [cm]	Weight [kg]
300 bar storage / PH 450 bar			
1 x 50 l	15	25 x 178 x 30	125
2 x 50 l	30	50 x 178 x 30	210
3 x 50 l	45	75 x 178 x 30	310
4 x 50 l	60	100 x 178 x 30	405
6 x 50 l	90	Ø 80 x 195	570

Cylinders	Capacity [m³]	W x H x D [cm]	Weight [kg]
350 bar storage / PH 450 bar			
1 x 50 l	17.5	25 x 178 x 30	140
2 x 50 l	35	50 x 178 x 30	240
3 x 50 l	52.5	75 x 178 x 30	355
4 x 50 l	70	100 x 178 x 30	465
6 x 50 l	105	Ø 80 x 195	660

Manual Storage Management

Cascade filling panel, connected upstream of the filling panel, a manual control unit for 2, 3 or 4 stage filling.

Single stage storage management

High pressure valve and pressure gauge can be installed as a storage control in every L&W filling panel.

Cascade panels

For overflow in stages from the storage cylinders via the filling panel or directly to the application. Thus, the gas storage in the storage cylinders can be used more effectively. This makes it possible to fill many more bottles to the final pressure until the compressor system has to be started.

Specifications

- Painted steel housing (RAL 6026)
- 1-, 2-, 3- or 4-stages
- Inlet, valve and pressure gauge for each stage
- Inlet of the compressor
- Outlet to the filling panel
- Fully piped

3 stage cascade management panel

Technical Data

Order no	No of stages	W x D x H [cm]	Weight [kg]
002957	1	21 x 23 x 33	6.5
002935	2	39 x 23 x 33	10
002329	3	58 x 23 x 33	13
002816	4	78 x 23 x 33	16

Auto Filling Selector

The Auto filling selectors always ensures an optimal interaction between compressor, storage cylinder(s) and filling panel.

Automatic filling via storage (e.g. 300 bar) and compressor, if the storage pressure decreases to the required filling pressure. After filling, the storage cylinders are refilled automatically to the final storage pressure. This ensures an optimal and economic usage of the unit.

We recommend using automatic condensation and automatic stop at final pressure at the compressor. Due to a fully automatic changing function of the automatic switching device, it is not necessary to open and close locking valves manually. This ensures fast and uncomplicated filling procedures. Our cascade filling panels are available as management panels with 1, 2, 3 or 4 stages. Tell us your filling requirements and we will quickly calculate your individual system.

The L&W auto filling selector is available in 3 versions:

Pneumatic controlled auto filling selector

For applications with a storage pressure of 300 bar and a max. filling pressure of 225 bar.
30 x 27 x 10 cm, 3 kg

Pneumatic controlled auto filling selector with integrated pressure reducing station

For applications with a storage pressure of 300 bar and a max. filling pressure of 225 bar. The outlet pressure is set by the pressure reducing station and is secured by the downstream safety valve.
55 x 35 x 15 cm, 9 kg

Electronic controlled auto filling selector

Switching points can be exactly set by the electronic pressure transducer. This system has to be used when the filling pressure is close to the storage pressure, e.g. storage pressure of 330 bar and filling pressure of 320 bar.
43 x 26 x 10 cm, 16 kg

Options

» Auto start signal for the compressor

Pressure Reducing Stations

Ideal for safe reducing storage pressure down to the required filling pressure. The pressure reducing stations are available for various inlet and outlet pressures and volumetric flows.

Pressure reducing station with safety valve

Pressure reducing station with TÜV/ CE safety valve

Pressure Reducers

Various pressure reducers are available for different applications, see. table. Other pressure reducers on request.

	Inlet	Outlet	Gas	Order number
	100 - 420 bar 2 x ¼“ NPT internal screw thread	27 - 300 bar 2 x ¼“ NPT internal screw thread	Air, Inert gases	000566
	100 - 420 bar 1 x ¼“ NPT external screw thread	27 - 300 bar 1 x ¼“ NPT internal screw thread	Air, Inert gases	001428
	0 - 200 bar G5/8“ DIN 477 external screw thread	0 - 10 bar G¼“ internal screw thread	Air, Nitrogen	004323
	0 - 200 bar G5/8“ DIN 477 external screw thread	0 - 20 bar G¼“ internal screw thread	Air, Nitrogen	000676
	0 - 300 bar G5/8“ DIN 477 external screw thread	0 - 10 bar G¼“ internal screw thread	Air, Nitrogen	003602
	0 - 300 bar G5/8“ DIN 477 external screw thread	0 - 50 bar G¼“ internal screw thread	Air, Nitrogen	003106
	0 - 6 bar 1 x ½“ internal screw thread	150 mbar - 6 bar 1 x ½“ internal screw thread	Air, Inert gases	001528

Filling Panels

The wide range of L&W filling panels has established itself as an industry benchmark for optimum design with an extensive list of features. The modular design guarantees that filling stations can be extended to adapt to your future requirements. The panels are available with either 200, 232 or 300 bar filling pressure (3000/4500 psi) or as dual pressure filling panels for simultaneous filling without the need to select the pressure. The self venting lever operated filling valves are available with either filling hoses and connections or direct filling connections for BA cylinders. We have a wide range of filling connections available.
A unique feature of the L&W panels is the facility to swing open the housing for maintenance work, without any disconnections, a leak check can be carried out while the panel is open.

