

**Powered by piston,  
innovated for  
industrial**

**For continuous  
demanding operation**

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## 100% Duty cycle



The ABAC Tech compressor range of air compressors has been developed to maximise efficiency and minimise downtime in your workplace by providing air on demand, whenever you need it.

### What is a 'duty cycle'?

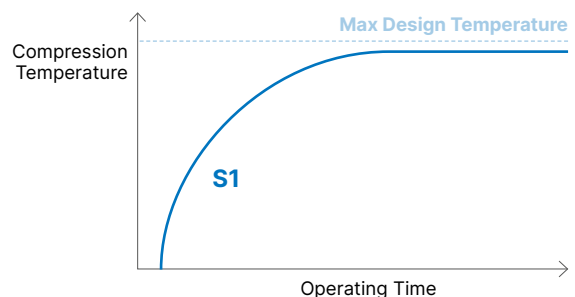
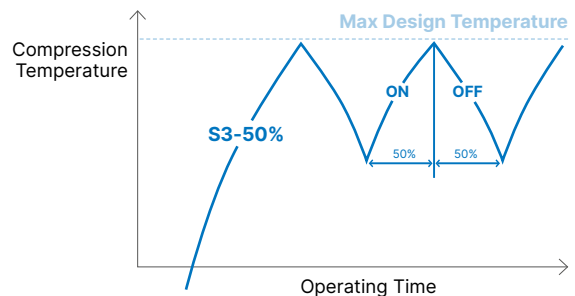
Air compressor duty cycles are easy to understand but often difficult to read because there are no universal characters to represent these values among compressor manufacturers.

Simply put, an air compressor duty cycle is the amount of time a compressor will deliver pressurised air within a total cycle time. If listed as a percentage, you can simply take the number of seconds or minutes the figure represents and subtract that from the total cycle time.

When listed as a percentage, the duty cycle is equal to the compressor's run time divided by the total cycle time. So, this percentage equates to the amount of time you can keep the compressor on, plus the corresponding cool-down duration.

For example, a compressor with a 50% duty cycle will need 30 minutes off for every 30 minutes on.

In general, the duty cycle formula often used for calculation is expressed as **Compressor time on / (time on + time off) = Duty Cycle percentage.**

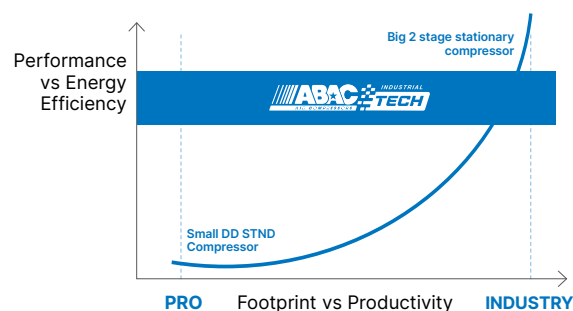


### Continuous duty cycles

Continuous duty cycles provide constant power to machinery and tools without any downtime, which improves productivity. Particularly in manufacturing environments, this is a major benefit. However, in some industries, air compressors with intermittent duty cycles are sufficient, as air is not needed continuously. It all depends on the application and size of the tools being used and our experts can advise on the most suitable products.

## How often should an air compressor cycle?

The number of times an air compressor cycles significantly impacts the air compression system's efficiency. Allowing a compressor to cycle more often than the recommended duty cycle can cause it to wear out faster.



Two main methods of increasing cycle time to deliver more air without affecting efficiency or increasing component wear:

- Increasing the tank size
- Widening the pressure band





# Introducing the ABAC Tech ATF-S for PRO Users

Whatever your profession, our **PRO** User range of air compressors is designed to deliver performance, efficiency and reliability to your business. The innovative, patented technology ensures a smooth start-up and low motor loads, delivering powerful and uninterrupted compressed air, which saves you time and money.

The ATF-S delivers market-leading reliability and performance. This new range features oil free single cast double pistons, sliding along the single axis inside the ceramic-coated aluminium cylinder, which reduces wear and increases durability.

