

# INDUSTRIAL PISTON COMPRESSORS

0.7-20 hp / 0.5-15 kW

Atlas Copco



# ATLAS COPCO PISTON COMPRESSORS

## Proven durability

Atlas Copco introduced the first piston compressor in 1904. Since then, we have continuously advanced the technology, most recently with the introduction of our oil-free and high-pressure series. Today, Atlas Copco piston compressors offer you the powerful combination of reliability, flexibility and low operating costs.

### RELIABILITY

- Dependable flow of compressed air directly to the point of use.
- High quality materials for premium performance and long life.
- Limited number of working parts ensures performance in extreme conditions.

**20,000**  
HOUR LIFETIME\*

**100%**  
DUTY CYCLE\*\*

**EXTRA THICK**  
VESSEL WALLS

\* For lubricated models;  
16,000 hours for oil-free models  
\*\* For most models

### FLEXIBILITY

- Very wide range of working pressures with a maximum of 300 bar (4353 psi).
- Compact installation.
- Available in oil-free as well as lubricated versions.
- Stand-alone use or easy integration in your process.

### LOW OPERATING COSTS

- Simple maintenance thanks to easily accessible parts.
- Direct drive technology offers major energy savings compared to belt-driven compressors.
- One-bearing motor reduces mechanical friction.

## A complete & flexible range

Count on Atlas Copco piston technology to drive your production reliably and efficiently. We can meet your exact requirements with the broadest compressor portfolio, whether you work in a large industrial plant, a smaller workshop or a clean

technology lab. We even offer customized piston solutions for industries with specific demands (transportation, snow making, ...) as well as for our OEM customers.

### OIL-FREE



**LFX:** Single-stage one-cylinder oil-free reciprocating compressor with a maximum working pressure of 10 bar (145 psi).



**LFXD:** Single-stage oil-free reciprocating compressor with integrated dryers and a maximum working pressure of 10 bar (145 psi).



**LF:** Single-stage two-cylinder oil-free reciprocating compressor with a maximum working pressure of 10 bar (145 psi).



**LZ:** Automatically or Elektronikon® Mk5-controlled single-stage oil-free reciprocating compressor, silenced, with a maximum working pressure of 10 bar (145 psi).

### LUBRICATED



**LE:** Single-stage reciprocating compressor with a maximum pressure of 10 bar (145 psi).

**LT:** Two-stage reciprocating compressor with a maximum pressure of 15, 20 or 30 bar (218, 290 or 435 psi).

### HIGH-PRESSURE



**LB boosters:** Single-stage lubricated air and nitrogen booster with a maximum pressure of 40 bar (580 psi).

Two-stage lubricated nitrogen booster with a maximum pressure of 300 bar (4353 psi).

## YOUR ATLAS COPCO PISTON COMPRESSOR: AN EASY CHOICE

	0.7	1	2	3	4	5	7	10	15	20 hp
<b>OIL-FREE</b>										
<b>LUBRICATED</b>	0.55	0.75	1.5	2.2	3	4	5.5	7.5	11	15 kW
<b>BOOSTER 300 BAR</b> 4353 psi									LB	
<b>BOOSTER 40 BAR</b> 580 psi										LB
<b>30 BAR</b> 435 psi									LT	
<b>10 BAR</b> 145 psi								LE		
										LZ
								LF		
										LFX
										LFXD

# OIL-FREE PISTON COMPRESSORS

## LZ, LF, LFX & LFXD series

When you need absolutely clean air, “technically oil-free” really won’t do. Oil-injected compression, even filtered, cannot guarantee that all oil vapors, aerosols and other contaminants are removed from the air. Atlas Copco pioneered the oil-free air technology that removes any risk of contamination by oil. What is more, we also set a new standard in air quality as the first manufacturer to be certified ISO 8573-1 Class 0. With no less than four clean air piston series (the LZ, LF, LFX and LFXD), we have the right oil-free compressor for you.

### FEATURES & BENEFITS

#### Flexibility

- Full range with different power (0.7-20 hp), pressure (4-10 bar) and power supply (230/400/460V) options.
- Pack and full feature, base and tank mounted versions are available.

