

# Dedicated to aerospace

Power tools for productivity



Sustainable Productivity

Atlas Copco

### FINAL ASSEMBLY

WING MARRIAGE	■ DRILLS
ENGINE TO WING	■ RIVETING SYSTEMS
LANDING GEAR	■ NUTRUNNERS
SEATS	■ SCREWDRIVERS ■ SANDERS

### MAINTENANCE, MRO

TIRE REPLACEMENT	■ DRILLS
STRUCTURAL MODIFICATIONS	■ RIVETING SYSTEMS
CABIN REFURBISHMENT	■ NUTRUNNERS
STRIP AND REPAINT	■ SCREWDRIVERS ■ SANDERS

# WATCH YOUR PRODUCTI

With the increasing focus on lean manufacturing, aircraft can be produced faster. Structures are fabricated in larger pieces and fewer parts need to be joined together at final assembly. The overall aim is to raise productivity – and that is where Atlas Copco comes in.

Atlas Copco has a dedicated range of assembly and material removal solutions for aerospace applications throughout the aircraft, all designed to raise the productivity of your operation.

Key criteria for our tool development are high efficiency and performance, combined with quality, good ergo-nomics and low cost of ownership.

#### **State-of-the-art assembly tools**

Atlas Copco pneumatic assembly tools offer advanced ergonomic designs, high power and efficiency, with low noise levels and air consumption.

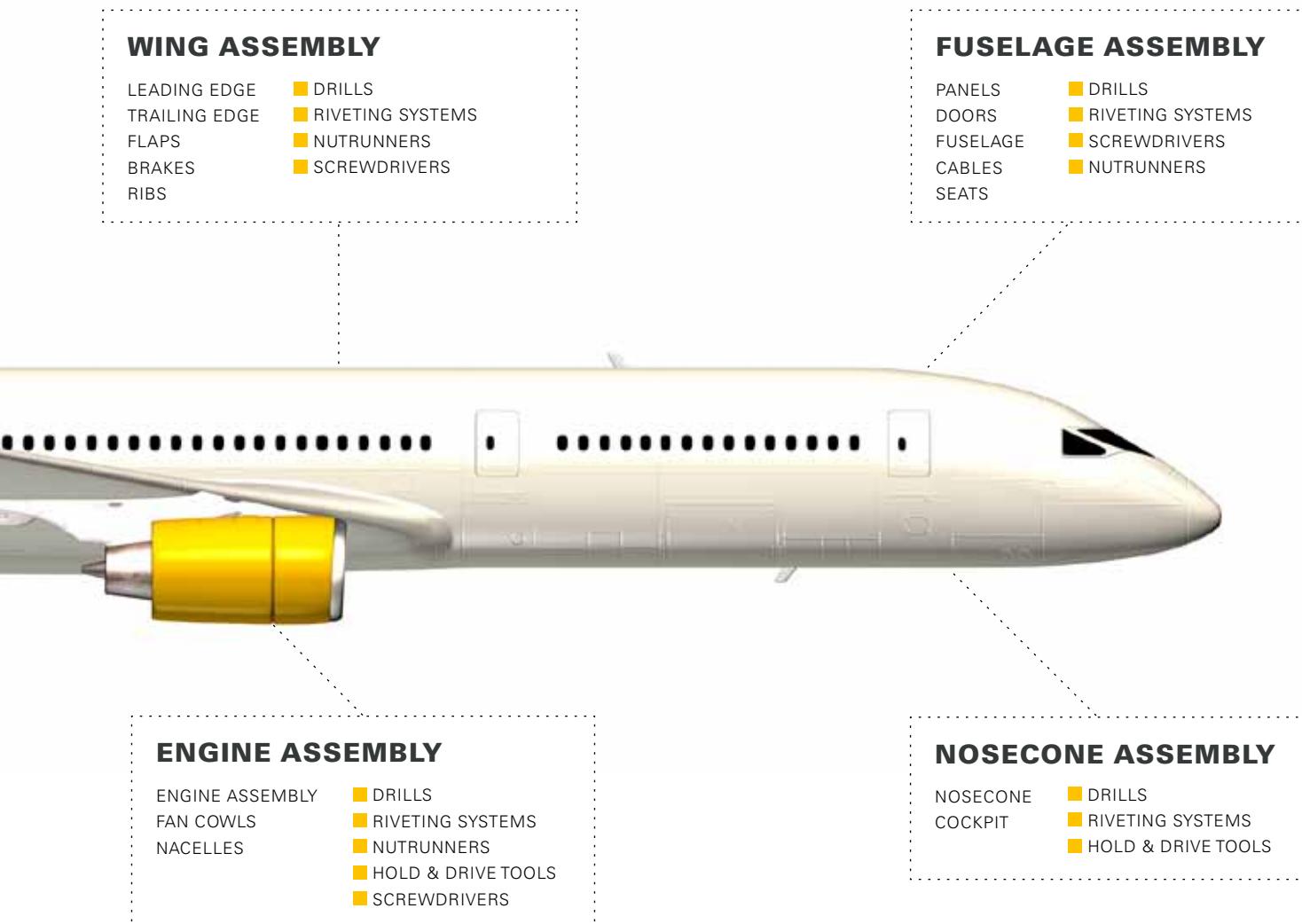
There are critical joints in many areas of an airplane, including landing gear, wing connections, seats and doors. Increasing use of titanium and

composites such as kevlar, calls for even more advanced tightening techniques. Partnered with Power Focus controllers, our advanced Tensor electric assembly tools, including cordless, battery driven models, provide quality assured tightening, with joint verification and traceability. They put your operation on the path to zero-fault production.

#### **Ergonomic material removal tools**

Atlas Copco offers a full range of material removal tools for sanding, grinding and drilling. The ergonomic designs

Katalog pobrano z serwisu [www.katalogi-narzedziowe.pl](http://www.katalogi-narzedziowe.pl)



# VITY TAKE OFF!

of our lightweight riveting systems make them highly operator friendly.

Ergonomic designs and dust extraction systems mean that operators can work with our sanders all day long without fatigue or health issues.

The use of composites also creates a need for more advanced drilling equipment. As the technology leader, Atlas Copco invests in continuous product development which ensures that all our tools meet the latest demands in aircraft manufacturing situations.

## Customer support is just as important

We know it's not enough to supply the most productive tools on the market. Equally important are our world-class logistics, delivery capabilities, and local support for customers anywhere in the world. Atlas Copco is a top performer in all these fields.

## We are committed to your superior productivity

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# RIVETING SYSTEMS

## APPLICATIONS



- WING ASSEMBLY
- FUSELAGE ASSEMBLY
- TAIL ASSEMBLY
- FINAL ASSEMBLY
- MAINTENANCE

## Challenges for the tool supplier

Excessive vibration during the riveting process poses the risk of injuries to nerve endings and circulation problems (white fingers) for aerospace workers in various parts of the world. Highly skilled riveters are often forced to change jobs or retire because, for the sake of their health, they cannot risk continuing this type of work.

For many large aircraft manufacturers the resulting costs are a heavy burden to bear. Productivity losses, prolonged absenteeism due to sickness, and the need to train new workers cost huge sums annually.

## Atlas Copco's response

Solving vibration problems in riveting tools, while maintaining high tool performance was a complex task requiring dedication, experience and know-how. Atlas Copco was the first tool supplier to address the issue and find a solution that minimized the riveter's exposure to vibration, thus cutting costs and raising individual productivity.

Atlas Copco's unique RRH recoilless riveting hammer has an air cushion behind the hammer piston which efficiently kills vibrations. The same air dampening technique is used in the RBB bucking bars which can be made compatible with each company's own dollies.

## Putting the operator first

At Atlas Copco, tool development has been guided by ergonomists for more than 50 years. Prioritizing the health and well-being of the operator is a key aspect of our power tool design.



**RRH 06-TS – the aerospace favourite**

The RRH 06-TS is the world's most sold riveting hammer! Aircraft manufacturers are rapidly discovering the productivity benefits of Atlas Copco RRH riveting systems. Combine an RRH riveting hammer with a vibration-damped RBB bucking bar and the result is smooth, comfortable operation for riveter and partner.

### ■ Unique RRH air servo system

Adapts automatically to varying feed force situation during riveting during riveting with efficient recoil damping.

**■ Protective sleeve** Safeguards the user from excessive vibration transmitted to the forward hand when aligning the hammer-die on the workpiece.

### ■ Trigger with adjustable power

Adjustable power gives the operator total control over the riveting process.

**■ Versatile** RRH can easily cope with rivet diameters of up to 13 mm.





## Vought chooses Atlas Copco tools for their superior ergonomics

At its Nashville site in Tennessee, USA, Vought Aircraft Industries builds large wing components for the Airbus A330/A340 family of commercial aircraft, the Gulfstream G350 and G450 series business jet, and the Cessna Citation business jet. The company also builds the empennage for Lockheed Martin's C-130J military aircraft.

Mike Kelley, Safety Manager at Nashville: "I first became familiar with Atlas Copco tools in 1995 when I

worked for Vought in Dallas. We investigated various air-powered tools from an ergonomic standpoint. Atlas Copco air-powered hand tools were the most advanced tools we came across. They are smaller, lighter, and engineered so well that they barely vibrate in your hand."

Recently, each Vought site made an assessment of ergonomic injuries. One area was cumulative trauma caused by tools with repetitive motion. At the

Nashville site the focus is on drills and rivet guns.

"There was some reluctance to invest in Atlas Copco tools due to the cost," relates Mike Kelley. "But when we analyzed the cost benefits of longer tool life and Atlas Copco's top-notch service, we decided to make the investment. We are now buying new Atlas Copco air-powered hand tools to the value of USD 250,000 annually for the next five years."

# DRILLS

## APPLICATIONS



- WING ASSEMBLY
- FUSELAGE ASSEMBLY
- TAIL ASSEMBLY
- FINAL ASSEMBLY
- MAINTENANCE
- ENGINE FAN COWL/ NACELLE PRODUCTION

## Challenges

In aircraft manufacturing plants, intensive use, high productivity demands and a wide selection of materials, push drills to the edge of their performance capabilities.

There are two significant needs relating to hand-held drills. The tools must be sufficiently operator-friendly to work with all day long. Also, models with different performance characteristics are needed to handle the increasingly diverse selection of material types used in today's aircraft manufacturing operations. Tool failure and production stops are un-

acceptable, therefore only high-performance products from a strong supplier can meet the industry's needs.

### Atlas Copco's response

Our deep understanding of aircraft manufacturing was gained by listening to our customers' problems and needs.

Based on your feedback, we have developed a broad portfolio of high-performance pneumatic drills that meets and surpasses the standards and criteria of the aerospace industry.

Atlas Copco pistol-grip, straight and angle drills are ergonomically designed with low noise levels and low air consumption. They are well-balanced with comfortable grips and they combine low weight with high power output, thus minimizing operator fatigue.

In Atlas Copco's range are tools suitable for drilling in different materials, including aluminum, titanium and various composites such as kevlar.

The efficiency of our high performance aerospace drills is enhanced by a wide range of air line accessories that ensure correct air pressure whatever the conditions.



### LBB 16 – smallest and lightest!

The LBB 16 is the smallest, lightest industrial drill available that has sufficient power for most aerospace applications. This tool is part of our broad portfolio of drills for use in aircraft manufacturing plants. All models feature ergonomic designs with comfortable grips, high power-to-weight ratios, low noise levels and low air consumption. All drills are lubrication free.

**LBB pistol-grip drills** Suitable for most drilling tasks. Support handle is included with high torque models. A dust extraction device is available as an option.

**LBV angle drills** Designed for drilling in awkward spaces. Versions with 30°, 45°, 90° and 360° angle heads available. Multiple lever options. Side exhaust and rear exhaust models.





## Airbus, Germany chooses ergonomically designed Atlas Copco LBS drills

"Working with Atlas Copco Tools is always a good experience. We rely on the Atlas Copco LBS 24 and LBS 36 drills for final assembly of everything that we hand drill on our aircraft. Thanks to the integrated planebase holder,

these tools have exactly the right angle at the point of entry. What's more, the base holder shortens the drill length, providing superior ergonomics, and optimizes the balance, size and weight of the drills."



# ABRASIVE TOOLS

## APPLICATIONS



- FINAL ASSEMBLY
- MAINTENANCE
- PAINT SHOPS

## Challenges

Sanders and grinders are used for many tasks in the aerospace industry, with a strong focus on maintenance operations and surface coating shops.

Ergonomically designed, operator-friendly tools are essential due to the highly productive, labour intensive work environment that typifies an aircraft manufacturing plant.

Sanding composite material requires high quality tools and efficient dust extraction solutions.

## Atlas Copco's response

Built to the highest quality standards, Atlas Copco abrasive tools are efficient, extremely reliable, and designed to meet

all aerospace industry requirements. Our ergonomically designed sanders, grinders and composite tools are light and comfortable to hold. Their high power-to-weight ratios maximize individual productivity. Effective vibration dampening and low noise levels make the tools comfortable to work with all day long.

Essential in coating and composite shops, Atlas Copco abrasive tools feature built-in dust extraction systems that collect the dust at the point of dust creation. These systems protect the operators and enable the tools to continue delivering high productivity year after year, without breakdowns. Spot suction kits are available as accessories where such systems not integrated in the tool.

## Low air consumption, high power

In Atlas Copco angle grinders, the new patented angle head design ensures continuous lubrication of the angle head gears, giving high power output with low air consumption. On many models the angle head comes with an extended guarantee.

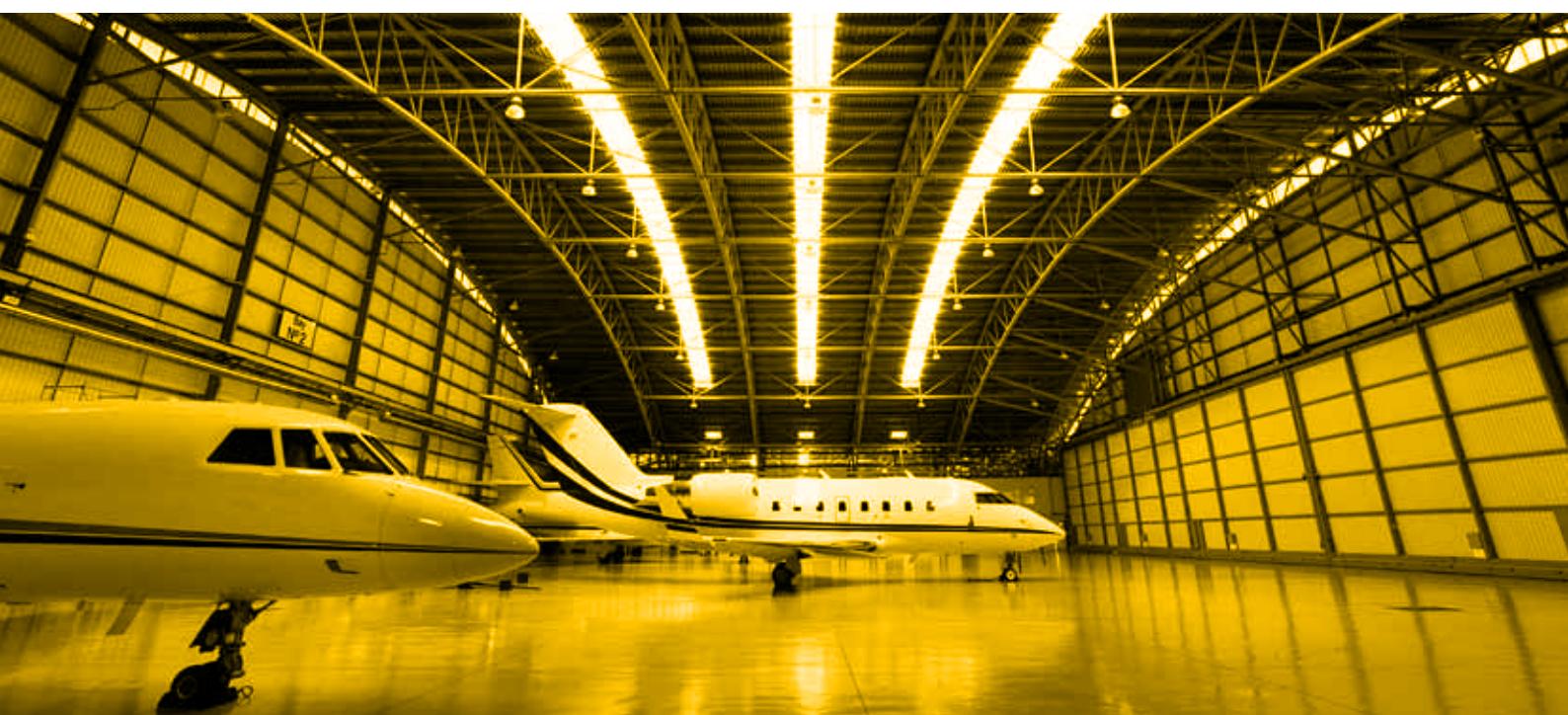


## LSV 18 – more powerful than ever

In the LSV 18 angle grinder and sander, the new patented design of the angle head ensures continuous lubrication of the gears with the help of unique sealing and cooling flanges. This results in impressively high power output with low air consumption. Built-in vibration dampening cuts burr consumption and makes the tool comfortable to operate.

**LST orbital sanders** Small, easy to operate and lubrication free. The range includes models with dust extraction.

**LSK routers for composites** Integrated dust extraction. Speed governor enables fast, effective cutting and prevents the bit from clogging. Sound dampening exhaust valve and piped-away exhaust air.





LSF 18



LST 20



LST 21



LST 22



LSF 07



LSV 38



# Pneumatic ASSEMBLY TOOLS

## APPLICATIONS



- WING ASSEMBLY
- TAIL ASSEMBLY
- FINAL ASSEMBLY
- MAINTENANCE
- ENGINE ASSEMBLY

## Challenges

In assembly operations in aircraft manufacturing plants employee health problems can be minimized and individual productivity increased by avoiding strain on tool users caused by working with large, underpowered tools.

It is desirable to avoid high reaction torque, since this will reduce strain on the operator. Ensuring high torque accuracy is another important challenge. Also, achieving high quality tightening when working with new materials.

Basic challenges related to tool design are accessibility and flexibility. Challenges for safety critical applications are discussed on page 14.

## Atlas Copco's response

For threaded fasteners and non-critical joints in aircraft manufacturing plants, Atlas Copco has developed a broad range of ergonomically designed pneumatic screwdrivers and nutrunners. The extensive screwdriver program covers all requirements in terms of speed and torque and suits all types of material used in the industry.

Our light, well-balanced tools offer high power output in relation to size, low reaction torque and handles in insulated materials that are comfortable to hold. Your operators can work with them all day with minimum strain.

Fast, accurate shut-off clutches ensure low reaction torque, minimizing the strain on the operator, while providing impressively high tightening accuracy.

Our pneumatic nutrunners are equipped with small angle heads for extra accessibility. All angle head tools feature spiral gears which increase tool durability and tool accuracy. Special attachments are available for Hi-Lock bolts.



**LUM 32 screwdriver – light and extremely powerful**

The slim, compact LUM 32 screwdriver is extremely light, yet it provides torque of up to 15.5 Nm, and a level of accessibility unmatched by larger tools. The LUM 32 has a unique design with unbeatable power-to-weight ratio and superior ergonomics due to low reaction force.

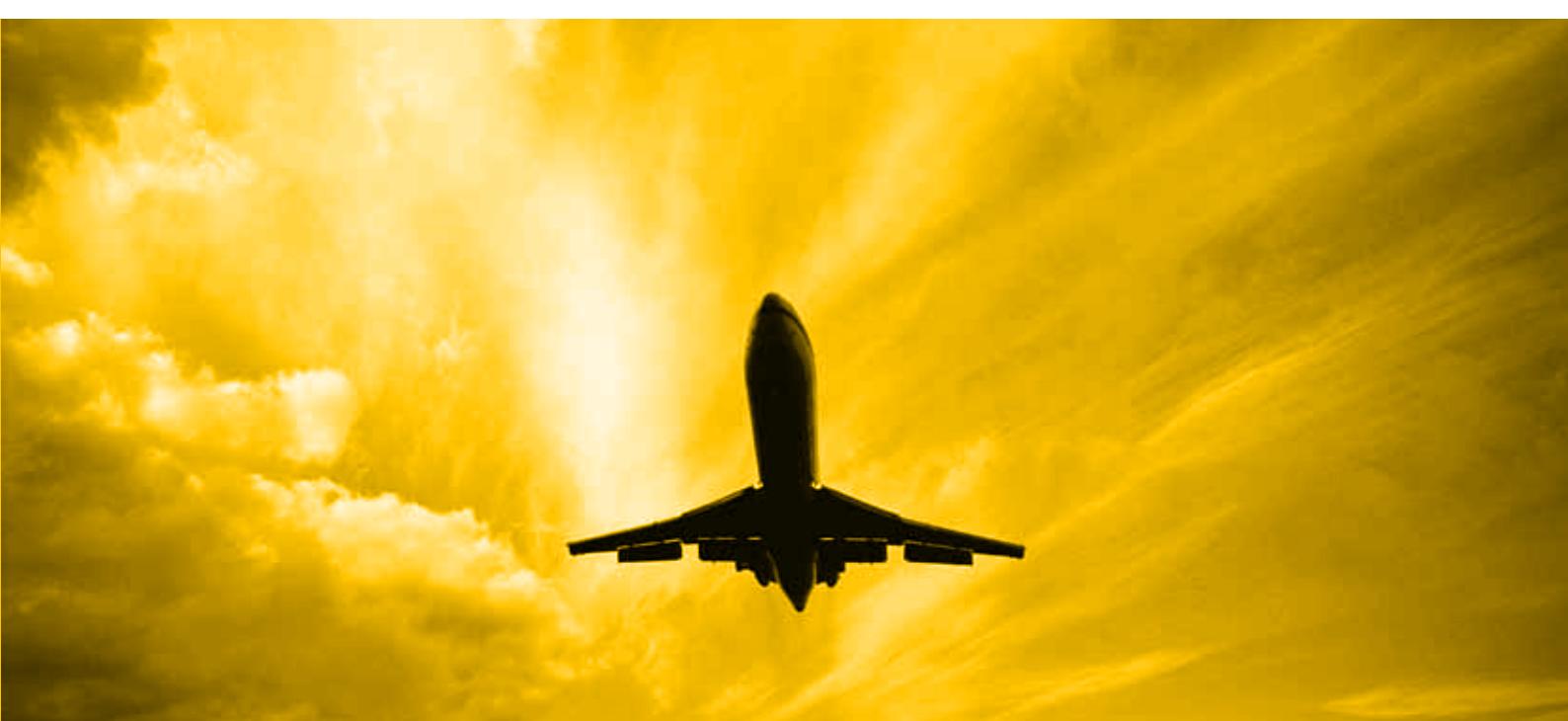
## LUM screwdrivers and LTV nutrunners – the benefits in a nutshell

- Operator-friendly designs. Well-balanced tools, that are comfortable to hold.
- High power-to-weight ratios. Work with them all day without strain.
- Slim, compact designs offer maximum flexibility and accessibility.
- Clutches with rapid shut-off mechanism ensure low reaction torque, minimum strain on the operator, and impressively high tightening accuracy.
- Durable, lubrication free and low maintenance requirements.





