

Building Heavy Trucks and Buses

Atlas Copco power tools for quality and productivity



Sustainable Productivity

Atlas Copco



21st century tool technology for heavy

Atlas Copco is more than tools – we are a total solutions provider. Featuring the world’s most extensive range of power tools, assembly systems and process software, our product portfolio is a true reflection of cutting-edge 21st century tool technology. Advanced Atlas Copco solutions and technical support are helping to raise productivity and reduce operating costs for heavy truck and bus manufacturers worldwide.



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Meeting your challenges

truck and bus manufacturing

Atlas Copco has tooling solutions that will...

- Speed up production on your existing production line
- Help eliminate bottlenecks
- Raise quality and reduce the number of rejects and reworking further down the line
- Adapt your tooling to handle product variations being built in the same line
- Help reduce your operating costs and make your production more cost-effective to sharpen your competitive edge in the marketplace
- Create a well-planned ergonomic working environment in your plant, helping to increase operator safety and well-being while raising individual productivity.

Look through this brochure, and you will see what we mean!

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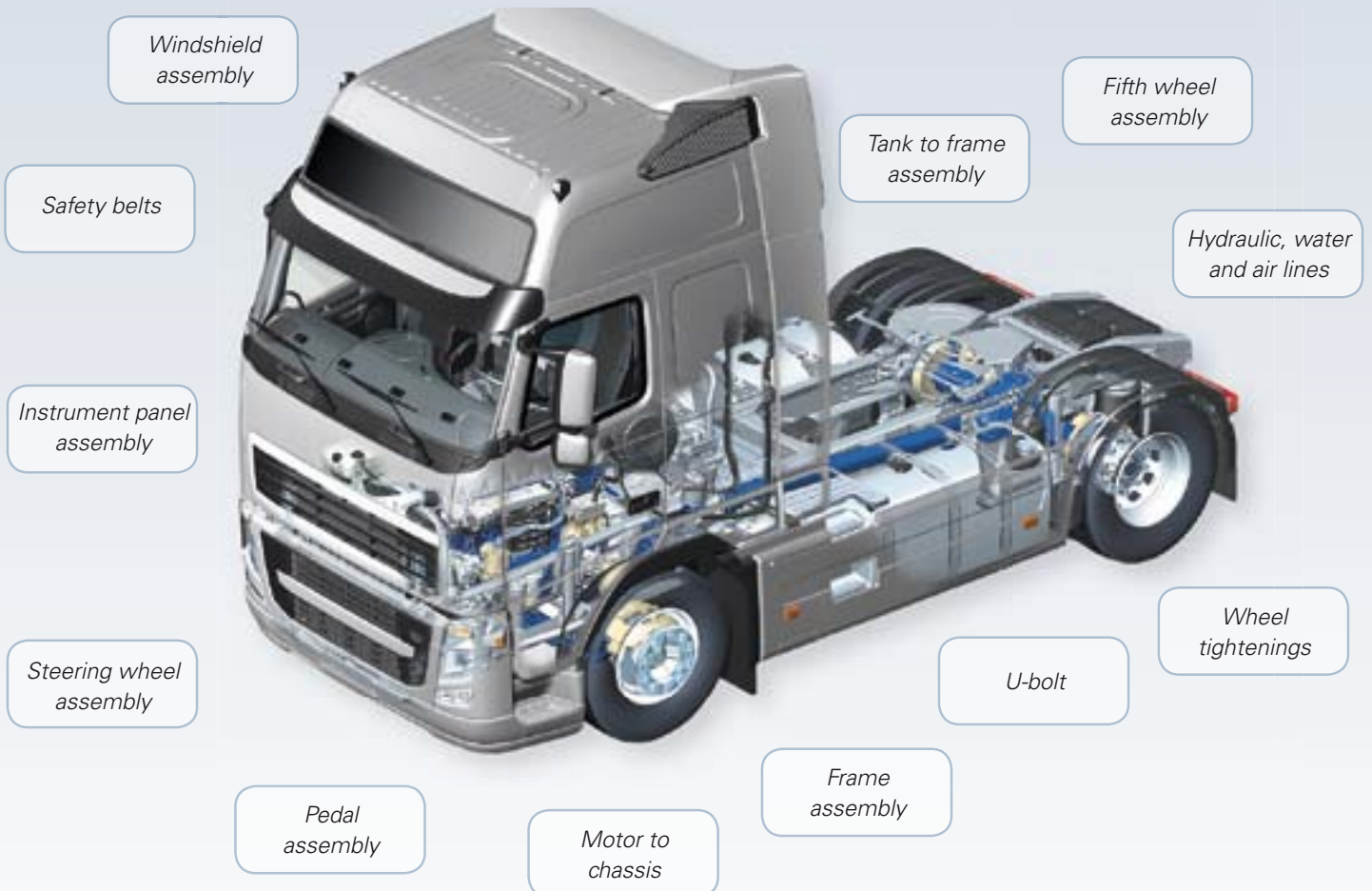
Let's talk joints – safety critical or quality

Choose the right tightening strategy

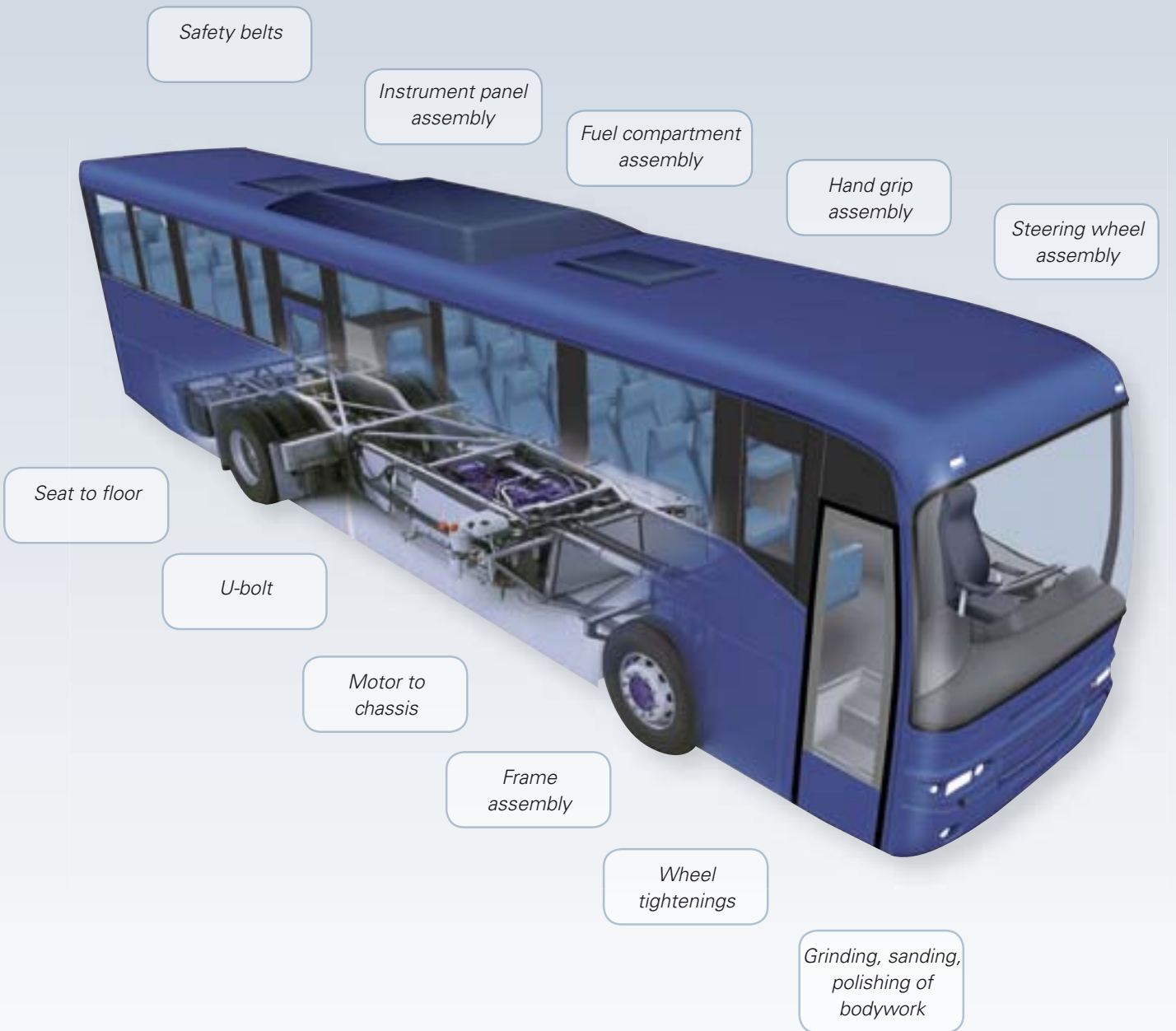
On truck and bus assembly lines it is important to decide which application will be a safety critical, a quality/function critical or non quality critical application. This is in order to select the correct tool and tightening strategy for the application. The tightening strategy guides the process of applying the right torque to the selected bolt to achieve the correct clamp force.

A normal truck is assembled using some 4,000 screws. If a customer wants to save weight it is possible to specify smaller screws with a higher bolt grade. This will save a lot of weight, but the bolt requires a tool which can deliver a high level of accuracy and which can be adjusted to different tightening strategies.

If you have any doubts or questions about the joints in your production, Atlas Copco's Advanced Fastening Technology Team will support you and suggest the right tightening method.



ty critical?



Your challenges are our business





Raising productivity Atlas Copco pneumatic and electric handheld and fixtured assembly tools are fast and powerful with the capability to help remove bottlenecks and streamline your production. Optimize your production line with advanced tools and technical support from Atlas Copco. We can show you how to achieve a major increase productivity without investing in expensive new production lines, production facilities and special plant engineering and construction.

Quality that contributes to safety The trend in assembly is to use fewer bolts in order to reduce costs and weight. This means that tightening quality is even more important. Choosing the right tools will help ensure optimal product quality. With Atlas Copco advanced tightening tools the correct torque is applied by choosing the right tightening strategy. Correct torque ensures that the joint will not loose when the product is in use. For safety critical applications, Atlas Copco has advanced handheld and fixtured tools offering joint validation and traceability.

Tools you can work with all day long Our ergonomically designed handheld assembly and material removal tools offer high power to weight ratios with low noise and vibration levels. Designed with operator health and safety in mind, they help raise individual productivity in your plant.

An example of what Atlas Copco can do for your production line

The takt time in a truck assembly operation at one of Germany's largest truck manufacturers was around 21 minutes. After consulting Atlas Copco, the line was restructured and new, state-of-the-art Atlas Copco tools were added. It was then possible to cut the takt time to 12 minutes. A second larger investment in tooling from Atlas Copco and a restructuring of the process for time-critical applications improved the tact time further – down to 8 minutes.

Previously, this manufacturer built 10,000 heavy trucks per year in one line. Today he is building more than 20,000 trucks per year in the same line – a production increase of about 100%. The new target is 6 minutes per takt.

Challenge us to optimize your production and speed up your line.



Get it right first time

Six steps to zero-fault fastening

Step 0. There is no torque specified

Operator only need to tighten the parts together. This could also be pre tightening. Totally operator depending tightening.

Step 1. To assure a correct tightening torque

The first step to zero fault production is obtained by using an assembly tool that delivers a precise and pre-determined torque. However, only the tightening torque is controlled at this first step, operators and workpieces are not yet involved in the monitoring process.

Step 2. To assure that all screws are tightened

One of the most common causes of a faulty assembly is the fact that the operator simply forgets to tighten a screw or makes a re-hit on an already tightened screw. The remedy against this possible error is to use a controlled tool. It monitors the tightening cycle and identifies a proper shut-off of a tool.

Step 3. To assure that the joint is correct

With step 1 and 2 the tool and the operator have been taken into consideration. However, the joint itself can also be a cause of the incorrect tightening. There can be several reasons for this. Missing parts like seals or washers will change the characteristics of the joint. Damaged threads or debris in the joint also

leads to an improperly tightened joint. The way to detect these types of faulty joints is to monitor the tightening angle during the tightening process. Operator guidance and feedback is provided by signal lights on the tool and by using socket selectors etc.

Step 4. To assure that safety critical joints are tightened properly

This is the level required for safety critical joints. All tightening data is documented and can be retrieved for error analyses, thus offering full traceability of the tightening operation. Documented tightening data for safety critical fasteners are essential in order to avoid or limit recalls and warranty claims.

Step 5. To assure zero fault production

With step five two further elements are introduced for fault-free production. One element is the introduction of part identification, the other is reject management. With step five the tool controllers are not only networked – they are also connected to the factory network. Information about the components is sent over the factory network. By identifying the components that are to be assembled, relevant information is transferred to the tool controller via the network. This safeguards both that the correct component is being assembled and that corresponding tightening parameters are chosen.



Choose the right tool for the job

As joint fastening grows more complex, error proofing becomes a key factor for the profitability of your operation. The later an assembly defect is identified, the more it costs to correct further down the line. At worst, it could reach the end-customer and result in warranty claims and loss of goodwill. Leading the field for tightening process control, Atlas Copco has defined six steps towards zero-fault fastening.

Six steps towards zero-fault fastening

Step 0

LMS

EP XS



Step 1

To assure correct torque.



LTP

Step 2

To assure that all screws are tightened.

Pulsor C system



Pulsor Focus



Tensor DS2



Pulsor C



DS Controller

Step 4

To assure safety critical joints are tightened properly.



Power MACS 4000 QST



ETX



Tensor ST10



Tensor STB



Tensor ST



Tensor Revo

Step 5

To assure zero fault fastening.



ToolsNet software

Factory overview



Power Focus 4000 Graph



Tensor STR61



Tensor STR21

Is this what your operators are thinking?

Can I apply the right torque to a joint with an impact wrench? What happens when the torque is too low and the tightening does not create enough clamp force? Does the joint loosen every time?

When I use the impact wrench, every time I perform a tightening, I have to go one "click" more. This is very time consuming and my shoulders are aching.

If I holding down the trigger of the impact wrench for a shorter time because I don't like the vibrations into my hand, will this affect the torque applied to the joint?

In the morning the pressure to the tool was 6.0 bar. Now the air pressure has dropped to 4.5 bar. Does this affect the torque result? How long should I press the tool trigger?

Can I apply the right torque with an impact wrench to the safety belt joint? What happens, if I damage the joint? Can I see or feel it?

The chassis has been sent to the next station and one bolt that I should have tightened is left! Did I forget to tighten this joint? Is there a system which can count tightenings?

Oh, I used the wrong length of the bolt and the head sticks out a little bit from the hole. Will this affect the function of the part?

The impact wrenches are very loud. Every evening I have a headache.

I do my best but the quality is not high enough. How is it possible to trace back my tightenings?

Every time I perform a tightening I'm supposed to check the torque with a click wrench! My shoulders are aching and I don't always do it.

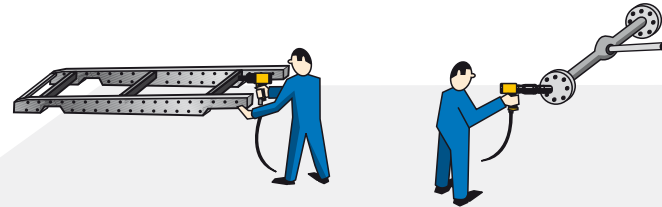
I'm using the click wrench. The nut doesn't turn. Is the torque correct, or did I overtighten it? What can happen when the truck is on the road?

My impact wrench takes a long time to build up torque and then I have to check the torque with a click wrench. Is there a tool that replaces an impact tool in combination with a click wrench?

I don't like vibrations or reaction force into my hand and wrist. Is it possible to use a supported tool that eliminates the forces acting on my body?

Ramp up your production

Production steps



1. Chassis assembly

Tools in use: Impact wrenches.

Upgrade option 1:

ErgoPulse pneumatic pulse tools, or LTP pneumatic shut-off tools.

Upgrade option 2:

Tensor straight or pistol grip electric shut-off tools.

2. Truck axle: Assemble holder to axle

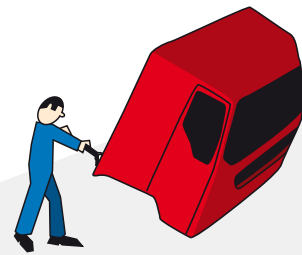
Tools in use: Impact wrench plus click wrench.

Upgrade option 1:

ErgoPulse pneumatic pulse tools, or LTP pneumatic shut-off tools.

Upgrade option 2:

Tensor DS in-line electric shut-off tools, or QST fixtured nutrunners.



7. Driver's cabin: Safety belt

Tools in use: Impact wrench plus click wrench.

Upgrade option:

Tensor ST electric shut-off tools, or Tensor STB cordless battery powered tools.

8. Driver's cabin: Airbag

Tools in use: Impact wrench plus click wrench.

Upgrade option:

Tensor ST electric shut-off tools, or Tensor STB cordless battery powered tools.

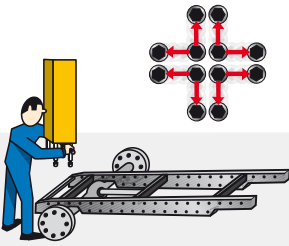
9. Driver's cabin: Steering wheel attachment

Tools in use: Impact wrench plus click wrench.

Upgrade option:

Tensor STB cordless battery powered tools, Line Wrench.

uction – now!

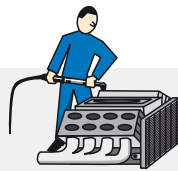


3. Axle to chassis assembly (U-bolt)

Tools in use: Impact wrench plus click wrench.

Upgrade option:

Fixtured multiple spindles, Tensor ST or QST.



4. Motor: Attach cooling system to motor

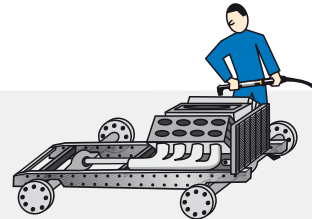
Tools in use: Impact wrench

Upgrade option 1:

LTV pneumatic shut-off tools.