4 point panel - 2 x 200 bar, 2 x 300 bar with hoses and DIN anti-whip connections

Specifications

» Sturdy steel frame, removable for easy mounting, powder coated in RAL 6026
» Steel plate housing powder coated in RAL 6026
» 8 mm bulkhead fitting for air inlet (inter-changeable left/right)
» Ready for connection, piped with 8 mm stainless steel piping
» Start/Stop remote control with running control lamp (available for various compressor controls)
» Large Ø 100 mm pressure gauge for each filling pressure
» Self-venting lever filling valves (venting within the housing for noise reduction).
» Valves can be equipped with extra silencers for further noise reduction.
» Filling hoses or direct BA connections according to your specifications
» Large Ø 100 mm pressure gauge(s)
» Self-venting lever filling valves
» Panels for dual pressure equipped

Filling panels with filling hoses

» 1000 mm HP hoses with stainless steel fittings (longer hoses available)
» Filling connections anti-whip option recommended for DIN or NF connections

Filling panels with direct BA connections

» Direct BA connections for flanging the cylinders on to the panel
» Filling connections anti-whip option recommended for DIN or NF connections
» Dust caps and holders for DIN connections

Filling Panels

Options available

» L&W anti-whip safety connections for DIN/NF connections
» Silencers for further reducing venting noise
» Storage inlet/outlet with hand wheel valve and pressure gauge
» Pressure reducer and safety valve in the inlet for 300 bar storage and only 200 bar filling
» 8 mm bulkhead outlet for additional filling panels (modular system)

6 point panel - 2x200, 4x300 bar direct BA connections

Stainless Steel Filling Panels

Ideal for installations in marine environments (beach locations, live aboard boats, etc.) where corrosion is a large problem. The stainless steel panels have the same features as the standard filling panels except they are fully equipped with stainless steel housing and fittings.

Technical Data

1 Filling pressure	L x W x H [cm]	Weight [kg]
1-point	21 x 23 x 33	6.5
2-point	39 x 23 x 33	9.0
3-point	58 x 23 x 33	12
4-point	80 x 23 x 33	15
6-point	115 x 23 x 33	20
8-point	153 x 23 x 33	25
9-point	172 x 23 x 33	28
10-point	195 x 23 x 33	31

2 Filling pressures	L x W x H [cm]	Weight [kg]	Configurations
2-point	39 x 23 x 33	13	1+1
3-point	58 x 23 x 33	16	1+2, 2+1
4-point	82 x 23 x 33	18	1+3, 2+2, 3+1
6-point	118 x 23 x 33	23	1+5, 2+4, 3+3, 4+2, 5+1
8-point	156 x 23 x 33	28	1+7, 2+6, 3+5, 4+4, 5+3, 6+2, 7+1
9-point	175 x 23 x 33	31	1+8, 2+7, 3+6, 4+5, 5+4, 6+3, 7+2, 8+1

Armoured Safety Filling Cabinets

3 Tank - SAFETY FILLING Cabinet for Dual Pressure

2 Tank - SAFETY FILLING Cabinet for Single Pressure

3 Tank - SAFETY FILLING Cabinet for Dual Pressure - Back View

Armoured Safety Filling Cabinets

Protect yourself, your employees and customers against the risk of exploding bottles.

With the new L&W safety filling cabinet, the filling process is completely safe and without danger.

The fear of decrepit or defective bottles has already implemented in many countries a provision for the explosion as a result.

The L&W safety filling cabinet is the affordable alternative to an explosion-proof hopper. In the case of an exploding bottle our solid steel armor protects you against the lethal shrapnel.

Our Safety Filling Cabinet are tested and approved by the American Organization UL

Specifications

» Max. Inlet pressure 350 bar
» Adjustable flow restrictor
» Inlet pressure gauge, 0-400 bar, Ø 63 mm,
» Filling pressure gauge(s), 0-400 bar, Ø 63 mm
» Self-venting lever filling valves for each outlet
» Emergency cut-off switch
» High pressure solenoid / 230 V
» Safetydoor and locking bar are controlled by position switch
» Start / Stop buttons

3 Tank - SAFETY FILLING Cabinet for Dual Pressure - Inside view

Technical Data

Order-Nr.	Size	Numbers of filling connection & Pressure range	L x W x H [mm]
Single Pressure Cabinets - 200 / 300 bar w/o. SV and Pressure Reducer (max. inlet pressure = max. filling pressure)			
004565	2 Tanks	2 x 200 bar or 2 x 300 bar	780 x 535 x 1640
004566	3 Tanks	3 x 200 bar or 3 x 300 bar	1050 x 535 x 1640
Dual Pressure Cabinets - 200 and 300 bar with SV and Pressure Reducer			
004567	2 Tanks	2 x 200 bar and 2 x 300 bar	780 x 535 x 1640
004568	3 Tanks	3 x 200 bar and 3 x 300 bar	1050 x 535 x 1640

420 bar version and other sizes available on request

Air Station

A breathing air filling station specifically designed for outdoor applications allowing air cylinders to be filled outside of shop hours and/or without involving staff. The filling station is housed in a weather proof stainless steel housing for wall mounting, this cabinet has a standard cylinder lock in the door.

Payment is processed using programmable magnetic keys which are issued to customers and a credit “loaded” on to the key. The digital display indicates the remaining credit on the key as the filling process takes place.

The filling station is equipped with an easy to use, self venting lever filling valve which can control up to 4 filling hoses. The filling hoses are equipped with the L&W patented anti-whip DIN safety ends or yoke connections. The venting is inside the housing and suppressed with a silencer reducing noise to a minimum, especially important for “out of hours” use.