COURTESY OF VOUGHT AIRCRAFT INDUSTRIES



# AIR LINE ACCESSORIES

A CORRECTLY DESIGNED AIR DISTRIBUTION SYSTEM, USING GENUINE ATLAS COPCO ACCESSORIES, WILL ENSURE THAT YOU GET OPTIMUM PERFORMANCE FROM YOUR ATLAS COPCO PNEUMATIC TOOLS.

## Challenges

Sub-standard nipples, poor quality couplings, under-dimensioned hose, and badly designed safety devices can cause restrictions or leakage in your air distribution system. Subsequent loss of pressure leads to reduced tool performance and lower torque accuracy, affecting both productivity and quality. It also wastes energy.

## Are you aware that:

- A well-designed air distribution system has leakage of no more than 5% of its total capacity.
- Pneumatic tools normally give best performance at a dynamic pressure of 6.3 bar. Tools working at only 3 to 4 bar, lose 30-50% of their performance.
- Torque accuracy depends on maintaining constant air pressure.

## Atlas Copco's response

Atlas Copco offers top quality accessories with guaranteed reliability. They are designed to ensure correct air pressure and maximum tool performance. Each component is tested and selected for its low pressure drop characteristics.

- **Productivity** Atlas Copco quick couplings provide low pressure drop and higher tool power, plus one-handed operation for fast tool changing.
- **Quality** For consistent torque accuracy, your Atlas Copco air line system will have a reliable pressure regulator and minimum pressure drops at critical workstations.
- **Energy savings** Reliable pressure regulators, the correct size hose and high quality accessories will minimize leakage, eliminating energy losses.
- **Ergonomics** Atlas Copco's range of ergonomic accessories take the strain off the operator without impairing the air flow in the system.

Our Selection Guide enables you to choose the right accessories for your tools and applications.



## ErgoQIC – a unique full-flow safety coupling

Upgrade your air distribution system with ErgoQIC couplings. Their unique full-flow design will give you higher working pressure at the tool and, thus, more power. This means higher productivity and energy savings. The ErgoQIC is effective in operation and easy to handle.

**Unique full flow design** Ensures lowest possible pressure drop.

**Safety coupling** Complies with EN 983 and ISO 4414 standards. No bang or recoil when disconnecting the airline.

**Easy to handle** Flipping the air flow on and off is literally a pushover. The ball valve swivels through 75 degrees for quick connection/disconnection and safe operation.

## Time to upgrade your air distribution system?

Atlas Copco pneumatic tools work best at the design pressure of 6.3 bar (90 psi). Any pressure less than 6.3 bar (90 psi) decreases tool power. A pressure loss of 1 bar (15 psi), for example, reduces the power of our LBB 26 drill by more than 15%. By upgrading their

air distribution system with Atlas Copco air hose assembly and new high quality couplings, a major aerospace manufacturer in Australia boosted productivity by 30%.

Boost your productivity with the right installation	Working pressure at the tool	Power of LBB 26
Old customer air line	3.5 bar (50 psi)	270 W (0.35 hp)
New Atlas Copco air line with ErgoQIC "full-flow" couplings and properly dimensioned hose	5.8 bar (85 psi)	450 W (0.60 hp)



### MultiFlex Swivel Connector – magic in the air!

The ingenious MultiFlex swivel rotates freely through 360°. Connect your tool and the hose will stay in the ideal position while you and the tool move around. Since the hose stays straight while MultiFlex bends in all directions, wear on the hose is greatly reduced. MultiFlex takes the effort out of working in cramped spaces. The hose no longer gets in your way and feels almost weightless!

### ErgoQIC couplings ensure optimum tool performance and safety at XIAC

Xi'an Aircraft Industry (Group) Co., Ltd., XIAC, assembles wing components for the Boeing Wichita factory using a large number of Atlas Copco pneumatic assembly tools.

Needing to increase productivity to meet the growing needs of Boeing for its 737-700/747SF program, XIAC reviewed its air distribution systems. Leaking air hoses and couplings were affecting tool performance, and there

was a risk that shooting couplings could be dangerous for the operators.

After consulting Atlas Copco, XIAC upgraded its air line systems with Ergo couplings (ErgoQIC/NIP) and CABLAIR PVC hoses. This has optimized the air flow in the systems and maximized tool performance which, in turn, has speeded up production. Operator safety is also ensured – the risk of shooting couplings has been eliminated.



PVC CABLAIR and TURBO air hoses.

# Electric ASSEMBLY TOOLS

## APPLICATIONS



### GENERAL

- SAFETY CRITICAL AND HAZARDOUS APPLICATIONS
- WING ASSEMBLY
- TAIL ASSEMBLY
- FINAL ASSEMBLY
- MAINTENANCE
- ENGINE ASSEMBLY

### Challenges

In addition to tool flexibility and accessibility, there is growing demand in the aerospace sector for advanced assembly tools and systems that offer joint traceability and validation, and for tools suitable for use in hazardous areas.

### Atlas Copco's response

Atlas Copco has developed a broad range of light, compact electric assembly tools,

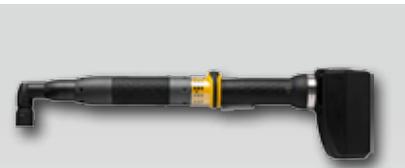
controllers and software that put aircraft manufacturing plants firmly on the path to zero-fault production. Tensor SL electric screwdrivers and Tensor ST/STB nutrunners are unmatched in their user-friendliness, speed, accuracy and durability. Partnered with the Power Focus controller, Tensor nutrunners and screwdrivers form a complete tightening system that can be programmed to achieve the optimum tightening result for every kind of joint. Special attachments are available for Hi-Lock bolts.

### For safety critical applications

Tensor tightening systems provide full joint traceability, documentation and validation, as well as immediate detection of faults. Tensor ST tools are also available with ATEX certification for use in hazardous areas.

### Accurate battery clutch tools

Atlas Copco cordless battery screwdrivers and nutrunners with fast shut-off clutches give excellent torque accuracy and are ideal for use in confined spaces, such as the fuselage interior.



### Tensor STB with Power Focus – true cordless freedom

Tensor STB battery powered, pistol-grip and angle nutrunners are ideal for safety critical applications in cramped areas. Partnered with Power Focus controllers these flexible transducerized tools provide accurate torque monitoring and full joint traceability. The operator can take the cordless STB into the fuselage, for example, while maintaining the link with the controller. For applications where no reporting but the accuracy and tightening strategies of the STB is needed, the STB stand alone mode is available. The STB is simply programmed by a Power Focus, and can after that work while being disconnected.

**Tensor ST/SL transducerized tools** plus Power Focus enable selection of tightening strategy, joint traceability, early error detection.

**BCP, BTV battery clutch tools** Good ergonomics, excellent torque repeatability, low mean shift and low reaction force. The BCP is available in low speed for challenging material, with an optional speed setting possibility.

## Major engine manufacturer chooses Tensor S for critical tapping in jet engine production

A large aircraft engine manufacturer, producing engines for more than 180 different types of aircraft and helicopters worldwide, was previously using pneumatic tappers to tap holes in jet engine components.

The holes must be tapped to specific depths. If the tap is allowed to run too deep, it punches a hole through the

part. If the tap jams in the hole, it breaks off inside the part. Jet engine components are extremely costly and damaged parts must be scrapped, generating serious costs for the company.

Atlas Copco recommended switching to the Tensor S system, comprising an ETD S7-70 tapper, partnered with a Power Focus 3007.





TENSOR ST

TENSOR ST

STWRENCH

BCP



By using torque monitoring control combined with angle control to measure degrees of rotation from the point of tool engagement in the workpiece, the Tensor S system enables the user to tap to a precise depth.

Maximum torque limits were set to prevent the tap from breaking if it jammed in the hole. Multistage tool

operation automatically reverses the tap out of the hole.

This solution has drastically reduced the probability of engine component damage during tapping at the plant.

Wherever critical tapping is performed, the Tensor S system is the perfect solution.



Power Focus 4000 Graph

# QUALITY IS ASSURED

## APPLICATIONS



- WING ASSEMBLY
- TAIL ASSEMBLY
- FINAL ASSEMBLY
- MAINTENANCE
- ENGINE ASSEMBLY

## Challenges

In an industry driven by extreme demands on safety and quality, problems related to tightening account for a large percentage of total warranty costs. Poor quality in the assembly area can also result in damaged brand image for the manufacturer. To avoid these problems, the following measures are necessary:

- Checking of torque delivered by tools.
- Setting correct torque on clutch, battery and pulse tools.
- Calibration of transducerized tools.
- Verification of assembled joints on the assembly line.
- Efficient management of tools and assembly process.

## Atlas Copco's response

Atals Copco offers a complete program of tools for quality assurance in tightening operations.

**ACTA 4000** measures and analyses the tightening performance of any direct-driven or pulse tool, torque wrench or click wrench. It can be used for setting output torque, calibrating tools and making accuracy tests.

ACTA 4000 takes the guesswork out of tightening by providing a full range of functions from simple torque, angle and pulse checks to advanced graphic analysis of tightening.

**ToolsTalk ACTA/QAT** ACTA 4000 partnered with ToolsTalk ACTA software provides you with a complete tool database containing all the information you need regarding torque measurement and analysis.

Different linked databases structure the information and make it easy to enter and to access. The general statistics and powerful statistical process control (SPC), enable you to identify significant changes in the performance of your tools before quality is affected.



## BLM joint simulator bench 3860

Using the Joint Simulator Bench, DC electric, clutch, battery, impulse tools and click wrenches can be evaluated fast and accurately. Machine capability indices Cm and Cmk are quickly checked on the joint simulator brakes that are easily programmed for a given torque and angle. All data are fully documented in the bench PC.

**STwrench** Can be used in production or in your torque lab for joint analyses. You can also use it for quality control and for critical tightening where it allows you to use many different tightening strategies.

**IRTT-B in-line rotary torque transducer** The ACTA 4000 automatically reads the memory in the IRTT-B. No manual calibration is needed. Very high readout accuracy. Available in torque or torque/angle versions.

## MRTT-B manual wrench torque

**transducer** Designed to measure static torque on higher torque applications.





TOOLSTALK



JOINT SIMULATOR BENCH



ACTA 4000



IRTT-B



MRTT-B



BLM



# RIVETING HAMMERS



RRH 04



RRH 06



RRH 14

## Selection guide

Hammer model <sup>a</sup>	Nominal Max. Rivet Diameter Capacity													
	Dural				Steel				Titanium				Bucking bar model required <sup>b</sup>	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		
RRH04	2- 5	3/32 - 3/16	1 - 4	3/21 - 5/32	-	-	-	-	RBB04	RBB10				
RRN11	2- 5	3/32 - 3/16	1 - 4	3/32 - 5/32	-	-	-	-						
RRH06	4- 7	5/32 - 1/4	3 - 6	1/8 - 1/4	2 - 4	3/32 - 5/32	RBB10	RBB16						
RRH08	5- 8	3/16 - 5/16	4 - 7	5/32 - 1/4	3 - 6	1/8 - 1/4	RBB10	RBB16						
RRH10	5- 9	3/16 - 3/8	6 - 8	1/4 - 5/16	4 - 7	5/32 - 1/4	RBB16							
RRH12	8-11	5/16 - 7/16	7-10	1/4 - 3/8	6 - 9	1/4 - 1/8	RBB16							
RRH14	11-13	7/16 - 1/2	9-12	3/8 - 15/32	8-11	5/16-7/16	RBB16							

<sup>a</sup> Hammer capacity depends on direct/indirect riveting as well as Panel density and stiffness.

<sup>b</sup> Bucking bar capacity is dependent on dolly weight.

## Riveting hammers

Model	Blows Hz	Nozzle		Piston dia		Stroke		Energy per blow		Weight		Air consumption		Hose size	Air inlet BSP	Ordering No.
		mm	in	mm	in	mm	in	J	ft lb	kg	lb	l/s	cfm	mm	in	
<b>Riveting hammers with push start</b>																
RRH04P-01	66	10.0	0.4	15	0.6	40	1.6	2.0	1.5	1.0	2.2	3.7	6	6.3	1/4	8426 1109 07
RRH04P-02	66	10.2	0.4	15	0.6	40	1.6	2.0	1.5	1.0	2.2	3.7	6	6.3	1/4	8426 1109 15
RRH04P-12	66	10.2	0.4	15	0.6	40	1.6	2.0	1.5	1.0	2.2	3.7	6	6.3	1/4	8426 1109 25
RRH06P	36	10.2	0.4	15	0.6	102	4.0	6.0	4.4	1.3	2.9	9.0	19	10.0	3/8	8426 1110 04
RRH08P	24	10.2	0.4	15	0.6	137	5.4	8.0	5.9	1.4	3.0	10.0	21	10.0	3/8	8426 1110 09
RRH10P	25	12.7	0.5	19	0.7	118	4.6	13.0	9.6	2.0	4.4	12.0	24	10.0	3/8	8426 1110 20
RRH12P	20	12.7	0.5	19	0.7	153	6.0	16.0	11.8	2.1	4.6	13.0	28	10.0	3/8	8426 1110 47
RRH12P-ENG	20	12.7	0.5	19	0.7	153	6.0	16.0	11.8	2.1	4.6	13.0	28	10.0	3/8	8426 1110 49
RRH14P	18	12.7	0.5	19	0.75	188	7.4	19.5	14.4	2.2	4.8	13	28	10.0	3/8	8426 1110 80
RRH14P-ENG	18	12.7	0.5	19	0.75	188	7.4	19.5	14.4	2.2	4.8	13	28	10.0	3/8	8426 1110 82
<b>Riveting hammers with trigger start</b>																
RRH04P TS-12	66	10.2	0.4	15	0.6	40	1.6	2.0	1.5	1.0	2.2	3.7	6	6.3	1/4	8426 1109 27
RRH06P TS	36	10.2	0.4	15	0.6	102	4.0	6.0	4.4	1.3	2.9	9.0	19	10.0	3/8	8426 1110 66
RRH08P TS	24	10.2	0.4	15	0.6	137	5.4	8.0	5.9	1.4	3.0	10.0	21	10.0	3/8	8426 1110 68
RRH10P TS	25	12.7	0.5	19	0.7	118	4.6	13.0	9.6	2.0	4.4	12.0	24	10.0	3/8	8426 1110 70
RRH12P TS	20	12.7	0.5	19	0.7	153	6.0	16.0	11.8	2.1	4.6	13.0	28	10.0	3/8	8426 1110 72
RRH14P-TS	18	12.7	0.5	19	0.75	188	7.4	19.5	14.4	2.2	4.8	13.0	28	10.0	3/8	8426 1110 81
<b>Conventional riveting hammers</b>																
RRN11P-01	66	10.0	0.4	15	0.6	40	1.6	2.0	1.5	1.2	2.6	3.4	7.2	6.3	1/4	8426 1101 05
RRN11P-02	66	10.2	0.4	15	0.6	40	1.6	2.0	1.5	1.2	2.6	3.4	7.2	6.3	1/4	8426 1101 13

-ENG means reinforced model for pin driving applications.

-01 means 10 mm short shank rivet set.

-02 means 10.2 mm short shank rivet set.

-12 means 10.2 mm stand shank rivet set.

### ACCESSORIES INCLUDED RRH

Flush set

Open spring retainer

### ACCESSORIES INCLUDED RRN

Retainer

Blank rivet set

Retainers for blank and flush rivet set

# BUCKING BARS



RBB 04



RBB 10SA



RBB 10SP

## Bucking bars

Model	Weight		Diameter		Air consumption		Ordering No.
	kg	lb	mm	in	l/s	cfm	
<b>Bucking bars with standard dolly<sup>a</sup></b>							
RBB10SA	1.3	2.9	48	2.0	0.5	1.1	8426 9101 77
RBB10SP	1.1	2.4	48	2.0	—	—	8426 9101 74
RBB16SA	1.9	4.2	48	2.0	0.5	1.1	8426 9101 78
RBB16SP	1.7	3.7	48	2.0	—	—	8426 9101 76
<b>Mini bucking bars</b>							
RBB04SP-01	0.8	1.8	46	1.8	—	—	8426 9101 10
RBB04SP-04	1.3	2.9	46	1.8	—	—	8426 9101 13
RBB04SP-05	1.4	3.1	46	1.8	—	—	8426 9101 14
RBB04SP-06	1.1	2.5	46	1.8	—	—	8426 9101 15

<sup>a</sup> Standard dolly assy (3085 0335 93).

## OPTIONAL ACCESSORIES

Designation	Ordering No.
Rod 5 mm	3085 0365 03
Rod 50 mm	3085 0365 04
Rod 100 mm	3085 0365 05
<b>Plastic cover for</b>	
RBB10SA	3520 0317 00
RBB10SP	3520 0315 00
RBB16SA	3520 0318 00
RBB16SP	3520 0316 00

## ACCESSORIES INCLUDED

All SA-models      Hose and hose fitting  
 All 10/16 models      Plastic cover

# PISTOL-GRIP DRILLS



LBB 16



LBB 26



LBB 37

The speed for a specific drilling operation should be chosen on the basis of the material in the workpiece and the diameter of the hole.

In the selection guide, you will find proposals for suitable free speeds for selection of the correct tool.

Please use the information below

as a guide only. Many variable contribute to the optimal speed choice for a specific application.

Cutting speed <sup>a</sup> m/min	Material				rpm																														
	300	400	500	600	700	800	1000	1200	1300	1500	1700	1800	1900	2200	2400	2600	2700	2900	3000	3300	3600	3700	3800	4000	4500	5500	6000	6400	6500	20000	23000	26000			
	Tita-nium	Alloy Steel																																	
5			5	4	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
10			11	8	6	5	5	4	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
15	Cast iron		12	10	8	7	6	5	4	4	3	3	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1				
20			16	13	11	9	8	6	5	5	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1				
25				13	11	10	8	7	6	5	5	4	4	4	3	3	3	3	3	3	2	2	2	2	2	2	1	1	1	1	1				
30	Hard plastics							10	8	7	6	6	5	5	4	4	4	4	3	3	3	3	3	3	2	2	2	1	1	1	1				
35									9	9	7	7	6	6	5	5	4	4	4	4	3	3	3	3	3	2	2	2	2	1	1				
40										10	8	7	7	6	5	5	5	4	4	4	4	3	3	3	3	3	2	2	2	2	1	1			
45											10	8	8	7	6	5	6	5	5	4	4	4	4	3	3	2	2	2	2	1	1				
50												9	8	7	6	5	5	5	4	4	4	4	4	4	3	3	2	2	1	1	1				
55												10	9	8	7	6	6	5	5	5	4	4	4	3	3	3	3	1	1	1					
60													11	10	9	7	7	6	6	5	5	5	5	4	3	3	3	3	1	1	1				
65													12		9	8	7	7	7	6	6	6	6	5	5	5	4	3	3	3	1	1			
70													13		10	9	8	8	7	6	6	6	6	6	5	5	4	3	3	3	1	1			
75													14			9		7	7	6	6	6	6	5	4	4	4	4	1	1	1				
80													15			10		8	7	6	6	6	5	4	4	4	4	1	1	1					
85													16					8	7	6	6	5	4	4	4	1	1	1							
90																		9	8	7	6	5	4	4	1	1	1								
95																		9	8	7	6	5	5	5	2	1	1								
100																		10	9	7	6	5	5	5	1	1	1								
105																			9	7	6	5	5	5	1	1									
110																			9	8	7	6	5	5	5	2	1								
115																			10		6	6	6	6	6	1									
120																																			
125																																			
130																																			
135																																			
140																																			
145																																			
150																																			

<sup>a</sup> Remember that, if the speed is too low the cycle time increases.

Note: To use a drill bit of bigger size than recommended may result in material hardening, bad hole quality and fast drill bit wear.