Upgrade option 2:

Tensor ST electric shut-off tools.



5. Motor: Attach gearbox to motor (flange)

Tools in use: Impact wrench plus click wrench.

Upgrade option:

Tensor ST 10 electric shut-off tools.

6. Attach motor with gearbox to chassis

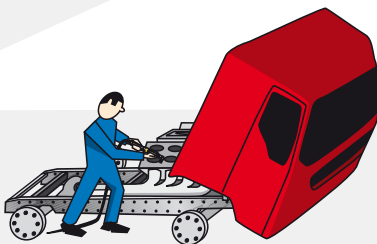
Tools in use: Impact wrench plus click wrench.

Upgrade option 1:

LTD or LTP pneumatic shut-off tools.

Upgrade option 2:

Tensor ST 10 or Tensor pistol grip electric shut-off tools.



10. Attach cabin to chassis

Tools in use: Impact wrench plus click wrench.

Upgrade option 1:

LTP, LTV, LTD pneumatic shut-off tools

Upgrade option 2:

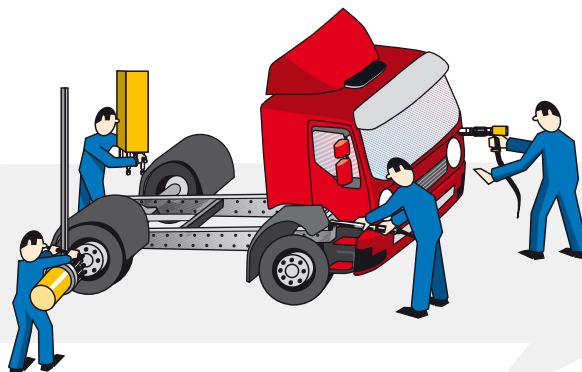
Tensor electric shut-off tools (ETP, ETD, ETV).

11. Attach cabin to chassis

Tools in use: Impact wrenches.

Upgrade option:

Tensor electric shut-off tools (ETD, ETV) plus articulated arm.



12. Wheel attachment

Tools in use: Impact wrench plus click wrench.

Upgrade option:

Fixtured multiple spindles, Tensor QST.

13a. Road semi-trailer attachment (5th wheel)

Tools in use: Impact wrench plus click wrench.

Upgrade option:

Fixtured multiple spindles, Tensor ETX, QST plus Crowfoot.

13b. Or trailer coupling attachment

Tools in use: Impact wrench plus click wrench

Upgrade option 1:

LTP pneumatic shut-off tools.

Upgrade option 2:

Tensor pistol grip electric shut-off tools .

14. Spare wheel attachment

Tools in use: Impact wrenches

Upgrade option:

ErgoPulse pneumatic tools, or LTP pneumatic shut-off tools.



Screwdrivers *step 1*

To ensure the highest level of productivity in your plant, Atlas Copco offers two ranges of advanced screwdrivers. Our LUM pneumatic screwdrivers are state-of-the-art tools offering high accuracy, wide torque and speed ranges and operator friendly ergonomic designs. These tools are complemented by our BCP battery clutch pistol-grip screwdrivers, which set you free from cables or hoses! Fast and powerful with superior ergonomics, BCP tools offer maximum accessibility and high productivity for your quality critical assembly operations.

Pneumatic screwdrivers

Wide torque and speed ranges

The LUM screwdriver program comprises three basic models LUM 12, 22 and 32, which are available in pistol grip, straight and angle versions in a large number of variations in terms of torque and speed. Our light, well-balanced LUM tools offer you high power output in relation to size, low reaction force and handles in insulated materials that are comfortable to hold. Your operators can work with them all day with minimum strain.

LUM 32 – high torque, maximum accessibility

Take the LUM 32, for instance. Weighing in at just 0.75 kg, this high performance pneumatic screwdriver generates an impressive 15.5 Nm of torque. LUM 32 screwdrivers also incorporate a “slimline” powertrain, complete with new gear package and clutch. You’ll find that their new, slim bodies make them ideal for use in confined spaces.

APPLICATION EXAMPLES



- HOSE CLAMPS
- HOLDERS FOR HOSES AND CABLES
- INTERIOR ASSEMBLY

Easy on the operator

By giving low inertia, the lightweight clutch in the LUM series ensures ultra-rapid shut-off, thus minimizing the reaction pulse felt in the operator’s wrist, and making a major contribution to operator comfort.

Built for productivity

With its ergonomic design, lubrication-free powertrain, patented silencer, low-maintenance design and exceptional reliability, LUM tools minimize operator strain and boost individual productivity.



Pneumatic and battery tools



Battery screwdrivers

Freedom from cables and hoses

Available in seven models covering the torque range 0.8 – 12 Nm, Atlas Copco BCP battery clutch pistol-grip screwdrivers are ideal for low-torque joints in final assembly of buses and heavy trucks. With a BCP screwdriver there are no cables or hoses to get in your way and the slim, well-balanced design, light weight and ergonomic pistol grip make it a pleasure to hold.

Choose the optimal speed for your assembly

With a speed range of 150 – 1,550 rpm, the BCP is the fast, most versatile battery screwdriver on the market. Best of all, the speed can be programmed for your application simply by attaching a speed-setting unit to the tool.

Feedback to the operator

A BCP screwdriver keeps you informed. It shuts off automatically at the preset torque and OK and not OK tightening results are indicated by green and red lights on the LED. This also shows the status of the battery.

Lithium-Ion battery technology

BCP screwdrivers are powered by light, high-capacity Lithium-Ion batteries that provide an impressive number of tightenings on one charge! There is no memory effect so they can be re-charged at any time.



LUM 12 HRF
Torque range: 0.6 – 8 Nm
Speed range: 500 – 1,650 rpm

LUM 22
Torque range: 0.6 – 26 Nm
Speed range: 50 – 4,500 rpm

LUM 32
Torque range: 5 – 15.5 Nm
Speed range: 450 – 750 rpm

BCP battery tool
Torque range: 0.8 – 12 Nm
Speed range: 150 – 1,550 rpm

Battery charger
18 V.

Speed setting unit



LTP/LMP pistol grip nutrunners *step 1-2*

If you need a higher level of accuracy in your heavy truck or bus production, take a look at Atlas Copco's LTP shut-off nutrunners. They have become standard tools at truck manufacturers such as Scania and Volvo. A "stall-type" version, the LMP, gives you maximum manual control over the tightening process.

APPLICATION EXAMPLES



- CHASSIS ASSEMBLY
- BACK UP FOR WHEEL
- TRAILER COUPLING
- SPARE WHEEL
- AXLES

Two-speed tightening for speed and accuracy

For maximum productivity, a pistol-grip nutrunner should provide fast rundown and precision tightening. LTP/LMP twin-motor nutrunners, incorporate a high-speed motor for rapid, smooth rundown, and a low-speed high-torque motor for precision tightening.

Believe it or not, our twin-motor concept is lighter, more powerful and more compact than a single-motor unit.

Ten times faster rundown

A conventional, mid-size shut-off nutrunner works at around 20 rpm, during both rundown and tightening. A mid-range LTP 61 runs down at 210 rpm – 10 times faster.

If you have a large number of nuts to tighten, the LTP 61 will save you a considerable amount of time, boosting the productivity of your company.

Ergonomics – our area of expertise

Comfortable to hold and deceptively light, LTP/LMP nutrunners possess an exceptional power-to-weight ratio, steplessly generating 55 to 4,000 Nm of torque. Compact design, optimal balance and a 360° multi-adjustable torque-reaction bar ensure that any strain on your wrist and arm is kept to a minimum.

Noise and vibration levels are exceptionally low, and operator comfort is further enhanced by piping exhaust air through the pistol grip. Operators who progress from impact wrenches really appreciate the difference.



Pneumatic tools



Use one LTP 61 for a wide range of different jobs.

Multi-Torque Selector

Transform one nutrunner into four: the Multi-Torque Selector allows you to preset four different torque levels per tool.

Reaction bars, examples

Multi-Point Reaction Bar

In many workshops, an application that requires a different torque also requires a different reaction point. The Multi-Point Reaction Bar features a sliding bracket that gives you a number of different reaction points.

S-Bar – straight out of the box

A blank reaction bar has to be bent, cut or welded. The geometry of the S-Bar has been optimized to provide a maximum number of reaction points. This means you'll be able to use the S-Bar in about 70 – 80% of all applications straight out of the box.

For more reaction bars, see page 57.



LTP 61 shut-off nutrunner with multi torque selector

up to 4 different torque levels
Torque range: 55 – 3,800 Nm
Speed range: 50 – 1,800 rpm



LTP 61 shut-off nutrunner

Torque range: 55 – 3,800 Nm
Speed range: 50 – 1,800 rpm



LMP 61 non shut-off nutrunner

Torque range: 60 – 4,000 Nm
Speed range: 60 – 2,200 rpm



LTV angle nutrunners *step 1 - 2*

The LTV 8 series is a range of high performance, angle nutrunners offering high speeds, extended torque range, operator comfort and long service life. LTV 69 nutrunners are helping to raising productivity in heavy truck and bus plants around the world. Tools in the new, extremely powerful Atlas Copco LTV 9-2 series combine up to 50% higher speed and consistently high accuracy with operator-friendly features. The new LTV 9-2 series can speed up your production even further.

Combining performance with reliability

A valuable addition to the tool population in your heavy truck or bus manufacturing plant, these advanced tools offer a unique combination of outstanding performance and traditional reliability, in a breakthrough design with innovative and effective features.

Speed and accuracy

Despite its compact design, the LTV proves it can deliver the right performance the moment it goes into action. It offers speeds of up to 1200 rpm, with consistent, high tightening accuracy under $\pm 10\%$ over 6 sigma. The LTV gives low mean shift, torque level remains stable regardless of joint conditions. Error proofing is possible by a built-in RE signal.

Light on the operator

With their high power-to-weight ratio and accuracy in an operator friendly design, tools in the LTV 9-2 series are popular with operators. Their slim, lightweight design, durable long-life grip and low reaction force make them exceptionally comfortable to use. The extra small anglehead gives optimum accessibility.

APPLICATION EXAMPLES



- CHASSIS ASSEMBLY
- MOTOR ASSEMBLY
- HOLDERS FOR PIPES AND CABLES

Easy to operate

Setting or adjusting the torque on an LTV 9-2 is simple and the tools are easy to reverse using the new aluminum reverse ring. A built in safety feature prevents the operator from changing the direction of rotation while running the tool.

Built for tough jobs and long service lifetime

LTV angle nutrunners are robustly designed to handle tough jobs and long service intervals, year in, year out. Trials have shown that they take the strain off your operators and just keep on performing through a long, trouble-free service lifetime.



Pneumatic tools



Increase speed by up to 50%

By using an LTV 9-2 series nutrunner you can increase speed by up to 50%. Assuming a time saving of 40 minutes per day and a labour cost of \$50 per hour, the payback period for a new LTV tool would only be 3 months! This should help you to convince you that the new LTV 9-2 nutrunner is a sound investment.

Fast and powerful

With a capacity range of 70 – 600 Nm, the LTV 69 is the fastest, high capacity pneumatic nutrunner on the market. Based on the well-proven, Atlas Copco twin motor concept, the LTV 69 provides fast run-down and torque-up with exceptional accuracy. Reaction bar mounting is included. Despite its impressive power, the LTV 69 is compact and lightweight enough to be used in many cramped spaces where other tools fail.

Low air consumption translates into major energy savings!

In a typical assembly plant, with tools in operation all year round, the considerably lower air consumption of LTV 9-2 nutrunners translates into huge energy savings annually.

Imagine, the annual cost savings in your plant using nutrunners that consume more than 30% less energy. The unmatched energy efficiency of LTV 9-2 nutrunners will reduce your production costs and make a major contribution to recouping your initial tool investment. In the long-term they cost you no more than less expensive tools.





Pulse tools *step 1 - 3*

Atlas Copco ErgoPulse tools will help you meet your productivity goals. Their reliability, accuracy and heavy duty construction, combined with their operator-friendly ergonomic designs, make them ideal for continuous production in heavy truck and bus plants. Available in automatic shut-off and non shut-off versions, there is also the amazing Pulsor offering the advantages of a pulse tool, with the intelligence of an electronic nutrunner.

ErgoPulse tools offer high torque with stable torque output

The twin chamber vane motor is designed to generate high torque at low speed. The oil compensation volume keeps the oil volume stable, even at very high cycle rates, ensuring stable pulse pressure in pulse unit.

Comfortable to operate

In ErgoPulse tools power-to-weight ratios are impressively high. Since there is no metal-to-metal impact, it provides a more controlled pulse with considerably less vibration and noise than an impact wrench.

Low maintenance, long working lifetime

ErgoPulse tools use a camshaft and piston arrangement and, thus, contain no springs. The camshaft, the guided pistons and the durable rollers are immersed in oil, ensuring minimum wear and a long service life.

APPLICATION EXAMPLES



- SPARE WHEEL ATTACHMENT
- BACK UP TOOL FOR WHEEL TIGHTENING
- CHASSIS PRE ASSEMBLY TOOL
- DOOR HINGES ASSEMBLY
- BUMPER ASSEMBLY

ErgoPulse PTS and PTX automatic shut-off tools

ErgoPulse PTS and PTX tools give you short cycle times, precision tightening and a top quality result. The pulse mechanism is designed for maximum torque generation and energy transfer. The unique inertia shut-off system allows the tool to tighten at maximum speed and power until final torque is reached.

Find another tool like this one!

With its amazingly high power-to-weight ratio, our most powerful pulse tool, the ErgoPulse 25PTX, gives you torque of up to 900 Nm in a tool weighing just 10.4 kg.



Pneumatic tools



Pulsor C – the impulse tool with electric tool intelligence

Atlas Copco's Pulsor C System gives you all the advantages of a controlled impulse tool, plus the intelligence of an electric tightening system. Like all Atlas Copco impulse tools, Pulsor C is fast, powerful, light and compact and generates virtually no reaction force.

The controller remembers up to 4,000 tightenings that can be stored and analyzed. This enables you to fine-tune your process and ensure that every tightening in every shift is perfect. If they are not perfect, you can see why.

Optimum performance on all types of joints

ErgoPulse PTS and PTX tools are available with either AutoTrim or StandardTrim valve version.

The AutoTrim feature ensures fast tightenings and torque consistency on mixed joints. With StandardTrim the tool's speed and power is manually adjustable and is suitable for extreme joint conditions, such as very hard or very soft joints.

ErgoPulse XS non shut-off tools

ErgoPulse non shut-off tools are the ideal choice when you need high speed and manual control over the tightening process. With torques of up to 400 Nm, ErgoPulse XS non shut-off tools are optimized to provide fast, accurate tightening and long service lifetimes.

Controlled Pulse Tool System



Pulsor C
Torque range: 16 – 450 Nm



Pulsor Focus Controller and Tool Control Box

ErgoPulse shut-off tools



ErgoPulse PTS
Torque range: 6 – 410 Nm



ErgoPulse PTX
Torque range: 2 – 450 Nm



ErgoPulse 25PTX
Torque range: 450 – 900 Nm

ErgoPulse non shut-off tools



ErgoPulse XS
Torque range: 5 – 400 Nm



Tensor DS electric nutrunners *step 3*

Today, heavy truck and bus manufacturers are demanding increased control and reduced errors in their tightening operations. Tensor DS electric nutrunners offer the high performance of more advanced tools at a fraction of the cost. Combined with market leading durability and the flexibility to choose only the functionality needed, it fulfils your requirements.

Available in pistol, angle or straight tools, Tensor DS is the perfect tool to suit any tightening operation. With torques ranging up to 4,000 Nm, it has the versatility and ease of use to ensure that operators are happy, and fastening quality is assured every time.

A pleasure to work with!

Your operators will benefit from the operator-friendly aspects of Tensor DS tools. These include light, compact ergonomic design, smooth, quiet operation, no exposure to air-borne oil vapour. Its attractive combination of accuracy and flexibility positions Tensor DS as a unique solution on the market.

Tensor DS detects the most common assembly problems

Missing fasteners: By simply counting each fastener as it is tightened, Tensor DS ensures that the most common human errors are immediately detected and identified.

APPLICATION EXAMPLES



- CABLE/PIPE HOLDERS
- CHASSIS
- PREVAILING TORQUE APPLICATIONS
- HANDGRIP/HOLDER
- INSTRUMENT PANEL

Incorrect joint conditions: Tensor DS can detect thread defects such as cross threads, stripped threads and incorrect screw length. Even missing components such as washers or gaskets can be detected.

Inconsistent repeatability: Using conventional pneumatic tools, the final torque can vary due to inconsistencies in air pressure, variances in joint hardness, even the type of materials being assembled. With Tensor DS, the right program and strategy is allocated for each condition.

Wrong torque applied: Tensor DS removes the human factor by shutting off at the desired programmed torque whilst ensuring a specified minimum level has been reached. The right result is achieved every time.



Electric tools



Four controllers to choose from

Box: Simple, smart and effective

A cost-effective first step into the world of controlled tightening. DS Box lets you control speed and tightening strategy to ensure that the tool does the job right independently of operator influence. The angle monitoring and bolt counting capabilities help you to detect common assembly errors.

Basic: Extra security with the information you need

The Tensor DS Basic drive is equipped with a keypad for programming. It offers the same advantages as Box with extra security since the operator can see the precise torque value displayed on the controller – instead of just the light on the tool.

Advanced: Optimal quality control with multiple options

With the Advanced solution Tensor DS demonstrates its full range of capabilities. Since it is possible to use 10 different Psets, the same tool can be used for several applications. Also, in addition to controlled tightening you can add error-proofing modules such as stack lights or alarms for increased operator feedback.