Traditional movement



AXIAL movement



- 1 62mm ball bearing. Max temp. 200°C.  
Max dynamic load 22.5kN
- 2 Double PTFE guide rings (14+14mm)
- 3 Roller bearing. Max temp 200°C.  
Max dynamic load 28kN
- 4 Enlarged con-rod for non-stop operation at 10 Bar
- 5 Improved piston head for higher efficiency





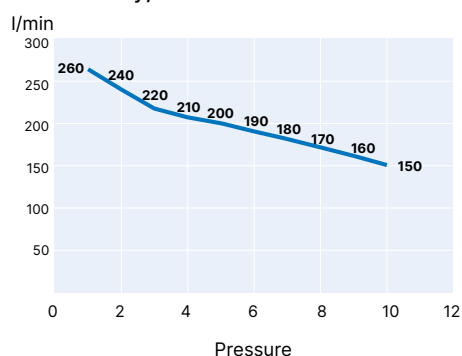
# ABAC Tech Pro ATF-S

## Performance data

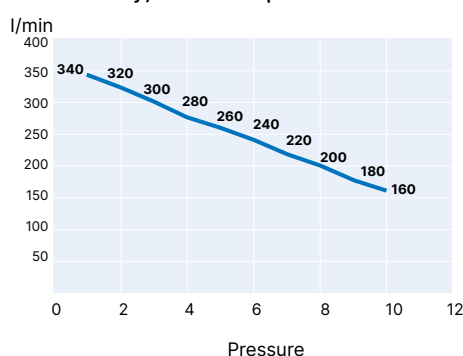
	ATF-S 3 		ATF-S 4 	
V-Hz	230/1/50	400/3/50	230/1/50	400/3/50
Air-end type	Oil free piston	Oil free piston	Oil free piston	Oil free piston
Construction	Industrial	Industrial	Industrial	Industrial
kW (hp)	2.2 (3.00)	2.2 (3.00)	3.2 (4.30)	3.2 (4.30)
RPM	1400	1400	1400	1400
Cylinders	2	2	4	4
Air intake, L/min	330	330	430	480
FAD L/min (@5Bar)	200	200	260	310
Max pressure (Bar)	10	10	10	10
Noise dB(A)	68	68	72	74
Duty cycle	S1 100% (*)	S1 100% (*)	S1 100% (*)	S1 100% (*)
Maintenance Overhaul	3000hrs	3000hrs	3000hrs	3000hrs
Dimensions (LxWxH) cm	44 × 39 × 24	44 × 39 × 24	67 × 39 × 24	67 × 39 × 24
Weight Kg	24	24	47	47

(\*) The duty cycle is generally calculated by dividing the compressor run time by the full cycle time. This formula is almost always expressed as compressor run time / (run time + rest time) = duty cycle percentage. **In few words: the "Duty cycle" is the amount of time a compressor is providing consistent pressure and flow.**

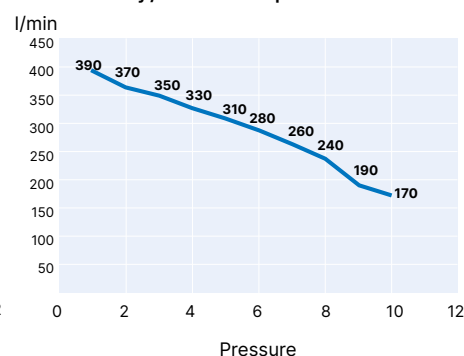
Air Delivery / ATF-S 3



Air Delivery / ATF-S 4 Monophase



Air Delivery / ATF-S 4 Three phase



## Compressor package



### Silent

Providing a better quality of work environment with very low sound levels of 68-72 dB that safeguards user wellbeing and reduces pipework for point of use operation.



Retractable handle

Rollcage protection

Lightweight

3Hp x 68dB motor



### Oil free

With zero risk of contamination and virtually maintenance free, save money on consumables and move the compressor anywhere without a problem.