Model	Free speed r/min	Chuck capacity mm		Air consumption at free speed l/s cfm			Hose size mm in		Air inlet thread BSP		Power W hp		With chuck Ordering No.	Without chuck		
		kg	lb	l/s	cfm	mm	in	1/4	290	0.4	8421 0108 60	200-U	8421 0108 61	Model	Ordering No.	
<b>Non-reversible drills with air supply through handle</b>																
LBB16 EP-200 <sup>a</sup>	20000	6.5	0.6	1.2	8.0	17.0	6.3	1/4	290	0.4	8421 0108 60	200-U	8421 0108 61			
LBB16 EP-060 <sup>a</sup>	6000	6.5	0.6	1.2	8.0	17.0	6.3	1/4	290	0.4	8421 0108 50	060-U	8421 0108 51			
LBB16 EP-045 <sup>a</sup>	4500	6.5	0.6	1.2	8.0	17.0	6.3	1/4	290	0.4	8421 0108 40	045-U	8421 0108 41			
LBB16 EP-033 <sup>a</sup>	3300	6.5	0.6	1.2	8.0	17.0	6.3	1/4	290	0.4	8421 0108 30	033-U	8421 0108 31			
LBB16 EP-024 <sup>a</sup>	2400	6.5	0.6	1.2	8.0	17.0	6.3	1/4	290	0.4	8421 0108 20	024-U	8421 0108 21			
LBB16 EP-010	1000	10.0	0.7	1.5	8.0	17.0	6.3	1/4	290	0.4	8421 0108 10	010-U	8421 0108 11			
LBB16 EP-005 <sup>b</sup>	500	10.0	0.7	1.5	8.0	17.0	6.3	1/4	290	0.4	8421 0108 06	005-U	8421 0108 07			
LBB16 EP-003 <sup>b</sup>	300	10.0	0.7	1.5	8.0	17.0	6.3	1/4	290	0.4	8421 0108 01	003-U	8421 0108 02			
LBB16 EPX-200 <sup>a</sup>	20000	6.5	0.6	1.2	9.5	20.0	6.3	1/4	340	0.45	8421 0108 82	200-U	8421 0108 63			
LBB16 EPX-060 <sup>a</sup>	6000	6.5	0.6	1.2	9.5	20.0	6.3	1/4	340	0.45	8421 0108 52	060-U	8421 0108 53			
LBB16 EPX-045 <sup>a</sup>	4500	6.5	0.6	1.2	9.5	20.0	6.3	1/4	340	0.45	8421 0108 42	045-U	8421 0108 43			
LBB16 EPX-033 <sup>a</sup>	3300	6.5	0.6	1.2	9.5	20.0	6.3	1/4	340	0.45	8421 0108 32	033-U	8421 0108 33			
LBB16 EPX-024 <sup>a</sup>	2400	6.5	0.6	1.2	9.5	20.0	6.3	1/4	340	0.45	8421 0108 22	024-U	8421 0108 23			
LBB16 EPX-010 <sup>b</sup>	1000	10.0	0.7	1.5	9.5	20.0	6.3	1/4	340	0.45	8421 0108 12	010-U	8421 0108 03			
LBB16 EPX-005 <sup>b</sup>	500	10.0	0.7	1.5	9.5	20.0	6.3	1/4	340	0.45	8421 0108 08	050-U	8421 0108 09			
LBB26 EPX-060 <sup>ac</sup>	6000	8	0.69	1.5	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 14	060-U	8421 0500 15		
LBB26 EPX-045 <sup>ac</sup>	4500	8	0.69	1.5	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 12	045-U	8421 0500 13		
LBB26 EPX-033 <sup>ac</sup>	3300	8	0.69	1.5	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 10	033-U	8421 0500 11		
LBB26 EPX-026 <sup>ac</sup>	2600	8	0.79	1.7	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 08	026-U	8421 0500 09		
LBB26 EPX-019 <sup>a</sup>	1900	10	0.79	1.7	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 24	019-U	8421 0500 25		
LBB26 EPX-013 <sup>abc</sup>	1300	10	0.79	1.7	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 06	013-U	8421 0500 07		
LBB26 EPX-007 <sup>b</sup>	700	13	0.82	1.8	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 04	007-U	8421 0500 05		
LBB26 EPX-005 <sup>bc</sup>	500	13	0.82	1.8	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 02	005-U	8421 0500 03		
LBB26 EPX-003 <sup>bc</sup>	300	13	0.82	1.8	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 00	003-U	8421 0500 01		
LBB36 H200 <sup>a</sup>	20000	6.5	1.0	2.2	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 55	-H200U	8421 0408 53		
LBB36 H060 <sup>a</sup>	6000	6.5	1.2	2.5	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 49	-H060U	8421 0408 47		
LBB36 H033 <sup>a</sup>	3300	10.0	1.2	2.5	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 41	-H033U	8421 0408 39		
LBB36 H026 <sup>a</sup>	2600	10.0	1.2	2.5	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 33	-H026U	8421 0408 31		
LBB36 H013 <sup>a</sup>	1300	10.0	1.5	3.3	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 15	-H013U	8421 0408 13		
LBB36 H007 <sup>b</sup>	700	13.0	1.6	3.5	16.5	34.9	10.0	3/8	3/8	700	0.9	8421 0408 07	-H007U	8421 0408 05		
LBB36 H005 <sup>b</sup>	500	—	1.2	3.3	16.5	34.9	10.0	3/8	3/8	700	0.9	—	-H005U	8421 0408 03		
LBB37 H230 <sup>a</sup>	23000	6.5	1.0	2.2	20.5	44	10.0	3/8	3/8	820	1.1	8421 0608 03	H230-U	8421 0608 18		
LBB37 H065 <sup>a</sup>	6500	6.5	1.2	2.5	20.5	44	10.0	3/8	3/8	820	1.1	8421 0608 11	H065-U	8421 0608 17		
LBB37 H037 <sup>a</sup>	3700	10.0	1.2	2.5	20.5	44	10.0	3/8	3/8	820	1.1	8421 0608 13	H037-U	8421 0608 16		
LBB37 H015 <sup>b</sup>	1500	10.0	1.5	3.3	20.5	44	10.0	3/8	3/8	820	1.1	8421 0608 05	H015-U	8431 0608 15		
LBB37 H006 <sup>b</sup>	600	13.0	1.2	2.5	20.5	44	10.0	3/8	3/8	820	1.1	8421 0608 06	H006-U	8431 0608 14		

<sup>a</sup> Incl. chuck guard. <sup>b</sup> Incl. support handle.

## ACCESSORIES INCLUDED

Chuck, chuck key.

LBB16 and -36/37 with suspension yoke and with chuck guard where possible.

16, 26 and -36/37-models have a 3/8" -24 UNF spindle thread, LBB36 H005 and LBB37 H006 has a 1/2" thread.

## OPTIONAL ACCESSORIES

### Key chucks

Mount	Body diameter mm	Chuck capacity mm	Ordering No.		
			Chuck (key incl)	Key only	Key designation
1/2-24UNF	43	2.0 - 13.0	4021 0289 01	4021 0465 00	S2
3/8-24UNF	43	1.5 - 13.0	4021 0289 01	4021 0465 00	S2
3/8-24UNF	30	0.0 - 6.5	4021 0283 00	4021 0293 00	S1
3/8-24UNF	30	0.5 - 8.0	4021 0495 00	4021 0293 00	S1
3/8-24UNF	36	2.0 - 10.0	4021 0416 00	4021 0449 00	S8
3/8-24UNF	46	2.0 - 13.0	4021 0289 00	4021 0465 00	S2
JT3	59	3.0 - 16.0	4021 0423 00	4021 0301 00	S3

## Spot suction attachment

For model	Hose size in	Spot suction kit Ordering No.	Hose kit Ordering No.
LBB16	1 1/4	4110 1715 80 <sup>a</sup>	4112 1227 00
LBB26	1 1/4	4110 1715 84 <sup>a</sup>	4112 1227 00
LBB36/37	1 1/4	4110 1716 80 <sup>a</sup>	4112 1227 00
LBS36	1 1/4	4110 1529 90 <sup>b</sup>	—

<sup>a</sup> Spare part, nose piece kit, Ordering No. 4110 1700 90.

Other standard sizes of front nozzle available.

<sup>b</sup> To be used in combination with plain base, dia 24 mm

# ANGLE DRILLS



LBV 16



LBV 37

Model	Free speed r/min	Setting range rpm	Collet or chuck capacity mm	Weight		Air consumption at free speed		Hose dimension		Air inlet at free thread BSP	Power		With spindle lock	
				kg	lb	l/s	cfm	mm	in		W	hp	Ordering No.	Ordering No.
<b>30° angle head</b>														
LBV11 S027-S30	2700	–	5.0	0.5	1.1	3.2	6.8	5.0	1/8	1/4	110	0.16	8421 0108 70	–
LBV16 032-S30	3200	1500-3200	5.0	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 04	8421 0110 29
LBV16 032-30	3200	1500-3200	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 05	8421 0110 30
LBV16 032-S32	3200	1500-3200	– <sup>c</sup>	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 06	–
LBV16 032-32	3200	1500-3200	– <sup>c</sup>	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 07	–
LBV16 045-32	4500	3200-4500	– <sup>c</sup>	0.5	1.1	8.7	18.4	6.3	1/4	1/4	510	0.73	–	8421 0110 57
LBV36 S030-30 <sup>e</sup>	3000	–	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 70	–
LBV36 S045-30 <sup>e</sup>	4500	–	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	300	0.4	8421 0414 72	–
<b>45° angle head</b>														
LBV16 032-45	3200	1500-3200	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 59	–
LBV16 032-46	3200	1500-3200	– <sup>c</sup>	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 60	–
<b>90° angle head</b>														
LBV11 S025-S90	2500	–	5.0	0.5	1.1	3.2	6.8	5.0	1/8	1/4	110	0.16	8421 0109 79	–
LBV16 032-90	3200	1500-3200	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 00	8421 0110 25
LBV16 032-S90	3200	1500-3200	5.0	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 01	8421 0110 26
LBV16 032-S92	3200	1500-3200	– <sup>c</sup>	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 02	8421 0110 27
LBV16 032-92	3200	1500-3200	– <sup>c</sup>	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 03	–
LBV16 045-90	4500	3200-4500	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 20	8421 0110 44
LBV16 045-92	4500	3200-4500	– <sup>c</sup>	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 21	–
LBV16 055-90	5500	4500-5500	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 23	8421 0110 46
LBV16 055-92	5500	4500-5500	– <sup>c</sup>	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 24	–
LBV36 S030-90 <sup>e</sup>	3000	–	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	300	0.4	8421 0414 60	–
LBV36 S030-S90 <sup>e</sup>	3000	–	5.0	0.9	2.0	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 61	–
LBV36 S045-90 <sup>e</sup>	4500	–	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 62	–
LBV36 S045-S90 <sup>e</sup>	4500	–	5.0	0.9	2.0	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 63	–
LBV36 S030-92 <sup>e</sup>	3000	–	– <sup>c</sup>	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 64	–
LBV36 S030-S92 <sup>e</sup>	3000	–	– <sup>c</sup>	0.9	2.0	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 65	–
LBV16 055-S92	5500	4500-5500	– <sup>c</sup>	0.45	1.0	8.7	18.4	6.3	1/4	1/4	510	0.73	8421 0110 58	–
<b>360° angle head</b>														
LBV16 032-90Z	3200	1500-3200	5.0	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 64	8421 0110 65
LBV16 032-92Z	3200	1500-3200	– <sup>c</sup>	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 68	–
<b>90° angle head – large angle head</b>														
LBV16 045-91	4500	3200-4500	6.6	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 38	–
LBV16 032-91	3200	1500-3200	6.6	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 09	8421 0110 34
LBV16 032-93	3200	1500-3200	– <sup>c</sup>	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 10	–
LBV16 032-S93	3200	1500-3200	– <sup>c</sup>	0.45	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 39	–
LBV16 010-91	1000	500-1000	6.6	0.6	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 16	8421 0110 40
LBV16 010-93	1000	500-1000	– <sup>c</sup>	0.6	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 17	–
LBV16 018-91	1800	800-1800	6.6	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 18	8421 0110 42
LBV16 018-93	1800	800-1800	– <sup>c</sup>	0.55	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 19	–
LBV16 005-91	500	200-500	6.6	0.6	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 11	8421 0110 36
LBV16 005-93	500	200-500	– <sup>c</sup>	0.6	1.2	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 12	–
LBV36 S030-91 <sup>e</sup>	3000	–	6.6	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 50	–
LBV36 S060-91 <sup>e</sup>	6000	–	6.6	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 51	–
LBV36 S030-93 <sup>e</sup>	3000	–	– <sup>c</sup>	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 52	–
LBV36 S060-93 <sup>e</sup>	6000	–	– <sup>c</sup>	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 53	–
<b>90° angle drill – Key chuck models</b>														
LBV16 018-11	1800	800-1800	6.5 <sup>a</sup>	0.8	1.7	8.7	18.4	6.3	1/4	1/4	110	0.4	8421 0110 22	–
LBV34 S040 <sup>b</sup>	4000	–	6.5 <sup>a</sup>	1.5	3.3	7.5	15.9	10.0	3/8	1/4	400	0.6	8421 0309 46	–
LBV34 S010 <sup>b</sup>	1000	–	10.0 <sup>a</sup>	2.0	4.4	7.5	15.9	10.0	3/8	1/4	400	0.6	8421 0309 12	–
LBV34 S005 <sup>b</sup>	500	–	13.0 <sup>a</sup>	2.1	4.6	7.5	15.9	10.0	3/8	1/4	400	0.6	8421 0309 04	–
<b>90° angle head – heavy-duty head</b>														
LBV37 030	3000	–	– <sup>c</sup>	1.1	2.4	22	46.0	10.0	3/8	3/8	820	1.1	–	8421 0414 54
LBV37 055	5500	–	– <sup>c</sup>	1.1	2.4	22	46.0	10.0	3/8	3/8	820	1.1	–	8421 0414 55
LBV37 HD030	3000	–	– <sup>d</sup>	1.1	2.4	22	46.0	10.0	3/8	3/8	820	1.1	–	8421 0414 56
LBV37 HD055	5500	–	– <sup>d</sup>	1.1	2.4	22	46.0	10.0	3/8	3/8	820	1.1	–	8421 0414 57

<sup>a</sup> Spindle thread, male 3/8"-24 UNF. <sup>b</sup> Side exhaust. <sup>c</sup> Internal thread 1/4"-28. <sup>d</sup> Internal thread 5/16"-24. <sup>e</sup> Short lever as standard.

## ACCESSORIES INCLUDED

Collet or chuck with key

3 mm collet (5.0 collet capacity head)

6 mm collet (6.6 collet capacity head)

# STRAIGHT DRILLS



LBB 16S

Model	Free speed* r/min	Chuck capacity mm	Weight		Air consumption at free speed		Hose size		Air inlet thread BSP	Power		With chuck Ordering No.	Without chuck	
			kg	lb	l/s	cfm	mm	in		W	hp		Model	Ordering No.
<b>Drills with rear exhaust</b>														
LBB16 S260	26000	0-6.5	0.55	1.2	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 00	S260-U	8421 0210 10
LBB16 S064	6400	0-6.5	0.55	1.2	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 01	S064-U	8421 0210 11
LBB16 S045	4500	0-6.5	0.55	1.2	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 02	S045-U	8421 0210 12
LBB16 S038	3800	0-6.5	0.55	1.1	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 03	S038-U	8421 0210 13
LBB16 S029	2900	0-8.0	0.6	1.3	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 04	S029-U	8421 0210 14
LBB16 S022	2200	0-10.0	0.7	1.5	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 05	S022-U	8421 0210 15
LBB16 S012	1200	0-10.0	0.7	1.5	8.0	17	6.3	1/4	1/4	350	0.47	8421 0210 06	S012-U	8421 0210 16

LBB16S models have a 3/8" -24 UNF spindle thread.

\* Free speed can be reduced to 50% of the maximum speed using the trim valve.

## ACCESSORIES INCLUDED

Chuck, chuck key

Suspension yoke and chuck guard where possible

# DRILLS WITH INTEGRATED MICRO STOP



LBS 36

Model	Free speed r/min	Spindle thread in/mm	Stroke		Setting range ±		Weight		Hose size		Air consumption		Air inlet thread BSP	Ordering No.
			mm	in	mm	in	kg	lb	mm	in	l/s	cfm		
LBS36 H033-40	3300	1/4"-28	40	1.6	6	1/4	1.2	2.6	10	3/8	16.5	34.9	3/8	8421 0220 80
LBS36 H013-40	1300	1/4"-28	40	1.6	6	1/4	1.5	3.3	10	3/8	16.5	34.9	3/8	8421 0220 90

## ACCESSORIES INCLUDED

2x2 mm Allen wrenches

## Plain bases for Micro Stop drills

Designation	Attachment	Ordering No.
Plain base, dia 24 mm	M 20x1	4110 1521 00
Plain base for nylon ring (attached with thread M35x1)	M 20x1	4110 1522 00
Separate nylon ring for above base, outer dia 40 mm, thread M35x1	M 20x1	4110 1523 00
Plain base, dia 14.5 mm	M 20x1	4110 1520 00
Tripod, nylon supported	Dia 22 mm	4110 1524 00

# ANGLE SANDERS



Model	Max free speed r/min	Rec. pad size max dia mm	Spindle thread	Max output		Weight kg lb	Length mm	Height over spindle mm	Air consumption at				Rec. hose size mm in	Air inlet thread BSP	Ordering No.		
				kW	hp				max output l/s	free speed cfm	max output l/s	free speed cfm					
<b>With collet</b>																	
LSV18 S200-1	20000	50	— <sup>a</sup>	0.46	0.62	0.6	1.32	193	79	11.3	23.9	7.5	15.9	10	3/8	1/4	8423 0111 11
LSV18 S120-1	12000	75	— <sup>a</sup>	0.46	0.62	0.6	1.32	185	79	11.3	23.9	7.5	15.9	10	3/8	1/4	8423 0111 13
LSV18 S080-1	8000	75	— <sup>a</sup>	0.37	0.50	0.6	1.32	185	79	11.3	23.9	6.5	13.8	10	3/8	1/4	8423 0111 16
<b>With threaded spindle</b>																	
LSV18 S200	20000	50	1/4-20	0.46	0.62	0.6	1.32	193	79	11.3	23.9	7.5	15.9	10	3/8	1/4	8423 0111 12
LSV18 S120	12000	75	1/4-20	0.46	0.62	0.6	1.32	185	79	11.3	23.9	7.5	15.9	10	3/8	1/4	8423 0111 14
LSV18 S080	8000	75	1/4-20	0.37	0.50	0.6	1.32	185	79	11.3	23.9	6.5	13.8	10	3/8	1/4	8423 0111 15
<b>Rotary sanders. Dry sanding</b>																	
LSV28 S060	6000	180	5/8"-11	0.73	0.98	1.5	3.2	265	87	16	33.9	7.3	15.5	10	3/8	3/8	8423 0125 30
LSV28 S060-M14	6000	180	M14	0.73	0.98	1.5	3.2	265	87	16	33.9	7.3	15.5	10	3/8	3/8	8423 0125 64
LSV28 S040	4000	180	5/8"-11	0.62	0.83	1.5	3.2	265	87	15	31.8	4	8.5	10	3/8	3/8	8423 0126 22
LSV28 ST034	3400	180	5/8"-11	0.71	0.95	1.7	3.7	305	87	18	38.2	7.7	16.3	10	3/8	3/8	8423 0135 80
LSV28 S021	2100	180	5/8"-11	0.68	0.91	1.9	4.1	285	87	16	33.9	5.6	11.9	10	3/8	3/8	8423 0125 19
LSV28 S021-M14	2100	180	M14	0.68	0.91	1.9	4.1	285	87	16	33.9	5.6	11.9	10	3/8	3/8	8423 0125 72
<b>Wet sanding</b>																	
LSV28 S040-01-M14	4000	180	M14	0.62	0.83	1.5	3.2	265	87	15	31.8	5	10.6	10	3/8	3/8	8423 0125 12
LSV28 ST018-01-M14	1800	180	M14	0.74	0.99	1.7	3.7	305	87	19	40.3	13	27.6	10	3/8	3/8	8423 0125 96
<b>Lubrication-free. Dry and wet sanding</b>																	
LSV28 ST013-M14 LF	1300	180	M14	0.68	0.91	1.7	3.7	285	87	20	42.4	9	19.1	10	3/8	3/8	8423 0125 28
LSV28 ST013 LF	1300	180	5/8"-11	0.68	0.91	1.7	3.7	285	87	20	42.4	9	19.1	10	3/8	3/8	8423 0126 26
LSV28 ST008-01 LF	800	200	5/8"-11	0.68	0.91	2.0	4.3	285	87	16	33.9	5.6	11.9	10	3/8	3/8	8423 0125 51
LSV38 S085	8500	180	5/8	1.30	1.7	1.5	3.3	217	96	28	58	15	31	13	1/2	3/8	8423 0130 69
LSV38 S085-M14	8500	180	M14	1.30	1.7	1.5	3.3	217	96	28	58	15	31	13	1/2	3/8	8423 0130 72
LSV38 S066	6600	180	5/8	1.20	1.6	1.5	3.3	217	96	24	50	13	27	13	1/2	3/8	8423 0130 73
LSV38 S066-M14	6600	180	M14	1.20	1.6	1.5	3.3	217	96	24	50	13	27	13	1/2	3/8	8423 0130 77
LSV38 S066 D	6600	180	5/8	1.20	1.6	2.3	5.0	217	96	24	50	13	27	13	1/2	3/8	8423 0130 75
LSV38 S085 D	8500	180	5/8	1.30	1.7	2.3	5.0	217	96	28	58	15	31	13	1/2	3/8	8423 0130 76
LSV48 SA085	8500	180	5/8	1.9	2.5	2.3	5.1	310	78	36	76	17	36	16	5/8	1/2	8423 0132 02
LSV48 SA085-M14	8500	180	M14	1.9	2.5	2.3	5.1	310	78	36	76	17	36	16	5/8	1/2	8423 0132 03
LSV48 SA066	6600	180	5/8	1.9	2.5	2.3	5.1	310	78	36	76	17	36	16	5/8	1/2	8423 0132 00
LSV48 SA066-M14	6600	180	M14	1.9	2.5	2.3	5.1	310	78	36	76	17	36	16	5/8	1/2	8423 0132 01
LSV48 SA085 D	8500	180	5/8	1.9	2.5	2.8	6.2	310	94	36	76	17	36	16	5/8	1/2	8423 0132 05

<sup>a</sup> Ø 6 mm collet.