Power Focus: A common solution for any level of complexity

By adding the Power Focus software key, Tensor DS is ready to go with functionality normally seen only in more expensive systems. Power Focus does it all and a lot more besides, providing a common platform for use throughout any assembly plant. Read more about the Power Focus 4000 controller on page 26.



Tensor DS angle tool
Torque range: 2 – 4,000 Nm
Speed range: 10 – 1,500 rpm



Tensor DS pistol grip tool
Torque range: 2 – 4,000 Nm
Speed range: 10 – 1,500 rpm



Tensor DS straight tool
Torque range: 2 – 4,000 Nm
Speed range: 10 – 1,500 rpm

ETP DS compact swivelling versions (light versions)
ETP DS 9-350-20SSW
ETP DS 9-500-20SSW
ETP DS 9-750-25SSW
ETP DS 9-1500-25SSW

Tensor DS controller boxes



Box



Basic



Advanced



Power Focus



Tensor ST electric nutrunners *step 4 - 5*

As a heavy truck or bus manufacturer, with Tensor ST tools you can be sure that your product is built to the correct specification, every time, and that you will not let your customers down or damage their reputation. Available in pistol, angle or straight tools, it would be difficult to find another tool that can match Tensor ST for its combination of productivity, ergonomics, error-proofing and low maintenance.

The motor is the key

The key to the tool's impressive performance is the high-efficiency motor which does not require fan cooling. The advanced design gives up to 30% higher torque and higher output speed, whilst running at low temperatures.

With the risk of overheating eliminated and fewer parts, the Tensor ST is an extremely reliable tool.

Spiral gears – durable and accurate

Tensor ST angle tools use the proven Atlas Copco spiral gear design, which utilises the maximum gear surface contact to produce best performance and longest possible service life. In the Tensor ST, the spiral gear design has been improved and is now even more accurate and durable, ensuring reduced maintenance costs.

APPLICATION EXAMPLES



- SEAT TO FLOOR
- SAFETY BELT
- STEERING WHEEL
- FUEL TANK ASSEMBLY
- CHASSIS ASSEMBLY

Visual and audio feedback

The Tensor ST is equipped with four signal lights, including a blue LED which can be configured, for example, to indicate when a batch of screws have all been tightened.

Yellow and red LEDs ensure immediate detection of NOK fasteners, direct at the point of failure. The tool can be configured to emit sounds that alert the operator immediately and indicate different events, work tasks, or fastening status.

Comfortable to operate

The ergonomically designed handle is an integral part of the tool and is unique in tools of this torque range. The two finger trigger and twist reverse ring allow easy and intuitive use wherever the tool is being operated



Electric tools



Proven transducer

Tensor ST has a built in torque transducer which allows best possible tightening accuracy whilst ensuring that all tightening data can be recorded. This information is sent digitally to the controller where it can be utilised for process improvement, quality assurance or documented traceability.

Easy fixture integration

Tensor ST provides all the benefits of a hand tool, yet has been designed with fixturing in mind. Easy integration into the assembly line is vital. With no need for special mounting brackets or torque reaction plates, Tensor ST is the easy way to introduce a controlled high torque nutrunner to your assembly operations.

Power Focus 4000 controller

Tensor ST nutrunners can be partnered with the Power Focus 4000 controller (see page 26) which supports "zero-fault" production by providing numerous tightening strategies, job work sequencing, full data traceability and networking capabilities.



Tensor ST angle tool

Torque range: 1 – 600 Nm
Speed range: 150 – 2,400 rpm



Tensor ETP STR61 pistol grip tool

Torque range: 5 – 125 Nm
Speed range: 380 – 2,100 rpm



ETV STR21 angle tool

Torque range: 2.5 – 25 Nm
Speed range: 1,000 – 1,350 rpm



Tensor ST straight tool

Torque range: 30 – 1,000 Nm
Speed range: 100 – 870 rpm



Tensor Revo pistol grip tool

Torque range: 60 – 1,000 Nm
Speed range: 100 – 400 rpm



Power Focus 4000 controller



Tensor STB battery nutrunners *step 4 - 5*

Available as angle or pistol grip tools, Tensor STB nutrunners give you true cordless freedom! First, they are battery powered. Second, they use Industrial Radio Communication (IRC) to communicate with a controller, giving you full process control. In other words, Tensor STB tools offer the same benefits and zero-fault process control as Tensor ST nutrunners.

Critical joints demand not only validation and documentation, but speed and accuracy. However, tool cables limit smooth movement along the line and cause access problems in cramped spaces. This is particularly attractive for the operator working on moving lines or at rework stations with many different tightening positions

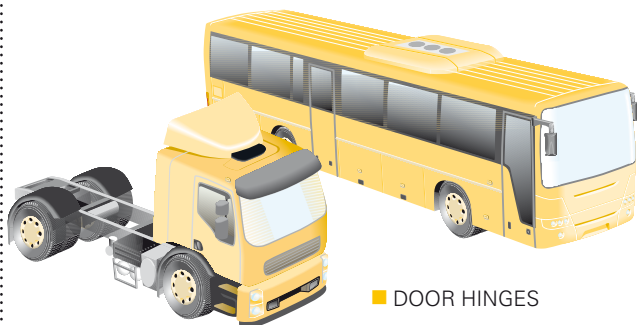
Unique fastening performance

There are other battery tools on the market. However, no other battery powered tool can offer Tensor STB's unique fastening performance and advanced process control.

Superior ergonomics

With no cord in the way, the operator works unhindered in ergonomic positions which result in reduced fatigue.

APPLICATION EXAMPLES



- DOOR HINGES
- STEERING WHEEL
- SEAT BELTS
- SEAT TO FLOOR

All-round player

At a typical workstation, one Tensor STB tool can be used for several applications within the same torque range. In some applications you can use one Tensor STB for both sides. If you have different joint types, it is recommended to use an STB with a socket tray.

Higher productivity

Tensor STB offers genuine ergonomic advantages for the operator which in turn raises individual productivity.

- Low tool weight and high spindle speed reduce cycle time
- Awkward working positions caused by the cable are eliminated
- Lightweight components help reduce operator fatigue



Electrical wireless tool



Better operator feedback

The operator is kept well informed by the tool. For example, if a tightening error occurs the operator will be alerted and can take immediate action, thereby avoiding the expense of reworking.

IRC – industrial strength

Atlas Copco has developed special communication technology that is designed for industrial environments. Industrial Radio Communication (IRC), as we call it, is based on Bluetooth 2.0. IRC is also equipped with AFH (Adaptive Frequency Hopping). With this spread-spectrum technology the transceivers hop from one frequency to the next at fixed time intervals. A major advantage of this design is that it offers a more robust link, especially in noisy environments.

Less parts in stock

Since no cables are required, there are no cables to keep in stock. In addition to this, Tensor STB shares many of the components and accessories used in Tensor ST. And by eliminating dirty cables, your end-products remain clean.

Tensor STB – a complete tightening system

Tensor STB nutrunners can be partnered with the Power Focus 4000 controller (see page 26) which supports “zero-fault” production by providing numerous tightening strategies, job work sequencing, full data traceability and networking capabilities.



Tensor STB angle tool
Torque range: 4 – 50 Nm
Speed range: 375 – 1,500 rpm



Tensor STB pistol grip tool
Torque range: 2 – 12 Nm
Speed range: 750 – 1,500 rpm



IRC



Power Focus 4000 controller



QST/ETX fixtured nutrunners *step 4 - 5*

Designed for large-scale, heavy duty tightening, ETX and QST fixtured nutrunners are compact, durable and easy to integrate in your heavy truck or bus production line. These rugged tools are designed to give you a long working lifetime and high accuracy in heavy duty applications.

QST tools with Power MACS 4000

Speed that raises productivity

Based on the success of its predecessor, the QMX, the new QST nutrunner offers a speed increase of up to 67%. Inertia braking allows nutrunner to run faster without overshooting. The tightening controller automatically increases the bus voltage for the larger size nutrunners, QST80 and 90, giving unique speed capabilities for high-torque applications.

Accurate and easy to maintain

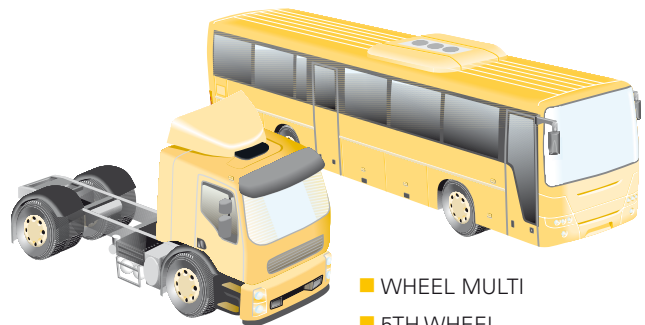
The QST delivers an accuracy of +2.5% after one million cycles, creating longer service intervals.

A simple, easy-to-install sandwich/pilot mount allows flexible maintenance possibilities. The QST is available with extended spring travel (76 and 100 mm) and/or extended socket holder length.

Built-in memory chip

An electronic chip stores data including calibration value, serial numbers and maintenance intervals, thus reducing costs and errors.

APPLICATION EXAMPLES



- WHEEL MULTI
- 5TH WHEEL
- U-BOLT
- CHASSIS ASSEMBLY
- MOTOR TO CHASSIS

Hot Swap function

You can replace the cable or spindle without turning the power off. The cable connector is adjustable in two directions for optimal cable management.

Power MACS 4000

Compatible with QST spindles, the new Atlas Copco Power MACS 4000 controller represents the pinnacle of automated fastening control and a new generation of upgradeable controller. Intuitive monitoring and communication capabilities combined with advanced management programs allow processes to be fine-tuned and productivity hurdles to be overcome. Built in PLC, E-stop and Reject management. Designed for multiple solutions. Digital communication with 12 mm cable Ø, up to 60 m tool cable possible.



Fixture spindles



ETX tools with Power Focus 4000

Functionality and flexibility

ETX spindles are designed exclusively for fixtured applications and optimized for extreme functionality, flexibility and low space requirements. Controlled by a Power Focus 4000 controller and featuring a "smart" memory chip for calibration and service data, the ETX combines the same advanced control and monitoring options and high productivity as the Tensor S range.

Durability and precision

ETX spindles are extremely durable. They are built to last and to continue giving precision tightening in the toughest environments, with high duty cycles and high production rates. ETX is rated up to A10, with a torque accuracy of $\pm 2.5\%$ over 1,000,000 cycles.

Optimized for integration

ETX makes life easy for application engineers. There are various ways to fixture the front end of the tool. With a sandwich mount, for easy exchange of the socket holder, or a pilot mount direct onto the front end. Its compact planetary gear minimizes center-to-center distances, for greater flexibility when placing the spindles in the power head.

Power Focus 4000

The Power Focus 4000 is an advanced control system for the complete range of Atlas Copco electrical assembly Tools (see page 26 for details).





Power Focus 4000

With your productivity in mind, we present the futuristic Power Focus 4000 control system for Tensor tools. It will give you full tightening documentation and traceability for safety and quality critical joints, and put your plant securely on the path to zero-fault production.

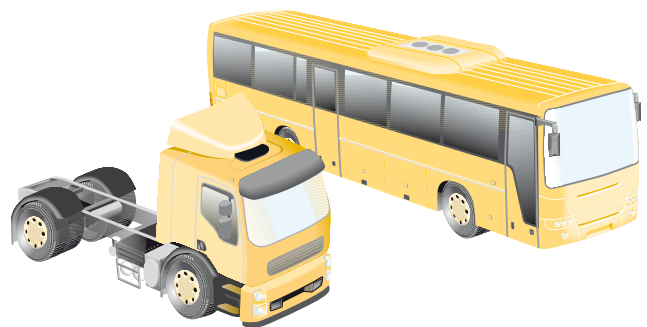
Traceable, zero-fault process control

Advanced control functions built into the Power Focus 4000 prevent the operator from deviating from the required process. When it receives assembly information, the programmed "Job" function automatically selects the correct tightening sequence and parameters. When combined with barcode scanning for component identification, the "Job" function offers traceable, zero-fault process control.

Power Focus 4000 Graph with full-colour display

On the Power Focus 4000 Graph the easy-to-read LCD colour display gives you all the information you need. Statistical data is collected, analyzed and presented on the screen. Changes and trends in the assembly process are indicated by diagnostics and statistical alarms, such as SPC monitor charts and capability (Cpk) alarms.

APPLICATION EXAMPLES



■ THE POWER FOCUS 4000 CAN RUN DIFFERENT TYPES OF TOOLS, SUCH AS TENSOR S, DS, ST, STB AND ETX.

Power Focus 4000 Compact

The Power Focus 4000 Compact has a basic operator interface with a six-button keyboard and LED display. Pre-programmed using ToolsTalk PF and with a PC as the interface, it offers the same functions as the Graph.

Plug & Play software functionality

There are four standard software levels for the Power Focus 4000: DS, Bronze, Silver and Gold. With Atlas Copco's patented plug-in Rapid Back-up Unit, RBU, a combined program back-up unit and functionality key, you can tailor a hardware/software combination to your specific application.



Controller software



Built-in PLC functionality eliminates problems

The advanced Power Focus 4000 has an integrated Logic Configurator providing basic PLC functionality as an integrated part of the controller, without additional hardware components. You can now configure your "PLC style" signal flow between the line or the fixture, and the PF 4000, thus the need for an interface PLC is eliminated.



Controller
Power Focus 4000 Compact



Controller
Power Focus 4000 Graph

Controller functionality keys



RBU-Bronze



RBU-Silver



RBU-Gold



RBU-DS



RBU-X



Drills, grinders, sanders and polishers

The tools in Atlas Copco's advanced range of pneumatic drills, grinders, sanders and polishers are ideal for a long list of bodywork finishing tasks in heavy truck and bus manufacturing plants. Common to all the tools are their ergonomic designs and high power-to-weight ratios. This is particularly true of the amazing GTG 40 Turbo Grinder. Try running this one to a standstill!

Drills

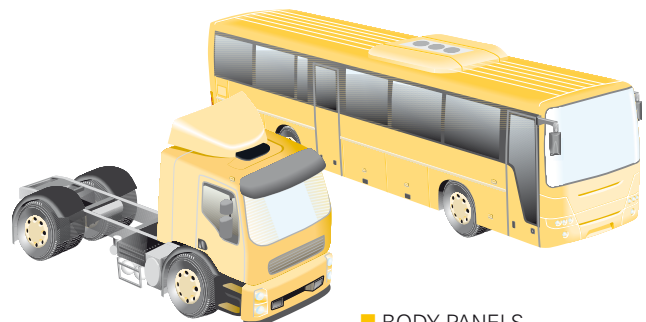
Drills are widely used in bus building and with Atlas Copco drills the result becomes excellent. Various materials such as composites and steel call for drills with high power and the intensity in the process makes our line of drills the clear choice for the operator. To efficiently drill 1,000's of holes in bus body panels require drills with high productivity which is the reason to why Atlas Copco is the preferred brand in many bus factories. The risk for water leaks from holes drilled in the roof out of tolerance is minimized by using drills with low run out. A full range of speeds and power classes makes it possible to use the right tool for the right job.

LSV Angle Grinders and Sanders

Tools that won't tire you out!

Atlas Copco's LSV 18, 28, 38 and 48 series of grinders and sanders are characterized by their good ergonomics. They are lighter than a conventional vertical grinder, yet much more powerful.

APPLICATION EXAMPLES



- ROOF TO BODY
- CHASSIS
- FIXING FLOOR
- BODY PANELS
- INTERIOR

To help reduce operator stress and fatigue, many LSV models are equipped with an autobalancer that reduces vibrations in the grinder. All models have textured non-slip grips that are comfortable to hold. Piped-away rear exhaust leaves you with a cleaner working environment.

Efficient pneumatic motors

The efficiency of the air motors in the LSV range ensures consistent performance, even when the grinder is connected to a long hose. With 1,300 W output at 3 meter hose length, you still get good output with a much longer hose.

Long service life

The new, extra durable angle gear is nearly maintenance free, ensuring you many years of excellent service. All LSV angle grinders and sanders have sealed angle heads ensuring long service intervals and troublefree operation for many years.



Material removal tools



LST Sanders/Polishers

A full range of random orbital sanders

LST 20, 21 and 22 sanders are highly efficient tools for sanding before painting and surface coating, and for polishing with wax and surface conditioner. The full range includes standard models and extraction models.

Comfortable to work with

The LST range is made up of compact tools with low height and weight. All models are well balanced and have a vibration level below 2.5 m/s². The housing allows both straight grip and a cross grip. A smaller housing cover, easily exchangeable with the standard cover, is included with each tool.

GTG 40 Turbo Grinder

High rate of material removal

Grinding welding seams on truck or bus bodies? The GTG 40 Turbo Grinder is just what you need. With a turbo-driven motor giving 4.5 kW of power in a grinder weighing only 4 kg, you'll achieve a higher rate of material removal than ever before – with far less effort!

Turbo-powered productivity

The turbine motor is more efficient than the conventional grinder motor, therefore it takes less time to do the same job. Thus boosting productivity in your plant. Also the total air consumption will be a lot less for a specific job.

Drills

Power: 0.11 – 0.83 kW
Speed: 300 – 23,000 rpm



LBB 16



LBB 37



LBV 16

Die grinder

Power 0.40 – 4.5 kW
Speed: 3,000 – 43,000 rpm



LSF 18



LSF 28



GTR 40



Turbo Grinders

Power: 4.5 kW
Wheel dia. 150 – 230 mm



Angle grinders LSV 18, 28, 38 and 48

Power: 0.45 - 1.9 kW
Wheel dia. 80 – 230 mm



Sanders LSV 18, 28, 38 and 48

Power: 0.37 – 1.9 kW
Wheel dia. 50 – 200 mm



LST sanders/polishers

Power: 0.2 – 0.3 kW
Pad size 90 – 150 mm

For more information about grinders, see our main catalogue, "Industrial Power Tools".



Atlas Copco air line accessories

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 airline 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.