#### Quality air

- ISO 8573-1 Class 0 pump produces TÜV-certified 100% clean air.
- Dryer and dust particle filters come included as standard in the full feature and pack versions.

#### Reliability

- Patented stainless steel inlet/outlet pump valves.
- Long lifetime of 16,000 hours.
- Elimination of oil changes ensures minimal service requirements.
- Extremely low maintenance costs.

#### Energy savings

- Direct drive offers major energy savings compared to belt-driven compressors.
- Start-stop technology eliminates waste during the unload cycle.
- One-bearing motor reduces mechanical friction.

**DESIGNED BY  
ATLAS COPCO**

All Atlas Copco oil-free piston compressors are designed and developed in Atlas Copco's European Piston Competence Center in Italy.



- ① Automotive style **cylinders** made of high silicon aluminum alloy with low tolerance finishing for extremely low clearance and minimized friction.
- ② **Direct drive** eliminates transmission losses.
- ③ **Industrial unloader valve:**
  - Designed to withstand extreme conditions and high working pressures.
  - The unloader valve reduces starting torque for a longer compressor and motor lifetime as well as limited strain on the electricity net.
- ④ **Single electrical connection** for easy, plug-and-play installation.
- ⑤ A wide range of **air treatment devices** is available to meet air purity levels as required by ISO 8573-1 2010.
- ⑥ **Highest quality components:**
  - Heavy-duty sealed-for-life ball bearings selected for continuous duty and long lifetime.
  - Die-cast aluminum crankcase and finned cylinder heads with high cooling characteristics, for long lifetime and efficient operation.

### CONTINUOUS OPERATION

Thanks to their oil-free technology and internal cooling fan system, Atlas Copco oil-free compressors can offer a 100% duty cycle for uninterrupted service. In contrast, lubricated compressors operate up to 20% of their running time in cool-down mode.

### THE LZ: THE PREMIUM OIL-FREE AIR SOLUTION

The Atlas Copco LZ adds low noise and extensive controls to the traditional piston benefits of robustness, low maintenance and energy efficiency. Simply the most complete oil-free piston compressor on the market today, the LZ meets all your compressed air needs and then some.



# LUBRICATED PISTON COMPRESSORS

## LE & LT series

An Atlas Copco LE/LT compressor is your high-performance industrial air solution. The 10-bar LE and the 15/20/30-bar LT generate quality air at the lowest operating temperatures in the industry and with minimal oil carryover. Their proven design and quality materials deliver premium operation and an extra long life.



### FEATURES & BENEFITS

#### Premium reliability

- A unique, robust design and quality materials ensure an extended product life.
- The fan designed for optimal cooling of the air flow also balances the compressor for reduced vibration.

#### Low running costs

- Use of highly durable components for improved performance.
- Start-stop system instead of load-unload.

#### Easy maintenance

- All components and service points are easily accessible.



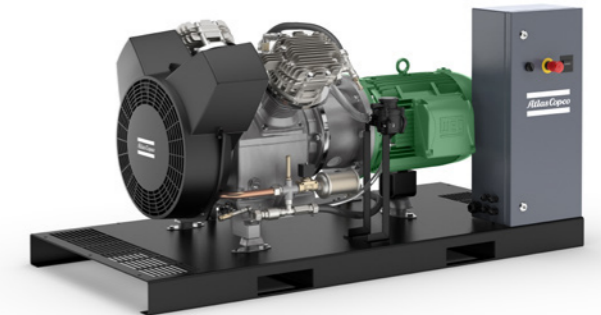
#### COMPACT

The LE/LT compressor block is directly coupled to the motor and is built with lightweight materials. This provides excellent cooling and smooth integration in small spaces.

# HIGH-PRESSURE PISTON COMPRESSORS

## LB booster series

When you need the best in booster performance and reliability, the Atlas Copco LB delivers. The LB is the ideal booster for PET bottling and nitrogen applications in power plants or laser cutting. Its piston technology offers industry-leading efficiency with remarkably low noise levels.



### FEATURES & BENEFITS

#### Quiet

- Silent from the core: optimal balancing and use of special vibration dampers.