The air station is easy to use, the key is placed in the holder and a start/stop switch controls the fill. The unit has an automatic final pressure shut-off and a safety valve for the final pressure. The storage pressure that supplies the air station and the filling pressure are shown on 2 pressure gauges. An emergency switch provides an additional safety feature.

The units comes complete with an interface for crediting and/or analysing the magnetic keys, including a cable to a serial 9-pole PC port. The software (included) will run on a windows PC. The data port is a serial 9 pole RS 232 port.

Specifications

- Lockable, all weather stainless steel housing
- Type tested final pressure safety valve (225 bar)
- Two pressure gauges (0-400 bar, Ø 63 mm, class 1.6)
- Choke for controlling the air flow to 800 litre/min
- LCD Display, 2 LED control lights
- Automatic final pressure shut off
- Stainless steel filling hose holder
- High pressure piping, stainless steel
- 8 mm bulkhead fitting for air inlet
- Central lever filling valve, self venting
- Silenced venting inside the housing
- 1, 2, 3 or 4 Filling hoses with certificate, length: 1000 mm (other lengths available on request)
- DIN 200 bar non-whip safety DIN, or yoke connections
- Start, Stop & Reset buttons, emergency off switch
- Filling instructions and complete documentation templates

Option: Removable memory module

- Separate lockable cabinet housed inside the stainless steel cabinet contains “plug-in” memory unit that stores the data from the air station
- Data can then be downloaded via RS232 port for storage and analysis
- Ideal for remote air stations where the owner/operator makes regular control visits

Technical Data

Filling pressure [bar]	Inlet pressure [bar]	Filling rate [litre/min.]	Power supply	W x H x D [mm]	Weight [kg]
200, 232 or 300	max. 350	800 (+/- 5%)	230V AC, 50 Hz, approx. 15 Watt	600 x 760 x 210	42

Gas Blending Panels

Using the partial pressure method, Nitrox and/or Trimix can be mixed and filled safely, easily and accurately using our Pro or Classic filling panels. The panels are tested and certified for 100% oxygen and/or helium mixing for all your breathing gas requirements. Practical valve and gauge layout makes operation easy to learn and use.

For pure oxygen compatible air (OCA), we recommend using the Puracon air controller and/or an extra filter mounted on the panel.

Wall mounted panels for safe and easy partial pressure gas blending. All gas inlets are fitted with isolation valves, non return valves and flow restrictors. The oxygen/helium gas pressure can be read on individual pressure gauges without the need to open the valves which makes efficient gas cascading quick and simple. The design of the panels has been approved by the stringent German TÜV authorities as suitable for use in Nitrox, Trimix and Heliox applications.

The Panels have a removable rear cover which makes wall mounting very simple and are powder coated in RAL 6026. All the pipework and the connections are stainless steel providing years of trouble free service and safe gas flow. The valves are industrial quality.

Nitrox Classic Panel specifications

- 2 inlets for oxygen/helium with pressure gauges, 6 mm pipe connections
- 1 inlet for OCA, 8 mm pipe connection
- 1 outlet for vented gas, 6 mm pipe connection
- Main pressure gauge Ø 160 mm class 1.0, 0-250 bar in 2 bar increments
- Housing for oxygen analyser/sensor, gas is reduced in pressure and flow
- 1 filling hose with cylinder connection of your choice
- Up to 3 extra filling hoses can be fitted

Nitrox Pro Panel specifications

- 3 inlets for oxygen/helium with pressure gauges, 6 mm pipe connection
- 1 inlet for OCA with pressure gauge, 8 mm pipe connection
- 1 outlet for vented gas, 6 mm pipe connection
- Main pressure gauge Ø 160 mm class 1.0, 0-250 bar in 2 bar increments
- Alpha 1 oxygen analyser (see text opposite) can be used off the panel if required
- 1 filling hose with cylinder connection of your choice
- Up to 2 extra filling hoses can be fitted

Options

- Inlet purification filter
- Alpha 1 analyser (classic)
- Additional filling hose(s)
- Helium/Oxygen analyser

Technical Data

	W x H x D [mm]	Weight [kg]	Max. inlet pressure OCA [bar]	Max. inlet pressure Oxygen/Helium [bar]
Nitrox Classic	710 x 480 x 220	29	200	200
Nitrox Pro	810 x 580 x 220	38	200	200

Nitrox / Trimix

Nitrox or EAN (enriched air nitrox) is a widely accepted alternative to diving with air and offers various advantages. Trimix is a term referring to gas mixtures containing helium for deep diving.

L&W offers two alternatives for Nitrox filling stations.

Partial pressure blending panels require a supply of medical grade oxygen and safely control the flow of oxygen together with oxygen compatible air (OCA) into an oxygen clean diving cylinder. The panels have the advantage of low investment and zero energy consumption and are the ideal investment for Nitrox filling stations who have a reliable supply of oxygen with small or moderate filling requirements. The blending panels can also be used for mixing Trimix mixtures in diving cylinders.

Despite the higher investment and higher energy consumption, membrane nitrox generators are the indispensable choice for filling stations where there is no reliable supply of oxygen. This method of nitrox generation and filling is ideal for large volume diving centres where the membrane operation in conjunction with a suitable high pressure compressor is simple and quick.