4-cylinder pump

Retractable handle

Larger tank for demanding applications

Off-road wheels



### Compact

Easy to transport and suitable for any workplace, this powerful but small unit is practical and user friendly with quick set up.



5+5 Skid design

4Hp - 72dB - 430 l/min

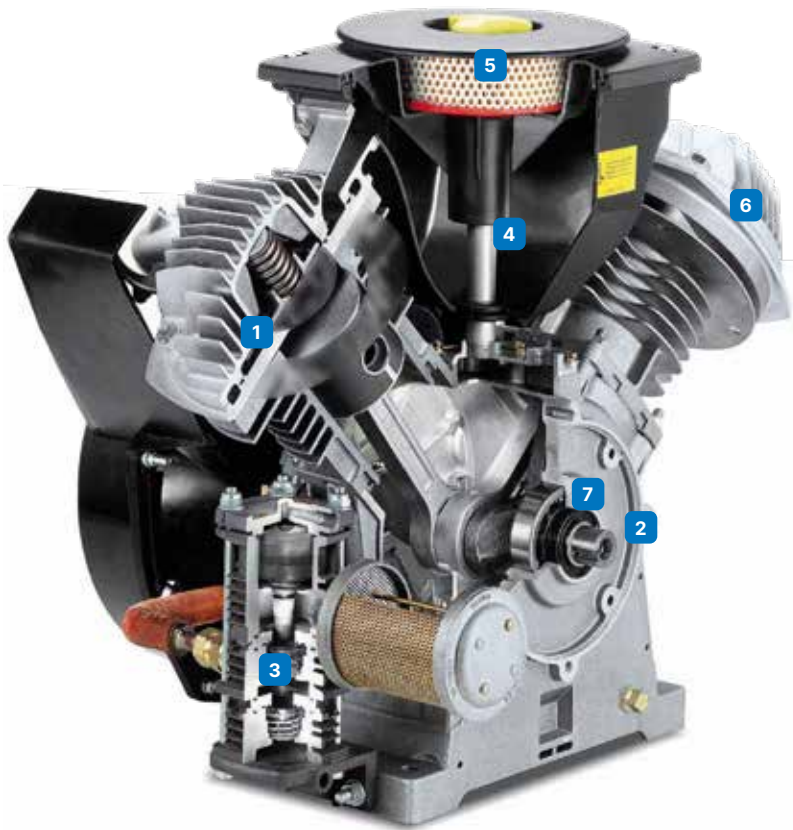
Easily portable

Off-road wheels





# Industrial pump technology



- 1** Stainless steel disk valve design and cylinders with low tolerance finishing ensure extremely low clearance, minimised friction and higher free air delivery.
- 2** Heavy-duty crankshaft ball bearings, sealed for life.
- 3** Industrial valve:
  - Designed to withstand extreme conditions and high working pressures.
  - Reduces starting torque for a longer motor lifetime and reduced energy consumption.
- 4** Oil separator on the carter ventilating line reduces oil consumption.
- 5** High-efficiency inlet air filter with large filtration surface.
- 6** Die-cast aluminium crankcase and finned cylinder heads with high cooling characteristics, for long lifetime and efficient operation.
- 7** Direct coupled IE3 motor offers highest energy efficiency.



## Continuous operation

Delivering 100%\* duty cycle with uninterrupted air on demand, ABAC Tech industrial compressors add value to your business by minimising the risk of equipment downtime and reducing maintenance costs.



## Robust design

Designed to withstand extreme conditions and high working pressures.



## Low operating costs

Simple maintenance thanks to easily accessible parts with long maintenance intervals and service kits available.



## Significant energy savings

Direct drive transmission allows major energy savings compared to belt-driven compressors.



## Higher reliability

High quality materials for premium performance and a long life.



## Quality air

Aluminium V-type pump heats up fast enough to vaporise any condensate, extending the lifetime of your equipment.

\* Within reference conditions.