#### Increased efficiency

- Low Specific Energy Requirement: direct driven technology eliminates friction losses.
- Low electrical peaks with soft start.
- Low mechanical losses: half elastic motor shaft coupling minimizes torque peaks.
- Easy operation.
- Plug-and-play, hose in/hose out solution.

#### Optimal performance

- Innovative oil lubrication system with oil ring and crankshaft channels ensures better lubrication.
- No oil carryover with oil breathing system.

#### Supreme reliability

- Based on proven, reliable LT piston compressor design.
- Inlet and outlet safety valve protection.
- Steel valve plates with innovative zinc-based microspathe coating for additional protection.

### NEW: ATLAS COPCO NITROGEN SKID

Need nitrogen? How about generating your own? The Atlas Copco LB booster is built into the all-in-one Atlas Copco nitrogen generation skids, available for direct nitrogen use (40 bar) and for direct use and bottling (300 bar).





## OEM APPLICATIONS

### Versatile & sustainable solutions

Tailored to perform non-stop in a wide variety of environments, Atlas Copco's piston compressors are the premium OEM air solution. What is more, our dedicated European Piston Competence Center allows us to maintain a collaborative relationship with our OEM customers, working on both current projects and long term solutions.

#### PERFORMANCE & FLEXIBILITY

It all starts with what we know best: our core piston technology and the proven reliability of our LFX, LE, LT and LF. Next, we optimize their performance within your original equipment by developing a tailored solution together. Our working relationship extends beyond yes/no answers to basic choices such as belt or direct driven, extreme temperatures, clean or harsh environments, single units or custom duplex built, ... The customization possibilities are almost endless.

#### GLOBAL SERVICE

Atlas Copco is a truly global organization with support available 24/7 in more than 150 countries.

#### INDUSTRY-SPECIFIC SOLUTIONS

- Transportation
- Snow making
- Solar fields
- Printing
- Box folding
- Beer production
- ... and many more

## OPTIONS

### Tailor your Atlas Copco piston compressor

	LFX & LFXD	LF	LZ	LE	LT	LB (40 bar)	LB (300 bar)
Heavy duty filter		O		O	O		
Interstage drain					O		✓
Timer drain	O	O	O	O	O		
CD dryer*	✓	O		O	O		
Hour meter**	O	O	✓	O	O	✓	✓
Hood	✓	O	✓	O	O		✓
Oil level switch				O	O	O	
Auto restart	O	O	✓	O	O		
HP filter						O	O

✓ = standard  
O = optional

\*\* Maximum 15 bar.

\* Only DOL 230/50 and 400/50.

# TECHNICAL SPECIFICATIONS

## OIL-FREE: LZ SERIES

Compressor type	Maximum working pressure		FAD @ 50 Hz			FAD @ 60 Hz			Installed motor power		Noise level dB(A)	Vessel l	Version	Dewpoint FF	
	bar	psig	l/s	m³/min	cfm	l/s	m³/min	cfm	kW	hp				°C	°F
LZ 7-10	10	145	11	0.66	23.3	12	0.72	25.4	5.5	7.5	72	270 500	BM/TM/FF*	3	37
LZ 10-10	10	145	15.5	0.93	32.8	18.2	1.1	38.9	7.5	10	74	270 500	BM/TM/FF*	3	37
LZ 15	10	145	22	1.32	46.6	24	1.44	50.8	11	15	75	-	BM	-	-
LZ 20	10	145	31	1.86	65.6	36.4	2.2	77.8	15	20	77	-	BM	-	-

\* BM: base mounted – TM: tank mounted – FF: full feature.  
 \*\* Voltage: 400 50Hz – 230/380/460 60Hz.  
 \*\*\* Unit performance measured according to ISO 1217, Ed.4, Annex C-2009.  
 \*\*\*\* Mean noise level measured according to ISO 2151/Pneurop/Cagi PN8NTC2 test code; tolerance 3 dB(A).