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 LSV 28 grinder by more than 15%. By upgrading their air distribution system with Atlas Copco air hose assembly and new high quality couplings, a large customer in Australia boosted productivity by 30%.

Avoid sub-standard nipples, poor quality couplings, underdimensioned hose, and badly designed safety devices. They can cause restrictions or leakage in your air distribution system. Subsequent loss of pressure leads to reduced tool performance and lower torque accuracy, affecting productivity and quality. It also wastes energy. Atlas Copco offers the highest quality air line accessories.



Air preparation unit



PVC hose



MultiFlex connector, swiveling type



Balancer



TURBO rubber hose



Air line accessories

ErgoNIP 08



ErgoQIC 08

ErgoNIP 10



ErgoQIC 10

NIP 15/15E/15T



QIC 15/15S/15SE/15ST

NIP 10/10E



QIC 10/10S/10SE

NIP 08



QIC 08/08S

Did you know 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.

Compatibility of Atlas Copco couplings

Nipple		Coupling QIC 8S	Coupling QIC 10S	Coupling QIC 15S	Coupling QIC 10SE	Coupling QIC 15SE	Coupling QIC 15ST
CEJN	310	X					
	320				X		
	408						X
	410					X	
TEMA	1300	X					
	1650		X				
	1750			X			
	1600				X		
	1700					X	
	1800						X
ARO	23 - 23902	X					
RECTUS	14 - 22	X					
	33		X				
	34			X			
	25 (KA, KB, KD, KE, KL, KS)				X		
	26 (KA, KB, KE)				X		
	27					X	
	32						X
PREVOST	ARM-ASC-ARC-06	X					
	ESC 07				X		
LEGRIS	14 - 22	X					
	25 (KA, KB, KD, KE, KL, KS)				X		
	26 (KA, KB, KE)				X		
	27					X	
HANSEN	100-Auto Flo 20 / 23	X					
	Auto Flo 24				X		
FOSTER	210	X					
JWL	520						
PARKER	Intercheck 35				X		
	Intercheck 55					X	
(Eurostandard 7.4)					X		
(Eurostandard 10.4)						X	

For more information about Air line Accessories, see our Industrial Power Tools catalogue.

Quality assurance in tightening



Assuring quality throughout the product cycle



In the heavy truck and bus manufacturing industry, demands on safety and quality are increasing all the time. Problems related to tightening account for a growing percentage of total warranty costs. Poor quality in the assembly area can also result in damaged brand image for the manufacturer. Atlas Copco QAT is a program of solutions for assuring tightening quality throughout the product cycle and for maintaining optimum tool accuracy during production.

The Atlas Copco ToolStation

Identify and solve problems early on in the product cycle. The Atlas Copco ToolStation is a mobile station equipped with production tooling and dedicated software for guidance, documentation, traceability and evaluations.

A valuable production tool, the ToolStation makes it possible to use production tooling where it is not usually available, to identify and solve problems from the design, prototype, and pilot build stages, through to serial production. In full production, it is ideal for production cell build, for use as back-up tooling and in the tool repair station.

Equipped with tools, controllers and fastening application software, the ToolStation can handle an unlimited number of parameter sets and support all fastening applications. It will raise efficiency and cut costs throughout the product cycle.



Solutions for maintaining optimum tool accuracy



ACTA 4000 takes away the guesswork

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.



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.

Eliminate rejects, costly reworking, unplanned downtime. Atlas Copco QAT assures quality right down the line.



BLM joint simulator bench 3860

The BLM Joint Simulator Bench 3860 provides maximum tool evaluation flexibility. DC electric, clutch, impulse and battery tools as well as torque wrenches can be evaluated.

The hydraulic brakes simulate the behaviour of a real joint reproducing the stiffness from hard to soft. This allows the tool to be tested in accordance with VDI/VDE 2647.

Torque tools are tested very quickly on a Joint Simulator Bench without having to remove their sockets. So there is no interference with production. It takes just a few seconds for a periodic statistical control and three minutes to make a machine capability test of 30 samples.

Pneumatic tools are tested directly on the production line under real conditions taking into account air pressure, hose wear, lubrication, etc.



Step-up to full productivity

Choose the service level that suits your operation and then focus on your core business



Fixed price repair



*Reduced lead times
Cost efficient*

*Short turnaround,
longer tool life cycle*

Calibration service



Special equipment and know-how

Traceability and quality control

Preventive maintenance



Field or workshop

Maximum up-time, reduced cost

Full coverage service



Field or workshop

Reduced cost and full budget control

Outsourcing solutions



Workshop on-site

Lean production



Service

ToolScan RCM

Is your tool service level correct? Based on the Reliability-centered Maintenance (RCM) process, ToolScan RCM enables our service experts to identify your precise needs in terms of tool maintenance.

Too little maintenance means frequent tool breakdowns. Too much maintenance is an unnecessary drain on your budget. For maximum profitability, the relationship between tool maintenance and system failure must be optimized. It's a fine balance which Atlas Copco can help you achieve by optimizing your existing maintenance program, or developing a new one. For more information, please contact your Atlas Copco representative.

Full Coverage Agreement

A complete, tailored maintenance solution with a fixed annual cost, a Full Coverage Service agreement consists of standard service modules designed to secure the availability of your equipment.

The agreement is available when you purchase new equipment, and for your existing tools and spindles after a basic check. It provides a full warranty covering all unplanned repairs, providing the equipment has not been misused.

Thus, throughout the contracted period, there is no risk of unpleasant surprises in the form of costly repairs, and we inform you in good time if and when your equipment needs to be serviced.

Preventive Maintenance Agreement

Preventive Maintenance is our standard recommended maintenance program. Maintenance is performed at the correct intervals based on the age, intensity of use, and application of your tools and equipment.

The work is carried out on your premises or in our central workshop at a fixed annual cost. We also take care of all planning and data storage during the contracted period. Additional work found during maintenance is quoted on a fixed price basis for completion during the next visit, or at an Atlas Copco workshop.

Calibration Services

On the assembly line, you need to be certain about the performance of your power tools and equipment. The tools need to be calibrated at regular intervals.

Our Calibration Services keep your transducerized tools and torque measurement equipment calibrated for optimum performance. We offer a complete range of calibration services. Most Atlas Copco Service Centers are ISO 9000 certified.

Customer training and workshops

We offer a full program of customer training courses and workshops to ensure that you get the most from your tools. These workshops can be held either on your own premises or in our Training Center. Please contact your local Atlas Copco Customer Center.

ToolStart

We offer tool installation and start-up by qualified Atlas Copco engineers at a fixed price. The service also includes: programming, test running and operator training.

Customized solutions

Atlas Copco application centers

Articulated arms and position recognition system

The Articulated Arm concept

Atlas Copco Articulated Arms are designed for use with single-spindle Atlas Copco handtools or smaller multiple-spindle fixtured housings. Good ergonomics remove the strain from the operator, while increasing safety and productivity.

A unique family of Articulated Arms with a wide range of options offers an unparalleled selection of standard, well-proven solutions.

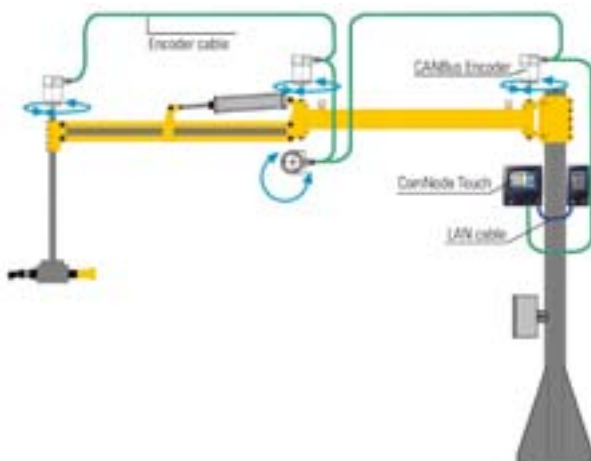
Improving productivity

With demands on productivity constantly increasing, Articulated Arms are a cost-effective way of raising productivity. A stand-alone concept, requiring no overhead rail system or similar, the Articulated Arm provides almost zero gravity support of the tool. It also absorbs the torque reaction, increasing operator comfort and safety.

Adding process security the Atlas Copco way

Error proofing has taken on a new dimension! Atlas Copco Articulated Arms can be equipped with our Position Recognition System (PRS). This tracks the exact position of the tool, ensuring the correct fasteners are tightened to the correct torque, in the correct sequence. PRS offers high level process security for complex assemblies.

Arm size	Torque capacity Nm	Working range mm	Lifting capacity at 6 bar kg
1, 2, 3, 5	50 - 2,000	1,200 - 4,000	40 - 90



Telescopic handtool suspension and installation frames

Telescopic tool suspension

Designed to support Tensor tool applications safely and ergonomically. With near-to-zero gravity and the capacity to absorb high torque reaction, the majority of applications can be solved quickly and effectively, with tried and tested products.

Installation frames

A flexible, cost-effective way to optimize your workstation. These modular, robust installation frames are designed to support the Tensor tool controller and other specific options. There are five different widths available, depending on the size of the workstation, and numerous options to customize them according to the application.

Overhead rail height mm	Torque capacity max. Nm	Stroke mm	Working range from floor mm
2,500 - 3,500	250 - 500	600	900 - 1,400



Multiples by Express®

The smart approach to fixtured multiples



Multiples by Express® from Atlas Copco is a highly flexible, modular system of fixtured multiples that saves time and money when planning or rebalancing a production line. The components are designed to be ergonomic and light without compromising durability. Delivered in as little as four weeks, Multiples by Express® offers full support for lean production.

Full flexibility – simple to upgrade

With Multiples by Express® as many as 10 spindles can be used to tighten up to 1,000 Nm in any predefined modularized multiple.

Tailoring a tightening system to new applications is simple. An existing fixture can be rebuilt to a new proven design using the same parts. You can go from vertical to horizontal to rotating with very little effort. Add a spindle or remove a spindle – it's easy.

When an increase in capacity is required, extra nutrunners can be added to the multiple simply by changing the base plate.

Plug-and-play error-proofing modules

Error-proofing is available in the form of optional plug-and-play accessories from Atlas Copco's Quality Integrated Fastening (QIF) range. These provide operator feedback or guidance, and the capability to handle product variance, or to monitor the processes.

Go into production in just 4 weeks!

Submit a detailed request to us and we are able to quote you within 24 – 48 hours. Once the order is placed we are able to build, test and deliver your multiple in 4 weeks, depending on where in the world you are located.

Multiples by Express® can be tailored to your needs

Our modular system is the backbone of our multiples concept. Whether you choose rapidly delivered Express Multiples, Extended or fully Engineered solutions, all are based on modules. Depending on the complexity of your needs we have different offers. They are all based on the modular system and cover a wide range of applications.

Systems



PowerMACS 4000 **QST** **Power Focus 4000** **ETX** **Tensor ST** **Tensor DS**



Accessories for Quality Integrated Fastening



Operator panel **Stacklight** **I/O Expander**
Mini-display **Socket selector** **Indicator box**



Fixtures

Spindle types: Straight and Offset
 Maximum torque: 1,000 Nm
 Number of spindles: 1 – 10



Horizontal **Horizontal rotating** **Vertical**

PNEUMATIC TOOLS

Pulse nutrunners



ErgoPulse – Non shut-off type



ErgoPulse – Shut-off type



ErgoPulse – Shut-off type

Model	Bolt size mm	Square drive in	Torque range ^a		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
Trim-RE Pistol grip														
EP7PTX55 HR10-RE	M8-M10	3/8	30 - 55	22 - 40	7200 ^a	1.2	2.5	176	25	9	19	10	1/4	8431 0375 30
EP8PTX70 HR10-RE	M10	3/8	40 - 70	29 - 51	6900 ^a	1.2	2.5	176	25	9	19	10	1/4	8431 0375 60
EP9PTX80 HR13-RE	M10	1/2	50 - 80	37 - 59	5200 ^a	1.5	3.3	188	29	11	23	10	1/4	8431 0375 40
EP11PTX120 HR13-RE	M12	1/2	70 - 110	51 - 88	5100 ^a	1.7	3.8	196	29	12	25	10	1/4	8431 0376 50
EP13PTX150 HR13-RE	M12-M14	1/2	85 - 150	63 - 110	5300 ^a	2.3	5.1	197	33.5	15	32	13	3/8	8431 0376 60
EP15PTX250 HR20-RE	M12-M16	3/4	125 - 250	92 - 184	4300 ^a	3.1	6.8	216	36.5	21	45	13	3/8	8431 0376 70
EP19PTX450 HR20-RE	M16-M20	3/4	225 - 450	166 - 332	3300 ^a	4.2	9.2	221	44	23	49	13	3/8	8431 0376 80
AutoTrim Pistol grip														
EP7PTX55 HR10-AT	M8-M10	3/8	30 - 55	22 - 40	6900 ^a	1.2	2.5	176	25	9	19	10	1/4	8431 0375 32
EP8PTX70 HR10-AT	M10	3/8	40 - 70	29 - 51	6900 ^a	1.2	2.5	176	25	9	19	10	1/4	8431 0375 62
EP9PTX80 HR13-AT	M10	1/2	50 - 80	37 - 59	5100 ^a	1.5	3.4	188	29	11	23	10	1/4	8431 0375 42
EP11PTX120 HR13-AT	M12	1/2	70 - 110	51 - 88	5100 ^a	1.7	3.8	196	29	12	25	10	1/4	8431 0376 52
EP13PTX150 HR13-AT	M12-M14	1/2	85 - 150	63 - 110	5300 ^a	2.3	5.0	197	33.5	15	32	13	3/8	8431 0376 62
EP15PTX250 HR20-AT	M12-M16	3/4	125 - 250	92 - 184	4200 ^a	3.1	6.8	216	36.5	21	45	13	3/8	8431 0376 72
EP19PTX450 HR20-AT	M16-M20	3/4	225 - 450	166 - 332	3300 ^a	4.2	9.2	221	44	23	49	13	3/8	8431 0376 82
Trim-RE Pistol grip models. Balanced grip														
EP8PTS40 HR42-RE	M8	1/4 ^b	22 - 40	16 - 29	7300 ^a	1.4	3.0	175	26	9	19	10	1/4	8431 0374 55
EP8PTS55 HR10-RE	M8-M10	3/8	30 - 55	22 - 40	7300 ^a	1.4	3.0	176	26	9	19	10	1/4	8431 0374 60
EP10PTS90 HR13-RE	M10-M12	1/2	50 - 90	37 - 66	5200 ^a	1.8	4.0	193	29	11	23	10	1/4	8431 0374 80
EP12PTS150 HR13-RE	M12-M14	1/2	85 - 150	63 - 110	4200 ^a	2.5	5.5	201	34	13	27	13	3/8	8431 0374 90
EP14PTS250 HR20-RE	M12-M16	3/4	125 - 250	92 - 185	4000 ^a	3.3	7.2	216	37	20	42	13	3/8	8431 0374 95
EP18PTS410 HR20-RE	M16-M20	3/4	225 - 410	166 - 302	3000 ^a	4.3	9.5	202	42	22	46	13	3/8	8431 0374 98
AutoTrim Pistol grip models. Balanced grip														
EP8PTS40 HR42-AT	M8	1/4 ^b	22 - 40	16 - 29	6900 ^a	1.4	3.0	175	26	9	19	10	1/4	8431 0374 57
EP8PTS55 HR10-AT	M8-10	3/8	30 - 55	22 - 40	6900 ^a	1.4	3.0	176	26	9	19	10	1/4	8431 0374 62
EP10PTS90 HR13-AT	M10-12	1/2	50 - 90	37 - 66	4900 ^a	1.8	4.0	193	29	11	23	10	1/4	8431 0374 82
EP12PTS150 HR13-AT	M12-14	1/2	85 - 150	63 - 110	4100 ^a	2.5	5.5	201	34	13	27	13	3/8	8431 0374 92
EP14PTS250 HR20-AT	M12-16	3/4	125 - 250	92 - 185	3900 ^a	3.3	7.2	216	37	20	42	13	3/8	8431 0374 97
EP18PTS410 HR20-AT	M16-20	3/4	225 - 410	166 - 332	2900 ^a	4.3	9.5	202	42	22	46	13	3/8	8431 0374 99

ErgoPulse – Non shut-off type

Model	Bolt size mm	Square drive in	Torque range ^a		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
Pistol grip models														
EP8XS HRX42	M8	1/4 ^b	22 - 40	16 - 29	7000	1.0	2.2	172	23	9	19	10	1/4	8431 0369 16
EP8XS HRX10	M8-M10	3/8	30 - 52	22 - 38	7000	1.0	2.2	174	23	9	19	10	1/4	8431 0369 09
EP10XS HR13	M10	1/2	50 - 70	37 - 52	6000	1.3	2.9	168	26	11	23	10	1/4	8431 0369 40
EP12XS HR13	M12	1/2	65 - 110	48 - 81	4500	1.6	3.5	178	29	12	25	10	1/4	8431 0371 00
EP14XS HR13	M14	1/2	110 - 160	81 - 118	3500	2.4	5.3	188	34	14	30	13	3/8	8431 0371 50
EP16XS HR20	M16	3/4	160 - 240	118 - 177	2800	3.3	7.3	205	37	15	32	13	3/8	8431 0371 55
EP20XS HR20	M20	3/4	300 - 400	221 - 295	3700	5.1	11.2	240	43	16	34	13	3/8	8431 0371 60

^a To be used as a guide only, final torque depends on type of joint, accessories used and air pressure.

^b Female hexagon drive. Quick change chuck.

^c With TRIM valve fully open.

^d In full speed mode.

For more options, see Industrial Power Tools catalogue.

Note: This is just a selection of tools from our extensive range. Please refer to the current edition of our main catalogue, "Industrial Power Tools," to see all the versions available.