## ABAC Tech ATL



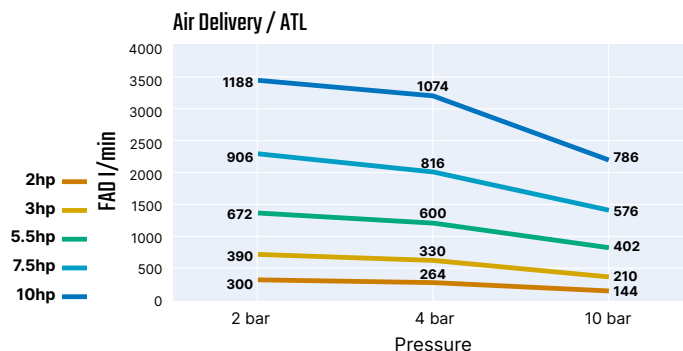
The ATL oil lubricated industrial piston compressor range has been designed specifically to support small industrial applications requiring powerful, reliable air.

- Oil lubricated technology
- Single stage up to 10 Bar
- ATL generates high quality air at the lowest operating temperatures in the industry with minimal oil carry over

### Performance data

	ATL 2hp	ATL 3hp	ATL 5.5hp	ATL 7.5hp	ATL 10hp
<b>V-Hz</b>	400/3/50 and 230/1/50	400/3/50 and 230/1/50	400/3/50	400/3/50	400/3/50
<b>Air-end type</b>	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated
<b>Construction</b>	Industrial	Industrial	Industrial	Industrial	Industrial
<b>kW (hp)</b>	1.5 (2)	2.2 (3)	4 (5.5)	5.5 (7.5)	7.5 (10)
<b>RPM</b>	1500	1500	1500	1500	1500
<b>Cylinders</b>	2	2	2	2	2
<b>Air intake, L/min</b>	408	504	918	1146	1560
<b>FAD L/min (@7Bar)</b>	204	264	504	702	942
<b>Max pressure (Bar)</b>	10	10	10	10	10
<b>Noise dB(A)</b>	78	79	79	80	81
<b>Duty cycle</b>	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)

Unit performance measured according to ISO 1217, Annex C, latest edition.  
Noise level measured according to ISO 2151 2004





## ABAC Tech ATF



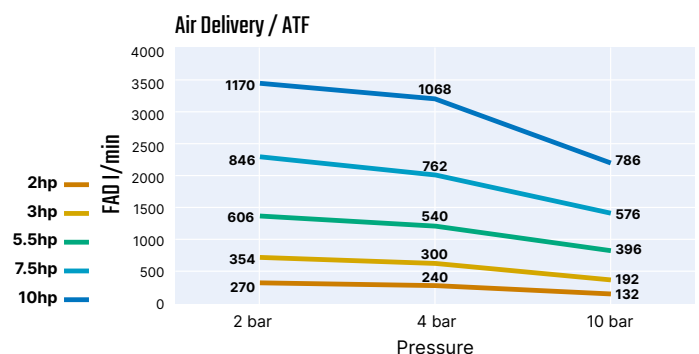
ATF compressors deliver clean air, which is free of any contamination, thereby avoiding damage to downstream equipment.

- Oil free technology
- Single stage up to 10 Bar
- Proven design with nickel plated aluminium cylinders ensures high durability as pistons are coated with Teflon, to allow lowest friction.

### Performance data

	ATF 2	ATF 3	ATF 5.5	ATF 7.5	ATF 10
<b>V-Hz</b>	400/3/50 and 230/1/50	400/3/50 and 230/1/50	400/3/50	400/3/50	400/3/50
<b>Air-end type</b>	Oil free	Oil free	Oil free	Oil free	Oil free
<b>Construction</b>	Industrial	Industrial	Industrial	Industrial	Industrial
<b>kW (hp)</b>	1.5 (2)	2.2 (3)	4 (5.5)	5.5 (7.5)	7.5 (10)
<b>RPM</b>	1500	1500	1500	1500	1500
<b>Cylinders</b>	2	2	2	2	2
<b>Air intake, L/min</b>	408	504	918	1146	1470
<b>FAD L/min (@7Bar)</b>	186	240	492	660	930
<b>Max pressure (Bar)</b>	10	10	10	10	10
<b>Noise dB(A)</b>	82	83	83	84	86
<b>Duty cycle</b>	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)