-1 = 6 mm collet

-M = Male 1/4" thread

## ACCESSORIES INCLUDED

Clamp

Exhaust hose (LSV18/28/38)

Support handle (LSV28/38/48)

Wrenches

Spot suction equipment (D-version)

# ORBITAL SANDERS



LST 20



LST 21



LST 22

Model	Max free speed r/min	Pad size mm	Orbit dia mm	Max output		Weight kg	Height mm	Length mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread BSP	Ordering No.
				kW	hp				l/s	cfm			
<b>Random orbital – Standard</b>													
LST30 H090-11	9000	110	8	0.3	0.4	1.2	2.6	120	255	7.5	16	8	1/4 8423 0361 64
LST30 H090-15	9000	150	8	0.3	0.4	1.2	2.6	120	275	7.5	16	8	1/4 8423 0361 72
LST30 S090-15	9000	150	8	0.3	0.4	1.1	2.4	120	175	7.5	16	8	1/4 8423 0361 98
<b>Self suction<sup>a</sup></b>													
LST31 H090-15	9000	150	8	0.3	0.4	1.4	3.0	120	300	7.5	16	8	1/4 8423 0363 19
<b>Central suction<sup>b</sup></b>													
LST32 H090-15	9000	150	8	0.3	0.4	1.4	3.0	120	300	7.5	16	8	1/4 8423 0362 55
LST32 S090-15	9000	150	8	0.3	0.4	1.3	2.9	120	200	7.5	16	8	1/4 8423 0362 71
<b>Orbital – Standard</b>													
LSO30 S070-3	7000	93x170	5	0.3	0.4	1.6	3.5	125	185	7.5	16	8	1/4 8423 0360 16
LSO30 H070-3	7000	93x170	5	0.3	0.4	1.7	3.7	125	285	7.5	16	8	1/4 8423 0360 24
<b>Self suction<sup>a</sup></b>													
LSO31 S070-3	7000	93x170	5	0.3	0.4	1.6	3.5	125	210	7.5	16	8	1/4 8423 0362 79
LSO31 H070-3	7000	93x170	5	0.3	0.4	1.7	3.7	125	310	7.5	16	8	1/4 8423 0363 03
<b>Central suction<sup>c</sup></b>													
LSO32 H070-3	7000	93x170	5	0.3	0.4	1.8	4.0	125	310	7.5	16	8	1/4 8423 0361 07
<b>Standard model</b>													
LST20 R350	12000	90	5	0.2	0.27	0.85	1.85	95	127	8	17	8	1/4 8423 0361 65
LST20 R550	12000	125	5	0.2	0.27	0.85	1.85	83	127	8	17	8	1/4 8423 0361 69
LST20 R650	12000	150	5	0.2	0.27	0.85	1.85	83	127	8	17	8	1/4 8423 0361 73
LST20 R325	12000	90	2.4	0.2	0.27	0.85	1.85	95	127	8	17	8	1/4 8423 0361 76
LST20 R525	12000	125	2.4	0.2	0.27	0.85	1.85	83	127	8	17	8	1/4 8423 0361 81
LST20 R625	12000	150	2.4	0.2	0.27	0.85	1.85	83	127	8	17	8	1/4 8423 0361 84
<b>Extraction model – self suction</b>													
LST21 R350	12000	90	5	0.2	0.27	0.85	1.85	95	133 <sup>d</sup>	8	17	8	1/4 8423 0361 66
LST21 R550	12000	125	5	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 70
LST21 R650	12000	150	5	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 74
LST21 R325	12000	90	2.4	0.2	0.27	0.85	1.85	95	133 <sup>d</sup>	8	17	8	1/4 8423 0361 77
LST21 R525	12000	125	2.4	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 82
LST21 R625	12000	150	2.4	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 85
<b>Extraction model – central suction<sup>c</sup></b>													
LST22 R650-9	12000	150	5	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 40
LST22 R625-9	12000	150	2.4	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 50
LST22 R350	12000	90	5	0.2	0.27	0.85	1.85	95	133 <sup>d</sup>	8	17	8	1/4 8423 0361 67
LST22 R550	12000	125	5	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 71
LST22 R650	12000	150	5	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 75
LST22 R325	12000	92	2.4	0.2	0.27	0.85	1.85	95	133 <sup>d</sup>	8	17	8	1/4 8423 0361 78
LST22 R525	12000	125	2.4	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 83
LST22 R625	12000	150	2.4	0.2	0.27	0.85	1.85	83	133 <sup>d</sup>	8	17	8	1/4 8423 0361 86

H = With handle

S = Without handle

All data at 6.3 bar.

-9 Velcro pad, 9 holes.

<sup>a</sup> Includes dust collecting bag.<sup>b</sup> Required air flow 150 m<sup>3</sup>/h or 88 cfm.<sup>c</sup> Required air flow 60 m<sup>3</sup>/h or 35 cfm.<sup>d</sup> 186 mm (7.3") included suction hose connector.

# DIE GRINDER



LSF 18

Model	Max free speed r/min	Rec. max dia of			Air consumption at						Rec. hose size <sup>c</sup>		Air inlet thread BSP	Ordering No. with collet		
		Tungsten carbide burrs mm	Mounted point mm	Max output kW hp	Weight kg lb	Length mm	max output l/s cfm	free speed l/s cfm	mm in	6 mm	1/4"					
<b>Straight models</b>																
LSF18 S460-1 <sup>a</sup>	46000	9	16	0.51 0.68	0.5 1.1	193	11.4	24	15.0	31.5	10	3/8	1/4	8423 1224 04		
LSF18 S460E-1 <sup>a</sup>	46000	9	16	0.51 0.68	0.7 1.5	291	11.4	24	15.0	31.5	10	3/8	1/4	8423 1224 09		
LSF18 S460E-1R	46000	9	16	0.51 0.68	0.7 1.5	291	11.4	24	15.0	31.5	10	3/8	1/4	8423 1224 12		
LSF18 S300	30000	12	20	0.50 0.67	0.5 1.1	193	11.3	23.7	6.6	13.8	10	3/8	1/4	8423 1224 03	8423 1224 06	
LSF18 S300/R	30000	12	20	0.50 0.67	0.5 1.1	193	11.3	23.7	6.6	13.8	10	3/8	1/4	8423 1224 11		
LSF18 S300E-1	30000	12	20	0.50 0.67	0.7 1.5	291	11.3	23.7	6.6	13.8	10	3/8	1/4	8423 1224 08		
LSF18 S300E-1/R	30000	12	20	0.50 0.67	0.7 1.5	291	11.3	23.7	6.6	13.8	10	3/8	1/4	8423 1224 10		
LSF18 S200	20000	12	20	0.50 0.54	0.5 1.1	193	9.6	20.1	3.5	7.4	10	3/8	1/4	8423 1224 02	8423 1224 05	
LSF18 S200E-1	20000	12	20	0.50 0.54	0.7 1.5	291	9.6	20.1	3.5	7.4	10	3/8	1/4	8423 1224 07		
LSF28 S250a	25000	12	32	0.86 1.15	0.75 1.65	210	18.5	39.2	11.0	23.3	10	3/8	3/8	8423 1235 11		
LSF28 S250E <sup>a</sup>	25000	12	32	0.86 1.15	1.25 2.75	335	18.5	39.2	11.0	23.3	10	3/8	3/8	8423 1235 60		
LSF28 S250E-R <sup>a</sup>	25000	12	32	0.86 1.15	1.25 2.75	335	18.5	39.2	11.0	23.3	10	3/8	3/8	8423 1235 49		
LSF28 S250-R <sup>a</sup>	25000	12	32	0.86 1.15	0.75 1.65	210	18.5	39.2	11.0	23.3	10	3/8	3/8	8423 1235 48		
LSF28 S180 <sup>a</sup>	18000	16	40	0.82 1.10	0.75 1.65	210	17.4	36.9	11.0	23.3	10	3/8	3/8	8423 1235 04		
LSF28 S180E <sup>a</sup>	18000	16	40	0.82 1.10	1.25 2.75	335	17.4	36.9	7.0	14.8	10	3/8	3/8	8423 1235 05		
LSF28 S180E-1R <sup>a</sup>	18000	16	40	0.82 1.10	1.25 2.75	335	17.4	36.9	7.0	14.8	10	3/8	3/8	8423 1235 42		
LSF28 S180-1R <sup>a</sup>	18000	16	40	0.82 1.10	0.75 1.65	210	17.4	36.9	7.0	14.8	10	3/8	3/8	8423 1235 41		
LSF28 S150 <sup>a</sup>	15000	16	40	0.70 0.94	0.75 1.65	210	15.0	31.8	5.5	11.7	10	3/8	3/8	8423 1235 64		
LSF28 S150E <sup>a</sup>	15000	16	40	0.70 0.94	1.25 2.75	335	15.0	31.8	4.3	9.1	10	3/8	3/8	8423 1235 61		
LSF28 S120a	12000	16	40	0.66 0.89	0.75 1.65	210	13.8	29.3	4.0	8.5	10	3/8	3/8	8423 1235 67		
LSF38 S250E-01 <sup>a</sup>	25000	16	40	1.35 1.8	1.5 3.3	352	28	58	25	53	13	1/2	3/8	8423 1231 17		
LSF38 S180E-01	18000	16	40	1.35 1.8	1.5 3.3	352	28	58	15	31	13	1/2	3/8	8423 1231 16		
LSF38 S180E-01/R	18000	16	40	1.35 1.8	1.5 3.3	356	28	58	15	31	13	1/2	3/8	8423 1231 15		
LSF38 S150E-01/R	15000	16	40	1.25 1.7	1.5 3.3	356	24	50	13	27	13	1/2	3/8	8423 1231 14		
<b>Angle grinders</b>																
LSV18 S200-1	20000	12	20	0.46 0.61	0.6 1.3	185	11	23	7	14.7	10	3/8	1/4	8423 0111 11		
LSV18 S120-1	12000	12	20	0.46 0.61	0.6 1.3	185	11	23	7	14.7	10	3/8	1/4	8423 0111 13		
LSV18 S080-1	8000	12	20	0.37 0.5	0.6 1.3	185	11	23	6.5	13.6	10	3/8	1/4	8423 0111 16		
LSV28 S150	15000	16	40	0.68 0.91	1.15 2.53	250	17.0	36.0	8.3	17.6	10	3/8	3/8	8423 0125 54		
<b>Grinders for polishing</b>																
LSF28 ST030	3000	—	—	0.67 0.90	1.16 2.55	275	18.0	38.2	8.6	18.2	10	3/8	3/8	8423 1235 63		
LSF28 ST030E	3000	—	—	0.67 0.90	1.76 3.87	400	18.0	38.2	8.6	18.2	10	3/8	3/8	8423 1235 62		
LSF28 ST070 <sup>a</sup>	7000	—	—	0.76 1.02	1.16 2.55	275	18.9	40.1	12.4	26.3	10	3/8	3/8	8423 1235 66		
LSF28 ST070E <sup>a</sup>	7000	—	—	0.76 1.02	1.76 3.87	400	18.9	40.1	12.4	26.3	10	3/8	3/8	8423 1235 65		

<sup>a</sup> Not lubrication-free. E = Extended version, flexible spindle. R = Rigid model.

\* Available direct from stock.



LSF 07

Model	Max free speed r/min	Rec. max dia of			Air consumption at						Rec. hose size <sup>c</sup>		Air inlet thread BSP	Ordering No. with collet 1/4"
		Tungsten carbide burrs mm	Mounted point mm	Max output kW hp	Weight kg lb	Length mm	max output l/s cfm	free speed l/s cfm	mm in	6 mm				
<b>High speed pen model</b>														
LSF07 S850	88000	4	6	0.10 0.13	0.4 0.9	170	2.2	4.9	2.3	4.6	4.5	3/16	—	8423 1222 03 <sup>a</sup>

<sup>a</sup> With exhaust hose and in accordance with PneuropCagi test code for all tools.

Ø 3 mm collet standard.

\* Air hose and ErgoNIP included.

## OPTIONAL ACCESSORIES

Ø 1/8" collet

4150 1822 00

## ACCESSORIES INCLUDED

Air hose and ErgoNIP 08 included Ø 3 mm collet and collet wrench. Exhaust with silencer (LSF07).

# ROUTERS



LSK 37



LSK 38\*

Model	Free speed r/min	Collet size	Weight		Power		Air consumption		Recommended hose size		Hose fitting thread BSP	Ordering No.
			kg	lb	kW	hp	l/s	cfm	mm	in		
LSK37 S250-DS1	25000	6 mm	2.8	6.1	0.7	0.95	18	32	13	1/2	3/8	8423 1234 41
LSK37 S250-DS2	25000	1/4"	2.8	6.1	0.7	0.95	18	32	13	1/2	3/8	8423 1234 42
LSK38 S180 Do	18000	1/4"	1.1	2.2	1.3	1.8	28	58	13	1/2	3/8 NPT	8423 0700 01
LSK38 S250 Do	25000	1/4"	1.1	2.2	1.3	1.8	28	58	13	1/2	3/8 NPT	8423 0700 00

Suction requirement: 200 m<sup>3</sup>/h.

\* only possible to use with a Dotco nosepiece.

# CIRCULAR CUTTERS



LCS 10



LCS 38

Model	Free speed r/min	Max output kW hp	Max cutting depth mm	Max cutter blade dia mm	Weight		Air consumption at free speed		Rec. hose size		Air inlet thread BSP	Ordering No.
					kg	lb	l/s	cfm	mm	in		
<b>Circular cutters</b>												
LCS10	3000	0.3 0.4	10	50	1.4	3.1	7.6	16	6.3	1/4	1/4	8424 1161 38
LCS38 S150D <sup>a</sup>	15000	1.3 1.7	26	100	1.7	3.7	28.0	58	13.0	1/2	3/8	8424 1125 06

<sup>a</sup> Suction requirement: 200 m<sup>3</sup>/h.

## ACCESSORIES INCLUDED

### LCS10

- Cutter blade, 62 teeth
- Hexagon wrench
- Hose nipple for 6.3 mm air hose

### LCS38

- Flanges for diamond blade
- Hose nipple for 13 mm air hose

## Cutter blades

Model	Application	Max thickness of material mm	No. of teeth mm	Dia mm	Hole mm	Ordering No.
LCS10	Steel sheet	1.0	92	50	10	4190 0394 00
	Steel sheet	1.0	62	50	10	4190 0395 00 (std)
	Aluminum	2.5	34	50	10	4190 0396 00
	Wood	10.0	34	50	10	4190 0396 00
LCS38	Glassfibre	25.0	44/60 (Grain)	75	12	3780 5073 00
	Glassfibre	25.0	44/60 (Grain)	100	12	3780 5074 00

## OPTIONAL ACCESSORIES

Model	Ordering No.
Suction hose set (L= 5.9 in, Dia 1 1/4") for LCS38	3780 2724 31
Bladeguard for LCS10	4150 1964 00

# PNEUMATIC SCREWDRIVERS



LUM 12



LUM 22



LUM 32

Model	Torque range soft joint		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb		kg	lb			l/s	cfm			
<b>Pistol grip models with trigger start</b>												
LUM22 HR3	0.6 - 3	5.3 - 26.5	2200	0.85	1.9	186	18	7.5	16	8	1/4	8431 0269 00
LUM22 HR4	0.6 - 4	5.3 - 35.4	1650	0.85	1.9	186	18	7.5	16	8	1/4	8431 0269 02
LUM22 HR6	1.5 - 6.5	13.3 - 57.5	1150	0.85	1.9	186	18	7.5	16	8	1/4	8431 0269 01
LUM22 HR10	3.5 - 10	31 - 88.5	750	1	2.2	218	18	7.5	16	10	1/4	8431 0269 03
LUM22 HR12	3.5 - 12.5	31 - 110.6	500	1	2.2	210	18	7.5	16	10	1/4	8431 0269 04
LUM22 HR12-370	3.5 - 12.5	31 - 110.6	370	1	2.2	210	18	7.5	16	10	1/4	8431 0269 05
LUM32 HR10	3.5 - 10	31 - 88.5	750	0.72	1.6	183	18.5	7.5	16	10	1/4	8431 0269 90
LUM32 HR15	7.5 - 15.5	61.9 - 137.2	450	0.72	1.6	183	18.5	7.5	16	10	1/4	8431 0269 91
<b>Pistol grip models with trigger and push start</b>												
LUM22 HR3-P	0.6 - 3	5.3 - 26.5	2200	0.85	1.9	186	21	7.5	16	8	1/4	8431 0269 06
LUM22 HR4-P	0.6 - 4	5.3 - 35.4	1650	0.85	1.9	186	21	7.5	16	8	1/4	8431 0269 08
LUM22 HR6-P	1.5 - 6.5	13.3 - 57.5	1150	0.85	1.9	186	21	7.5	16	8	1/4	8431 0269 07
LUM22 HR10-P	3.5 - 10	31 - 88.5	750	1	2.2	218	21	7.5	16	10	1/4	8431 0269 09
LUM22 HR12-P	3.5 - 12.5	31 - 110.6	500	1	2.2	210	21	7.5	16	10	1/4	8431 0269 10
LUM22 HR12-370-P	3.5 - 12.5	31 - 110.6	370	1	2.2	210	21	7.5	16	10	1/4	8431 0269 11
<b>Balanced grip models with trigger start</b>												
LUM12 HRX1	0.6 - 1.8	5.3 - 15.9	2300	0.65	1.4	176	15	6	13	6	1/8	8431 0278 58
LUM12 HRX1-50	0.6 - 1.8	5.3 - 15.9	50	0.7	1.4	196	16	6	13	6	1/8	8431 0279 58
LUM12 HRX1-110	0.6 - 1.8	5.3 - 15.9	110	0.7	1.4	196	16	6	13	6	1/8	8431 0279 60
LUM12 HRX2	0.6 - 2.5	5.3 - 22.1	1650	0.65	1.4	176	16	6	13	6	1/8	8431 0278 56
LUM12 HRX3	0.4 - 3.5	3.5 - 31	1150	0.7	1.5	186	16	6	13	6	1/8	8431 0278 54
LUM12 HRX5	0.4 - 5	3.5 - 44.2	850	0.7	1.5	186	16	6	13	6	1/8	8431 0278 51
LUM12 HRX5-170	0.4 - 5	3.5 - 44.2	170	0.7	1.5	196	16	6	13	6	1/8	8431 0278 47
LUM12 HRX5-350	0.4 - 5	3.5 - 44.2	350	0.7	1.5	186	16	6	13	6	1/8	8431 0278 48
LUM12 HRX8	1.5 - 8	13.3 - 70.8	500	0.7	1.5	186	16	6	13	6	1/8	8431 0278 60
LUM12 HRX8-50	1.5 - 8	13.3 - 70.8	50	0.7	1.5	196	16	6	13	6	1/8	8431 0280 25
LUM12 HRX8-110	1.5 - 8	13.3 - 70.8	110	0.7	1.5	196	16	6	13	6	1/8	8431 0280 27
LUM12 HRX8-250	1.5 - 8	13.3 - 70.8	250	0.7	1.5	186	16	6	13	6	1/8	8431 0278 69
LUM22 HRX2	1.2 - 2 <sup>a</sup>	10.6 - 17.7	4500	0.9	2	187	18	9	19	8	1/4	8431 0269 29
LUM22 HRX2-3200	1.1 - 2.6 <sup>a</sup>	9.7 - 23	3200	0.9	2	187	18	9	19	8	1/4	8431 0278 85
LUM22 HRX3	0.6 - 3 <sup>a</sup>	5.3 - 26.5	2250	0.9	2	187	18	9	19	8	1/4	8431 0269 22
LUM22 HRX3.5	0.6 - 3.5	5.3 - 29.2	2250	0.9	2	187	18	9	19	8	1/4	8431 0263 99
LUM22 HRX4	0.6 - 4 <sup>a</sup>	5.3 - 35.4	1650	0.9	2	187	18	9	19	8	1/4	8431 0269 20
LUM22 HRX6	1.5 - 6.5 <sup>a</sup>	13.3 - 57.5	1100	0.95	2.1	197	18	9	19	8	1/4	8431 0269 21
LUM22 HRX10	3.5 - 10 <sup>a</sup>	31 - 88.5	800	1.1	2.4	219	18	9	19	10	1/4	8431 0269 23
LUM22 HRX11-220	3.5 - 12.5 <sup>a</sup>	31 - 110.6	220	1.15	2.5	229	18	9	19	10	1/4	8431 0282 20
LUM22 HRX12	3.5 - 12.5 <sup>a</sup>	31 - 110.6	500	1.1	2.4	211	18	9	19	10	1/4	8431 0269 24
LUM22 HRX12-50	3.5 - 12.5 <sup>a</sup>	31 - 110.6	50	1.15	2.5	229	18	9	19	10	1/4	8431 0280 26
LUM22 HRX12-120	3.5 - 12.5 <sup>a</sup>	31 - 110.6	120	1.15	2.5	229	18	9	19	10	1/4	8431 0280 28
LUM22 HRX12-370	3.5 - 12.5 <sup>a</sup>	31 - 110.6	370	1.1	2.4	211	18	9	19	10	1/4	8431 0269 25
<b>Pistol grip models with slip clutch</b>												
TWIST12 HRX4	0.5 - 4.4	4.4 - 38.9	800	0.65	1.4	186	15	6.5	14	6	1/8	8431 0278 38
TWIST22 HRX10	1.5 - 10	13.3 - 88.5	750	1.1	2.4	205	15	9	19	8	1/4	8431 0269 27
TWIST22 HRX12	5 - 12	44.2 - 106.2	500	1.05	2.3	205	15	9	19	8	1/4	8431 0269 28
TWIST22 HR10	1.5 - 10.0	13.3 - 88.5	750	1	2.2	205	15	8	17	8	1/4	8431 0269 15
TWIST22 HR12	5.0 - 12.0	44.2 - 106.2	500	1	2.2	195	15	8	17	8	1/4	8431 0269 16
LUF34 HR04	3.0 - 17.0	27.0 - 150.0	440	1.4	3.1	265	21	9.5	19	8	1/4	8431 0311 05
LUF34 HR08	2.0 - 15.0	18.0 - 133.0	750	1.4	3.1	265	21	9.5	19	8	1/4	8431 0311 09
<b>Pistol grip models with direct drive</b>												
LUD12 HRX8	3.5 - 8	31.0 - 70.8	500	0.5	1.1	125	16	6.5	14	8	1/8	8431 0278 79
LUD22 HR12	5 - 12	44.2 - 106.2	750	0.75	1.7	143	18	8	17	8	1/4	8431 0269 19
LUD22 HR12-260-A	Max 12	Max 106	260	0.7	1.5	116	18	9	19	10	1/4	8431 0269 36
LUF34 HRD04	8.0 - 18.0	71 - 160	440	1.2	2.6	212	20	9	19	10	1/4	8431 0311 22
LUF34 HRD08	8.0 - 11.0	71 - 97	750	1.2	2.6	212	20	9	19	10	1/4	8431 0311 24
<b>Straight models with direct drive</b>												
TWIST SR03-A	Max 12	Max 106	260	0.6	1.4	154	18	8	17	10	1/4	8431 0252 18

<sup>a</sup> 1.4-4 Nm with spring, Ordering No. 4210 1831 00. All models: Are reversible and have quick change chuck. All data at an air pressure of 6.3 bar.  
All assembly tools can be equipped with special attachments. For more information contact your local Atlas Copco sales representative.