Controlled impulse nutrunner



EPP10 C

Pulsor C tools

Model	Bolt size mm	Square drive in	Torque range		Free speed r/min	Weight		Length mm	CS distance mm	Air consumption under load		Rec. hose size mm	Air inlet thread in	Ordering No.
			Nm	ft lb		kg	lb			l/s	cfm			
Tools with ball retainer														
EPP6 C32 HR-B10	M8	3/8	16 - 32	12 - 24	9000	1.3	2.8	164	23	7	15	10	1/4	8431 0380 55
EPP8 C55 HR-B10	M8-M10	3/8	30 - 55	22 - 40	7000	1.5	3.4	172	26	8	17	10	1/4	8431 0380 59
EPP10 C90 HR-B13	M10	1/2	50 - 90	37 - 66	5500	2	4.5	184	30	11	23	10	1/4	8431 0380 64
EPP11 C110 HR-B13	M12	1/2	70 - 110	51 - 88	5100	2.1	4.6	192	30	12	25	13	1/4	8431 0380 68
Tools with pin retainer														
EPP6 C32 HR10	M6-M8	3/8	16 - 32	12 - 24	9000	1.3	2.8	164	23	7	15	10	1/4	8431 0380 48
EPP8 C55 HR10	M8-M10	3/8	30 - 55	22 - 40	7000	1.5	3.4	172	26	8	17	10	1/4	8431 0380 57
EPP10 C90 HR13	M10	1/2	50 - 90	37 - 66	5500	2	4.5	184	30	11	23	10	1/4	8431 0380 62
EPP11 C110 HR13	M12	1/2	70 - 110	51 - 88	5100	2.1	4.6	192	30	12	25	13	1/4	8431 0380 66

Bigger tool models, up to 450 Nm are under development.

Screwdrivers



LUM22 HR



LUM12 HRF

Pistol grip models

Model	Torque range*		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			
With trigger start												
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 HR3-RE	0.6 - 3	5.3 - 26.5	2200	0.85	1.9	186	18	7.5	16	8	1/4	8431 0278 63
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 HR4-RE	0.6 - 4	5.3 - 35.4	1650	0.85	1.9	186	18	7.5	16	8	1/4	8431 0278 65
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 HR6-RE	1.5 - 6.5	13.3 - 57.5	1150	0.85	1.9	186	18	7.5	16	8	1/4	8431 0278 64
LUM22 HR10	3.5 - 10	31 - 88.5	750	1	2.2	218	18	7.5	16	10	1/4	8431 0269 03
LUM22 HR10-RE	3.5 - 10	31 - 88.5	750	1	2.2	218	18	7.5	16	10	1/4	8431 0278 66
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
LUM22 HR12-RE	3.5 - 12.5	31 - 110.6	500	1	2.2	210	18	7.5	16	10	1/4	8431 0278 67
LUM32 HR10	5 - 10	44.2 - 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	66 - 137.2	450	0.72	1.6	183	18.5	7.5	16	10	1/4	8431 0269 91
Multiple air inlet models and air-on-top models with trigger start												
LUM12 HRF2	0.6 - 2.5	5.3 - 22.1	1650	0.65	1.4	190	16	6	13	6	1/8	8431 0269 31
LUM12 HRF3	0.4 - 3.6	3.5 - 31.9	1150	0.7	1.5	200	16	6	13	6	1/8	8431 0269 32
LUM12 HRF5	0.4 - 5	3.5 - 44.2	850	0.7	1.5	200	16	6	13	6	1/8	8431 0269 33
LUM12 HRF8	1.5 - 8	13.3 - 70.8	500	0.7	1.5	200	16	6	13	6	1/8	8431 0269 34
LUM25 HRF11-U	3.5 - 5.5*	31 - 49	1100	1.2	2.6	226	26	6	13	8	1/4	8431 0249 09
LUM25 HRF08-U-RE	3.5 - 7.5*	31 - 66	800	1.2	2.6	226	26	6	13	8	1/4	8431 0264 98
LUM25 HRF08-U	3.5 - 7.5*	31 - 66	800	1.2	2.6	226	26	6	13	8	1/4	8431 0249 07
LUM25 HRF05-U-RE	3.5 - 12.0*	31 - 110	500	1.2	2.6	226	26	6	13	8	1/4	8431 0264 96
LUM25 HRF05-U	3.5 - 12.0*	31 - 110	500	1.2	2.6	226	26	6	13	8	1/4	8431 0249 05

* 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. For operator comfort a support handle is recommended for high torque, see Optional Accessories. For more options, see Industrial Power Tools catalogue.

PNEUMATIC TOOLS

Pistol grip nutrunners



LTP 61



LTP 61 MT

LTP – Shut-off type

Model	Bolt size mm	Square drive in	Torque range at 6.3 bar		Min torque at 3 bar		Free speed r/min	Weight*		Length mm	CS distance mm	Air consumption at free speed		Air inlet thread in	Spline type	Ordering No.
			Nm	ft lb	Nm	ft lb		kg	lb			l/s	cfm			
Non reversible																
LTP61 H100-13	M12	1/2	55 - 100	40 - 75	45	35	1800	3.0	6.6	223	29	20	42	3/8	3	8431 0800 07
LTP61 H170-13	M14	1/2	95 - 170	70 - 125	70	50	1100	3.0	6.6	223	29	20	42	3/8	3	8431 0800 14
LTP61 H230-19	M16	3/4	125 - 230	90 - 170	85	60	820	3.0	6.6	223	29	20	42	3/8	3	8431 0800 21
LTP61 H350-20	M18	3/4	190 - 350	140 - 255	145	105	520	3.9	8.6	260	31	20	42	3/8	4	8431 0800 28
LTP61 H500-20	M20	3/4	275 - 500	200 - 370	220	160	360	3.9	8.6	260	31	20	42	3/8	4	8431 0800 35
LTP61 H700-25	M22	1	360 - 650	265 - 480	280	207	280	4.5	9.9	305	34	20	42	3/8	5	8431 0800 42
LTP61 H900-25	M24	1	480 - 870	350 - 640	300	220	210	4.5	9.9	282	32	20	42	3/8	5	8431 0800 49
LTP61 H1500-25	M30	1	850 - 1500	625 - 1100	700	516	115	6.8	14.5	323	42	20	42	3/8	9	8431 0800 56
LTP61 H1900-38	M30	1 1/2	1050 - 1900	770 - 1400	800	576	90	14.1	31.0	380	68	20	42	3/8	8	8431 0800 63
LTP61 H2800-38	M36	1 1/2	1550 - 2800	1140 - 2060	1200	864	65	14.1	31.0	380	68	20	42	3/8	8	8431 0800 70
LTP61 H3800-38	M42	1 1/2	2100 - 3800	1540 - 2790	1600	1152	50	14.1	31.0	380	68	20	42	3/8	8	8431 0800 77
Reversible																
LTP61 HR100-13	M12	1/2	55 - 100	40 - 75	45	35	1800	3.0	6.6	235	30	20	42	3/8	3	8431 0801 08
LTP61 HR170-13	M14	1/2	95 - 170	70 - 125	70	50	1100	3.0	6.6	238	30	20	42	3/8	3	8431 0801 15
LTP61 HR230-19	M16	3/4	125 - 230	90 - 170	85	60	820	3.0	6.6	275	34	20	42	3/8	3	8431 0801 22
LTP61 HR350-20	M18	3/4	190 - 350	140 - 255	145	105	520	3.9	8.6	275	34	20	42	3/8	4	8431 0801 29
LTP61 HR500-20	M20	3/4	275 - 500	200 - 370	220	160	360	3.9	8.6	275	34	20	42	3/8	4	8431 0801 36
LTP61 HR700-25	M22	1	360 - 650	265 - 480	280	207	280	4.5	9.9	305	34	20	42	3/8	5	8431 0801 43
LTP61 HR900-25	M24	1	480 - 870	350 - 640	300	220	210	4.5	9.9	305	34	20	42	3/8	5	8431 0801 50
LTP61 HR1500-25	M30	1	850 - 1500	625 - 1100	700	516	115	6.8	14.5	345	42	20	42	3/8	9	8431 0801 57
LTP61 HR1900-38	M30	1 1/2	1050 - 1900	770 - 1400	800	576	90	14.1	31.0	380	68	20	42	3/8	8	8431 0801 64
LTP61 HR2800-38	M36	1 1/2	1550 - 2800	1140 - 2060	1200	864	65	14.1	31.0	380	68	20	42	3/8	8	8431 0801 71
LTP61 HR3800-38	M42	1 1/2	2100 - 3800	1540 - 2790	1600	1152	50	14.1	31.0	380	68	20	42	3/8	8	8431 0801 78
Reversible with Multi Torque unit																
LTP61 HR100-13-MT	M12	1/2	55 - 100	40 - 75	45	35	1800	3.3	7.3	288	30	20	42	3/8	3	8431 0806 02
LTP61 HR170-13-MT	M14	1/2	95 - 170	70 - 125	70	50	1100	3.3	7.3	288	30	20	42	3/8	3	8431 0806 09
LTP61 HR230-19-MT	M16	3/4	125 - 230	90 - 170	85	60	820	3.3	7.3	288	34	20	42	3/8	4	8431 0806 16
LTP61 HR350-20-MT	M18	3/4	190 - 350	140 - 255	145	105	520	4.2	9.2	325	34	20	42	3/8	4	8431 0806 23
LTP61 HR500-20-MT	M20	3/4	275 - 500	200 - 370	220	160	360	4.2	9.2	325	34	20	42	3/8	4	8431 0806 30
LTP61 HR700-25-MT	M22	1	360 - 650	265 - 480	280	207	280	4.8	10.6	355	34	20	42	3/8	5	8431 0806 33
LTP61 HR900-25-MT	M24	1	480 - 870	350 - 640	300	220	210	4.8	10.6	355	34	20	42	3/8	5	8431 0806 37
LTP61 HR1500-25-MT	M30	1	850 - 1500	625 - 1100	700	516	115	7.1	15.6	395	42	20	42	3/8	9	8431 0806 44
LTP61 HR1900-38-MT	M30	1 1/2	1050 - 1900	770 - 1400	800	576	90	14.4	31.7	430	68	20	42	3/8	8	8431 0806 51
LTP61 HR2800-38-MT	M36	1 1/2	1550 - 2800	1140 - 2060	1200	864	65	14.4	31.7	430	68	20	42	3/8	8	8431 0806 58
LTP61 HR3800-38-MT	M42	1 1/2	2100 - 3800	1540 - 2790	1600	1152	50	14.4	31.7	430	68	20	42	3/8	8	8431 0806 65
For prevailing applications																
LTP61 PH100-13	M12	1/2	60 - 100	45 - 80	45	33	700	3.0	6.6	223	34	20	42	3/8	3	8431 0807 04
LTP61 PH170-13	M14	1/2	100 - 180	75 - 135	70	52	440	3.0	6.6	223	34	20	42	3/8	3	8431 0807 12
LTP61 PH230-19	M16	3/4	130 - 240	95 - 180	90	66	320	3.0	6.6	223	34	20	42	3/8	3	8431 0807 17
LTP61 PH350-20	M18	3/4	210 - 370	155 - 275	150	110	200	3.9	8.6	260	34	20	42	3/8	4	8431 0807 24
LTP61 PH500-20	M20	3/4	300 - 520	220 - 380	200	150	140	3.9	8.6	260	34	20	42	3/8	4	8431 0807 31
LTP61 PH700-25	M22	1	400 - 680	295 - 500	280	205	100	4.5	9.9	305	34	20	42	3/8	5	8431 0807 38
LTP61 PH900-25	M24	1	500 - 900	370 - 665	350	260	80	4.5	9.9	282	34	20	42	3/8	5	8431 0807 41
LTP61 PH1500-25	M30	1	900 - 1600	665 - 1180	650	480	45	6.8	14.9	323	42	20	42	3/8	9	8431 0807 52
Reversible																
LTP61 PHR700-25	M22	1	400 - 680	295 - 500	280	205	100	4.5	9.9	305	34	20	42	3/8	5	8431 0807 55
LTP61 PHR900-25	M24	1	500 - 900	370 - 665	350	260	80	4.5	9.9	305	34	20	42	3/8	5	8431 0807 62
LTP61 PHR1500-25	M30	1	900 - 1600	665 - 1180	650	480	45	6.8	14.9	345	42	20	42	3/8	9	8431 0807 68
Reversible with Multi Torque unit																
LTP61 PHR700-25-MT	M22	1	400 - 680	295 - 500	280	205	100	4.8	10.6	305	34	20	42	3/8	5	8431 0807 77
LTP61 PHR900-25-MT	M24	1	500 - 900	370 - 665	350	260	80	4.8	10.6	305	34	20	42	3/8	5	8431 0807 81

* Without reaction bar. Recommended hose size: 13 mm. Sound level: 79 dB(A)

LTP61 H/HR: Change over torque is around 4% of maximum torque on a given air pressure.
 Reaction bars, see page 57.
 LTP61 PH/PHR: Change over torque is around 10% of maximum torque on a given air pressure.
 Recommended hose size 13 mm for hose length up to 5m and 16mm hose size for length 5 - 10 m.
 All LTP/LMP tools need lubrication.

Note: This is just a selection of tools from our extensive range.
 Please refer to the current edition of our main catalogue,
 "Industrial Power Tools," to see all the versions available.

PNEUMATIC TOOLS

Pistol grip nutrunners



LMP 61

LMP – Non shut-off type

Model	Bolt size mm	Square drive in	Max torque at 6.3 bar		Min torque at 3 bar		Free speed r/min	Weight*		Length mm	CS distance mm	Air consumption at free speed		Air inlet thread in	Spline type	Ordering No.
			Nm	ft lb	Nm	ft lb		kg	lb			l/s	cfm			
Non reversible																
LMP61 H100-13	M12	1/2	100	75	60	45	2200	3.0	6.6	223	29	20	42	3/8	3	8431 0803 05
LMP61 H170-13	M14	1/2	170	125	100	75	1400	3.0	6.6	223	29	20	42	3/8	3	8431 0803 12
LMP61 H230-19	M16	3/4	230	170	130	95	1000	3.0	6.6	223	29	20	42	3/8	3	8431 0803 19
LMP61 H350-20	M18	3/4	350	260	200	145	650	3.9	8.6	260	31	20	42	3/8	4	8431 0803 26
LMP61 H500-20	M20	3/4	500	370	300	220	450	3.9	8.6	260	31	20	42	3/8	4	8431 0803 33
LMP61 H700-25	M22	1	700	520	400	295	350	4.5	9.9	305	34	20	42	3/8	5	8431 0803 40
LMP61 H900-25	M24	1	900	665	500	365	260	4.5	9.9	282	34	20	42	3/8	5	8431 0803 47
LMP61 H1500-25	M30	1	1600	1180	900	660	140	6.8	14.9	323	42	20	42	3/8	9	8431 0803 54
LMP61 H1900-38	M30	1 1/2	2000	1475	1100	810	120	14.1	31	380	68	20	42	3/8	8	8431 0803 61
LMP61 H2800-38	M36	1 1/2	3000	2210	1600	1180	80	14.1	31	380	68	20	42	3/8	8	8431 0803 68
LMP61 H3800-38	M42	1 1/2	4000	2950	2200	1620	60	14.1	31	380	68	20	42	3/8	8	8431 0803 75
Reversible																
LMP61 HR100-13	M12	1/2	100	75	60	45	2200	3.0	6.6	235	30	20	42	3/8	3	8431 0804 04
LMP61 HR170-13	M14	1/2	170	125	100	75	1400	3.0	6.6	238	30	20	42	3/8	3	8431 0804 11
LMP61 HR230-19	M16	3/4	230	170	130	95	1000	3.0	6.6	275	34	20	42	3/8	3	8431 0804 18
LMP61 HR350-20	M18	3/4	350	260	200	145	650	3.9	8.6	275	34	20	42	3/8	4	8431 0804 25
LMP61 HR500-20	M20	3/4	500	370	300	220	450	3.9	8.6	320	35	21	42	3/8	4	8431 0804 32
LMP61 HR700-25	M22	1	700	520	400	295	350	4.5	9.9	305	34	20	42	3/8	5	8431 0804 39
LMP61 HR900-25	M24	1	900	665	500	365	260	4.5	9.9	305	34	20	42	3/8	5	8431 0804 46
LMP61 HR1500-25	M30	1	1600	1180	900	660	140	6.8	14.9	345	42	20	42	3/8	9	8431 0804 53
LMP61 HR1900-38	M30	1 1/2	2000	1475	1100	810	120	14.1	31	380	68	20	42	3/8	8	8431 0804 60
LMP61 HR2800-38	M36	1 1/2	3000	2210	1600	1180	80	14.1	31	380	68	20	42	3/8	8	8431 0804 67
LMP61 HR3800-38	M42	1 1/2	4000	2950	2200	1620	60	14.1	31	380	68	20	42	3/8	8	8431 0804 74

* Without reaction bar.

Recommended hose size 13 mm for hose length up to 5 m.

Reaction bars, see page 57.