Unit performance measured according to ISO 1217, Annex C, latest edition.  
Noise level measured according to ISO 2151 2004





## ABAC Tech ATH



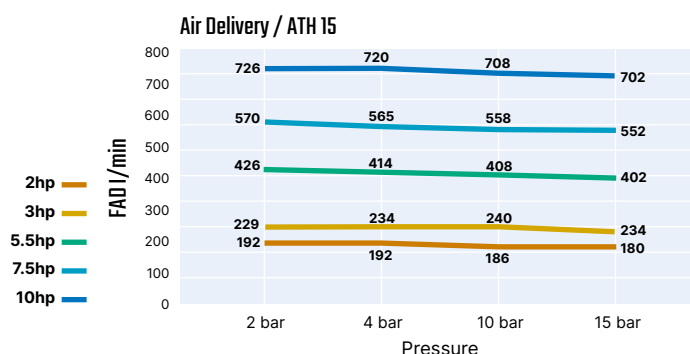
ATH industrial pistons are designed for pressures of 15, 20 or 30 Bar. Perfect for more demanding applications where continuous high-pressure air is essential. Built for the most challenging work environments.

- Oil lubricated aluminium pistons
- Double stage compression for higher pressure up to 30 Bar.
- Higher power capacity up to 20hp.
- Proven design and quality materials deliver premium operation and an extra long life.

### Performance data

	ATH 15 - 2	ATH 15 - 3	ATH 15 - 5.5	ATH 15 - 7.5	ATH 15 - 10
<b>V-Hz</b>	400/3/50 and 230/1/50	400/3/50 and 230/1/50	400/3/50	400/3/50	400/3/50
<b>Air-end type</b>	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated
<b>Construction</b>	Industrial	Industrial	Industrial	Industrial	Industrial
<b>kW (hp)</b>	1.5 (2)	2.2 (3)	4 (5.5)	5.5 (7.5)	7.5 (10)
<b>RPM</b>	1500	1500	1500	1500	1500
<b>Cylinders</b>	2	2	2	2	2
<b>Air intake, L/min</b>	252	318	570	780	1002
<b>FAD L/min (@15Bar)</b>	180	234	402	552	702
<b>Max pressure (Bar)</b>	15	15	15	15	15
<b>Noise dB(A)</b>	78	79	79	80	81
<b>Duty cycle</b>	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)

Unit performance measured according to ISO 1217, Annex C, latest edition.  
Noise level measured according to ISO 2151 2004