# PNEUMATIC SCREWDRIVERS



LTV 009



LTV 18

Model	Torque range soft joint		Free speed r/min	Weight kg lb	Length mm	Angle head height mm	Angle head centre to side mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.
	Nm	in lb						l/s	cfm			
<b>Angle screwdrivers air shut-off control models</b>												
LTV009 R025-Q	0.6 - 2.5	5.3 - 22.1	1650	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 00
LTV009 R025-42	0.6 - 2.5	5.3 - 22.1	1650	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 01
LTV009 R025-6	0.6 - 2.5	5.3 - 22.1	1650	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 02
LTV009 R03-10	0.7 - 3	6.2 - 26.5	1400	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 23
LTV009 R035-Q	0.4 - 3.5	3.5 - 31	1100	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 03
LTV009 R035-42	0.4 - 3.5	3.5 - 31	1100	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 04
LTV009 R035-6	0.4 - 3.5	3.5 - 31	1100	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 05
LTV009 R05-Q	0.4 - 5	3.5 - 44.2	850	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 06
LTV009 R05-42	0.4 - 5	3.5 - 44.2	850	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 07
LTV009 R05-6	0.4 - 5	3.5 - 44.2	850	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 08
LTV009 R07-Q	1.1 - 7	9.7 - 61.9	500	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 09
LTV009 R07-42	1.1 - 7	9.7 - 61.9	500	0.7 1.5	266	25	9	6	13	6	1/8	8431 0278 10
LTV009 R07-6	1.1 - 7	9.7 - 61.9	500	0.7 1.5	266	28.5	11	6	13	6	1/8	8431 0278 11
LTV009 R07-6-230	0.7 - 7	6.2 - 61.9	230	0.8 1.5	266	28.5	11*	6	13	6	1/8	8431 0279 18
LTV009 R08-6-200	1.3 - 9	11.5 - 79.6	200	0.7 1.5	266	28.5	11	6	13	6	1/8	8431 0278 24
LTV009 R08-6-200-B	1.3 - 9	11.5 - 79.6	200	0.8 1.5	266	28.5	11*	6	13	6	1/8	8431 0278 31
LTV009 R09-Q	1.3 - 9	11.5 - 79.6	430	0.7 1.5	266	28.5	11	6	13	6	1/8	8431 0278 12
LTV009 R09-10	1.3 - 9	11.5 - 79.6	430	0.7 1.5	266	28.5	11	6	13	6	1/8	8431 0278 13
LTV009 R09-42	1.3 - 9	11.5 - 79.6	430	0.7 1.5	266	28.5	11	6	13	6	1/8	8431 0278 15
LTV009 R09-42M	1.3 - 9	11.5 - 79.6	430	0.7 1.5	266	28.5	11	6	13	6	1/8	8431 0278 16
LTV009 R09-6	1.3 - 9	11.5 - 79.6	430	0.7 1.5	266	28.5	11	6	13	6	1/8	8431 0278 17
LTV009 R11-Q	1.3 - 11	11.5 - 97.3	320	0.8 1.8	266	28.5	11	6	13	6	1/8	8431 0278 19
LTV009 R11-10	1.3 - 11	11.5 - 97.3	320	0.8 1.8	266	28.5	11	6	13	6	1/8	8431 0278 20
LTV009 R11-42	1.3 - 11	11.5 - 97.3	320	0.8 1.8	266	28.5	11	6	13	6	1/8	8431 0278 21
LTV009 R11-6	1.3 - 11	11.5 - 97.3	320	0.8 1.8	266	28.5	11	6	13	6	1/8	8431 0278 22
LTV18 R07-6	3.5 - 7	31 - 61	700	1.2 2.6	290	28.5	10	6	13	6	1/4	8431 0326 72
LTV18 R07-42	3.5 - 7	31 - 61	700	1.2 2.6	290	28.5	10	6	13	6	1/4	8431 0326 61
LTV18 R07-Q	3.5 - 7	31 - 61	700	1.2 2.6	290	28.5	10	6	13	6	1/4	8431 0326 76
LTV18 R15-6	6 - 15	53 - 132	360	1.2 2.6	308	28	11	7	15	8	1/4	8431 0326 55
LTV18 R15-10	6 - 15	53 - 132	360	1.2 2.6	308	28	11	7	15	8	1/4	8431 0326 56
LTV18 R15-42	6 - 15	53 - 132	360	1.2 2.6	308	28	11	7	15	8	1/4	8431 0326 54
LTV18 R15-Q	6 - 15	53 - 132	360	1.2 2.6	308	28	11	7	15	8	1/4	8431 0326 58
<b>Angle screwdrivers slip clutch models with 1/4" square drive</b>												
TWIST VR07-6	1.3 - 7	12 - 62	700	1 2.2	280	29	10	4	8	8	1/4	8431 0256 11
TWIST VR13-6	2 - 6	18 - 53	1300	1 2.2	280	29	10	4	8	8	1/4	8431 0256 37
<b>Angle screwdrivers slip clutch models with 1/4" female hexagon drive</b>												
TWIST VR07-16	1.3 - 7	12 - 62	700	1 2.2	280	29	10	4	8	8	1/4	8431 0256 03
<b>Angle screwdrivers with adapter prepared for attachment</b>												
LTV009-LA R09	4 - 13	35 - 115	250	0.9 2.0	218	-	-	6	13	6	1/8	8431 0282 15
LTV009-LA R15	5 - 20	44 - 177	150	0.9 2.0	218	-	-	6	13	6	1/8	8431 0282 13

All models: Are reversible.

- 42 = 1/4" female hexagon drive for bits.
- 10 = 3/8" square drive.
- 6 = 1/4" square drive for sockets.
- Q = 1/4" quick change chuck.

All assembly tools can be equipped with special attachments. For more information contact your local Atlas Copco sales representative.

\* Angle head centre to side (mm).

# PNEUMATIC NUTRUNNERS



LTV 29-2



LTV 39-2

Model	Bolt size mm	Square drive in	Torque range soft joint		Free speed r/min	Weight kg	Length mm	Angle head height mm	Angle head centre to side mm	Air consumption at free speed l/s cfm	Rec. hose size mm	Air inlet thread in	Ordering No.	
	Nm	ft lb												
<b>Angle nutrunners reversible models</b>														
LTV29-2 R12-Q	M6	1/4a	6 - 12	4.5 - 9	850	1.3	2.9	351	44	11	10	21	10	1/4 8431 0631 17
LTV29-2 R12-42	M6	1/4b	6 - 12	4.5 - 9	850	1.3	2.9	351	34	11	10	21	10	1/4 8431 0631 18
LTV29-2 R12-6	M6	1/4	6 - 12	4.5 - 9	850	1.3	2.9	351	27	11	10	21	10	1/4 8431 0631 15
LTV29-2 R12-B6	M6	1/4	6 - 12	4.5 - 9	850	1.3	2.9	351	27	11	10	21	10	1/4 8431 0631 00
LTV29-2 R12-10	M6	3/8	6 - 12	4.5 - 9	850	1.3	2.9	351	27	11	10	21	10	1/4 8431 0631 16
LTV29-2 R12-B10	M6	3/8	6 - 12	4.5 - 9	850	1.3	2.9	351	27	11	10	21	10	1/4 8431 0631 01
LTV29-2 R16-Q	M6	1/4a	9 - 16	7 - 12	850	1.3	2.9	351	44	11	10	21	10	1/4 8431 0631 24
LTV29-2 R16-42	M6	1/4b	9 - 16	7 - 12	850	1.3	2.9	351	34	11	10	21	10	1/4 8431 0631 23
LTV29-2 R16-6	M6	1/4	9 - 16	7 - 12	850	1.3	2.9	351	27	11	10	21	10	1/4 8431 0631 22
LTV29-2 R16-B6	M6	1/4	9 - 16	7 - 12	850	1.3	2.9	351	27	11	10	21	10	1/4 8431 0631 02
LTV29-2 R16-10	M6	3/8	9 - 16	7 - 12	850	1.3	2.9	351	27	11	10	21	10	1/4 8431 0631 21
LTV29-2 R16-B10	M6	3/8	9 - 16	7 - 12	850	1.3	2.9	351	27	11	10	21	10	1/4 8431 0631 03
LTV29-2 R24-10	M8	3/8	12 - 24	9 - 18	640	1.4	3.1	374	30	14	10	21	10	1/4 8431 0631 29
LTV29-2 R24-B10	M8	3/8	12 - 24	9 - 18	640	1.4	3.1	374	30	14	10	21	10	1/4 8431 0631 04
LTV29-2 R30-10	M8	3/8	15 - 30	11 - 22	500	1.4	3.1	374	30	14	10	21	10	1/4 8431 0631 37
LTV29-2 R30-B10	M8	3/8	15 - 30	11 - 22	500	1.4	3.1	374	30	14	10	21	10	1/4 8431 0631 36
LTV39-2 R16-10	M6	3/8	7 - 16	5 - 12	1200	1.5	3.3	375	27	11	16	34	10	1/4 8431 0633 09
LTV39-2 R16-B10	M6	3/8	7 - 16	5 - 12	1200	1.5	3.3	375	27	11	16	34	10	1/4 8431 0631 05
LTV39-2 R24-10	M8	3/8	12 - 24	9 - 18	870	1.6	3.5	385	30	14	16	34	10	1/4 8431 0633 14
LTV39-2 R24-B10	M8	3/8	12 - 24	9 - 18	870	1.6	3.5	385	30	14	16	34	10	1/4 8431 0631 06
LTV39-2 R30-10	M8	3/8	15 - 30	11 - 22	870	1.6	3.5	385	35	14	16	34	10	1/4 8431 0633 19
LTV39-2 R30-B10	M8	3/8	15 - 30	11 - 22	870	1.6	3.5	385	35	14	16	34	10	1/4 8431 0631 07
LTV39-2 R37-10	M8	3/8	22 - 37	16 - 27	708	1.7	3.7	405	35	18	16	34	10	1/4 8431 0633 24
LTV39-2 R37-B10	M8	3/8	22 - 37	16 - 27	708	1.7	3.7	405	35	18	16	34	10	1/4 8431 0631 08
LTV39-2 R48-10	M8	3/8	24 - 48	18 - 35	560	1.7	3.7	405	35	18	16	34	10	1/4 8431 0633 27
LTV39-2 R48-B10	M8	3/8	24 - 48	18 - 35	560	1.7	3.7	405	35	18	16	34	10	1/4 8431 0631 09
LTV39-2 R48-13	M8	1/2	24 - 48	18 - 35	560	2.0	4.4	425	41	20	16	34	10	1/4 8431 0633 43
LTV39-2 R48-B13	M8	1/2	24 - 48	18 - 35	560	2.0	4.4	425	41	20	16	34	10	1/4 8431 0631 10
LTV39-2 R56-10	M10	3/8	28 - 56	21 - 41	460	1.7	3.7	405	35	18	16	34	10	1/4 8431 0633 35
LTV39-2 R56-B10	M10	3/8	28 - 56	21 - 41	460	1.7	3.7	405	35	18	16	34	10	1/4 8431 0631 11
LTV39-2 R56-13	M10	1/2	28 - 56	21 - 41	460	2.0	4.4	425	41	20	16	34	10	1/4 8431 0633 51
LTV39-2 R56-B13	M10	1/2	28 - 56	21 - 41	460	2.0	4.4	425	41	20	16	34	10	1/4 8431 0631 12
LTV39-2 R70-13	M10	1/2	35 - 70	26 - 51	350	2.1	4.6	425	41	20	16	34	10	1/4 8431 0633 59
LTV39-2 R70-B13	M10	1/2	35 - 70	26 - 51	350	2.1	4.6	425	41	20	16	34	10	1/4 8431 0631 13
LTV39-2 R85-13	M10-12	1/2	43 - 85	32 - 63	305	2.5	5.5	500	52	25	16	34	10	1/4 8431 0633 67
LTV39-2 R85-B13	M10-12	1/2	43 - 85	32 - 63	305	2.5	5.5	500	52	25	16	34	10	1/4 8431 0631 14
<b>Angle nutrunners reversible models</b>														
LTV28 R07-6	M5	1/4	2.5 - 7	1.8 - 5	1100	1.3	2.9	334	28.5	10	8	17	8	1/4 8431 0601 65
LTV28 R07-42	M5	1/4 <sup>a</sup>	2.5 - 7	1.8 - 5	1100	1.3	2.9	334	28.5	10	8	17	8	1/4 8431 0601 73
LTV28 R07-Q	M6	1/4 <sup>b</sup>	2.5 - 7	1.8 - 5	1100	1.3	2.9	334	28.5	10	8	17	8	1/4 8431 0601 68
LTV28 R15-6	M6	1/4	7 - 15	5 - 11	560	1.4	3.1	349	28	11	10	21	10	1/4 8431 0601 52
LTV28 R15-42	M6	1/4 <sup>a</sup>	7 - 15	5 - 11	560	1.4	3.1	349	28	11	10	21	10	1/4 8431 0601 58
LTV28 R15-Q	M6	1/4 <sup>b</sup>	7 - 15	5 - 11	560	1.4	3.1	349	28	11	10	21	10	1/4 8431 0601 53
LTV28 R15-10	M6	3/8	7 - 15	5 - 11	560	1.4	3.1	349	28	11	10	21	10	1/4 8431 0601 55
LTV28 R20-10	M6	3/8	10 - 19	7 - 15	530	1.4	3.1	355	34.5	13.5	10	21	10	1/4 8431 0601 50
LTV28 R20-42	M6	1/4 <sup>a</sup>	10 - 20	7 - 15	420	1.4	3.1	350	34	13.5	10	21	10	1/4 8431 0601 48
LTV28 R28-10	M8	3/8	14 - 28	10 - 21	340	1.4	3.1	350	29.5	13.5	10	21	10	1/4 8431 0601 40
LTV28 R28-42	M8	3/8	14 - 28	10 - 21	340	1.4	3.1	350	29.5	13.5	10	21	10	1/4 8431 0601 44
LTV28 RL28-10	M8	3/8	14 - 28	10 - 21	80	1.4	3.1	350	29.5	13.5	10	21	10	1/4 8431 0601 33

<sup>a</sup> Quick change chuck.<sup>b</sup> Female hex drive.**ACCESSORIES INCLUDED**

Hose fitting

Clutch adjustment key

Model	Bolt size	Square drive	Torque range soft joint		Free speed r/min	Weight kg	Length mm	Angle head centre		Air consumption at free speed		Rec. hose size mm	Air inlet thread in	Ordering No.	
	mm	in	Nm	ft lb				head height mm	to side mm	l/s	cfm				
<b>Angle nutrunners reversible models</b>															
LTV38 R42-10	M8	3/8	20 - 42	15 - 31	400	2.0	4.4	436	34.5	18	16	34	10	1/4	8431 0603 55
LTV38 R42-13	M8	1/2	20 - 42	15 - 31	400	2.2	4.8	453	41	20	16	34	10	1/4	8431 0603 69
LTV38 R50-10	M10	3/8	25 - 50	18 - 36	330	2.0	4.4	436	34.5	18	16	34	10	1/4	8431 0603 63
LTV38 R50-13	M10	1/2	25 - 50	18 - 36	330	2.2	4.8	453	41	20	16	34	10	1/4	8431 0603 71
LTV38 R57-13	M10	1/2	30 - 57	22 - 41	280	2.2	4.8	453	41	20	16	34	10	1/4	8431 0603 51
LTV38 R70-13	M10	1/2	34 - 70	24 - 50	225	2.4	5.3	487	41	20	16	34	10	1/4	8431 0603 46
LTV38 R85-13	M10-12	1/2	40 - 85	29 - 61	190	2.8	6.1	530	52	25	16	34	10	1/4	8431 0603 38
<b>Angle nutrunners reversible models</b>															
LTV48 R120-L13	M12	1/2	70 - 120	51 - 88	215	3.5	7.6	590	52	25	28	59	12.5	1/2	8431 0534 88
LTV48 R150-L13	M12	1/2	70 - 150	51 - 111	170	3.5	7.6	590	52	25	28	59	12.5	1/2	8431 0534 93
LTV48 R200-L13	M14	1/2	115 - 200	85 - 148	100	3.8	8.3	610	52	25	28	59	12.5	1/2	8431 0534 98
<b>Straight nutrunners non shut-off stall type models</b>															
LMD28 R18-RE-A	M8	—	10 - 20	7.4 - 15	380	1.8	4.0	308	—	—	8	17	10	1/4	8431 0307 61
LMD28 R60-A	M10	—	35 - 60	26 - 44	210	1.5	3.3	210	—	—	9.5	20	10	1/4	8431 0307 65
LMD28 R40-A	M10	—	20 - 40	15 - 29	290	1.2	2.6	217	—	—	10	21	10	1/4	8431 0591 08

<sup>a</sup> Female hex drive.<sup>b</sup> Quick change chuck.