PNEUMATIC TOOLS

Angle nutrunners



LTV 39-2



LTV 48



LTV 69

LTV – torque control and flush socket tools

Model	Bolt size mm	Square drive in	Socket size mm	Torque range soft joint		Free speed r/min	Weight		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	ft lb		kg	lb				l/s	cfm			
Reversible																
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
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
Flush socket																
LTV39-2 R37 FS	M8	–	13	22 - 37	16 - 27	708	1.7	3.7	405	35	18	16	34	10	1/4	8431 0632 41
LTV39-2 R48 FS	M8	–	13	24 - 48	18 - 35	560	1.7	3.7	406	40	18	16	34	10	1/4	8431 0632 42
LTV39-2 R56 FS	M8	–	13	28 - 56	21 - 41	460	1.7	3.7	406	40	18	16	34	10	1/4	8431 0632 46
LTV39-2 R70 FS	M10	–	16	35 - 70	26 - 51	350	2.1	4.6	425	50	20	16	34	10	1/4	8431 0632 51
LTV39-2 R85 FS	M10-12	–	19	43 - 85	32 - 63	305	2.5	5.5	500	70	25	16	34	10	1/4	8431 0632 58
LTV48 R120 FS	M12	–	19	70 - 120	37 - 88	220	3.5	7.6	590	70	25	28	59	12.6	1/2	8431 0610 12
LTV48 R150 FS	M12	–	19	70 - 150	44 - 111	180	3.5	7.6	590	70	25	28	59	12.7	1/2	8431 0610 17
LTV48 R200 FS	M14	–	19	115 - 200	85 - 148	100	3.8	8.3	610	70	25	28	59	12.8	1/2	8431 0610 21

Model	Bolt size mm	Square drive in	Min torque at 3 bar soft joint		Min torque at 6.3 bar soft joint		Max torque at 6.3 bar soft joint		Free speed r/min	Weight		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	ft lb	Nm	ft lb	Nm	ft lb		kg	lb				l/s	cfm			
Reversible																			
LTV69 R180-13 ^a	M16	1/2	70	52	100	74	170	125	840	5.1	11.1	592	50	25.3	20	42	13	1/2"	8431 0830 04
LTV69 R370-20 ^a	M18	3/4	140	103	190	140	370	273	480	7.6	16.6	634	62	32.9	20	42	13	1/2"	8431 0830 15
LTV69 R600-25 ^a	M22	1	230	170	400	295	600	443	280	10.2	22.6	676	77	54.0	20	42	13	1/2"	8431 0830 21
Non-reversible																			
LTV69 N180-13	M16	1/2	70	52	100	74	170	125	840	4.6	10.1	577	50	25.3	20	42	13	1/2"	8431 0830 35
LTV69 N370-20	M18	3/4	140	103	190	140	370	273	480	7.1	15.6	619	62	32.9	20	42	13	1/2"	8431 0830 46
LTV69 N600-25	M22	1	230	170	400	295	600	443	280	9.7	21.3	661	77	54.0	20	42	13	1/2"	8431 0830 52

^a Fixed reverse.

Note: This is just a selection of tools from our extensive range. Please refer to the current edition of our main catalogue, "Industrial Power Tools", to see all the versions available.

ELECTRIC TOOLS

Angle nutrunners

Tensor DS



Model	Square drive in	Torque range soft joint		Speed r/min	Weight		Length mm	CS distance mm	Ordering No.
		Nm	ft lb		kg	lb			
ETV DS72									
ETV DS72-15-10	3/8	4.5 - 17	3.3 - 12	1525	1.4	3.1	412	13.5	8433 1720 10
ETV DS72-28-10	3/8	7 - 28	5.1 - 20	1171	1.4	3.1	412	13.5	8433 1720 28
ETV DS72-30-10	3/8	9 - 35	6.6 - 25	800	1.4	3.1	412	13.5	8433 1721 42
ETV DS72-40-10	3/8	10 - 40	7.4 - 29	800	1.6	3.5	434	18	8433 1721 94
ETV DS72-50-10	3/8	14 - 55	11 - 40	480	1.6	3.5	434	18	8433 1722 58
ETV DS72-70-13	1/2	20 - 80	15 - 59	348	2.1	4.6	461	20	8433 1723 16
ETV DS72-100-13	1/2	28 - 110	21 - 81	229	2.3	5.1	482	20	8433 1723 70
ETV DS72-160-13	1/2	40 - 160	30 - 118	152	2.8	6.2	525	25.5	8433 1723 98
ETV DS72-180-13	1/2	45 - 180	34 - 133	123	2.8	6.2	525	25.5	8433 1724 15
ETV DS72-200-20	3/4	53 - 210	39 - 155	123	3.0	6.6	525	27	8433 1724 40
ETV DS72 Flush Socket									
ETV DS72-30-FS	-	9 - 35	6.6 - 25	800	1.4	3.1	412	13.5	8433 1721 65
ETV DS72-50-FS	-	14 - 55	11 - 40	480	1.6	3.5	434	18	8433 1722 75
ETV DS72-70-FS	-	20 - 80	15 - 59	345	2.1	4.6	461	20	8433 1723 26
ETV DS72-160-FS	-	40 - 160	36 - 118	152	2.8	6.2	525	25.5	8433 1724 00
ETV DS72-200-FS	-	50 - 200	37 - 147	137	3.5	7.7	527	28	8433 1725 05
ETV DS72 Hold & Drive									
ETV DS72-50-HAD	-	14 - 55	11 - 40	480	3.0	6.6	504	26	8433 1722 60
ETV DS72-70-HAD	-	20 - 80	15 - 59	348	3.1	6.8	479	26	8433 1723 30
ETV DS72-100-HAD	-	28 - 110	21 - 81	229	3.2	7.1	525	26	8433 1723 73
ETV DS72-160-HAD	-	40 - 160	30 - 118	152	3.3	7.3	525	26	8433 1724 02
ETV DS72-200-HAD	-	50 - 200	37 - 148	123	3.5	7.7	525	26	8433 1724 45
ETV DS72 Ball retainer									
ETV DS72-15-B10	3/8	5 - 17	3.7 - 12	1525	1.4	3.1	412	13.5	8433 1720 20
ETV DS72-30-B10	3/8	9 - 35	6.7 - 25	800	1.4	3.1	412	13.5	8433 1721 54
ETV DS72-40-B10	3/8	10 - 40	7.4 - 29	800	1.6	3.5	434	18	8433 1721 99
ETV DS72-50-B10	3/8	14 - 55	11 - 40	480	1.6	3.5	434	18	8433 1722 63
ETV DS72-70-B13	1/2	20 - 80	15 - 59	348	2.1	4.6	461	20	8433 1723 21
ETV DS72-100-B13	1/2	28 - 110	21 - 81	240	2.3	5.1	482	20	8433 1723 68
ETV DS72-160-B13	1/2	40 - 160	36 - 118	152	2.8	6.2	525	25.5	8433 1724 12
ETV DS72-180-B13	1/2	45 - 180	34 - 133	123	2.8	6.2	525	25.5	8433 1724 20
ETV DS92									
ETV DS92-100-13	1/2	25 - 100	19 - 74	642	3.3	7.3	534	20	8433 1750 21
ETV DS92-180-13	1/2	45 - 180	34 - 113	395	3.8	8.4	578	25.5	8433 1750 68
ETV DS92-270-20	3/4	70 - 270	52 - 199	240	7.0	15.4	661	33.5	8433 1751 38
ETV DS92-370-20	3/4	95 - 370	70 - 273	152	7.1	15.7	661	33.5	8433 1751 86
ETV DS92-450-20	3/4	115 - 450	85 - 333	131	11.6	25.6	702	54	8433 1752 04
ETV DS92-600-25	1	150 - 600	111 - 444	112	11.6	25.6	702	54	8433 1752 63
ETV DS92-600-20TM	3/4	150 - 600	111 - 444	97	9.7	21.4	603	26.3	8433 1752 40
ETV DS92-1000-25TM	1/2	250 - 1000	185 - 740	60	12.0	26.5	666	32	8433 1752 90
ETV DS92-2000-38TM	1/2	500 - 2000	370 - 1480	30	17.0	37.5	706	63.5	8433 1752 96
ETV DS92-4000-38TM	1/2	1000 - 4000	740 - 2960	14	21.0	46.3	615	71	8433 1753 25
ETV DS92 Flush Socket									
ETV DS92-270-FS	-	68 - 270	51 - 199	235	7.0	15.4	661	34	8433 1751 46
ETV DS92-600-FS	-	150 - 600	111 - 442	124	10	22	701	54	8433 1752 70
ETV DS92 Hold & Drive									
ETV DS92-370-HAD	-	95 - 370	70 - 273	170	8.3	18.3	661	35	8433 1751 95

Note: This is just a selection of tools from our extensive range. Please refer to the current edition of our main catalogue, "Industrial Power Tools", to see all the versions available.

ELECTRIC TOOLS

Straight nutrunners



Tensor DS

Model	Square drive in	Torque		Speed r/min	Weight		Length mm	CS distance mm	Splines/ Mounting	Ordering No.
		Nm	ft lb		kg	lb				
ETD DS7										
ETD DS7-20-10S	3/8	6 - 20	4.4 - 14.5	1240	1.4	3.1	411	28	- / 1	8433 0730 23
ETD DS72-30-10S	3/8	10 - 35	7.3 - 25	745	1.4	3.1	411	28	- / 1	8433 1730 88
ETD DS72-50-13S	1/2	17 - 55	12 - 40	540	1.9	4.2	456	28	2 / 2	8433 1731 12
ETD DS7-70-13S	1/2	21 - 70	15 - 51	370	2.2	4.9	477	28	2 / 2	8433 0731 31
ETD DS7-90-13S	1/2	28 - 95	21 - 69	275	2.2	4.9	477	28	2 / 2	8433 0731 45
ETD DS7-120-13S	1/2	38 - 125	28 - 91	225	2.2	4.9	477	28	2 / 2	8433 0731 84
ETD DS7 Telescopic										
ETD DS7-20-10ST	3/8	6 - 20	4.4 - 14.5	1240	1.5	3.3	449	28	2 / 2	8433 0730 44
ETD DS7-30-10ST	3/8	10 - 35	7.3 - 25	745	1.5	3.3	449	28	2 / 2	8433 0731 05
ETD DS7-30-10ST50	3/8	10 - 35	7.3 - 25	745	1.6	3.5	500	28	2 / 2	8433 0730 93
ETD DS7-50-13ST	1/2	17 - 55	12 - 40	540	2.1	4.7	483	28	3 / 5	8433 0731 24
ETD DS7-50-13ST50	1/2	17 - 55	12 - 40	540	2.2	4.8	540	28	3 / 5	8433 0731 22
ETD DS7-70-13ST	1/2	21 - 70	15 - 51	370	2.4	5.4	504	29.5	3 / 5	8433 0731 40
ETD DS7-70-13ST50	1/2	21 - 70	15 - 51	370	2.5	5.5	562	29.5	3 / 5	8433 0731 38
ETD DS72-70-13ST75	1/2	21 - 70	15 - 51	370	2.5	5.5	504	29.5	3 / 5	8433 1731 39
ETD DS7-90-13ST	1/2	28 - 95	21 - 69	275	2.9	6.5	562	29.5	3 / 5	8433 0731 52
ETD DS7-90-13ST50	1/2	28 - 95	21 - 69	275	3.0	6.6	504	29.5	3 / 5	8433 0731 64
ETD DS7-120-13ST	1/2	38 - 125	28 - 91	225	3.0	6.6	562	29.5	3 / 5	8433 0731 96
ETD DS7-120-13ST50	1/2	38 - 125	28 - 91	225	3.1	6.8	456	29.5	3 / 5	8433 0731 99
ETD DS7-200-13ST	1/2	50 - 200	37 - 146	225	3.2	7.1	616	29.5	3 / 5	8433 0732 10
ETD DS7 Ball Retainer										
ETD DS7-50-B13S	1/2	17 - 55	12 - 40	540	1.9	4.2	456	28	2 / 2	8433 0731 20
ETD DS7-90-B13S	1/2	28 - 95	21 - 69	275	2.2	4.9	477	28	2 / 2	8433 0731 48
ETD DS9										
ETD DS9-100-13S	1/2	40 - 100	29 - 73	715	3.0	6.7	529	32	2 / 2	8433 0756 42
ETD DS9-150-13S	1/2	60 - 150	44 - 110	455	3.2	7.1	544	32	2 / 2	8433 0757 54
ETD DS9-200-13S	1/2	80 - 200	58 - 146	340	3.2	7.1	544	32	2 / 2	8433 0758 71
ETD DS9-270-20S	3/4	68 - 270	50 - 199	220	6.2	14	603	36	6 / 8	8433 0760 53
ETD DS9-450-20S	3/4	115 - 450	85 - 328	125	7.4	16	639	40.5	6 / 8	8433 0760 71
ETD DS92-600-20S	3/4	150 - 600	110 - 438	110	7.6	17	639	40.5	6 / 8	8433 1761 29
ETD DS9-1000-25S	1	250 - 1000	184 - 730	68	12.3	27	769	47	7 / 11	8433 0763 60
ETD DS9-1200-25S	1	300 - 1200	220 - 880	55	12.3	27	769	47	7 / 11	8433 0763 80
ETD DS9-1500-38S	1 1/2	375 - 1500	280 - 1100	42	16.8	37	725	68	8 / 12	8433 0763 91
ETD DS9-2000-38S	1 1/2	600 - 2000	440 - 1475	34	20.5	45	725	68	8 / 12	8433 0764 05
ETD DS9-3000-38S	1 1/2	750 - 3000	550 - 2200	21	21.7	47.8	809	68	8 / 12	8433 0764 23
ETD DS92-4000-38S	1 1/2	1000 - 4000	730 - 2950	17	21.7	48	809	68	8 / 12	8433 1764 37
ETD DS9 Telescopic										
ETD DS9-100-13ST	1/2	40 - 100	29 - 73	715	3.2	7.1	557	32	3 / 5	8433 0756 92
ETD DS9-150-13ST	1/2	60 - 150	44 - 110	455	3.4	7.6	572	32	3 / 5	8433 0758 03
ETD DS9-200-13ST	1/2	80 - 200	58 - 146	340	3.4	7.6	572	32	3 / 5	8433 0759 11
ETD DS9-270-20ST	3/4	108 - 270	79 - 197	225	6.0	13	653	36	6 / 8	8433 0760 55
ETD DS9-450-20ST	3/4	115 - 450	85 - 328	125	7.6	17	689	40.5	6 / 8	8433 0760 88
ETD DS9-600-20ST	3/4	150 - 600	110 - 438	110	7.6	17	689	40.5	6 / 8	8433 0761 35
ETD DS9-1000-25ST	1	250 - 1000	184 - 730	68	12.5	28	824	47	7 / 11	8433 0763 63
ETD DS9-1200-25ST	1	300 - 1200	220 - 880	55	12.5	28	824	47	7 / 11	8433 0763 83
ETD DS9-1500-38ST	1 1/2	375 - 1500	280 - 1100	42	17	37.5	824	68	8 / 12	8433 0763 93
ETD DS9-2000-38ST	1 1/2	600 - 2000	440 - 1475	34	21	47	824	68	8 / 12	8433 0764 20
ETD DS92-3000-38ST	1 1/2	750 - 3000	550 - 2200	21	21.9	48.3	904	68	8 / 12	8433 1764 25
ETD DS9-4000-38ST	1 1/2	1000 - 4000	730 - 2950	17	21.9	48	904	68	8 / 12	8433 0764 40
ETD DS9 Swivelling										
ETD DS92-750-25SSW	1	188 - 750	138 - 552	84	5.5	12.1	579	47	5	8433 0761 75
ETD DS92-1000-25SSW	1	250 - 1000	185 - 737	68	12.3	27	769	47	7/11	8433 0763 70
ETD DS92-1200-25SSW	1	300 - 1200	220 - 884	55	12.3	27	769	47	7/11	8433 0763 85
ETD DS92-2000-25SSW	1 1/2	500 - 2000	370 - 1480	34	20.5	45	725	68	8/12	8433 0764 10
ETD DS92-4000-25SSW	1 1/2	1000 - 4000	740 - 2960	17	21.7	48	809	68	8/12	8433 0764 45