## OIL-FREE: LF SERIES

Compressor type	Maximum working pressure		FAD @ 50 Hz			FAD @ 60 Hz			Installed motor power		Noise level dB(A)
	bar	psig	l/s	m³/min	cfm	l/s	m³/min	cfm	kW	hp	
LF 2	10	145	3.1	0.19	6.57	3.5	0.21	7.42	1.5	2	82
LF 3	10	145	4	0.24	8.48	5.5	0.33	11.65	2.2	3	83
LF 5	10	145	8.2	0.49	17.37	11.1	0.67	23.52	4	5	83
LF 7	10	145	11	0.66	23.31	18.4	1.1	38.99	5.5	7	84
LF 10	10	145	15.5	0.93	32.84	24.2	1.45	51.28	7.5	10	86

\* Comes with a choice of refrigerant, desiccant or membrane dryer technology and appropriate filters.

## OIL-FREE: LFX SERIES

Compressor type	Maximum working pressure		FAD @ 50 Hz			FAD @ 60 Hz			Installed motor power		Noise level dB(A)
	bar	psig	l/s	m³/h	cfm	l/s	m³/min	cfm	kW	hp	
LFX 0.7	10	145	1.02	3.6	2.16	1.35	4.8	2.86	0.55	0.7	64
LFX 1.0	10	145	1.38	4.8	2.92	1.46	5.2	3.09	0.75	1	64
LFX 1.5	10	145	2.07	7.5	4.38	2.39	8.6	5.06	1.1	1.5	67
LFX 2.0	10	145	2.53	9.1	5.36	-	-	-	1.5	2	67

\* Comes with a choice of refrigerant, desiccant or membrane dryer technology and appropriate filters.

## OIL-FREE: LFXD SERIES

Compressor type	Maximum working pressure		FAD @ 50 Hz			FAD @ 60 Hz			Installed motor power		Noise level dB(A)
	bar	psig	l/s	m³/h	cfm	l/s	m³/min	cfm	kW	hp	
LFXD 0.7	10	145	1.02	3.6	2.16	1.35	0.08	2.86	0.55	0.7	61
LFXD 1.0	10	145	1.38	4.8	2.92	1.46	0.09	3.09	0.75	1	62
LFXD 1.5	10	145	2.07	7.5	4.39	2.39	0.14	5.06	1.1	1.5	63
LFXD 2.0	10	145	2.53	9.1	5.36	3.08	0.18	6.53	1.5	2	64

\* Comes with a choice of refrigerant, desiccant or membrane dryer technology and appropriate filters.

## LUBRICATED: LE SERIES

Compressor type	Maximum working pressure		FAD @ 50 Hz			FAD @ 60 Hz			Installed motor power		Noise level dB(A)	
	bar	psig	l/s	m³/min	cfm	l/s	m³/min	cfm	kW	hp	Unsilenced	Base-mounted, silenced
LE 2-10	10	145	3.4	0.2	7.2	3.9	0.23	8.3	1.5	2	78/80	63/65
LE 3-10	10	145	4.4	0.26	9.3	5.1	0.31	10.8	2.2	3	79/81	64/66
LE 5-10	10	145	8.4	0.5	17.8	9.7	0.58	20.6	4	5.5	79/81	64/66
LE 7-10	10	145	11.7	0.7	24.8	13.6	0.82	28.2	5.5	7.5	80/82	68/70
LE 10-10	10	145	15.7	0.94	33.3	18.2	1.04	38.6	7.5	10	81/81	68/69
LE 15-10	10	145	23.9	1.43	50.7	28.7	1.7	60.8	11	15	89/90	78/78
LE 20-10	10	145	31.7	1.90	67.2	37.2	2.26	78.8	15	20	88/89	76/78

\* Comes with a choice of refrigerant, desiccant or membrane dryer technology and appropriate filters.