## ACCESSORIES INCLUDED

Hose fitting

Clutch adjustment key  
(not for stall type models)

# AIR LINE ACCESSORIES SELECTION GUIDE



	<b>Tool</b>	<b>FRL kit</b>	<b>5 m hose kit</b>	<b>Whip hose kit</b>	<b>MultiFlex swivel</b>	<b>Closed hose reel</b>	<b>Opened hose reel</b>
	RRH 04	8202 0845 48	8202 1180 67	-	8202 1350 20	8202 1180 91	8202 1181 10
RRH 06/08	8202 0845 48	8202 1180 77	-	8202 1350 20	8202 1181 00	8202 1181 10	
RRH 10/12/14	8202 0845 48	8202 1180 30	8202 1180 47	8202 1350 20	8202 1181 00	8203 1181 12	
RBB 10/16	8202 0845 48	8202 1180 67	-	-	8202 1180 91	8202 1181 10	

	LBB 16 LBV 16	8202 0845 48	8202 1180 77	-	8202 1350 20	8202 1181 00	8202 1181 10
	LBB 26	8202 0845 48	8202 1180 30	8202 1180 47	8202 1350 22	8202 1181 56	8203 1181 12
	LBB 36/37/LBV 36/LBS 36	8202 0845 48	8202 1180 31	8202 1180 50	8202 1350 22	8202 1181 56	8203 1181 22
	LBV 11	8202 0845 48	8202 1180 67	-	8202 1350 20	8202 1180 91	8202 1181 10

	LSV 18	8202 0845 48	8202 1180 30	8202 1180 47	8202 1350 20	8202 1181 00	8203 1181 12
	LSV 28	8202 0829 11	8202 1180 31	8202 1180 50	8202 1350 22	8202 1181 56	8203 1181 22
	LSV 38/48	8202 0829 11	8202 1180 22	8202 1180 23	8202 1350 24	-	-
	LST 20/21/22	8202 0845 48	8202 1180 77	-	8202 1350 20	8202 1180 91	8202 1181 10
	LST 30/31/32	8202 0845 48	8202 1180 77	-	8202 1350 20	8202 1180 91	8202 1181 10
	LSF 07	8202 0829 11	8202 1180 67	-	-	8202 1180 91	8202 1181 10
	LSK 38	8202 0845 48	8202 1180 79	8203 1180 35	8202 1350 22	-	-
	LCS 10	8202 0845 48	8202 1180 30	8202 1180 47	8202 1350 20	8202 1180 91	8202 1181 10
	LCS 38	8202 0845 48	8202 1180 22	8202 1180 44	8202 1350 22	-	-

	LUM 12	8202 0845 48	8202 1180 67	-	-	8202 1180 91	8202 1181 10
	LUM 25	8202 0845 48	8202 1180 77	-	8202 1350 20	8202 1180 91	8202 1181 10
	LUM 22/32	8202 0845 48	8202 1180 77	-	8202 1350 20	8202 1181 00	8203 1181 12
	TWIST	8202 0845 48	8202 1180 77	-	8202 1350 20	8202 1180 91	8202 1181 10
	LTV 008/009	8202 0845 48	8202 1180 67	-	-	8202 1180 91	8202 1181 10
	LTV 18	8202 0845 48	8202 1180 77	-	-	8202 1180 91	8202 1181 10
	LTV 28/29	8202 0845 48	8202 1180 30	8202 1180 47	8202 1350 20	8202 1181 00	8203 1181 12
	LTV 38/39	8202 0845 48	8202 1180 30	8202 1180 47	8202 1350 20	8202 1181 56	8203 1181 22
	LTV 48	8202 0845 48	8202 1180 22	8202 1180 23	8202 1350 24	-	-

Description	Ordering number	Explanation
<b>FRL kits</b>	8202 0845 48	Filter/Regulator Midi F/R 15 + Ball valve + ErgoQIC 10 coupling
	8202 0829 11	Filter/Regulator + Lubricator Midi F/R D 15 + Ball valve + ErgoQIC 10 coupling
<b>Hose kits</b>	8202 1180 30	5 m PVC hose, Ø10 mm (3/8") ErgoQIC 08 coupling + ErgoNIP Male 1/4" BSPT
	8202 1180 77	5 m CABLAIR hose, Ø8 mm (5/16") ErgoQIC 08 coupling + ErgoNIP Male 1/4" BSPT
	8202 1180 31	5 m PVC hose, Ø10 mm (3/8") ErgoQIC 08 coupling + ErgoNIP Male 3/8" BSPT
	8202 1180 79	5 m CABLAIR hose, Ø13 mm (1/2") ErgoQIC 10 coupling + ErgoNIP Male 3/8" BSPT
	8202 1180 67	5 m CABLAIR hose, Ø6 mm (1/4") ErgoQIC 08 coupling + ErgoNIP Male 1/8" BSPT
	8202 1180 22	5 m RUBAIR hose, Ø13 mm (1/2") ErgoQIC 10 coupling
<b>Whip hose kits</b>	8202 1180 47	0.7 m whip hose, PVC Ø10 mm (3/8") ErgoNIP 08 + Male nipple 1/4" BSPT
	8202 1180 50	0.7 m whip hose, PVC Ø10 mm (3/8") ErgoNIP 08 + Male nipple 3/8" BSPT
	8203 1180 35	1.5 m whip hose, CABLAIR Ø10 mm (3/8") ErgoNIP 10 + Male nipple 3/8" BSPT
	8202 1180 23	0.7 m whip hose, RUBAIR Ø13 mm (1/2") ErgoNIP 10 + Male nipple 1/2" BSPT
	8202 1180 44	0.7 m whip hose, RUBAIR Ø10 mm (3/8") ErgoNIP 10 + Male nipple 3/8" BSPT
<b>MultiFlex swivel</b>	8202 1350 20	MultiFlex Swivel 1/4 BSP
	8202 1350 22	MultiFlex Swivel 3/8 BSP
	8202 1350 24	MultiFlex Swivel 1/2 BSP
<b>Closed hose reel</b>	8202 1180 91	HM Light 100% PU hose, 10 m length, Ø8 mm (5/16")
	8202 1181 00	HM Flex 100% PU hose, 10 m length, Ø10 mm (3/8")
	8202 1181 56	HM Flex L Rubber hose, 10 m length, Ø13 mm (1/2")
<b>Open hose reel</b>	8202 1181 10	HM Open Flex 100% PU hose, 15 m length, Ø10 mm (3/8")
	8203 1181 12	HM Open Flex 100% PU hose, 10 m length, Ø10 mm (3/8")
	8203 1181 22	HM Open Flex L 100% PU hose, 10 m length, Ø13 mm (1/2")

# BATTERY CLUTCH SCREWDRIVERS



BTV

Model	Screw size mm	Recommended torque range		Free speed			Weight excl. battery		Tool only Ordering No.	PROT version tool only Ordering No.
		Nm	in lb	9.6 V r/min	12 V r/min	14.4 V r/min	kg	lb		
<b>BTV/BTD – shut-off</b>										
BTV7i-6	M3-M5	2 - 7	18 - 62	350	450	-	1.4	3.0	8431 0261 40	8431 0261 52
BTV7i-42	M3-M5	2 - 7	18 - 62	350	450	-	1.4	3.0	8431 0261 44	8431 0261 53
BTV7i-Q	M3-M5	2 - 7	18 - 62	350	450	-	1.4	3.0	8431 0261 49	8431 0261 54
BTV11i-6	M4-M6	4 - 11	36 - 97	300	380	-	1.4	3.0	8431 0261 55	8431 0261 59
BTV11i-42	M4-M6	4 - 11	36 - 97	300	380	-	1.4	3.0	8431 0261 56	8431 0261 60
BTV11i-Q	M4-M6	4 - 11	36 - 97	300	380	-	1.4	3.0	8431 0261 57	8431 0261 61
BTV11i-10	M4-M6	4 - 11	36 - 97	300	380	-	1.4	3.0	8431 0261 58	8431 0261 64
BTV15i-6	M6	8 - 15	70 - 132	-	340	410	1.7	3.7	8431 0261 65	8431 0261 69
BTV15i-42	M6	8 - 15	70 - 132	-	340	410	1.7	3.7	8431 0261 72	8431 0261 76
BTV15i-Q	M6	8 - 15	70 - 132	-	340	410	1.7	3.7	8431 0261 73	8431 0261 77
BTV15i-10	M6	8 - 15	70 - 132	-	340	410	1.7	3.7	8431 0261 68	8431 0261 78
BTV28i-42	M8	15 - 28	132 - 248	-	210	260	1.8	4.0	8431 0261 79	8431 0262 10
BTV28i-10	M8	15 - 28	132 - 248	-	210	260	1.8	4.0	8431 0261 80	8431 0262 11
BTV28i-B10	M8	15 - 28	132 - 248	-	210	260	1.8	4.0	8431 0261 83	8431 0262 12
BTV28i-Q	M8	15 - 28	132 - 248	-	210	260	1.8	4.0	8431 0261 86	8431 0262 14

Voltage	Capacity	Weight gram	Ordering No.	Pulse chargers		
<b>Battery</b>	9.6 V	2.0 Ah	570	4210 3680 02	15/23 min	(1.4/2.0 Ah)
	12 V Flat pack	1.4 Ah	500	4210 3680 03	25/36 min	(1.4/2.0 Ah)
	12 V	2.0 Ah	730	4210 3680 05	1/1.3 hour	(1.4/2.0 Ah)
	14.4 V	2.0 Ah	800	4210 3680 06	230/240 V	4210 3676 10
					110/120 V	4210 3676 20
					230/240 V	4210 3676 00



BCP

Model	Square drive	Torque range		Torque ft lb		Speed r/min	Weight (excl. battery)		Length/Height		Ordering No.
	in	Nm	ft lb	Min	Max		Kg	lb	mm	in	
<b>BCP – shut-off brushless tools with variable speed</b>											
BCP BL2-I06	1/4	0.8	2.5	0.6	1.8	500 - 1550	0.86	1.89	200/188	8431 1273 00	
BCP BL6-I06	1/4	2.0	6.0	1.5	4.4	300 - 1000	0.86	1.89	200/188	8431 1273 10	
BCP BL8-I06	1/4	3.0	8.0	2.2	5.9	300 - 800	0.86	1.89	200/188	8431 1273 20	
BCP BL12-I06	1/4	5.0	12.0	3.7	8.8	300 - 600	0.86	1.89	200/188	8431 1273 30	
BCP BL-12L-I06	1/4	3.0	12.0	2.2	8.8	150 - 440	0.86	1.89	200/188	8431 1273 40	
BCP BL-2L-I06	1/4	0.8	2.5	0.6	1.8	150 - 440	0.86	1.89	200/188	8431 1273 50	
BCP BL-6L-I06	1/4	1.5	6.0	1.5	4.4	150 - 440	0.86	1.89	200/188	8431 1273 60	

The tools are set at maximum speed at delivery. All pistol grip models have 1/4" female hexagon drive for bits with quick change chuck.

## ACCESSORIES – BCP BATTERY CLUTCH SCREWDRIVERS



BATTERY CHARGER



SUPPORT HANDLE



TOOL COVER



COLOUR RINGS

18 V.



BATTERY



BATTERY



SPEED SETTING UNIT

18 V, 2.6 AH.



BATTERY COVER

18 V, 1.3 AH.



BATTERY COVER



SUSPENSION YOKE

Miscellaneous	Ordering No.
Speed setting unit	4211 5462 80
Support handle	4211 5421 80
Tool cover protection	4211 5415 00
Battery cover protection flat pack	4211 5601 00
Battery cover protection big pack	4211 5602 00
Suspension bail	4211 5600 00
Colour ring – red	4211 5461 02
Colour ring – orange	4211 5461 03
Colour ring – green	4211 5461 04
Colour ring – blue	4211 5461 05
Colour ring – white	4211 5461 06
Colour ring – purple	4211 5461 07
Colour ring – grey	4211 5461 08

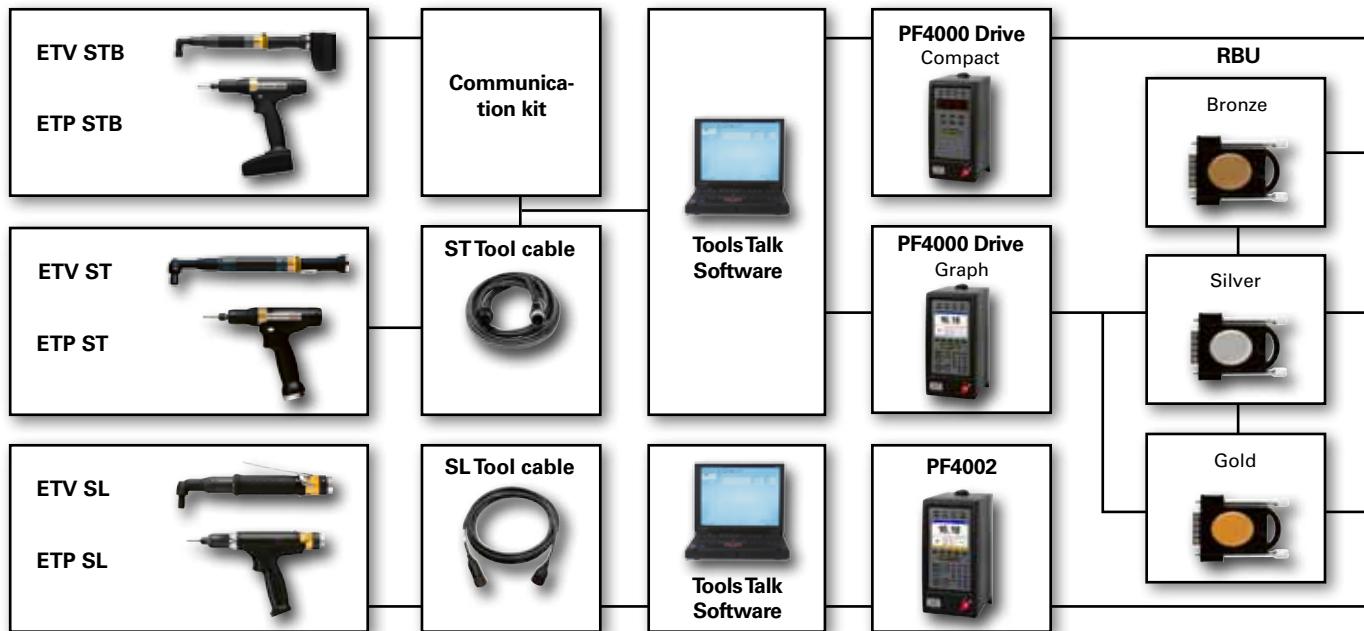
18 V, 2.6 AH.

18 V, 1.3 AH.

Battery	Current V	Electric charge Ah	Weight		Charge time min	Ordering No.
			kg	lb		
Li-Ion flat pack	18	1.3	0.37	0.81	35	4211 5426 82
Li-Ion big pack	18	2.6	0.63	1.39	70	4211 5426 83

Charger	Input V / Hz	Output V / A	Weight		Ordering No.
			kg	lb	
EU-contact	230V / 50Hz	18V / 1.8A	0.61	1.34	4211 5428 80
UK-contact	230V / 50Hz	18V / 1.8A	0.61	1.34	4211 5428 81
US-contact	120V / 60Hz	18V / 1.8A	0.61	1.34	4211 5428 84

# TENSOR SYSTEM OVERVIEW



In order to connect a Tensor system, the tool needs to be connected to the PF with a cable, or for the wireless models, with a communication kit. The level of functionality of the PF can be decided by choice of RBU, Rapid Back-up Unit. For easy data handling and programming, the system can be connected to the ToolsTalk software, used on a PC or ComNode, easily set up with ethernet cables.

# ELECTRIC SCREWDRIVERS



## Tensor SL

Model	Torque		Speed r/min	Weight		Length mm	CS distance mm	Stroke mm	Ordering No.
	Nm	in lb		kg	lb				
<b>Right angle tools (lever start)</b>									
ETV SL21-04-I06	0.8 - 4	7 - 35	1600	0.75	1.7	279	9	-	8433 2004 47
ETV SL21-04-I06-OC	0.8 - 4	8 - 35	1600	0.75	1.7	279	9	-	8433 2004 73
ETV SL21-04-06	0.8 - 4	9 - 35	1600	0.75	1.7	279	9	-	8433 2004 91
ETV SL21-07-I06	1.5 - 7.5	13 - 66	970	0.75	1.7	279	9	-	8433 2007 66
ETV SL21-07-I06-OC	1.5 - 7.5	14 - 66	970	0.75	1.7	279	9	-	8433 2007 79
ETV SL21-07-06	1.5 - 7.5	15 - 66	970	0.75	1.7	279	9	-	8433 2007 94
ETV SL21-12-I06	2.5 - 12	22 - 106	610	0.8	1.8	282	11	-	8433 2008 34
ETV SL21-12-I06-OC	2.5 - 12	23 - 106	610	0.8	1.8	282	11	-	8433 2008 61
ETV SL21-12-06	2.5 - 12	24 - 106	610	0.8	1.8	282	11	-	8433 2008 77
<b>Pistol grip (push-to-start)</b>									
ETP SL21-01-I06-PS	0.3 - 1.2	2.7 - 10	3000	0.85	1.9	246	20.5	-	8433 2201 16
ETP SL21-04-PS	0.8 - 4	7 - 35	1600	0.85	1.9	246	20.5	-	8433 2204 66
ETP SL21-07-PS	1.5 - 7.5	13 - 66	970	0.85	1.9	246	20.5	-	8433 2207 53
ETP SL21-10-PS	2 - 10	18 - 89	720	0.85	1.9	246	20.5	-	8433 2208 28

All assembly tools can be equipped with special attachments. For more information contact your local Atlas Copco sales representative.

# ELECTRIC NUTRUNNERS



TENSOR ST ETV

## Tensor ST

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Height mm	Ordering No.
		Nm	ft lb		kg	lb				
<b>ETV ST31</b>										
ST31-05-10	3/8	1 - 5	0.7 - 3.6	2390	1.0	2.2	381.5	11	39.3	8433 2011 21
ST31-10-10	3/8	3 - 12	2.2 - 8.8	1020	1.0	2.2	381.5	11	39.3	8433 2013 66
ST31-15-10	3/8	5 - 15	3.6 - 10	755	1.0	2.2	381.5	11	39.3	8433 2015 98
ST31-20-10	3/8	5 - 22	3.7 - 16.1	545	1.2	2.6	415	14	42	8433 2017 10
<b>ETV ST31 Ball Retainer</b>										
ST31-05-B10	3/8	1 - 5	0.7 - 3.6	2390	1.0	2.2	381.5	11	39.3	8433 2011 87
ST31-10-B10	3/8	3 - 12	2.2 - 8.8	1020	1.0	2.2	381.5	11	39.3	8433 2014 12
ST31-15-B10	3/8	5 - 15	3.6 - 10	755	1.0	2.2	381.5	11	39.3	8433 2016 36
ST31-20-B10	3/8	5 - 22	3.7 - 16.1	545	1.2	2.6	415	14	42	8433 2018 23
<b>ETV ST31 Female Hex</b>										
ST31-05-I06-QC	-	1 - 5	0.7 - 3.6	2390	1.0	2.2	381.5	11	39.3	8433 2011 95
ST31-10-I06-QC	-	3 - 12	2.2 - 8.8	1020	1.0	2.2	381.5	11	39.3	8433 2014 21
<b>ETV ST61</b>										
ST61-28-10	3/8	6 - 29	4 - 21	1450	1.3	2.9	440	14	42	8433 2021 76
ST61-30-10	3/8	7 - 35	5 - 25	1090	1.3	2.9	440	15.5	42	8433 2023 92
ST61-40-10	3/8	8 - 40	6 - 29	1090	1.5	3.3	454	18	47	8433 2027 85
ST61-50-10	3/8	10 - 55	7 - 40	655	1.5	3.3	454	18	47	8433 2031 58
ST61-70-13	1/2	15 - 80	10 - 58	475	2.0	4.5	466	20	58	8433 2035 30
ST61-100-13	1/2	20 - 100	15 - 80	350	2.5	5.5	502	22.5	60	8433 2039 02
ST61-150-13	1/2	30 - 160	22 - 117	227	3.0	6.6	536	25.5	65	8433 2042 70
ST61-180-13	1/2	35 - 180	26 - 133	190	3.0	6.6	536	25.5	65	8433 2045 53
ST61-200-20	1/2	40 - 200	30 - 154	185	3.0	6.6	537.5	27	69.5	8433 2046 39
<b>ETV ST61 ATEX</b>										
ST61-28-10-ATEX	3/8	6 - 29	4 - 21	1450	1.3	2.9	440	14	42	8433 2023 76
ST61-30-10-ATEX	3/8	7 - 35	5 - 25	1090	1.3	2.9	440	15.5	42	8433 2026 91
ST61-40-10-ATEX	3/8	8 - 40	6 - 29	1090	1.5	3.3	454	18	47	8433 2030 85
ST61-50-10-ATEX	3/8	10 - 55	7 - 40	655	1.5	3.3	454	18	47	8433 2034 98
ST61-70-13-ATEX	1/2	15 - 80	10 - 58	475	2.0	4.5	466	20	58	8433 2037 90
ST61-100-13-ATEX	1/2	20 - 100	15 - 80	350	2.5	5.5	502	22.5	60	8433 2041 41
ST61-150-13-ATEX	1/2	30 - 160	22 - 117	227	3.0	6.6	536	25.5	65	8433 2045 20
ST61-200-20-ATEX	1/2	40 - 200	30 - 154	185	3.0	6.6	537.5	27	69.5	8433 2048 49
<b>ETV ST61 Ball Retainer</b>										
ST61-28-B10	3/8	6 - 29	4 - 21	1450	1.3	2.9	440	14	42	8433 2022 32
ST61-30-B10	3/8	7 - 35	5 - 25	1090	1.3	2.9	440	15.5	42	8433 2025 09
ST61-40-B10	3/8	8 - 40	6 - 29	1090	1.5	3.3	454	18	47	8433 2029 13
ST61-50-B10	3/8	10 - 55	7 - 40	655	1.5	3.3	454	18	47	8433 2032 87
ST61-70-B13	1/2	15 - 80	10 - 58	475	2.0	4.5	466	20	60	8433 2036 93
ST61-100-B13	1/2	20 - 100	15 - 80	350	2.5	5.5	502	22.5	58	8433 2040 70
ST61-150-B13	1/2	30 - 160	22 - 117	227	3.0	6.6	536	25.5	65	8433 2043 62
ST61-180-B13	1/2	35 - 180	26 - 133	190	3.0	6.6	536	25.5	65	8433 2045 61

All assembly tools can be equipped with special attachments. For more information contact your local Atlas Copco sales representative.

**Tensor ST**

Model	Square drive	Torque		Speed r/min	Weight		Length mm	CS distance mm	Height mm	Ordering No.
	in	Nm	ft lb		kg	lb				
<b>ETV ST81</b>										
ST81-50-10	3/8	16 - 55	12 - 40	1090	1.8	3.9	473	18	48	8433 2051 55
ST81-70-13	1/2	20 - 80	15 - 58	790	2.3	5.0	485	20	58	8433 2053 48
ST81-100-13	1/2	20 - 100	15 - 80	540	2.7	5.9	522	22.5	60	8433 2056 82
ST81-150-13	1/2	30 - 160	22 - 117	380	3.2	7.0	555	25.5	65	8433 2060 12
ST81-180-13	1/2	35 - 180	26 - 133	310	3.2	7.0	555	25.5	65	8433 2062 31
ST81-200-20	1/2	40 - 200	30 - 154	300	3.2	7.0	556.5	27	69.5	8433 2063 42
<b>ETV ST81 Ball Retainer</b>										
ST81-50-B10	3/8	16 - 55	12 - 40	1090	1.8	3.9	473	18	48	8433 2052 36
ST81-70-B13	1/2	20 - 80	15 - 58	790	2.3	5.0	485	20	58	8433 2054 62
ST81-100-B13	1/2	20 - 100	15 - 80	540	2.7	5.9	522	22.5	60	8433 2058 24
ST81-150-B13	1/2	30 - 160	22 - 117	380	3.3	7.0	555	25.5	65	8433 2060 97
ST81-180-B13	1/2	35 - 180	26 - 133	310	3.2	7.0	555	25.5	65	8433 2062 43
<b>ETV ST81 Extended</b>										
ST81-70-13-L150	1/2	20 - 80	15 - 58	790	2.3	5.0	633	20	58	8433 2055 62
ST81-100-13-L150	1/2	20 - 110	15 - 80	540	2.7	5.9	672	22.5	60	8433 2059 36
ST81-200-20-L150	1/2	40 - 200	30 - 154	300	3.2	7.0	708.5	27	69.5	8433 2065 29

All assembly tools can be equipped with special attachments. For more information contact your local Atlas Copco sales representative.