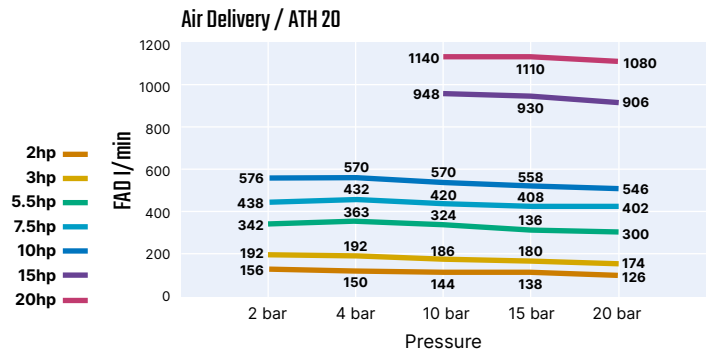




## Performance data

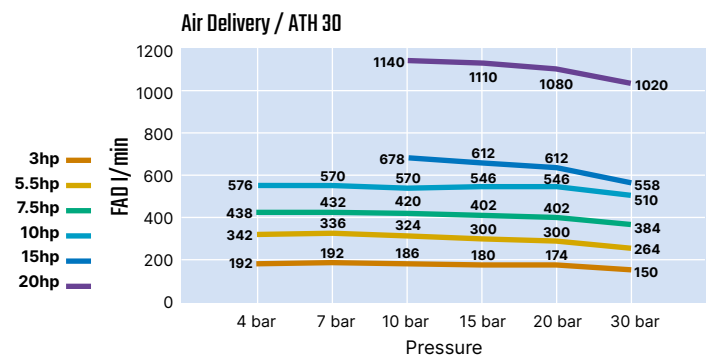
	ATH 20 - 2	ATH 20 - 3	ATH 20 - 5.5	ATH 20 - 7.5	ATH 20 - 10	ATH 20 - 15	ATH 20 - 20
<b>V-Hz</b>	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>Air-end type</b>	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated
<b>Construction</b>	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial
<b>kW (hp)</b>	1.5 (2)	2.2 (3)	4 (5.5)	5.5 (7.5)	7.5 (10)	11 (15)	15 (20)
<b>RPM</b>	1500	1500	1500	1500	1500	1500	1500
<b>Cylinders</b>	2	2	2	2	2	2	2
<b>Air intake, L/min</b>	204	252	456	570	780	1392	1716
<b>FAD L/min (@20Bar)</b>	126	174	300	402	546	906	1080
<b>Max pressure (Bar)</b>	20	20	20	20	20	20	20
<b>Noise dB(A)</b>	78	79	79	80	81	86	86
<b>Duty cycle</b>	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)	S1 100%(*)

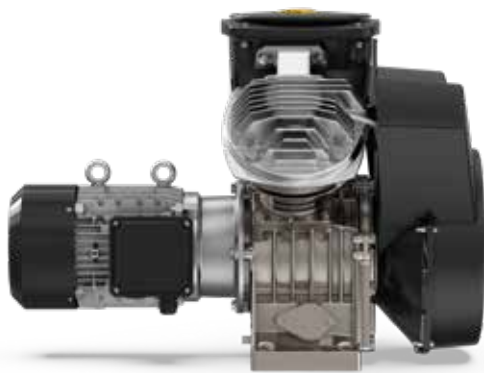
Unit performance measured according to ISO 1217, Annex C, latest edition.  
Noise level measured according to ISO 2151 2004



	ATH 30 - 3	ATH 30 - 5.5	ATH 30 - 7.5	ATH 30 - 10	ATH 30 - 15	ATH 30 - 20
<b>V-Hz</b>	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>Air-end type</b>	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated	Oil lubricated
<b>Construction</b>	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial
<b>kW (hp)</b>	2.2 (3)	4 (5.5)	5.5 (7.5)	7.5 (10)	11 (15)	15 (20)
<b>RPM</b>	1500	1500	1500	1500	1500	1500
<b>Cylinders</b>	2	2	2	2	2	2
<b>Air intake, L/min</b>	252	456	570	780	996	1710
<b>FAD L/min (@30Bar)</b>	150	264	384	510	558	1020
<b>Max pressure (Bar)</b>	30	30	30	30	30	30
<b>Noise dB(A)</b>	79	79	80	81	85	86
<b>Duty cycle</b>	S1 85%(*)	S1 85%(*)	S1 85%(*)	S1 85%(*)	S1 85%(*)	S1 85%(*)

Unit performance measured according to ISO 1217, Annex C, latest edition.  
Noise level measured according to ISO 2151 2004





**Power pack**



**Base mounted**



**Tank mounted**



**Full feature**

## 4 factory options

### **Silencing hood**

Metal hood with noise insulating foam

### **Timer condensate drain**

Automatic condensate drain on the tank

### **Oil level switch**

Sensor in crankcase measures oil level

### **Low duty cycle**

Additional device (solenoid valve with silencer and relay) on aftercooler line to blow off the line, drain condensate and run unit for 60 seconds without load



# Applications

## Construction Pro & Industrial

The construction sector needs air compressors for a range of pneumatic tools and equipment. Variable flow streams are required for jackhammers, nail guns, drills, handling, compactors and lifting operations, for example.