L&W cannot endorse the use of continuous blending systems due to the potential risk of mixtures greater than 40% oxygen entering the high pressure compressor.

Alpha 1 Oxygen Analyser

Hand held oxygen analyser ideal for analysing oxygen content in any location.
The robust metal housing which includes the oxygen sensor and the water-proof (IP65) construction make this analyser a first choice for diving schools, instructors and divers alike. The Alpha 1 is standard with the pro panel and Mixmaster panels and available as an option with the classic panel.

Features

- Cast metal housing sealed with rubber gaskets, IP65 protection
- Large stainless steel eye for lanyard/hook
- Fine calibration with hand wheel, secondary calibration inside
- User replaceable 9V battery (display goes faint to indicate battery change due)
- Sensor inlet sealed with screw cap and O Ring for water protection and conserving sensor life
- User replaceable sensor, expected life approx. 3 years
- Measuring range 1-100% oxygen
- 0.1% accuracy

Nitrox Membrane Systems

Nitrox membrane systems are based around a special semi-permeable „filter“ called a membrane. The membrane is fed with very clean, low pressure air. The air is separated between oxygen and nitrogen within the membrane leaving a higher percentage of oxygen (> 28 - 40%) in the gas that exits the sides of the membrane, and a higher percentage of nitrogen (> 90 - 99%) exiting the top of the membrane.

The capacity of the membrane is the amount of nitrox produced. This is then compressed in a suitable HP compressor, the quantity of nitrox must be higher than the delivery rate of the HP compressor due to some loss within the HP compressor.

The membrane therefore has a degree of waste (the nitrogen) so that the amount of air entering the membrane is considerably higher than the nitrox exiting the membrane. This air requirement is the most important factor when sizing either the high pressure storage or the low pressure compressor that feeds the membrane and increases drastically with an increase in oxygen percentage of the nitrox.

L&W membranes are available in two sizes S & L. The L membranes can also be mounted in parallel to produce even higher quantities of nitrox if required (> 800 litre/min).

Technical Data S membrane

Inlet pressure	Oxygen %						
	28%	30%	32%	34%	36%	38%	40%
Technical Data S membrane outlet capacity (litre/min) at +20°C							
4 bar	128	131	134	137	140	143	-
5 bar	163	167	170	174	178	181	185
6 bar	199	203	207	212	216	221	225
7 bar	235	240	246	251	256	261	267
8 bar	273	279	285	291	297	303	309
9 bar	311	318	325	332	339	346	353
10 bar	351	358	366	374	382	390	397
11 bar	391	400	408	417	426	435	443
Technical Data S membrane air inlet requirement (litre/min) at +20°C							
4 bar	177	206	242	299	392	557	-
5 bar	225	256	296	357	444	580	998
6 bar	274	311	361	417	526	662	991
7 bar	324	368	427	494	597	745	1066
8 bar	376	426	495	573	692	864	1190
9 bar	429	487	565	654	793	985	1340
10 bar	484	550	627	741	897	1130	1569
11 bar	543	615	715	830	1022	1304	1869

This data is based on a membrane air inlet temperature of +20°C. Temperatures below +20°C increase the selectivity of the membrane and the capacity and the air requirement is reduced, temperatures above +20°C increase the permeability of the membrane and the capacity and the air inlet requirement increases.

Technical Data L membrane

Inlet pressure	Oxygen %						
	28%	30%	32%	34%	36%	38%	40%
Technical Data L membrane outlet capacity (litre/min) at +20°C							
4 bar	250	256	262	268	274	280	-
5 bar	318	325	333	341	348	356	364
6 bar	387	396	406	415	425	434	443
7 bar	458	470	481	492	503	514	515
8 bar	532	545	558	571	584	596	609
9 bar	607	622	637	652	666	681	696
10 bar	685	701	718	735	751	768	784
11 bar	764	783	801	820	838	857	875
Technical Data L membrane air inlet requirement (litre/min) at +20°C							
4 bar	345	401	472	585	768	1093	-
5 bar	438	500	579	698	871	1139	1964
6 bar	534	608	706	818	1027	1302	1950
7 bar	633	718	836	969	1172	1465	2101
8 bar	734	833	970	1124	1360	1700	2346
9 bar	838	952	1108	1284	1559	1941	2644
10 bar	945	1076	1249	1455	1765	2227	3097
11 bar	1062	1204	1402	1632	2012	2571	3691

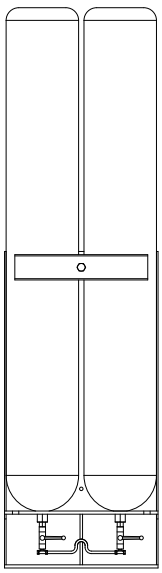
Nitrox Membrane Systems

The Nitrox membrane must be supplied with a clean low pressure air supply, this can either come from a high pressure breathing air storage (in combination with a Mixmaster HP) or from a low pressure air compressor with excellent purification before the membrane (in combination with a Mixmaster LP).
The Mixmaster systems differ slightly in their scope of delivery.

Mixmaster HP

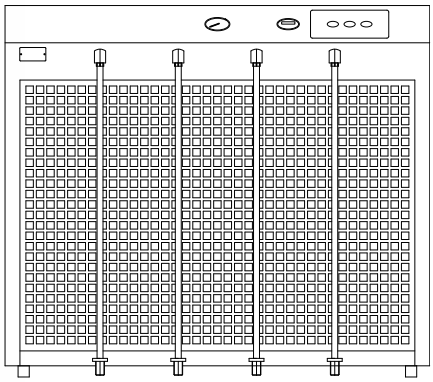
Available in 2 versions, large and small. The Mixmaster HP panels have an HP breathing air inlet with isolation valve and pressure reducer that safely reduces the HP supply down to the desired LP inlet pressure. The HP version has a large filter for air conditioning to ensure that the membrane is supplied with oil-free air, this reduces the risk of membrane contamination.