ELECTRIC TOOLS

Pistol grip nutrunners



Tensor DS

Model	Square drive in	Torque range soft joint		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
		Nm	ft lb		kg	lb				
ETP DS7										
ETP DS7-20-10S	3/8	6 - 20	4.4 - 14.5	1240	1.6	3.6	273	21.5	- / 1	8433 0726 36
ETP DS7-30-10S	3/8	10 - 35	7.3 - 25	750	1.6	3.6	273	21.5	- / 1	8433 0726 53
ETP DS7-50-13S	1/2	17 - 55	12 - 40	540	1.9	4.2	318	21.5	2 / 2	8433 0726 87
ETP DS7-70-13S	1/2	21 - 70	15 - 51	370	2.1	4.7	340	21.5	2 / 2	8433 0727 01
ETP DS7-90-13S	1/2	28 - 95	21 - 69	275	2.1	4.7	340	21.5	2 / 2	8433 0727 19
ETP DS7-120-13S	1/2	38 - 125	28 - 91	220	2.1	4.7	340	21.5	2 / 2	8433 0727 47
ETP DS7 Telescopic										
ETP DS7-30-10ST	3/8	10 - 35	7.3 - 25	750	1.7	3.7	313	21.5	2 / 2	8433 0726 55
ETP DS7-50-13ST	1/2	17 - 55	12 - 40	540	2.1	4.6	350	21.5	2 / 2	8433 0726 92
ETP DS7-70-13ST	1/2	21 - 70	15 - 51	370	2.2	4.9	367	22.5	3 / 5	8433 0727 05
ETP DS7 Female Hex										
ETP DS7-20-106	1/4	6 - 20	4.4 - 14.5	1240	1.6	3.6	273	21.5	- / 1	8433 0726 38
ETP DS7 Swivelling*										
ETP DS7-50-13SSW	1/2	17 - 55	12 - 40	540	2.0	4.5	320	29.5	2 / 4	8433 0726 95
ETP DS7-70-13SSW	1/2	21 - 70	15 - 51	370	2.2	4.9	339	29.5	2 / 4	8433 0727 09
ETP DS7-90-13SSW	1/2	28 - 95	21 - 69	275	2.2	4.9	339	29.5	2 / 4	8433 0727 28
ETP DS7-120-13SSW	1/2	38 - 125	28 - 91	220	2.2	4.9	339	29.5	2 / 4	8433 0727 84
ETP DS9										
ETP DS9-100-13S	1/2	40 - 100	29 - 73	790	3.8	8.5	378	32	2 / 2	8433 0765 39
ETP DS9-150-13S	1/2	60 - 150	44 - 110	510	3.8	8.5	392	32	2 / 2	8433 0765 58
ETP DS9-200-13S	1/2	80 - 200	58 - 146	375	3.8	8.5	392	32	2 / 2	8433 0766 05
ETP DS9-270-20S	3/4	108 - 270	79 - 197	250	5.8	12.9	451	36	6 / 8	8433 0766 49
ETP DS9-450-20S	3/4	115 - 450	85 - 328	140	7.4	16.5	487	40.5	6 / 8	8433 0767 52
ETP DS9-600-20S	3/4	150 - 600	110 - 438	120	7.4	16.5	487	40.5	6 / 8	8433 0768 08
ETP DS9-1000-25S	1	250 - 1000	184 - 730	68	12.1	26.7	620	47	7 / 11	8433 0768 66
ETP DS9-1200-25S	1	300 - 1200	220 - 880	55	12.1	26.7	620	47	7 / 11	8433 0768 83
ETP DS9-2000-38S	1 1/2	500 - 2000	440 - 1475	34	16.8	37	574	68	8 / 12	8433 0769 10
ETP DS9-3000-38S	1 1/2	750 - 3000	550 - 2200	21	21.7	47.8	654	68	8 / 12	8433 0769 30
ETP DS9-4000-38S	1 1/2	1000 - 4000	730 - 2950	17	21.7	47.8	654	68	8 / 12	8433 0769 50
ETP DS9 Telescopic										
ETP DS9-1000-25ST	1	250 - 1000	184 - 730	68	12.3	27.1	672	47	7 / 11	8433 0768 79
ETP DS9-2000-38ST	1 1/2	500 - 2000	440 - 1475	34	17	37.5	672	68	8 / 12	8433 0769 20
ETP DS9-3000-38ST	1 1/2	750 - 3000	550 - 2200	21	21.9	48.3	753	68	8 / 12	8433 0769 33
ETP DS9-4000-38ST	1 1/2	1000 - 4000	730 - 2950	17	21.9	48.3	753	68	8 / 12	8433 0769 60
ETP DS9 Swivelling*										
ETP DS9-150-13SSW	1/2	60 - 150	44 - 110	510	3.9	8.7	394	32	2 / 4	8433 0765 69
ETP DS9-200-13SSW	1/2	80 - 200	58 - 146	375	3.9	8.7	394	32	2 / 4	8433 0766 12
ETP DS9-350-20SSW	3/4	100 - 370	75 - 270	180	5.2	11.5	387	35	4	8433 0766 56
ETP DS9-500-20SSW	3/4	140 - 530	105 - 390	125	5.2	11.5	387	35	4	8433 0767 71
ETP DS9-750-25SSW	1	220 - 750	162 - 553	84	5.5	12.1	428	47	5	8433 0768 24
ETP DS9-1000-25SSW	1	250 - 1000	184 - 730	68	12.1	26.7	620	47	7 / 11	8433 0768 76
ETP DS9-1500-25SSW	1	375 - 1500	280 - 1100	45	8.5	18.8	450	46	9	8433 0768 99
ETP DS9-2000-38SSW	1 1/2	500 - 2000	440 - 1475	34	16.8	37	574	68	8 / 12	8433 0769 15

* Non-reversible.

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ELECTRIC TOOLS

Pistol grip nutrunners

Tensor ST



Model	Square drive in	Torque range soft joint		Speed r/min	Weight		Length mm	Height mm	Ordering No.
		Nm	ft lb		kg	lb			
ETP ST32									
ETP ST32-05-10	3/8	1 - 5	0.7 - 3.6	2820	0.75	1.7	197	179	8433 2211 03
ETP ST32-05-106	1/4	1 - 5	0.7 - 3.6	2820	0.75	1.7	197	179	8433 2212 19
ETP ST32-10-10	3/8	3 - 11	2.2 - 8.0	1210	0.8	1.8	197	179	8433 2213 48
ETP ST32-10-106	1/4	3 - 11	2.2 - 8.0	1210	0.8	1.8	197	179	8433 2214 63
ETP ST32-20-106	1/4	5 - 20	3.6 - 15.0	677	0.91	2	235	179	8433 2217 11
ETP ST32-20-10	3/8	5 - 20	3.6 - 15.0	677	0.91	2	235	179	8433 2216 95
ETP ST32 with Barcode Scanner									
ETP ST32-05-10BCR	3/8	1 - 5	0.7 - 3.6	2820	0.87	2	197	205	8433 2211 13
ETP ST32-05-106BCR	1/4	1 - 5	0.7 - 3.7	2820	0.87	2	197	205	8433 2212 29
ETP ST32-10-10BCR	3/8	3 - 11	2.2 - 8.0	1210	0.92	2.1	197	205	8433 2213 58
ETP ST32-10-106BCR	1/4	3 - 11	2.2 - 8.0	1210	0.92	2.1	197	205	8433 2214 73
ETP ST32-20-106BCR	1/4	5 - 20	3.6 - 15.0	677	1.03	2.3	237	205	8433 2217 26
ETP ST32-20-10BCR	3/8	5 - 20	3.6 - 15.0	677	1.03	2.3	237	205	8433 2217 05

For more options, see Industrial Power Tools catalogue.

Tensor STR



ETV STR21



ETP STR61

Model	Torque range soft joint		Speed r/min	Weight		Length mm	CS distance mm	Spline/Mounting	Ordering No.
	Nm	ft lb		kg	lb				
Pistol grip model									
ETP STR61-20-10	5 - 22	3.7 - 16.2	2100	1.3	2.87	244	24	Bracket 1	8436 6360 20
ETP STR61-30-10	6 - 32	4.4 - 23.5	1530	1.3	2.87	244	24	Bracket 1	8436 6360 30
ETP STR61-50-13	10 - 55	7.4 - 40.6	820	1.7	3.75	282	24	-	8436 6360 50
ETP STR61-70-13	14 - 80	10.3 - 59	560	2.0	4.41	298	26.5	-	8436 6360 70
ETP STR61-90-13	20 - 95	14.7 - 70.4	450	2.0	4.41	298	26.5	-	8436 6360 90
ETP STR61-120-13	24 - 125	17.7 - 89.4	380	2.0	4.41	298	26.5	-	8436 6360 12
Pistol grip - cable on top-model									
ETP STR61-20-10 COT	5 - 22	3.7 - 16.2	2100	1.7	3.75	296	24	Spline 2	8436 6368 20
ETP STR61-30-10 COT	6 - 32	4.4 - 23.5	1530	1.7	3.75	296	24	Spline 2	8436 6368 30
ETP STR61-50-13 COT	10 - 55	7.4 - 40.6	820	2.1	4.63	334	24	-	8436 6368 50
ETP STR61-70-13 COT	14 - 80	10.3 - 59	560	2.4	5.29	350	26.5	-	8436 6368 70
ETP STR61-90-13 COT	20 - 95	14.7 - 70.4	450	2.4	5.29	350	26.5	-	8436 6368 90
ETP STR61-120-13 COT	24 - 125	17.7 - 89.4	380	2.4	5.29	350	26.5	-	8436 6368 12
Angle model									
ETV STR21-12-10	2.5 - 12	1.9 - 8.9	1350	1.1	2.4	297	14	-	8436 6120 12
ETV STR21-25-10	5 - 25	3.7 - 18.5	1000	1.2	2.6	297	14	-	8436 6120 25

Tensor ST Rev0



Model	Square drive in	Torque range soft joint		Speed r/min	Weight		Length mm	CS distance mm	Spline	Ordering No.
		Nm	ft lb		kg	lb				
ETP ST101-200-20	3/4	60 - 200	45 - 145	396	4.8	10.5	303	32.5	3	8433 2302 01
ETP ST101-500-20	3/4	150 - 500	110 - 365	186	5.5	12.1	334	33.5	4	8433 2305 01
ETP ST101-750-25	1	220 - 750	160 - 550	132	5.8	12.8	353	33.5	5	8433 2307 51
ETP ST101-1000-25	1	300 - 1000	220 - 735	99	6	13.2	364	33.5	5	8433 2310 01
Model with fan										
ETP ST101-200-20-F	3/4	60 - 200	45 - 145	396	5.2	10.9	303	32.5	3	8433 2302 02
ETP ST101-500-20-F	3/4	150 - 500	110 - 365	186	5.9	12.4	334	33.5	4	8433 2305 02
ETP ST101-750-25-F	1	220 - 750	160 - 550	132	6.2	13	353	33.5	5	8433 2307 52
ETP ST101-1000-25-F	1	300 - 1000	220 - 735	99	6.4	13.4	364	33.5	5	8433 2310 02

Reaction bar not included for ETP ST101. See accessory pages.

ELECTRIC TOOLS

Straight nutrunners

Tensor ST



Model	Square drive in	Torque range soft joint		Speed r/min	Weight		Length mm	CS distance mm	Spline/ Mounting	Ordering No.
		Nm	ft lb		kg	lb				
ETD ST81										
ETD ST81-30-10	1/2	10 - 30	7 - 22	1700	1.8	4.0	450	24	- / 1	8433 2151 93
ETD ST81-50-13	1/2	16 - 50	12 - 37	1230	2.1	4.6	493	24	2 / 2	8433 2153 34
ETD ST81-70-13	1/2	15 - 70	12 - 51	880	2.5	5.5	510	26.5	2 / 2	8433 2156 03
ETD ST81-90-13	1/2	20 - 95	15 - 70	675	2.5	5.5	510	26.5	2 / 2	8433 2158 14
ETD ST81-120-13	1/2	25 - 125	19 - 91	505	2.5	5.5	510	26.5	2 / 2	8433 2160 25
ETD ST81 Telescopic										
ETD ST81-30-10-T25	3/8	10 - 30	7 - 22	1700	1.9	4.2	488	24	2 / 2	8433 2151 21
ETD ST81-50-13-T25	1/2	16 - 50	12 - 37	1230	2.3	5.0	520	24	3 / 5	8433 2152 72
ETD ST81-70-13-T25	1/2	15 - 70	12 - 51	880	2.6	5.8	538	26.5	3 / 5	8433 2154 98
ETD ST81-90-13-T25	1/2	20 - 95	15 - 70	675	2.6	5.8	538	26.5	3 / 5	8433 2157 25
ETD ST81-120-13-T25	1/2	25 - 125	19 - 91	505	2.6	5.8	538	26.5	3 / 5	8433 2159 53
ETD ST101										
ETD ST101-100-13	1/2	25 - 100	18 - 73	1043	3.2	7.0	631	30.5	-	8433 2179 00
ETD ST101-120-13	1/2	30 - 120	22 - 88	875	3.2	7.0	631	30.5	-	8433 2180 22
ETD ST101-150-20	3/4	30 - 150	22 - 109	685	4.3	9.3	706	33	-	8433 2181 36
ETD ST101-200-20	3/4	50 - 200	36 - 146	500	4.3	9.3	706	33	-	8433 2182 05
ETD ST101-300-20	3/4	70 - 300	51 - 221	345	4.3	9.3	706	33	-	8433 2182 70
ETD ST101-500-20	3/4	120 - 500	88 - 368	204	8.3	18.5	717	33	-	8433 2183 28
ETD ST101-750-25	1	150 - 750	109 - 553	143	9.1	20.3	681	45	-	8433 2184 40
ETD ST101-1000-25	1	250 - 1000	184 - 737	100	9.7	21.6	708	45	-	8433 2185 60
ETD ST101-1200-25	1	300 - 1200	220 - 885	81	12	26	787	47	-	8433 2186 10
ETD ST101-1200-25-S	1	300 - 1200	220 - 885	81	12	26	787	47	7	8433 2196 10
ETD ST101-2000-38	1 1/2	500 - 2000	370 - 1475	48	17	37	742	68	-	8433 2187 22
ETD ST101-2000-38-S	1 1/2	500 - 2000	370 - 1475	48	17	37	742	68	8	8433 2197 22
ETD ST101-4000-38	1 1/2	1000 - 4000	735 - 2950	25	22	48	823	68	-	8433 2187 40
ETD ST101-4000-38-S	1 1/2	1000 - 4000	735 - 2950	25	22	48	823	68	8	8433 2197 40
ETD ST101 Fan										
ETD ST101-100-13-F	1/2	25 - 100	18 - 73	1043	3.2	7.0	631	30.5	-	8433 2179 05
ETD ST101-120-13-F	1/2	30 - 120	22 - 88	875	3.2	7.0	631	30.5	-	8433 2180 28
ETD ST101-150-20-F	3/4	30 - 150	22 - 109	685	4.3	9.3	706	33	-	8433 2181 40
ETD ST101-200-20-F	3/4	50 - 200	36 - 146	500	4.3	9.3	706	33	-	8433 2182 10
ETD ST101-300-20-F	3/4	70 - 300	51 - 221	345	4.3	9.3	706	33	-	8433 2182 72
ETD ST101-500-20-F	3/4	120 - 500	88 - 368	204	8.3	18.5	717	33	-	8433 2183 30
ETD ST101-750-25-F	1	150 - 750	109 - 553	143	9.1	20.3	681	45	-	8433 2184 50
ETD ST101-1000-25-F	1	250 - 1000	184 - 737	100	9.7	21.6	708	45	-	8433 2185 70
ETD ST101 Telescopic										
ETD-ST101-100-13-T25	1/2	25 - 100	18 - 73	1043	3.3	7.3	656	30.5	-	8433 2179 10
ETD-ST101-120-13-T25	1/2	30 - 120	22 - 88	873	3.3	7.3	656	30.5	-	8433 2180 32
ETD-ST101-150-20-T40	3/4	30 - 150	22 - 109	685	4.4	9.7	656	30.5	-	8433 2181 46
ETD-ST101-200-20-T40	3/4	50 - 200	36 - 146	500	4.4	9.7	756	33	-	8433 2182 23
ETD-ST101-300-20-T40	3/4	70 - 300	51 - 221	345	4.4	9.7	756	33	-	8433 2182 82
ETD-ST101-500-20-T40	3/4	120 - 500	88 - 368	204	8.4	18.5	768	37	-	8433 2183 38
ETD-ST101-750-25-T50	1	150 - 750	109 - 553	143	9.2	20.3	727	45	-	8433 2184 56
ETD-ST101-1000-25-T50	1	250 - 1000	184 - 737	100	9.8	21.6	754	45	-	8433 2185 78
ETD ST101-1200-25-T50	1	300 - 1200	22 - 885	81	12	26	844	47	-	8433 2186 12
ETD ST101-1200-25-T50-S	1	300 - 1200	220 - 885	81	12	26	844	47	7	8433 2196 12
ETD ST101-2000-38-T50	1 1/2	500 - 2000	370 - 1475	48	17	37	840	68	-	8433 2187 20
ETD ST101-2000-38-T50-S	1 1/2	500 - 2000	370 - 1475	48	17	37	840	68	8	8433 2197 20
ETD ST101-4000-38-T50	1 1/2	1000 - 4000	735 - 2950	25	22	48	921	68	-	8433 2187 42
ETD ST101-4000-38-T50-S	1 1/2	1000 - 4000	735 - 2950	25	22	48	921	68	8	8433 2197 42
ETD ST101 Telescopic Fan										
ETD-ST101-100-13-T25F	1/2	25 - 100	18 - 73	1043	3.3	7.3	656	30.5	-	8433 2179 15
ETD-ST101-120-13-T25F	1/2	30 - 120	22 - 88	873	3.3	7.3	656	30.5	-	8433 2180 48
ETD-ST101-150-20-T40F	3/4	30 - 150	22 - 109	685	4.4	9.7	656	30.5	-	8433 2181 59
ETD-ST101-200-20-T40F	3/4	50 - 200	36 - 146	500	4.4	9.7	756	33	-	8433 2182 45
ETD-ST101-300-20-T40F	3/4	70 - 300	51 - 221	345	4.4	9.7	756	33	-	8433 2182 91
ETD-ST101-500-20-T40F	3/4	120 - 500	88 - 368	204	8.4	18.5	769	37	-	8433 2183 49
ETD-ST101-750-25-T50F	1	150 - 750	109 - 553	143	9.2	20.3	769	45	-	8433 2184 69
ETD-ST101-1000-25-T50F	1	250 - 1000	184 - 737	100	9.8	21.6	755	45	-	8433 2185 89

