

# ***INDUSTRIAL PISTON COMPRESSORS***

0.7-20 hp / 0.5-15 kW

*Atlas Copco*







# OIL-FREE PISTON COMPRESSORS

## LZ, LF, LFx & LFD 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 LFD), 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.



### 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.

- ① Automotive style **cylinders** made of high silicium 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.



### 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.



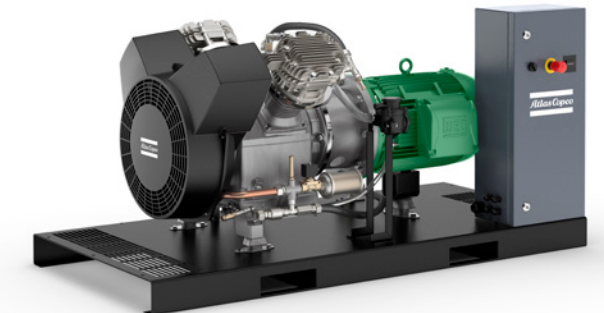
#### COMPACT

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

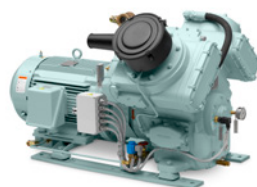
- Based on proven, reliable LT piston compressor design.
- Inlet and outlet safety valve protection.
- Steel valve plates with innovative zinc-based microspathe coating for additional protection.

### 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<br>& LFXD | LF | LZ | LE | LT | LB<br>(40 bar) | LB<br>(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 | Vessel  | Version   | Dewpoint FF |     |
|-----------------|--------------------------|------|-------------|--------|------|-------------|--------|------|-----------------------|-----|-------------|---------|-----------|-------------|-----|
|                 | bar                      | psig | l/s         | m³/min | cfm  | l/s         | m³/min | cfm  | kW                    | hp  | dB(A)       | l       |           | ° 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 – 230/390/460 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 |
|-----------------|--------------------------|------|-------------|--------|-------|-------------|--------|-------|-----------------------|----|-------------|
|                 | bar                      | psig | l/s         | m³/min | cfm   | l/s         | m³/min | cfm   | kW                    | hp | dB(A)       |
| 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 |
|-----------------|--------------------------|------|-------------|------|------|-------------|--------|------|-----------------------|-----|-------------|
|                 | bar                      | psig | l/s         | m³/h | cfm  | l/s         | m³/min | cfm  | kW                    | hp  | dB(A)       |
| 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: LFDx SERIES

| Compressor type | Maximum working pressure |      | FAD @ 50 Hz |      |      | FAD @ 60 Hz |        |      | Installed motor power |     | Noise level |
|-----------------|--------------------------|------|-------------|------|------|-------------|--------|------|-----------------------|-----|-------------|
|                 | bar                      | psig | l/s         | m³/h | cfm  | l/s         | m³/min | cfm  | kW                    | hp  | dB(A)       |
| LFDx 0.7        | 10                       | 145  | 1.02        | 3.6  | 2.16 | 1.35        | 0.08   | 2.86 | 0.55                  | 0.7 | 61          |
| LFDx 1.0        | 10                       | 145  | 1.38        | 4.8  | 2.92 | 1.46        | 0.09   | 3.09 | 0.75                  | 1   | 62          |
| LFDx 1.5        | 10                       | 145  | 2.07        | 7.5  | 4.39 | 2.39        | 0.14   | 5.06 | 1.1                   | 1.5 | 63          |
| LFDx 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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Read all safety instructions in the manual before usage.

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