The HP solution has the advantage of using pure breathing air to feed the membrane, this reduces the risk of membrane contamination. The investment cost are lower than a LP solution, but the running costs are higher. 2 HP compressors offer the ideal solution with redundancy for professional diving centres. If only 1 HP compressor is available then a higher capacity storage will be necessary.



High pressure storage

Pressure reducer, membrane, analyser & reservoir



HP compressor (gas tight inlet) and filling hoses

Technical Data

Mixmaster HP Technical Data	
Inlet Pressure [bar]	50 > 350 bar (G¼" female)
Membrane inlet pressure LP [bar]:	4 > 11 (11.5 bar safety valve)
Outlet to compressor (air/nitrox):	G1" female
Air inlet (for air filling operations):	G1" female
Dimensions W x H x D [cm]:	65 x 115 x 30
Weight [kg]:	75

Nitrox Membrane Systems

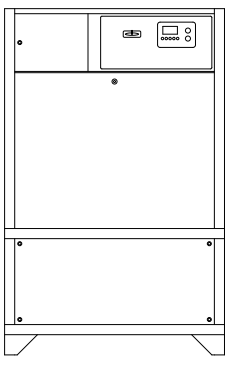
Mixmaster LP

Available in 2 versions, large and small. The Mixmaster LP panels have a LP inlet with coarse and fine coalescent filters and a large capacity active charcoal filter for oil removal.

The LP solution is a higher investment but has the advantage of lower running costs compared to the HP version. The LP compressor must be matched to the highest oxygen mixture required.

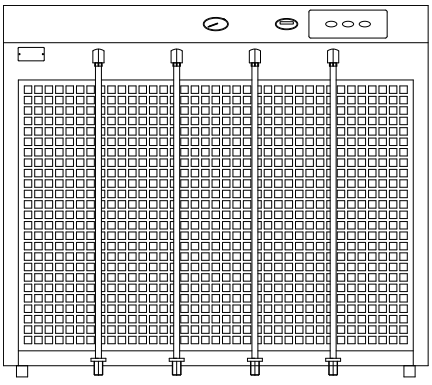
Complete Mixmaster LP installations

The Mixmaster LP can also be supplied complete with a matched LP compressor for a turn key installation either complete with a matching HP compressor or just the LP compressor and Mixmaster LP to suit an existing high pressure air compressor that is suitable for nitrox compression.



Low pressure compressor and air dryer

Pressure reducer, membrane, analyser & Inlett buffer



HP compressor (gas tight inlet) and filling hoses

Technical Data

Mixmaster LP Technical Data	
Inlet Pressure [bar]	4-11 bar (G1" female)
Outlet to compressor (air/nitrox):	G1" female
Air inlet (for air filling operations):	G1" female
Dimensions W x H x D [cm]:	65 x 115 x 30
Weight [kg]:	75

Filling Connections

Filling connections for SCBA and diving cylinders in accordance with national/international standards.

	Gas	Description	Max WP	M16x1.5 mm for HP hose/lever filling valve	G1/4" for Oxygen hose	G1/4" for lever filling valves (-2005)	M16 x 1.5mm for cross filling valves	8 x 2.5 mm for piping connection
	Luft	DIN 477 200 bar	232 bar / 3400 psi	002299	1)	002297	002301	003131
	Luft	DIN 477 200 bar anti whip	232 bar / 3400 psi	002303	1)			
	Luft	DIN 477 300 bar	300 bar / 4500 psi	002300		002298	002302	002305
	Luft	DIN 477 300 bar anti whip	300 bar / 4500 psi	002304				
	Luft	DIN 477 300 bar 360° swivel connection	300 bar / 4500 psi	1)				
	Luft	INT/Yoke for scuba	232 bar / 3400 psi	002306	1)		002307	
	Luft	CGA 346	200 bar / 3000 psi	000706		000705	1)	
	Luft	CGA 347	300 bar / 4000 psi	000704		000703	1)	
	Luft	NF E 29-662	232 bar / 3400 psi	000695[2] 000276[3]		001378[2] 000276[3]	1)	
	Luft	NF E 29-662 anti whip	232 bar / 3400 psi	000701[2] 000276[3]				
	Luft	NF E 29-663	300 bar / 4500 psi	000698[2] 000277[3]		001377[2] 000277[3]	1)	
	Luft	NF E 29-663 anti whip	300 bar / 4500 psi	000702[2] 000277[3]				
	Luft	Spasciani	200 bar / 3000 psi	002251				
	Nitrox	Draeger M24 x 2.0 prEN144	200 bar / 3000 psi	001381				
	Nitrox	M26 x 2.0 - 250 bar	250 bar / 3675 psi	001688[2] 003657[3]				
	Nitrox	M26 x 2.0 - 350 bar	350 bar / 5000 psi	001688[2] 000376[3]				
	O_2	G3/4" DIN 477	200 bar / 3000 psi	004295	001407			