# BATTERY NUTRUNNERS



TENSOR STB ETP

## Tensor STB

Model Angle	Square drive in	Torque		Battery	Speed r/min	Weight		Weight incl. battery		Length mm	CS distance	Height mm	Ordering No.
		Nm	ft lb			kg	lb	kg	lb				
ETV STB32-10-10	3/8	2-10	2-7.5	Li-Io 18 V	943	1.3	2.9	1.9	4.2	406	11	41	8433 3010 20
ETV STB32-10-10-BCR	3/8	2-10	2-7.5	Li-Io 18 V	943	1.5	3.2	2.05	4.5	406	11	41	8433 3010 25
ETV STB32-10-B10	3/8	2-10	2-7.5	Li-Io 18 V	943	1.3	2.9	1.9	4.2	406	11	41	8433 3010 30
ETV STB32-10-B10-BCR	3/8	2-10	2-7.5	Li-Io 18 V	943	1.5	3.2	2.05	4.5	406	11	41	8433 3010 35
ETV STB32-15-10	3/8	4-15	3-11	Li-Io 18 V	720	1.3	2.9	1.9	4.2	406	11	41	8433 3010 82
ETV STB32-15-10-BCR	3/8	4-15	3-11	Li-Io 18 V	720	1.5	3.2	2.05	4.5	406	11	41	8433 3010 89
ETV STB32-15-B10	3/8	4-15	3-11	Li-Io 18 V	720	1.3	2.9	1.9	4.2	406	11	41	8433 3010 96
ETV STB32-15-B10-BCR	3/8	4-15	3-11	Li-Io 18 V	720	1.5	3.2	2.05	4.5	406	11	41	8433 3010 99
ETV STB32-20-10	3/8	5-20	4-14.5	Li-Io 18 V	480	1.4	3.08	1.99	4.41	440.3	14	41.8	8433 3011 05
ETV STB32-20-10-BCR	3/8	5-20	4-14.5	Li-Io 18 V	480	1.5	3.41	2.14	4.74	440.3	14	41.8	8433 3011 10
ETV STB32-20-B10	3/8	5-20	4-14.5	Li-Io 18 V	480	1.4	3.08	1.99	4.41	440.3	14	41.8	8433 3011 15
ETV STB32-20-B10-BCR	3/8	5-20	4-14.5	Li-Io 18 V	480	1.5	3.41	2.14	4.74	440.3	14	41.8	8433 3011 20
ETV STB32-30-10	3/8	6-30	4.5-22	Li-Io 18 V	380	1.5	3.3	2.1	4.6	444	14	41.8	8433 3011 66
ETV STB32-30-10-BCR	3/8	6-30	4.5-22	Li-Io 18 V	380	1.6	3.6	2.2	4.9	444	14	41.8	8433 3011 69
ETV STB32-30-B10	3/8	6-30	4.5-22	Li-Io 18 V	380	1.5	3.3	2.1	4.6	444	14	41.8	8433 3011 76
ETV STB32-30-B10-BCR	3/8	6-30	4.5-22	Li-Io 18 V	380	1.6	3.6	2.2	4.9	444	14	41.8	8433 3011 79
ETV STB62-30-10	3/8	6-30	4.5-22	Li-Io 30 V	610	1.75	3.85	2.65	5.8	466	14	41.8	8433 3030 21
ETV STB62-30-10-BCR	3/8	6-30	4.5-22	Li-Io 30 V	610	1.9	4.2	2.8	6.2	466	14	41.8	8433 3030 28
ETV STB62-30-B10	3/8	6-30	4.5-22	Li-Io 30 V	610	1.75	3.85	2.65	5.8	466	14	41.8	8433 3030 36
ETV STB62-30-B10-BCR	3/8	6-30	4.5-22	Li-Io 30 V	610	1.9	4.2	2.8	6.2	466	14	41.8	8433 3030 38
ETV STB62-40-10	3/8	12-40	9-29	Li-Io 30 V	465	1.7	3.8	2.55	5.7	479	18	47	8433 3031 22
ETV STB62-40-10-BCR	3/8	12-40	9-29	Li-Io 30 V	465	1.9	4.1	2.75	6.1	479	18	47	8433 3031 28
ETV STB62-40-B10	3/8	12-40	9-29	Li-Io 30 V	465	1.7	3.8	2.55	5.7	479	18	47	8433 3031 39
ETV STB62-40-B10-BCR	3/8	12-40	9-29	Li-Io 30 V	465	1.9	4.1	2.75	6.1	479	18	47	8433 3031 48
ETV STB62-50-10	3/8	15-50	10-37	Li-Io 30 V	375	1.7	3.8	2.55	5.7	479	18	47	8433 3032 67
ETV STB62-50-10-BCR	3/8	15-50	10-37	Li-Io 30 V	375	1.9	4.1	2.75	6.1	479	18	47	8433 3032 68
ETV STB62-50-B10	3/8	15-50	10-37	Li-Io 30 V	375	1.7	3.8	2.55	5.7	479	18	47	8433 3032 75
ETV STB62-50-B10-BCR	3/8	15-50	10-37	Li-Io 30 V	375	1.9	4.1	2.75	6.1	479	18	47	8433 3032 78
ETV STB62-70-13	1/2	15-70	10-50.7	Li-Io 30 V	265	2.3	5.1	3.2	7.1	492	20	58	8433 3033 05
ETV STB62-70-13-BCR	1/2	15-70	10-50.7	Li-Io 30 V	265	2.5	5.4	3.35	7.4	492	20	58	8433 3033 10
ETV STB62-70-B13	1/2	15-70	10-50.7	Li-Io 30 V	265	2.3	5.1	3.2	7.1	492	20	58	8433 3033 15
ETV STB62-70-B13-BCR	1/2	15-70	10-50.7	Li-Io 30 V	265	2.5	5.4	3.35	7.4	492	20	58	8433 3033 20
ETV STB62-100-13	1/2	20-100	15-72.5	Li-Io 30 V	170	2.9	6.4	3.8	8.4	528.5	22.5	60.5	8433 3034 05
ETV STB62-100-13-BCR	1/2	20-100	15-72.5	Li-Io 30 V	170	3.1	6.73	3.95	8.71	528.5	22.5	60.5	8433 3034 10
ETV STB62-100-B13	1/2	20-100	15-72.5	Li-Io 30 V	170	2.9	6.4	3.8	8.4	528.5	22.5	60.5	8433 3034 15
ETV STB62-100-B13-BCR	1/2	20-100	15-72.5	Li-Io 30 V	170	3.1	6.73	3.95	8.71	528.5	22.5	60.5	8433 3034 20
<b>Pistol grip</b>													
ETP STB32-06-10	3/8	2-6	2-4	Li-Io 18 V	1500	0.9	2	1.5	3.3	218	-	186	8433 3110 25
ETP STB32-06-10-BCR	3/8	2-6	2-4	Li-Io 18 V	1500	1	2.3	1.6	3.5	218	-	186	8433 3110 28
ETP STB32-06-I06	1/4	2-6	2-4	Li-Io 18 V	1500	0.9	2	1.5	3.3	218	-	186	8433 3110 37
ETP STB32-06-I06-BCR	1/4	2-6	2-4	Li-Io 18 V	1500	1	2.3	1.6	3.5	218	-	186	8433 3110 38
ETP STB32-12-10	3/8	4-12	3-9	Li-Io 18 V	750	0.9	2	1.5	3.3	218	-	186	8433 3111 35
ETP STB32-12-10-BCR	3/8	4-12	3-9	Li-Io 18 V	750	1	2.3	1.6	3.5	218	-	186	8433 3111 38
ETP STB32-12-I06	1/4	4-12	3-9	Li-Io 18 V	750	0.9	2	1.5	3.3	218	-	186	8433 3111 48
ETP STB32-12-I06-BCR	1/4	4-12	3-9	Li-Io 18 V	750	1	2.3	1.6	3.5	218	-	186	8433 3111 58

All assembly tools can be equipped with special attachments. For more information contact your local Atlas Copco sales representative.

# TENSOR STB ACCESSORIES

## Chargers

Chargers	Voltage	Region	Ordering No.
18 V	230V/50Hz	EU	4211 5428 80
18 V	230V/50Hz	UK	4211 5428 81
18 V	115V/60Hz	US	4211 5428 84
30 V	230V/50Hz	EU	4211 5424 80
30 V	230V/50Hz	UK	4211 5424 81
30 V	120V/60Hz	US	4211 5424 84
18 V	230V/60V	BRA	4211 5428 83
30 V	230V/60V	BRA	4211 5424 83

## Battery - Li-Io

Battery - Li-Io Voltage	Capacity	Weight	Ordering No.
18 V	2.6 Ah	0.60	4211 5426 83
30 V	2.6 Ah	0.85	4211 5426 86
Battery protection (18V)		4211 5602 00	
Battery protection (30V)		4211 5444 00	
Communication kit,		8433 3900 20	

# POWER FOCUS



POWER FOCUS  
4000 /4002 GRAPH



POWER FOCUS  
4000 /4002 COMPACT

## Power Focus 4000 Tensor S/DS/ST

	Ordering No.
PF 4000-G-HW	8433 6100 00
PF 4000-C-HW	8433 6100 05
PF 4000-G-DN-HW	8433 6140 00
PF 4000-C-DN-HW	8433 6140 05
PF 4000-C-FLN-HW	8433 6141 05
PF 4000-G-PB-HW	8433 6142 00
PF 4000-C-PB-HW	8433 6142 05
PF 4000-G-IB-HW	8433 6145 00
PF 4000-C-IB-HW	8433 6145 05
PF 4000-G-MB-HW	8433 6147 00
PF 4000-C-MB-HW	8433 6147 05
PF 4000-G-EIP-HW	8433 6149 00
PF 4000-C-EIP-HW	8433 6149 05

## Power Focus 4000 Tensor SL

Ordering No.
PF 4002 G-HW
PF 4002 C-HW
PF 4002 G-DN-HW
PF 4002 C-DN-HW
PF 4002 G-PB-HW
PF 4002 C-PB-HW
PF 4002 G-IB-HW
PF 4002 C-IB-HW
PF 4002 G-MB-HW
PF 4002 C-MB-HW
PF 4002 G-EIP-HW
PF 4002 C-EIP-HW
PF 4002 G-PN-HW
PF 4002 C-PN-HW

# CONTROLLER SOFTWARE

## Bronze

- Stand alone functionality:
- 64 PSETs
- Autoset
- Batch count

## Silver

- All the functionality of the bronze plus:
- 250 PSETs
- Integrated Ethernet
- Job and Cell operation
- MultiStage functionality
- SPC
- Fieldbus options
- Logic Configurator

## Gold

- All the functionality of the silver plus:
- Advanced line control (Cell Job)
- Synchronisation in a cell
- Yield control

## Controller functionality

Hardware key	Ordering No.
RBU-Bronze	8433 0010 10
RBU-Silver	8433 0015 20
RBU-Gold	8433 0020 20



RBU-GOLD



RBU-SILVER



RBU-BRONZE

# TENSOR CABLES



ST CABLE



ST SPIRAL CABLE



ST CABLE PROTECTION

## Tensor ST

Model	Ordering No.
<b>Tool cable</b>	
2 m	4220 2636 02
3 m	4220 2636 03
5 m	4220 2636 05
7 m	4220 2636 07
10 m	4220 2636 10
15 m	4220 2636 15
<b>Spiral cable (length/stretched length)</b>	
3 m/4 m	4220 2757 03
7 m/8 m	4220 2757 07
10 m/12 m	4220 2757 10
<b>Cable protection</b>	
	4220 2977 90



SL CABLE



SL CABLE WITH 90 DEGREES CONNECTOR



SL SPIRAL CABLE

## Tensor SL

Model	Ordering No.
<b>Tool cable</b>	
3 m	4220 3319 03
5 m	4220 3319 05
10 m	4220 3319 10
15 m	4220 3319 15
<b>Heavy duty cable</b>	
3 m	4220 3378 03
5 m	4220 3378 05
10 m	4220 3378 10
15 m	4220 3378 15
<b>Cables with 90 degrees connector</b>	
3 m	4220 3607 03
5 m	4220 3607 05
10 m	4220 3607 10
15 m	4220 3607 15
<b>Spiral cable straight</b>	
5 m	4220 3746 05
<b>Spiral cable with 90 degrees connector</b>	
5 m	4220 3617 05

# TENSOR SYSTEM SOFTWARE

ToolsTalk PF W10	Ordering No.
1-user license	8092 1190 01
5-user license	8092 1190 05
10-user license	8092 1190 10
Plant license	8092 1190 99

# ACTA 4000



ACTA 4000

Model	Ordering No.
ACTA 4000	8092 1177 40

# IRTT-B



IRTT-B

Model	Drive		Rated capacity		Ordering No.
	Hex in	Square in	Nm	ft lb	
<b>Torque models</b>					
IRTT-B 5-I06	1/4		5	4	8059 0942 05
IRTT-B 5-06		1/4	5	4	8059 0942 07
IRTT-B 20-I06	1/4		20	15	8059 0942 10
IRTT-B 20-06		1/4	20	15	8059 0942 15
IRTT-B 25 -10	3/8		25	18	8059 0942 20
IRTT-B 75-10	3/8		75	55	8059 0942 25
IRTT-B 180-13	1/2		180	133	8059 0942 30
IRTT-B 500-20	3/4		500	369	8059 0942 35
IRTT-B 750-25	1		750	553	8059 0942 40
IRTT-B 1400-25	1		1400	1033	8059 0942 45
IRTT-B 3000-38	1 1/2		3000	2200	8059 0942 52
IRTT-B 5000-38	1 1/2		5000	3685	8059 0942 56
<b>Torque/angle models</b>					
IRTT-B 1A-I06	1/4		1	0.8	8059 0943 96
IRTT-B-2A-I06	1/4		2	1.5	8059 0943 01
IRTT-B 5A-I06	1/4		5	4	8059 0943 06
IRTT-B 5A-06		1/4	5	4	8059 0943 08
IRTT-B 20A-I06	1/4		20	15	8059 0943 11
IRTT-B 20A-06		1/4	20	15	8059 0943 16
IRTT-B 25A-10	3/8		25	18	8059 0943 21
IRTT-B 75A-10	3/8		75	55	8059 0943 26
IRTT-B 180A-13	1/2		180	133	8059 0943 31
IRTT-B 500A-20	3/4		500	369	8059 0943 36
IRTT-B 750A-25	1		750	553	8059 0943 41
IRTT-B 1400A-25	1		1400	1033	8059 0943 46
IRTT-B 3000A-38	1 1/2		3000	2200	8059 0943 52
IRTT-B 5000A-38	1 1/2		5000	3685	8059 0943 56

NOTE: All IRTT are equipped with 19-pin connector.

## Cables for ToolsTalk ACTA

Length	Ordering No.
ToolsTalk ACTA cable 3 m	4222 0546 03
ToolsTalk ACTA cable 5 m	4222 0546 05

# MRTT-B



MRTT-B

Model	Capacity		Weight		Length		
	Nm	ft lb	Drive	kg	lb	mm	Ordering No.
MRTT-B 30	30	22	9x12	0.45	0.99	218.5	8059 0937 30
MRTT-B 50	50	37	9x12	0.46	1.01	218.5	8059 0937 36
MRTT-B 70	70	51	9x12	0.56	1.23	282	8059 0937 39
MRTT-B 100	100	74	9x12	0.66	1.45	362	8059 0937 45
MRTT-B 150	150	110	14x18	1.40	3.08	473.5	8059 0937 48
MRTT-B 250	250	180	14x18	1.46	3.21	473.5	8059 0937 54
MRTT-B 400	400	300	14x18	2.00	4.40	733.5	8059 0937 60
MRTT-B 600	600	440	14x18	4.93	10.86	944.5	8059 0937 66
MRTT-B 1000	1000	730	Ø28	8.55	18.84	1087	8059 0937 75
MRTT-B 2000	2000	1460	Ø28	13.08	28.83	2092	8059 0937 84



MRTT-B

Model	Capacity		Weight		Length		
	Nm	ft lb	Drive	kg	lb	Ordering No.	
MRTT-B 1-06	0.1-1	0.07-0.74	1/4	0.3	0.66	169	8059 0931 06
MRTT-B 5-06	0.5-5	0.36-3.67	1/4	0.3	0.66	169	8059 0931 15
MRTT-B 15-06	1.5-15	1.1-11.1	1/4	0.4	0.88	223	8059 0931 24

## Transducer cable

The cable needed for all transducers and MRTT-B.

### Cables

Length	Ordering No.
1 m	4145 0982 01
3 m	4145 0982 03
5 m	4145 0982 05
3 m curled cable	4145 0971 03

If non Atlas Copco transducers are used one of the following cables are required.

### Cables

Model	Ordering No.
Industrial style Transducer cable 3 m 19 - 4	4145 0965 03
Industrial style Transducer cable 3 m 19 - 6	4145 0968 03
Industrial style Transducer cable 3 m 19 - 10	4145 0967 03

# BLM JOINT SIMULATOR BENCH

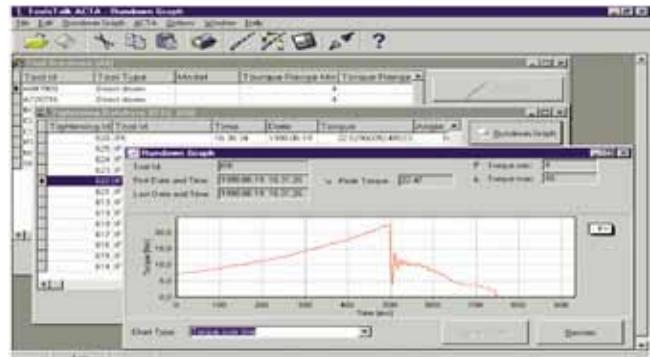


Model	Hydraulic brakes, range		ISO rig	Spindle fixture holder	Dimensions		Ordering No.
	Nm	lb ft			length x width x height		
<b>Mobile benches</b>							
JSB AD 250	1 - 250	0.8 - 150	-	-	1000 x 550 x 920		8059 0962 00
JSB AD 250 ISO	1 - 250	0.8 - 150	yes	-	1150 x 550 x 920		8059 0962 30
JSB AD 500 ISO	1 - 500	0.8 - 365	yes	-	1150 x 550 x 920		8059 0962 35
JSB AD 1000 ISO	1 - 1000	0.8 - 735	yes	-	1400 x 700 x 950		8059 0962 40
JSB AD 2000 ISO	1 - 2000	0.8 - 1470	yes	-	1400 x 700 x 950		8059 0962 50
<b>Fix benches</b>							
JSB AD HD 500	1 - 500	0.8 - 365	-	yes	2100 x 850 x 1000		8059 0963 00
JSB AD HD 2000	1 - 2000	0.8 - 1470	-	yes	2300 x 900 x 1000		8059 0963 50
JSB AD HD 3000	1 - 3000	0.8 - 2215	-	yes	2300 x 900 x 1000		8059 0963 60

# QUALITY ASSURANCE SOFTWARE

Model	Ordering No.
ToolsTalk ACTA Single PC	8092 1136 01
ToolsTalk ACTA Network 5 users	8092 1136 05
ToolsTalk ACTA Network 10 users	8092 1136 10
ToolsTalk ACTA Network 20 users	8092 1136 20
ToolsTalk ACTA Network 50 users	8092 1136 50

Cable included.  
Microsoft Windows NT4, 2000 or XP operating system.



# WRENCHES



STWRENCH

Controller	Capacity		Drive mm	Weight		Length mm	Ordering No.
	Nm	ft lb		Kg	lb		
STwrench Controller				0.48	1.08	313	8059 0930 00
<b>smartHEAD only Torque</b>							
smartHEAD 30-10	30	23	9x12	0.20	0.44	167.5	8059 0920 30
smartHEAD 80-10	80	59	9x12	0.22	0.48	167.5	8059 0920 42
smartHEAD 150-13	150	111	14x18	0.55	1.21	271.0	8059 0920 48
smartHEAD 250-13	250	185	14x18	0.78	1.72	417.0	8059 0920 54
smartHEAD 400-20	400	295	14x18	0.93	2.05	584.0	8059 0920 60
smartHEAD 600-20	600	443	21x26	1.70	3.75	1048.5	8059 0920 66
<b>smartHEAD A Torque + Angle</b>							
smartHEAD A30-10	30	23	9x12	0.22	0.48	167.5	8059 0930 30
smartHEAD A80-10	80	59	9x12	0.24	0.53	167.5	8059 0930 42
smartHEAD A150-13	150	111	14x18	0.57	1.25	271.0	8059 0930 48
smartHEAD A250-13	250	185	14x18	0.80	1.76	417.0	8059 0930 54
smartHEAD A400-20	400	295	14x18	0.95	2.09	584.0	8059 0930 60
smartHEAD A600-20	600	443	21x26	1.72	3.79	1048.5	8059 0930 66
<b>RBU Rapid Backup unit</b>							
STwrench RBU Quality							8059 0930 90
STwrench RBU Production							8059 0930 91
<b>Optional modules</b>							
STwrench IRC-B Module							8059 0920 10
STwrench IRC-W Module							8059 0920 11
STwrench Bar Code							8059 0920 12
STwrench cable box							8059 0920 24
<b>Accessories</b>							
STwrench battery charger							8059 0930 88
STwrench Printer Cradle							8059 0920 25
STwrench PokaYoke Cradle							8059 0920 26
STwrench battery							8059 0930 86
<b>Software</b>							
TT BLM W09 1 User							8059 0981 10
TT BLM W09 5 User							8059 0981 11
TT BLM W09 10 User							0805 9098 12
TT BLM W09 plant licence							0859 0981 13

	Length				Weight Total	
	x mm	y mm	z mm	k mm	kg	lb
STwrench 30 Nm	159	280	96	535	0.90	2.00
STwrench 80 Nm	159	280	96	535	0.80	2.00
STwrench 150 Nm	262	280	96	638	1.23	2.56
STwrench 250 Nm	408	280	96	784	1.46	2.56
STwrench 400 Nm	575	280	96	951	1.63	3.59
STwrench 600 Nm	1040	280	96	1416	2.40	5.29

# Vibration and Noise Emission Values

The values you will find in this table are the official declared values both for vibration and noise. On December 29, 2009 the new Machinery Directive, 2006/42/EC repealed the directive 98/37/EC. From that date the 3-axes vibration total values are the official values. For most of our tools the new values are measured according to the relevant part in the ISO 28927 series, while the previous values were measured to one part of the ISO 8662 series, or for electric tools one part of the EN 60745 series. For machines where no specific test code exists the ISO 20643 is used. In such cases the test procedure must be described in detail in connection to the given values.