## LUBRICATED: LT SERIES

Compressor type	Maximum working pressure		FAD @ 50 Hz			FAD @ 60 Hz			Installed motor power		Noise level dB(A)	
	bar	psig	l/s	m³/min	cfm	l/s	m³/min	cfm	kW	hp	Unsilenced	Base-mounted, silenced
LT 2-15	15	218	3.1	0.19	6.6	3.6	0.22	7.6	1.5	2	78/80	63/65
LT 3-15	15	218	4	0.25	8.5	4.7	0.28	10	2.2	3	79/81	64/66
LT 5-15	15	218	6.7	0.4	14.2	7.9	0.47	16.7	4	5.5	79/81	64/66
LT 7-15	15	218	9.2	0.56	19.5	10.9	0.65	23.1	5.5	7.5	80/81	68/70
LT 10-15	15	218	11.7	0.7	24.8	-	-	-	7.5	10	81/-	68
LT 2-20	20	290	2.1	0.13	4.5	2.7	0.16	5.7	1.5	2	78/80	63/65
LT 3-20	20	290	2.9	0.17	6.1	3.6	0.22	7.6	2.2	3	79/81	64/66
LT 5-20	20	290	5	0.3	10.6	6.3	0.38	13.3	4	5.5	79/81	64/66
LT 7-20	20	290	6.7	0.4	14.2	8.4	0.5	17.8	5.5	7.5	80/82	68/70
LT 10-20	20	290	9.1	0.55	19.3	13.6	0.82	28.8	7.5	10	81/83	68/70
LT 15-20	20	290	15.1	0.91	29.1	17.7	1.06	37.5	11	15	86/89	75/83
LT 20-20	20	290	18	1.08	38.1	20.9	1.25	44.3	15	20	86/88	78/81
LT 3-30	30	435	2.5	0.15	5.3	3.1	0.19	6.6	2.2	3	79/81	64/66
LT 5-30	30	435	4.4	0.26	9.3	5.5	0.33	11.7	4	5.5	79/81	64/66
LT 7-30	30	435	6.4	0.38	13.6	8	0.48	17	5.5	7.5	80/82	68/70
LT 10-30	30	435	8.5	0.51	18	-	-	-	7.5	10	81/-	68/-
LT 15-30	30	435	9.3	0.56	19.7	11.1	0.67	23.5	11	15	85/89	76/85
LT 20-30	30	435	17	1.02	36	19.7	1.18	41.7	15	20	86/88	80/83

\* Unit performance measured according to ISO 1217, Ed. 4, Annex C-2009.  
 \*\* Mean noise level measured at a distance of 1 m according to ISO 2151/Pneurop/Cagi PN8NTC2 test code; tolerance 3 dB(A).  
 \*\*\* Comes with a choice of refrigerant, desiccant or membrane dryer technology and appropriate filters.

## HIGH-PRESSURE: LB BOOSTER SERIES

Compressor type	Maximum inlet pressure		Maximum outlet pressure		Recommended inlet flow @ 50hz		Recommended inlet flow @ 60hz		Outlet flow @ 50hz (40 bar)		Outlet flow @ 60hz (40 bar)		Installed motor power @ 50hz		Installed motor power @ 60hz	
	bar	psi	bar	psi	l/s	cfm	l/s	cfm	l/s	cfm	l/s	cfm	kW	hp	kW	hp
LB 15	6	87	40	580	29	61	33	70	24.2	51	28.1	60	11	15	13	17
LB 20	6	87	40	580	48	101	55	116	40	85	46.4	98	15	20	18	24

\* Electrical power  
 230/3/50 230/3/60  
 380/3/50 460/3/60  
 400/3/50 575/3/60  
 500/3/50  
 \*\* 50hz units come standard with CE approval; 60hz units standard with UL approval.  
 \*\*\* Different voltages are available upon request.

Compressor type	FAD		Intake pressure	Maximum outlet pressure	Revolution	Power	Noise	Weight	Dimensions	
	l/min	m³/h	bar	bar	rpm	hp-kW	dB	Kg	lbs	cm (LxWxH)
LB 7-300	140-550	8.4-33	4-11	300	1350	7.5-5.5	68	260	573	75x108x140

## ***COMMITTED TO SUSTAINABLE PRODUCTIVITY***

We stand by our responsibilities towards our customers, towards the environment and the people around us. We make performance stand the test of time. This is what we call – Sustainable Productivity.



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Designs and specifications are subject to change without notice or obligation.  
Read all safety instructions in the manual before usage.

**Atlas Copco**