1) On request 2) Handwheel 3) Filling nozzle

Filling Valves

	Order number	P max Application	Mount	Repair kit/ special tools/silencer
	**Cross design filling valve without pressure gauge**			
	Yoke: 003686 DIN 200: 003684 DIN 300: 003685	350 bar Filling valve with separate vent screw	Filling valve without pressure gauge for hose with swivel connection. (Standard connection 8S)	Repair kit: 002294
	**Cross design filling valve with pressure gauge**			
	Yoke: 003689 DIN 200: 003687 DIN 300: 003688	350 bar Filling valve with separate vent screw	Filling valve with pressure gauge for hose with swivel connection. (Standard connection 8S)	Repair kit: 002294
	**Hand wheel valve without venting**			
	001477	350 bar. Standard 2/1 way valve, G¼" inlet and outlet for opening closing lines such as storage cylinders	For panels with diameter of bore 33 mm	Lower seat: 000571 Upper valve stem and bearing: 000573
	**Hand wheel valve self venting**			
	001476	350 bar Standard 2/1 way valve, G¼" inlet and outlet self venting on the outlet line for filling panels	For panels with diameter of bore 33 mm	Lower seat: 000572 Upper valve stem and bearing: 000574 Silencer kit: 002896
	**Lever filling valve, self venting**			
	200 bar: 002449 300 bar: 002450	350 bar Standard 2/1 way valve, G¼" inlet and M16 x 1.5 mm outlet self venting on the outlet line for filling panels	Panel mounting inside a 90° profile secured by 4 screws, vents inside the panel	Repair kit small: 002451 Repair kit large: 002452 Tool kit: 002453 Silencer: 000580
	**Lever filling valve, self venting (by 2005)**			
	No longer available	350 bar Standard 2/1 way valve, G¼" inlet and outlet self venting on the outlet line for filling panels	Panel mounting inside a 90° profile secured by 4 screws, vents inside the panel. (limited availability)	Repair kit: 000576 Special tool: 000575 Silencer: 000580
	**Lever filling valve, self venting**			
	No longer available	350 bar. Standard 2/1 way valve, G¼" inlet and M16 x 1,5mm male outlet, self venting on the outlet line for filling panels with hoses	Panel mounting with Ø 23 mm hole silencer integrated in the vent	Repair kit: 000576 Special tool: 000575
	**Lever filling valve, self venting**			
	No longer available	350 bar Standard 2/1 way valve, G¼" inlet and M16 x 1.5 mm outlet self venting on the outlet line for filling	Vertical panel mounting with U Clamp	U Clamp: 001826 Repair kit small: 001834 Repair kit large: 001836

Adapters

	Order number	From	To	Material
	000684	DIN 200 bar G5/8“ female	G1/4“ female	Stainless steel
	000683	DIN 300 bar G5/8“ female	G1/4“ female	Stainless steel
	001496	DIN 200 bar G5/8“ female	G1/4“ female with M22 x 1.5mm male	Stainless steel
	001497	DIN 300 bar G5/8“ female	G1/4“ female with M22 x 1.5mm male	Stainless steel
	000685	DIN 200 bar G5/8“ male	G1/4“ female	Brass
	000686	DIN 300 bar G5/8“ male	G1/4“ female	Brass
	000214	DIN 200 bar G5/8“ female	INT/Yoke A clamp connection	Chromed brass
	001478	DIN 200 bar G5/8“ female (for anti whip connections)	INT/Yoke A clamp connection	Chromed brass
	001479	DIN 200 bar G5/8“ female (for anti whip connections, old version with Pin)	INT/Yoke A clamp connection	Chromed brass
	002903	2 x DIN 300 bar G5/8“ female	G1/4“ female	Stainless steel
	003096	W28.8 x 1/142 tapered thread DIN 477	G1/4“ female	Brass

Safety Valves

Safety valves are available for various pressures, either securing the final pressure on HP compressors and installations or preventing damage to inter stage or low/medium pressure components.

	Pressure setting	Mount	Certification / Order number	
	100 - 350 bar 225 bar 330 bar Base for SV	 Special mount Special mount 2 x G 1/4“	TÜV 000553 000556 000233	CE 001814 001816 000233
	100 - 350 bar 225 bar 330 bar Base for SV	 G 3/8“ G 3/8“ 1 x G 3/8“ 2 x G 1/4“	Non type tested 000558 000560 000231	
	8 - 110 bar	G3/8“	Non type tested	

Pressure switches and sensors

A wide range of analogue pressure switches and electronic pressure sensors is available suitable for pressures between 0 and 600 bar.

	Pressure setting available	Order number	Mount	Operation
	0 - 10 bar 0 - 350 bar 0 - 600 bar	000636 000203 001512	G1/4“ female	Switch opens at set pressure
	0 - 1,6 bar 0 - 6 bar 0 - 10 bar 0 - 60 bar 0 - 100 bar 0 - 400 bar	000635 004840 002141 002142 003888 002143	G1/4“ male	Electronic sensor 14-30V DC input, 0-10 V DC output

Filter Cartridges

Filter cartridges are available in various versions and for different gases and applications.