## Measuring vibrations in three directions

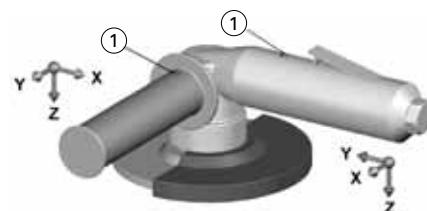
A vibration total value is based on a vibration measurement in three directions. The value is the vector sum of the three different directions. The vector sum is always higher than one single direction. On machines intended to be used with two hands, two positions are measured and the position with the highest value is declared. There is no fixed relation between 3-axes and 1-axis values. Therefore comparisons can only be made between values referring to the same part of the same standard. Values with no reference to a standard are meaningless and can not be used for comparisons.

## Suitable for comparison purposes only

The declared values given in this table were obtained by laboratory type testing in accordance with the stated standards and are suitable for comparison with the declared values of other tools tested in accordance with the same standards. These declared values are not adequate for use in risk assessments and values measured in individual work places may be higher. The actual exposure values and risk of harm experienced by an individual user are unique and depend upon the way the user works, the workpiece and the workstation design, as well as upon the exposure time and the physical condition of the user. We, Atlas Copco Tools AB, cannot be held liable for the consequences of using the declared values, instead of values reflecting the actual exposure, in an individual risk assessment in a work place situation over which we have no control.

## Measurement of the vibration total value

(3-axes value) with new transducer positions according to ISO 28927. Valid from 2010.



① Transducer position

## Measurement of the vibration value

(1-axis value) with previous transducer positions according to ISO 8662. Valid until 2009.



① Transducer position

According to the new standard ISO 28927 vibrations are measured in 3 directions both on the trigger and the support handle. The transducer positions are also moved. The new locations between thumb and index finger are chosen to avoid disturbance of the operators normal hand grip.



*Atlas Copco has a well equipped laboratory for measuring tool noise and vibration emissions. It contains advanced vibration measurement tools, a state-of-the-art acoustics laboratory and dedicated computer software for analysing measurement and test results.*

## Managing hand-arm vibration

Power Tools may cause hand-arm vibration syndrome if the use is not adequately managed. An EU guide to managing hand-arm vibration can be found at [www.humanvibration.com/EU/VIB-GUIDE.htm](http://www.humanvibration.com/EU/VIB-GUIDE.htm). We recommend a programme of health surveillance to detect early symptoms which may relate to vibration exposure, so that manage-

ment procedures can be modified to help prevent future impairment.

Additional information about the tests, vibration control and regarding in-use vibrations can be found at:  
[www.atlascopco.com/tools/ergonomics](http://www.atlascopco.com/tools/ergonomics).  
 From this website you can download an up-to-date pdf file containing all the vibration total values for our tools.

## Assembly tools

Model	Vibration total value (3 axes value) according to ISO 28927-2 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-1 Valid until 2009		Sound pressure levels and sound power levels <sup>a</sup> according to ISO 15744		Model	Vibration total value (3 axes value) according to ISO 28927-2 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-1 Valid until 2009		Sound pressure levels and sound power levels <sup>a</sup> according to ISO 15744		
	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	Value 1-axis m/s <sup>2</sup>	Sound pressure dB(A)	Sound power dB(A)	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	Value 1-axis m/s <sup>2</sup>	Sound pressure dB(A)	Sound power dB(A)	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>		
<b>Pneumatic screwdrivers</b>														
<b>Pistol grip</b>														
<b>Shut-off</b>		LUM22 HR	<2.5	-	<2.5	78	-	LUM22 HR	<2.5	-	<2.5	78	-	
LUM32 HR		<2.5	-	<2.5	77	-	LUM32 HR	<2.5	-	<2.5	77	-		
LUM12 HRX		<2.5	-	<2.5	74	-	LUM12 HRX	<2.5	-	<2.5	74	-		
LUM22 HRX		<2.5	-	<2.5	78	-	LUM22 HRX	<2.5	-	<2.5	78	-		
LUM10 HRX		<2.5	-	<2.5	72	-	LUM10 HRX	<2.5	-	<2.5	72	-		
LUM12 HRF		<2.5	-	<2.5	<70	-	LUM12 HRF	<2.5	-	<2.5	<70	-		
LUM25 HRF		<2.5	-	<2.5	74	-	LUM25 HRF	<2.5	-	<2.5	74	-		
<b>Straight</b>		LUM02 PR	<2.5	-	<2.5	71	-	LUM02 PR	<2.5	-	<2.5	71	-	
LUM10 PR		<2.5	-	<2.5	<70	-	LUM10 PR	<2.5	-	<2.5	<70	-		
LUM12 PR		<2.5	-	<2.5	75	-	LUM12 PR	<2.5	-	<2.5	75	-		
LUM22 PR		<2.5	-	<2.5	75	-	LUM22 PR	<2.5	-	<2.5	75	-		
LUM12 SR		<2.5	-	<2.5	75	-	LUM12 SR	<2.5	-	<2.5	75	-		
LUM22 SR		<2.5	-	<2.5	78	-	LUM22 SR	<2.5	-	<2.5	78	-		
<b>Angle</b>		LTV009	<2.5	-	<2.5	75	-	LTV009	<2.5	-	<2.5	75	-	
LTV18		<2.5	-	<2.5	71	-	LTV18	<2.5	-	<2.5	71	-		
<b>Pistol grip</b>		LUD12 HRX	<2.5	-	<2.5	74	-	LUD12 HRX	<2.5	-	<2.5	74	-	
<b>Direct drive</b>		LUD22 HR	<2.5	-	<2.5	76	-	LUD22 HR	<2.5	-	<2.5	76	-	
LUF34 HRD		<2.5	-	<2.5	79	90	LUF34 HRD	<2.5	-	<2.5	79	90		
<b>Pneumatic screwdrivers</b>														
<b>Slip clutch<sup>b</sup></b>														
<b>Pistol grip</b>		LWIST12 HRF	<2.5	-	6	80	-	LWIST12 HRF	<2.5	-	6	80	-	
TWIST12 HRX		<2.5	-	6	80	-	TWIST12 HRX	<2.5	-	6	80	-		
TWIST22 HR		<2.5	-	6	86	97	TWIST22 HR	<2.5	-	6	86	97		
TWIST22 HRX		<2.5	-	6	86	97	TWIST22 HRX	<2.5	-	6	86	97		
TWIST HRF		<2.5	-	6	80	-	TWIST HRF	<2.5	-	6	80	-		
LUF34 HR		<2.5	-	6	81	92	LUF34 HR	<2.5	-	6	81	92		
<b>Straight</b>		TWIST12 SR3	<2.5	-	6	85	96	<b>Straight</b>						
TWIST12 SR4		<2.5	-	16	85	96	TWIST12 SR3	<2.5	-	6	85	96		
TWIST22 PR		<2.5	-	15	86	97	TWIST12 SR4	<2.5	-	16	85	96		
TWIST22 SR6		<2.5	-	15	86	97	TWIST22 PR	<2.5	-	15	86	97		
TWIST22 SR10		<2.5	-	>30	86	97	TWIST22 SR6	<2.5	-	15	86	97		
<b>Angle</b>		TWIST VR07	<2.5	-	6	81	92	<b>Angle</b>						
TWIST VR13		<2.5	-	8	82	93	TWIST VR07	<2.5	-	6	81	92		
							TWIST VR13	<2.5	-	8	82	93		

<sup>a</sup> The uncertainty in the sound levels is 3 dB(A). <sup>b</sup> 1-axis value measured with clutch slipping. Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, [www.atlascopco.com/tools/ergonomics](http://www.atlascopco.com/tools/ergonomics).

## Assembly tools

Model	Vibration total value (3 axes value) according to ISO 28927-2		Vibration value (1 axis value) according to ISO 8662-1		Sound pressure levels and sound power levels <sup>a</sup> according to ISO 15744		Model	Vibration total value (3 axes value) according to ISO 28927-2		Vibration value (1 axis value) according to EN 60745-2-2		Sound pressure levels and sound power levels <sup>a</sup> according to ISO 15744	
	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	Value 1-axis m/s <sup>2</sup>	Sound pressure dB(A)	Sound power dB(A)	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	Value 1-axis m/s <sup>2</sup>	Sound pressure dB(A)	Sound power dB(A)	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	
<b>Pneumatic nutrunners</b>													
<b>Angle</b>													
LTV29-2 R	<2.5	-	<2.5	80	-			BCP BL	<2.5	-	<2.5	<70	-
LTV39-2 R	<2.5	-	<2.5	81	92			BTV	<2.5	-	<2.5	<70	-
LTV28 R	<2.5	-	<2.5	76	-			ETV STB	<2.5	-	<2.5	<70	-
LTV38 R	<2.5	-	<2.5	82	93			ETP STB	<2.5	-	<2.5	<70	-
LTV48 R	<2.5	-	<2.5	84	95			ETC STB	<2.5	-	<2.5	<70	-
								ETO STB	<2.5	-	<2.5	<70	-
<b>Battery screwdrivers/nutrunner</b>													
<b>Tensor DL</b>													
ETD DL	<2.5	-	<2.5					ETD DL	<2.5	-	<2.5	<70	-
ETV DL	<2.5	-	<2.5					ETV DL	<2.5	-	<2.5	<70	-
ETP DL	<2.5	-	<2.5					ETP DL	<2.5	-	<2.5	<70	-
ETF DL	b	-	-					ETF DL	b	-	-	<70	-
<b>Tensor SL</b>													
ETD SL	<2.5	-	<2.5					ETD SL	<2.5	-	<2.5	<70	-
ETV SL	<2.5	-	<2.5					ETV SL	<2.5	-	<2.5	<70	-
ETP SL	<2.5	-	<2.5					ETP SL	<2.5	-	<2.5	<70	-
ETF SL	b	-	-					ETF SL	b	-	-	<70	-
<b>Electric nutrunners</b>													
<b>Tensor DS</b>													
ETV DS	<2.5	-	<2.5					ETV DS	<2.5	-	<2.5	<70	-
ETD DS	b	-	-					ETD DS	b	-	-	<70	-
ETP DS	<2.5	-	<2.5					ETP DS	<2.5	-	<2.5	<70	-
ETC DS	<2.5	-	<2.5					ETC DS	<2.5	-	<2.5	<70	-
ETO DS	<2.5	-	<2.5					ETO DS	<2.5	-	<2.5	<70	-
<b>Tensor S</b>													
ETV S	<2.5	-	<2.5					ETV S	<2.5	-	<2.5	<70	-
ETD S	b	-	-					ETD S	b	-	-	<70	-
ETP S	<2.5	-	<2.5					ETP S	<2.5	-	<2.5	<70	-
<b>Tensor ST</b>													
ETV ST	<2.5	-	<2.5					ETV ST	<2.5	-	<2.5	<70	-
ETD ST	b	-	-					ETD ST	b	-	-	<70	-
ETP ST	<2.5	-	<2.5					ETP ST	<2.5	-	<2.5	<70	-
ETC ST	<2.5	-	<2.5					ETC ST	<2.5	-	<2.5	<70	-
ETO ST	<2.5	-	<2.5					ETO ST	<2.5	-	<2.5	<70	-
<b>Tensor STR</b>													
ETV STR	<2.5	-	-					ETV STR	<2.5	-	-	<70	-
ETD STR	<2.5	-	-					ETD STR	<2.5	-	-	<70	-
ETP STR	<2.5	-	-					ETP STR	<2.5	-	-	<70	-

<sup>a</sup> The uncertainty in the sound levels is 3 dB(A).

<sup>b</sup> Tools for fixtured applications have no vibration values.

Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, [www.atlascopco.com/tools/ergonomics](http://www.atlascopco.com/tools/ergonomics).

## Material removal tools

Model	Vibration total value (3 axes value) according to ISO 28927-12		Vibration value (1 axis value) according to ISO 8662-13		Sound pressure levels and sound power levels <sup>a</sup> according to ISO 15744		Model	Vibration total value (3 axes value) according to ISO 28927-5		Vibration value (1 axis value) according to ISO 8662-1		Sound pressure levels and sound power levels <sup>a</sup> according to ISO 15744	
	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	Value 1-axis m/s <sup>2</sup>	Sound pressure dB(A)	Sound power dB(A)	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	Value 1-axis m/s <sup>2</sup>	Sound pressure dB(A)	Sound power dB(A)	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	
<b>Grinders</b>													
<b>Die grinder</b>													
<b>Straight</b>													
LSF18 S460	4.7	2	<2.5	79	-	LBB16 EP	<2.5	-	<2.5	80	-		
LSF18 S460E	3.6	1.3	<2.5	82	-	LBB16 EPX	<2.5	-	<2.5	82	93		
LSF18 S300	<2.5	-	<2.5	70	-	LBB26 EPX	<2.5	-	<2.5	82	93		
LSF18 S300/R	3.2	2.2	<2.5	73	-	LBB36	<2.5	-	<2.5	83	94		
LSF18 S300E	3.4	1.8	<2.5	73	-	LBB37	<2.5	-	<2.5	86	97		
LSF18 S300E/R	3.3	1	<2.5	73	-	LBB16 S260	<2.5	-	<2.5	75	-		
LSF18 S200	3.4	0.9	<2.5	<70	-	LBB16 S064	<2.5	-	<2.5	75	-		
LSF18 S200E	3.1	1.8	<2.5	70	-	LBB16 S045	<2.5	-	<2.5	75	-		
LSF28 S250	2.7	0.7	5.6	81	92	LBB16 S038	<2.5	-	<2.5	75	-		
LSF28 S250E	<2.5	-	<2.5	81	92	LBB16 S029	<2.5	-	<2.5	75	-		
LSF28 S250E-R	3	0.7	<2.5	81	92	LBB16 S260	<2.5	-	<2.5	75	-		
LSF28 S250-R	3.1	1.8	<2.5	81	92	LBB16 S064	<2.5	-	<2.5	75	-		
LSF28 S180	2.8	1.1	4	74	-	LBB16 S045	<2.5	-	<2.5	75	-		
LSF28 S180E	<2.5	-	<2.5	74	-	LBB16 S038	<2.5	-	<2.5	75	-		
LSF28 S180E-R	2.8	1	<2.5	74	-	LBB16 S029	<2.5	-	<2.5	75	-		
LSF28 S180-R	3.4	0.9	<2.5	74	-	LBV11 30°	<2.5	-	<2.5	72	-		
LSF28 S150	3.6	1.2	5.7	<70	-	LBV16 30°	2.7	0.9	<2.5	75	-		
LSF28 S150E	<2.5	-	3.1	<70	-	LBV36 30°	<2.5	-	<2.5	81	92		
LSF28 S120	2.8	0.7	<2.5	<70	-	LBV16 45°	<2.5	-	<2.5	75	-		
LSF38 S250E	2.8	1.3	<2.5	90	101	LBV11 90°	<2.5	-	<2.5	72	-		
LSF38 S180E	<2.5	-	<2.5	86	97	LBV16 90°	<2.5	-	<2.5	75	-		
LSF38 S180E/R	<2.5	-	<2.5	85	96	LBV36 90°	<2.5	-	<2.5	81	92		
LSF38 S150E/R	<2.5	-	<2.5	81	92	LBV16 Z	<2.5	-	<2.5	75	-		
LSF28 ST030	<2.5	-	<2.5	74	-	LBV16 90° Large	<2.5	-	<2.5	75	-		
LSF28 ST030E	2.7	1.5	<2.5	74	-	LBV36 90° Large	<2.5	-	<2.5	81	92		
LSF28 ST070	<2.5	-	3.5	81	92	LBV37 90° Heavy duty	<2.5	-	<2.5	84	95		
LSF28 ST070E	2.7	1.2	4.2	81	92	LBS36	<2.5	-	<2.5	86	97		
LSF07 S850	<2.5	-	<2.5	75	-								
<b>Angle</b>													
LSV18 S200	<2.5	-	<2.5	73	-								
LSV18 S120	<2.5	-	<2.5	73	-								
LSV18 S080	<2.5	-	<2.5	70	-								

<sup>a</sup> The uncertainty in the sound levels is 3 dB(A).

Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, [www.atlascopco.com/tools/ergonomics](http://www.atlascopco.com/tools/ergonomics).

## Material removal tools

Model	Vibration total value (3 axes value) according to ISO 28927-3 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-8 Valid until 2009		Sound pressure levels and sound power levels <sup>a</sup> according to ISO 15744		Model	Vibration total value (3 axes value) according to ISO 28927-7 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-10 Valid until 2009		Sound pressure levels and sound power levels <sup>a</sup> according to ISO 15744	
	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	Value 1-axis m/s <sup>2</sup>	Sound pressure dB(A)	Sound power dB(A)	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	Value 1-axis m/s <sup>2</sup>	Sound pressure dB(A)	Sound power dB(A)	Value 3-axes m/s <sup>2</sup>	Uncertainty m/s <sup>2</sup>	
<b>Grinders</b>													
<b>Angle sanders</b>													
LSV28 S060	<2.5	-	<2.5	77	-								
LSV28 S060-M14	<2.5	-	<2.5	77	-								
LSV28 S040	<2.5	-	<2.5	78	-								
LSV28 ST034	<2.5	-	<2.5	86	97								
LSV28 S021	<2.5	-	<2.5	74	-								
LSV28 S021-M14	<2.5	-	<2.5	74	-								
LSV28 S040-01-M14	<2.5	-	<2.5	78	-								
LSV28 ST013-M14-LF	<2.5	-	<2.5	77	-								
LSV28 ST013-LF	<2.5	-	<2.5	77	-								
LSV38 S085	<2.5	-	3	85	96								
LSV38 S085-M14	<2.5	-	3	85	96								
LSV38 S066	<2.5	-	<2.5	82	93								
LSV38 S066-M14	<2.5	-	<2.5	82	93								
LSV38 S066 D	<2.5	-	<2.5	82	93								
LSV38 S085 D	<2.5	-	3	85	96								
LSV48 SA085	<2.5	-	<2.5	87	98								
LSV48 SA085-M14	<2.5	-	<2.5	87	98								
LSV48 SA066	<2.5	-	<2.5	87	98								
LSV48 SA066-M14	<2.5	-	<2.5	87	98								
LSV48 SA085 D	<2.5	-	<2.5	87	98								
LSV38 D120	<2.5	-	<2.5	77	-								
LSV38 D085	<2.5	-	<2.5	85	96								
LSV38 D066	<2.5	-	<2.5	82	93								
<b>Orbital and random orbital sanders</b>													
LST30 H090-11	5.5	1.6	<2.5	82	93								
LST30 H090-15	6.0	1.7	<2.5	82	93								
LST30 S090-15	5.1	1.3	<2.5	82	93								
LST31 H090-15	3.4	0.8	<2.5	84	95								
LST32 H090-15	5.1	1.4	<2.5	82	93								
LST32 S090-15	5.2	1.5	<2.5	82	93								
LSO30 S070-3	11.0	1.7	<2.5	81	92								
LSO30 H070-3	11.5	1.6	<2.5	81	92								
LSO31 S070-3	11.0	1.7	<2.5	82	93								
LSO31 H070-3	11.0	1.7	<2.5	82	93								
LSO32 H070-3	7.8	1.3	<2.5	79	-								
LST20 R350	3.8	1.7	<2.5	76	-								
LST20 R550	4.3	1.5	<2.5	76	-								
LST20 R650	3.4	1.3	<2.5	76	-								
LST20 R325	5.6	2.1	<2.5	76	-								
LST20 R525	4.7	2.4	<2.5	76	-								
LST20 R625	5	2.3	<2.5	76	-								
LST21 R350	3.8	1.7	<2.5	85	96								
LST21 R550	3.2	1.7	<2.5	85	96								
LST21 R650	4.4	1.5	<2.5	85	96								
LST21 R525	3.2	1.4	<2.5	85	96								
LST21 R625	4.6	2.9	<2.5	85	96								
LST22 R350	3.5	1.3	<2.5	78	-								
LST22 R550	3.9	1.4	<2.5	78	-								
LST22 R650	5.7	2.9	<2.5	78	-								
LST22 R525	3.2	1.4	<2.5	78	-								
LST22 R625	3.2	1.4	<2.5	78	-								

<sup>a</sup> The uncertainty in the sound levels is 3 dB(A).

Additional information about the tests, vibration control and regarding in-use vibrations can be found at the link, [www.atlascopco.com/tools/ergonomics](http://www.atlascopco.com/tools/ergonomics).



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