## Manufacturing Industrial

From plastics and metal fabrication to food, beverage, and pharmaceutical packaging, high tech compressors not only enhance manufacturing productivity, they provide contaminant-free and tightly sealed products, where safety is mandatory. OIL FREE compressors ensure a 100% clean seal while also powering conveyor belts, sprayers, and presses.







## Agriculture Pro & industrial

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Machinery used in arable and livestock farming and commercial greenhouses all depend on reliable, clean air. From dairy farms to irrigation systems, compressed air is essential to the safe and efficient operation of agricultural businesses. From tractor-mounted equipment such as crop sprayers, as well as pumps and crop conveyors, compressed air powers a variety of heavy and expensive machinery.



## Rail Pro & industrial

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High tech compressors are integral to the safe and effective operation of air braking systems, suspension and automatic doors for underground and overground rolling stock, that need powerful and reliable compressed air. Without it, locomotives and subway systems across the world would not be able to function.



## Applications



### Automotive Pro & Industrial

Compressed air is fundamental not only to the manufacture of vehicles but also in aftermarket garages and body repair workshops. From applications such as tyre inflation, spray painting and cleaning, every automotive business will utilise compressed air in some capacity, to ensure safe, speedy and high quality results.



### Dry Cleaning Industrial

Energy-efficient air compressors can save commercial dry cleaners up to 25 per cent on their utility consumption and operating costs. Accommodating a range of sizes and pressure bands, these air compressors can de-wrinkle, press clothes, spot treat and recover solvents from the most delicate materials that some washing machinery cannot handle.



## Carpentry Pro

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Dedicated to professional craftspeople who use pneumatic tools with high duty cycles, our Pro User range is the perfect choice for carpentry, furniture manufacture and other woodworking applications. Offering a solution for different pressurisation needs, our air compressors have been designed to support every type of pneumatic tool and equipment, from nail guns to sandblasters and air sanders.



## Pressure Washing Pro & Industrial

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Fast, user-friendly and labour-saving, industrial and domestic pressure washers are perfect for cleaning vehicles, buildings, pavements, decking, patios and fencing in a commercial and residential environment. From 300-litre industrial units to home power washers, compressed air pressure washers make these jobs as easy as pressing the "on" button. OIL FREE units are strongly preferred to ensure clean air delivery.



## Applications



### Pharmaceutical Industrial



The pharmaceutical industry requires an extremely high standard of cleanliness and accuracy when it comes to equipment. Air compressors are essential for operations such as product movement on conveyor systems, coating applications on pharmaceuticals, pressure maintenance in mixing and holding tanks, and bottling or packaging products. By ensuring that their air compressors remain oil-free and dry at all times, the industry can be assured that they are using the most accurate and efficient tools available.



### Energy Exploration Industrial



In order to minimise repair and maintenance costs during energy exploration, it is essential that operations implement the most reliable power source. This is especially needed in onshore and offshore sites and where turbulent seas or other uncontrollable conditions can affect the equipment. An air compressor is the ideal choice for this situation since it can be used for inserting and withdrawing reactor rods, controlling valves in steam and coolant circuits from a distance, and powering ventilation systems for boiler houses.



## CAD/CAM for Medical Segment Pro

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CAD/CAM technology has revolutionised therapeutic solutions across fields such as dental repair and prosthesis, implantology, oral surgery, and orthodontics. The majority of machines making use of this technology are installed in laboratories or small offices where space is limited; thus the need for compressed air systems that operate with low pressure and flow, yet are low noise and oil-free. This is why ABAC TECH could be an ideal partner.



## Sandblasting Pro & industrial

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Is the operation of forcibly propelling a stream of abrasive material against a surface under high pressure. Compressed air is used to propel the blasting material (often called the media). Blast facilities come in many sizes, some of which are big enough to accommodate very large or uniquely shaped objects. Equipped with a material recycling or media reclamation system to collect abrasive blasting media so it can be used again; these can be automated by a pneumatic system installed on the floor of the blast room.





**Air. Anytime. Anywhere.**

**Powered by piston,  
innovated for industrial**

**Contact your local ABAC representative now**

[www.abacaircompressors.com](http://www.abacaircompressors.com)

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