Applications

» Breathing air according to EN 12021
» Breathing air according to EN 12021 and additional CO/CO_2-filtration
» Oil removal < 0.1 mg/m³ (Nitrogen / Helium applications)
» Drying < 15 mg/m³
» Natural gas drying and oil removal

Order number new (order number old)	Diameter Ø [mm]	Length [mm]	Compressor/ Filter housing	Capacity [m³] at 20° C*	35° C*
Breathing air in accordance with EN 12021					
000644	45	200	LW 100 E / E1 ECO LW 100 E / E1	108	32
001375 (LW160/190154)	48	165	LW 160 E / E1 LW 170 E Nautic	180	54
001374 (LW225/245154)	48	210	LW 200 E Nautic, LW 225 E	200	60
000002 (4508005)	62	355	LW 210/230/260/280/320 E, LW 210/230/260/280/320 ES, LW 210/230/260/280/320 E Compact, LW 320 E Nautic LW 300 E, LW 450 E, 1.7 liter housing	900	270
000003 (8022)	62	575	LW 300 ES, LW 450 ES, LW 570 E, LW 570 ES, LW 720 E, LW 1300 E 2.3 liter housing	1200	360
Breathing air in accordance with EN 12021 and additional CO/CO_2 filtration					
002309	45	200	LW100 B ECO, LW100 B	86	26
001463 (LW160/190154K)	48	165	LW 170 D Nautic, LW 190 B	150	45
001464 (LW225/154K)	48	210	LW 245 B	166	50
001459 (4508005K)	62	355	LW 320 B, LW 450 D Basic, LW 450 D	750	225
001461 (4508022K)	62	575	LW 570 D	1000	300

* Temperature of the filter housing

Filter Cartridges

Order number new (order number old)	Diameter Ø [mm]	Length [mm]	Compressor/ Filter housing	Capacity
Oil / odour removal < 0,1mg/m³ (nitrogen / helium / mixmaster applications)				
002310	45	200	LW 100	Capacity depends on the inlet quality of the gas and the operating conditions, refer to instruction manual
001466 (4508005B)	62	355	1.7 litre housing	
001467 (3790)	62	575	2.3 litre housing	
001469	90	500	Mixmaster	
Air / inertgas drying only < 15 mg/m³				
002311	45	200	LW 100	
001464 (4508005A)	62	355	1.7 litre housing	
001462 (8022A)	62	575	2.3 litre housing	
CNG Filter (drying and oil removal)				
002476	45	200	LW 100 EG	
001468 (8070)	62	575	2.3 litre housing	

Oil

We have gone to great lengths testing various oil compositions for our compressors. The low carbon build up and the excellent lubrication properties were paramount in the development of our compressor oil.

Oil Type	Order number new (old)	Quantity
Full synthetic for HP breathing air compressors	000001 (4509001)	1 litre
Mineral motor oil for combustion engines	000004 (4509003)	500 ml

Inlet filters

The inlet filter is essential for the operating life of the compressor; it avoids that dirt particles damage valves, pistons and cylinder bores. Filters for different compressor sizes are available.

Inlet Filter Order number new (old)	Compressor
001708	LW 100
000119 (LW160/190123)	LW 160/170/190/200/225/245
000170 (4507017)	LW 210/230/260/280/300/450/570/720
002662 (1820)	LW 1300

Service Kits

The service kits contain all required parts for the maintenance interval according to the factory requirements. The use of the L&W servive kits ensure that all required parts are ordered and be replaced and gives you the assurance that all parts are includet in your order. The servive kits include, depending on the model and interval parts such as O-Rings, Sinter Filter, Intake Filter, V-Belts, Silencers, In-& Outlet Valve, Valve Seals and Compressor oil.

Mobile Compressors

Compressor	Frequency	Order Number / Working Hours	
		500 h	1000 h
LW 100 E ECO / E1 ECO und LW 100 E / E1	50 Hz	006709	003604
	60 Hz	006710	006711
LW 100 B ECO und LW 100 B	-	006712	006713
LW 160 E	50 Hz	006766	003963
	60 Hz	006767	006768
LW 170 E / D	-	006883	006884
LW 190 B	-	006769	005904
LW 225 E (Old version - 2007)	50 Hz	006770	003950
	60 Hz	006769	003066
LW 225 E (New version - from 2008)	50 Hz	006771	006629
	60 Hz	006772	006773
LW 245 B (Old version - 2007)	-	006770	003950
LW 245 B (New version - from 2008)	-	006771	006629

Compact Compressors

Compressor	Frequency	Order Number / Working Hours		
		1000 h	2000 h	4000 h
LW 230 E Compact	50 Hz	004656	005168	-
	60 Hz	006757	006758	-
LW 280 E Compact	50 Hz	004329	003921	-
	60 Hz	004656	005168	-
LW 320 E Compact	50 Hz	006751	006752	-
	60 Hz	004656	006754	-
LW 450 E Compact	50 Hz	003841	-	003834
	60 Hz	006718	-	006719

Service Kits

Stationary Compressors

Compressor	Frequency	Order Number / Working Hours		
		1000 h	2000 h	4000 h
LW 230 E	50 Hz	004656	005168	-
	60 Hz	004656	005168	-
LW 280 E	50 Hz	004329	003921	-
	60 Hz	004656	005168	-
LW 300 E	50 Hz	006718	-	006719
LW 320 E	50 Hz	006751	006752	-
	60 Hz	004656	006754	-
LW 320 E AL Nautic	50 Hz	006753	006754	-
	60 Hz	006755	006756	-
LW 320 B AL Nautic	-	005468	005469	-
LW 450 E	50 Hz	003841	-	003834
	60 Hz	006718	-	006719
LW 450 D Basic / LW 450 D	-	003843	-	003837
LW 570 E	50 Hz	005166	002272	004029
	60 Hz	006825	006736	006737
LW 570 D	-	004030	002357	006828
LW 720 E (with 1.7 l final separator until 06/2011)	50 Hz	003954	006814	005171
LW 720 E (with 0.8 l final separator from 06/2011)	50 Hz	006815	006816	006817
LW 1300 E (with 1.7 l final separator until 06/2011)	-	003876	006818	004271
LW 1300 E (with 0.8 l final separator from 06/2011)	-	006819	006820	006821

Silent Compressors

Compressor	Frequency	Order Number / Working Hours		
		1000 h	2000 h	4000 h
LW 230 ES	50 Hz	006749	006750	-
	60 Hz	004656	005168	-
LW 280 ES	50 Hz	004970	003920	-
	60 Hz	006749	006750	-
LW 300 ES	50 Hz	006718	-	006719
LW 320 ES	50 Hz	004970	003920	-
	60 Hz	006749	006750	-
LW 450 ES	50 Hz	003841	-	003834
	60 Hz	006718	-	006719
LW 570 ES	50 Hz	006826	004068	005167
	60 Hz	006827	006738	006739

Certified L&W Quality

L&W delivers high-pressure compressors and the complementary modules for purification, storage and filling of breathing air. Highest quality and continuous development and improvement of our products are our most significant target in the implementation of our daily tasks. Therefore, we meet all EU requirements as a standard and are certified to ISO 9001:2000. On requested, our products could also be certified by other authorities such as TÜV, Germanischer Lloyd, DNV, GOST, UDT or ABS.

In the field of air supply, we serve a broad range of users, such as firefighters in action, sports and professional divers. These customers must be able to trust unconditionally in the exercise of their activities on the quality and safety of our products.

Our employees are aware of their responsibilities and they have the task to reach with expertise and experience the enormous needs of the market. Through continuous in-house quality control we face new challenges every day.

L & W Network

In all parts of the world our customers appreciate reliability and our full support. Our products offer the maximum in durability and ease of maintenance. Low operating costs and excellent value for money are as a matter of course for L & W. Through our worldwide dealer network, our customers can always count on superb service and excellent support. A special offer from L & W are the personal training sessions that are conducted in specially equipped training facilities in our company. In this training, our customers learn the proper use and independent maintenance with our products.

Seminars / Training courses at L&W

In our training courses we teach you the basics for the knowledgeable and reliable handling of our compressors and filling devices. You will receive practical skills that allow you to expand your skills in terms of compression technology and air conditioning essential.

All participants will receive a certificate of participation. Participation in the trainings enable you to hold regular training of personnel in accordance with the provisions of the BG.

For questions about our training, please contact:

Lenhardt & Wagner GmbH
Mrs. Ina Weinzierl

An der Tuchbleiche 39
68623 Hüttenfeld / Germany
Phone: +49 (0)62 56 / 8 58 80 -16
Fax: +49 (0)62 56 / 8 58 80 -14
eMail: iweinzierl@lw-compressors.com

Compressor Seminar
max. 24 persons, duration: approx. 7h
In this seminar, the basics of the following topics are covered in theory:

» Compressor technology, maintenance, troubleshooting
» Legal Notices
» Air conditioning and air quality testing
» Production and use of Nitrox

The seminar also includes instruction for filling high pressure cylinders.

Technology Seminar
max. 8 people Duration: 2 days
This course is a practical organized and the „Compressor Seminar“ is required as a basis knowledge.
It includes the following topics:

» Refreshment of the basic skills
» Specific troubleshooting of compressors
» Disassambling and Assembling of a compressor block
» Implementing of a high pressure system
» Setting options on the compressor
» Repair of filling devices on Compressor and filling panels

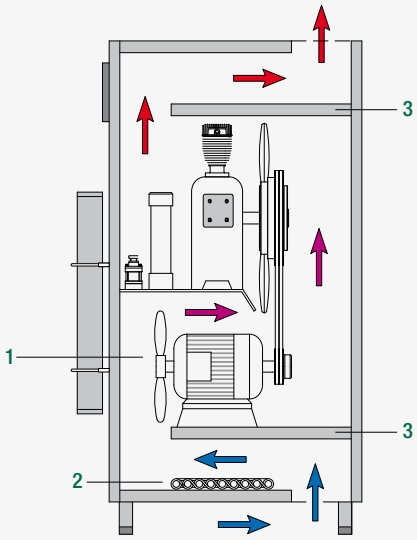


News 2014

The new silent Compressor Series with a delivery rate of 300 - 850 l/min is characterized of a robust and high efficiency construction and it offers an excellent value for money.

The newly developed automatic condensate drainage system includes a pre-filter which extends the lifetime of the filter cartridge. A novel valve limits pressure drop during the condensate drain cycle, the efficiency of the compressor systems is thereby considerably improved.

The ES Silent Concept



Sound insulation is also heat insulation, manufacturing quiet compressors **and** keeping them cool is the ultimate objective. With the ES concept, we have benchmark sound insulation **and** benchmark cooling. The cross sectional view of the ES housing illustrates the key features.

1. A secondary ventilator provides additional thrust for the cooling air flow through the housing.
2. Additional final stage heat exchangers are the first component in the flow of cooling air into the housing.
3. The intermediate panels with sound insulation padding prevent the direct egress of sound waves out of the housing absorbing the majority of the noise.

Notes

L&W - World Wide

Our worldwide network of dealers and service centers.

Compressors | Purification | Storage | Filling Panels | Nitrox/Trimix





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