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ELECTRIC TOOLS

Angle nutrunners



Tensor ST

Model	Square drive in	Torque range soft joint		Speed r/min	Weight		Length mm	CS distance mm	Height mm	Ordering No.
		Nm	ft lb		kg	lb				
ETV ST61										
ETV ST61-28-10	3/8	6 - 29	4 - 21	1450	1.3	2.9	440	14	42	8433 2021 76
ETV ST61-30-10	3/8	7 - 35	5 - 25	1090	1.3	2.9	440	15.5	42	8433 2023 92
ETV ST61-40-10	3/8	8 - 40	6 - 29	1090	1.5	3.3	454	18	47	8433 2027 85
ETV ST61-50-10	3/8	10 - 55	7 - 40	655	1.5	3.3	454	18	47	8433 2031 58
ETV ST61-70-13	1/2	15 - 80	10 - 58	475	2.0	4.5	466	20	58	8433 2035 30
ETV ST61-100-13	1/2	20 - 100	15 - 80	350	2.5	5.5	502	22.5	60	8433 2039 02
ETV ST61-150-13	1/2	30 - 160	22 - 117	227	3.0	6.6	536	25.5	65	8433 2042 70
ETV ST61-180-13	1/2	35 - 180	26 133	190	3.0	6.6	536	25.5	65	8433 2045 53
ETV ST61-200-20	3/4	40 - 200	30 - 154	185	3.0	6.6	537	27	70	8433 2046 39
ETV ST61 Ball Retainer										
ETV ST61-28-B10	3/8	6 - 29	4 - 21	1450	1.3	2.9	440	14	42	8433 2022 32
ETV ST61-30-B10	3/8	7 - 35	5 - 25	1090	1.3	2.9	440	15.5	42	8433 2025 09
ETV ST61-40-B10	3/8	8 - 40	6 - 29	1090	1.5	3.3	454	18	47	8433 2029 13
ETV ST61-50-B10	3/8	10 - 55	7 - 40	655	1.5	3.3	454	18	47	8433 2032 87
ETV ST61-70-B13	1/2	15 - 80	10 - 58	475	2.0	4.5	466	20	60	8433 2036 93
ETV ST61-100-B13	1/2	20 - 100	15 - 80	350	2.5	5.5	502	22.5	58	8433 2040 70
ETV ST61-150-B13	1/2	30 - 160	22 - 117	230	3.0	6.6	536	25.5	65	8433 2043 62
ETV ST61-180-B13	1/2	35 - 180	26 - 133	190	3.0	6.6	536	25.5	65	8433 2045 61
ETV ST81										
ETV ST81-50-10	3/8	16 - 55	12 - 40	1090	1.8	3.9	473	18	48	8433 2051 55
ETV ST81-70-13	1/2	20 - 80	15 - 58	790	2.3	5.0	485	20	58	8433 2053 48
ETV ST81-100-13	1/2	20 - 100	15 - 80	540	2.7	5.9	522	22.5	60	8433 2056 82
ETV ST81-150-13	1/2	30 - 160	22 - 117	380	3.2	7.0	555	26	65	8433 2060 12
ETV ST81-180-13	1/2	35 - 180	26 - 133	310	3.2	7.0	555	26	65	8433 2062 31
ETV ST81-200-20	3/4	40 - 200	30 - 154	300	3.2	7.0	556	27	70	8433 2063 42
ETV ST81 Ball Retainer										
ETV ST81-50-B10	3/8	16 - 55	12 - 40	1090	1.8	3.9	473	18	48	8433 2052 36
ETV ST81-70-B13	1/2	20 - 80	15 - 58	790	2.3	5.0	485	20	58	8433 2054 62
ETV ST81-100-B13	1/2	20 - 100	15 - 80	540	2.7	5.9	522	22.5	60	8433 2058 24
ETV ST81-150-B13	1/2	30 - 160	22 - 117	380	3.3	7.0	555	25.5	65	8433 2060 97
ETV ST81-180-B13	1/2	35 - 180	26 - 133	310	3.2	7.0	555	25.5	65	8433 2062 43
ETV ST81 Flush Socket										
ETV ST81-50-FS	-	16 - 55	12 - 40	1090	1.8	3.9	472	18	39	8433 2052 53
ETV ST81-70-FS	-	20 - 80	15 - 58	790	2.3	5.0	497	20	50	8433 2055 07
ETV ST81-100-FS	-	20 - 100	15 - 80	540	2.7	5.9	522	23	51	8433 2058 68
ETV ST81-180-FS	-	35 - 180	26 - 133	310	3.2	7.0	555	26	58	8433 2062 50
ETV ST81-200-FS	-	40 - 200	30 - 154	300	3.2	7.0	557	28	58	8433 2064 59
ETV ST81 Hold & Drive										
ETV ST81-50-HAD	-	16 - 55	12 - 40	1090	2.3	5.0	473	18.5	80	8433 2052 80
ETV ST81-90-HAD	-	20 - 95	15 - 70	665	2.4	5.1	540	26	80	8433 2056 03
ETV ST81-120-HAD	-	30 - 130	22 - 100	540	2.8	6.0	560	26	80	8433 2058 65
ETV ST81-150-HAD	-	30 - 160	22 - 117	365	3.3	7.0	560	26	80	8433 2061 81
ETV ST81-180-HAD	-	35 - 180	26 - 133	310	3.3	7.0	560	26	80	8433 2062 60
TV ST81-200-HAD	-	40 - 200	30 - 154	300	3.3	7.0	561	28	81	8433 2065 09
ETV ST81 Extended										
ETV ST81-70-13-L150	1/2	20 - 80	15 - 58	790	2.3	5.0	633	20	58	8433 2055 62
ETV ST81-100-13-L150	1/2	20 - 110	15 - 80	540	2.7	5.9	672	22.5	60	8433 2059 36
ETV ST81-200-20-L150	3/4	40 - 200	30 - 154	300	3.2	7.0	708	27	70	8433 2065 29
ETV ST101										
ETV-ST101-100-13	1/2	20 - 100	15 - 74	920	4.2	9.3	572	22.5	44	8433 2080 10
ETV-ST101-180-13	1/2	50 - 180	37 - 133	485	4.2	9.3	600	25.3	47	8433 2080 52
ETV-ST101-200-20	3/4	50 - 200	37 - 147	485	4.4	9.7	602	27.5	47	8433 2080 92
ETV-ST101-270-20	3/4	65 - 270	48 - 199	380	7.3	16.1	672	32.9	62	8433 2081 23
ETV-ST101-370-20	3/4	90 - 370	66 - 273	280	7.3	16.1	672	32.9	62	8433 2082 26
ETV-ST101-450-20	3/4	110 - 450	81 - 332	230	10.6	23.4	715	54.0	76	8433 2082 81
ETV-ST101-600-25	1	150 - 600	111 - 443	151	10.6	23.4	715	54.0	76	8433 2083 56

Tensor ST

Model	Square drive in	Torque range soft joint		Speed r/min	Weight		Length mm	CS distance mm	Height mm	Ordering No.
		Nm	ft lb		kg	lb				
ETV ST101 Ball Retainer/Fan										
ETV-ST101-100-B13	1/2	20 - 100	15 - 74	920	4.2	9.3	572	23	44	8433 2080 20
ETV-ST101-100-B13-F	1/2	20 - 100	15 - 74	920	4.2	9.3	572	23	44	8433 2080 35
ETV-ST101-180-B13	1/2	50 - 180	37 - 133	485	4.2	9.3	600	25	47	8433 2080 56
ETV-ST101-180-B13-F	1/2	50 - 180	37 - 133	485	4.2	9.3	600	25	47	8433 2080 66
ETV ST101 Flush Socket/Fan										
ETV-ST101-100-FS	-	20 - 100	15 - 74	920	4.2	9.3	572	23	50	8433 2080 25
ETV-ST101-100-FS-F	-	20 - 100	15 - 74	920	4.2	9.3	572	23	50	8433 2080 40
ETV-ST101-180-FS	-	50 - 180	37 - 133	485	4.2	9.3	600	26	58	8433 2080 61
ETV-ST101-180-FS-F	-	50 - 180	37 - 133	485	4.2	9.3	600	26	58	8433 2080 71
ETV-ST101-200-FS	-	50 - 200	37 - 147	485	4.4	9.7	602	28	58	8433 2080 96
ETV-ST101-200-FS-F	-	50 - 200	37 - 147	485	4.4	9.7	602	28	58	8433 2081 03
ETV-ST101-270-FS	-	65 - 270	48 - 199	380	7.5	16.4	672	33	77	8433 2081 35
ETV-ST101-270-FS-F	-	65 - 270	48 - 199	380	7.5	16.5	672	33	77	8433 2081 60
ETV-ST101-370-FS	-	90 - 370	66 - 273	280	7.5	16.5	672	33	77	8433 2082 38
ETV-ST101-370-FS-F	-	90 - 370	66 - 273	280	7.5	16.5	672	33	77	8433 2082 52
ETV-ST101-450-FS	-	110 - 450	81 - 332	230	10.0	22.0	715	54	69	8433 2082 88
ETV-ST101-450-FS-F	-	110 - 450	81 - 332	230	10.0	22.0	715	54	69	8433 2082 96
ETV-ST101-600-FS	-	150 - 600	111 - 443	150	10.0	22.0	715	54	69	8433 2083 64
ETV-ST101-600-FS-F	-	150 - 600	111 - 443	150	10.0	22.0	715	54	69	8433 2083 80
ETV ST101 Fan										
ETV-ST101-100-13-F	1/2	20 - 100	15 - 74	920	4.2	9.3	572	23	44	8433 2080 30
ETV-ST101-180-13-F	1/2	50 - 180	37 - 133	485	4.2	9.3	600	25	47	8433 2080 63
ETV-ST101-200-20-F	3/4	50 - 200	37 - 147	485	4.4	9.7	602	28	47	8433 2080 93
ETV-ST101-270-20-F	3/4	65 - 270	48 - 199	380	7.3	16.1	672	33	62	8433 2081 45
ETV-ST101-370-20-F	3/4	90 - 370	66 - 273	280	7.3	16.1	672	33	62	8433 2082 48
ETV-ST101-450-20-F	3/4	110 - 450	81 - 332	230	10.6	23.4	715	54	76	8433 2082 90
ETV-ST101-600-25-F	1	150 - 600	111 - 443	150	10.6	23.4	715	54	76	8433 2083 69
ETV ST101 Intel/Fan										
ETV-ST101-100-Intel	1/2	20 - 100	15 - 74	920	4.6	10.2	572	23	82	8433 2080 28
ETV-ST101-100-Intel-F	1/2	20 - 100	15 - 74	920	4.6	10.2	572	23	82	8433 2080 47
ETV-ST101-180-Intel	1/2	50 - 180	37 - 133	485	4.6	10.1	600	26	90	8433 2080 62
ETV-ST101-180-Intel-F	1/2	50 - 180	37 - 133	485	4.6	10.2	600	26	90	8433 2080 99
ETV-ST101-200-Intel	1/2	50 - 200	37 - 147	485	4.8	10.6	602	28	90	8433 2081 01
ETV-ST101-200-Intel-F	1/2	50 - 200	37 - 147	485	4.8	10.6	602	28	90	8433 2081 02
ETV-ST101-270-Intel	3/4	65 - 270	48 - 199	380	8.4	18.5	672	33	113	8433 2081 40
ETV-ST101-270-Intel-F	3/4	65 - 270	48 - 199	380	8.4	18.5	672	33	113	8433 2081 98
ETV-ST101-370-Intel	3/4	90 - 370	66 - 273	280	8.4	18.5	672	33	113	8433 2082 40
ETV-ST101-370-Intel-F	3/4	90 - 370	66 - 273	280	8.4	18.5	672	33	113	8433 2082 59
ETV ST101 Hold & Drive/Fan										
ETV-ST101-100-HAD	-	20 - 100	15 - 74	920	4.9	10.8	572	23	71.4	8433 2080 45
ETV-ST101-100-HAD-F	-	20 - 100	15 - 74	920	4.6	10.2	572	23	71.4	8433 2080 46
ETV-ST101-180-HAD	-	50 - 180	37 - 133	485	4.9	10.8	600	26	80.1	8433 2080 89
ETV-ST101-180-HAD-F	-	50 - 180	37 - 133	485	4.6	10.1	600	26	80.1	8433 2080 90
ETV-ST101-200-HAD	-	50 - 200	37 - 147	485	5.1	11.2	602	28	80.2	8433 2080 99
ETV-ST101-200-HAD-F	-	50 - 200	37 - 147	485	5.1	11.2	602	28	80.2	8433 2081 04
ETV-ST101-270-HAD	-	65 - 270	48 - 199	380	8.3	18.3	672	33	103.5	8433 2081 92
ETV-ST101-270-HAD-F	-	65 - 270	48 - 199	380	8.3	18.3	672	33	103.5	8433 2081 95
ETV-ST101-370-HAD	-	90 - 370	66 - 273	280	8.3	18.3	672	33	103.5	8433 2082 55
ETV-ST101-370-HAD-F	-	90 - 370	66 - 273	280	8.3	18.3	672	33	103.5	8433 2082 58
ETV-ST101-450-HAD	-	110 - 450	81 - 332	230	11.7	25.8	715	54	104.2	8433 2082 97
ETV-ST101-450-HAD-F	-	110 - 450	81 - 332	230	11.7	25.8	715	54	104.2	8433 2082 98
ETV-ST101-600-HAD	-	150 - 600	111 - 443	150	11.7	25.8	715	54	104.2	8433 2083 90
ETV-ST101-600-HAD-F	-	150 - 600	111 - 443	150	11.7	25.8	715	54	104.2	8433 2083 93
ETV ST101 Fixture Extension/Fan										
ETV ST101-180-13-M	1/2	50 - 180	37 - 133	485	5.0	11	673	25	47	8433 2080 83
ETV ST101-180-13-M-F	1/2	50 - 180	37 - 133	485	5.0	11	673	25	47	8433 2080 86
ETV ST101-270-20-M	3/4	65 - 270	48 - 199	380	8.5	18.8	763	33	62	8433 2081 82
ETV ST101-370-20-M	3/4	90 - 370	66 - 273	280	8.5	18.8	763	33	62	8433 2082 60
ETV ST101 Torque Multiplier/Fan										
ETV ST101-600-TM	3/4	150 - 600	111 - 443	132	7.6	16.8	613	34	143	8433 2083 62
ETV-ST101-600-TM-F	3/4	150 - 600	111 - 443	132	7.6	16.8	613	34	143	8433 2083 96
ETV-ST101-1000-TM	1	250 - 1000	184 - 734	77	11.3	24.3	679	40	191	8433 2084 05
ETV-ST101-1000-TM-F	1	250 - 1000	184 - 734	77	11.3	24.3	679	40	191	8433 2084 10
ETV ST101-1500-38-TM	1 1/2	325 - 1500	240 - 1100	48	19	42	719	71	233	8433 2084 70
ETV ST101-2000-38-TM	1 1/2	500 - 2000	370 - 1475	35	19	42	719	71	231	8433 2084 80

Note: This is just a selection of tools from our extensive range. Please refer to the current edition of our main catalogue, "Industrial Power Tools", to see all the versions available.

BATTERY TOOLS

Angle nutrunners and pistol screwdrivers



Tensor STB

Model	Square drive in	Torque range		Battery	Speed r/min	Weight		Weight incl. battery		Length mm	CS distance mm	Height mm	Ordering No.
		Nm	ft lb			kg	lb	kg	lb				
Angle													
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
Pistol grip													
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 STB32-06-106	1/4	2-6	2-4	Li-Io 18 V	1500	0.9	2	1.5	3.3	218	-	186	8433 3110 37
ETP STB32-06-106-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 STB32-12-106	1/4	4-12	3-9	Li-Io 18 V	750	0.9	2	1.5	3.3	218	-	186	8433 3111 48
ETP STB32-12-106-BCR	1/4	4-12	3-9	Li-Io 18 V	750	1	2.3	1.6	3.5	218	-	186	8433 3111 58

BCP Battery screwdriver – clutch type

Model	Square drive in	Torque range		Speed r/min	Weight (excl. battery)		Length/Height mm	Ordering No.
		Nm	ft lb		kg	lb		
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	250 - 600	0.86	1.89	200/188	8431 1273 30
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	1.1 - 4.4	150 - 440	0.86	1.89	200/188	8431 1273 60
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

ELECTRIC TOOLS

Fixtured nutrunners



ETX

Model	Travel mm	Torque range		Speed r/min	Min C-C	Weight		Gear ratio	Socket holder size in	Ordering No.	Socket holder Ordering No.
		Nm	ft lb			kg	lb				
ETX42-20CT	50	6 - 20	4 - 14	2000	43	3.2	7.1	7.50	3/8	8435 5120 10	4230 1818 00
ETX42-20COT	50	6 - 20	4 - 14	2000	31	4.3	9.5	7.50	3/8	8435 5120 20	4230 1818 00
ETX42-50CT	50	10 - 50	7 - 35	700	43	3.5	7.7	21.33	1/2	8435 5130 10	4230 1819 00
ETX42-50COT	50	10 - 50	7 - 35	700	31	4.6	10.1	21.33	1/2	8435 5130 20	4230 1819 00
ETX50-90CT	50	20 - 90	15 - 65	650	51	5.9	13.0	18.21	1/2	8435 5140 10	4230 1820 00
ETX50-90COT	50	20 - 90	15 - 65	650	37	8.1	17.9	18.21	1/2	8435 5140 20	4230 1820 00
ETX50-150CT	50	30 - 150	22 - 110	380	51	5.8	12.8	31.24	1/2	8435 5150 10	4230 1820 00
ETX50-150COT	50	30 - 150	22 - 110	380	37	8.0	17.6	31.24	1/2	8435 5150 20	4230 1820 00
ETX62-150CT	50	30 - 150	22 - 110	450	63	9.5	20.9	13.94	1/2	8435 5160 10	4230 1829 00
ETX62-150COT	50	30 - 150	22 - 110	450	46	9.5	20.9	13.94	1/2	8435 5160 20	4230 1829 00
ETX62-230CT	50	40 - 230	29 - 170	330	63	10.2	22.5	19.04	3/4	8435 5170 10	4230 1822 00
ETX62-230COT	50	40 - 220	29 - 162	330	46	12.8	28.2	19.04	3/4	8435 5170 20	4230 1822 00
ETX62-350CT	50	50 - 350	37 - 258	220	63	10.2	22.5	28.33	3/4	8435 5180 10	4230 1822 00
ETX62-350COT	50	50 - 330	37 - 243	220	50	12.9	28.4	28.33	3/4	8435 5180 20	4230 1822 00
ETX72-450CT	50	90 - 450	65 - 331	160	73	11.3	25	41.6	3/4	8435 5182 10	4230 1971 00
ETX72-600CT	50	120 - 600	90 - 441	110	73	11.3	25	58.0	3/4	8435 5183 10	4230 1971 00
ETX72-600COT	50	120 - 580	90 - 425	110	55	17	37.5	57.99	3/4	8435 5183 20	4230 1971 00
ETX90-750CT	50	150 - 750	110 - 551	90	91	17.8	39	68.3	1	8435 5184 10	4230 1824 00
ETX90-950CT	50	200 - 950	150 - 699	70	91	17.8	39	90.0	1	8435 5185 10	4230 1824 00
Angle head tools											
ETX42-70CTV	-	15 - 70	11 - 50	355	45	4.9	10.8	21.33	1/2	8435 4072 07	-
ETX50-170CTV	-	22 - 170	16 - 125	200	50	9.1	20	31.24	1/2	8435 4073 04	-
ETX62-350CTV	-	50 - 350	37 - 221	175	70	13.9	28.9	19.04	3/4	8435 4074 72	-

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ELECTRIC TOOLS

Fixtured nutrunners



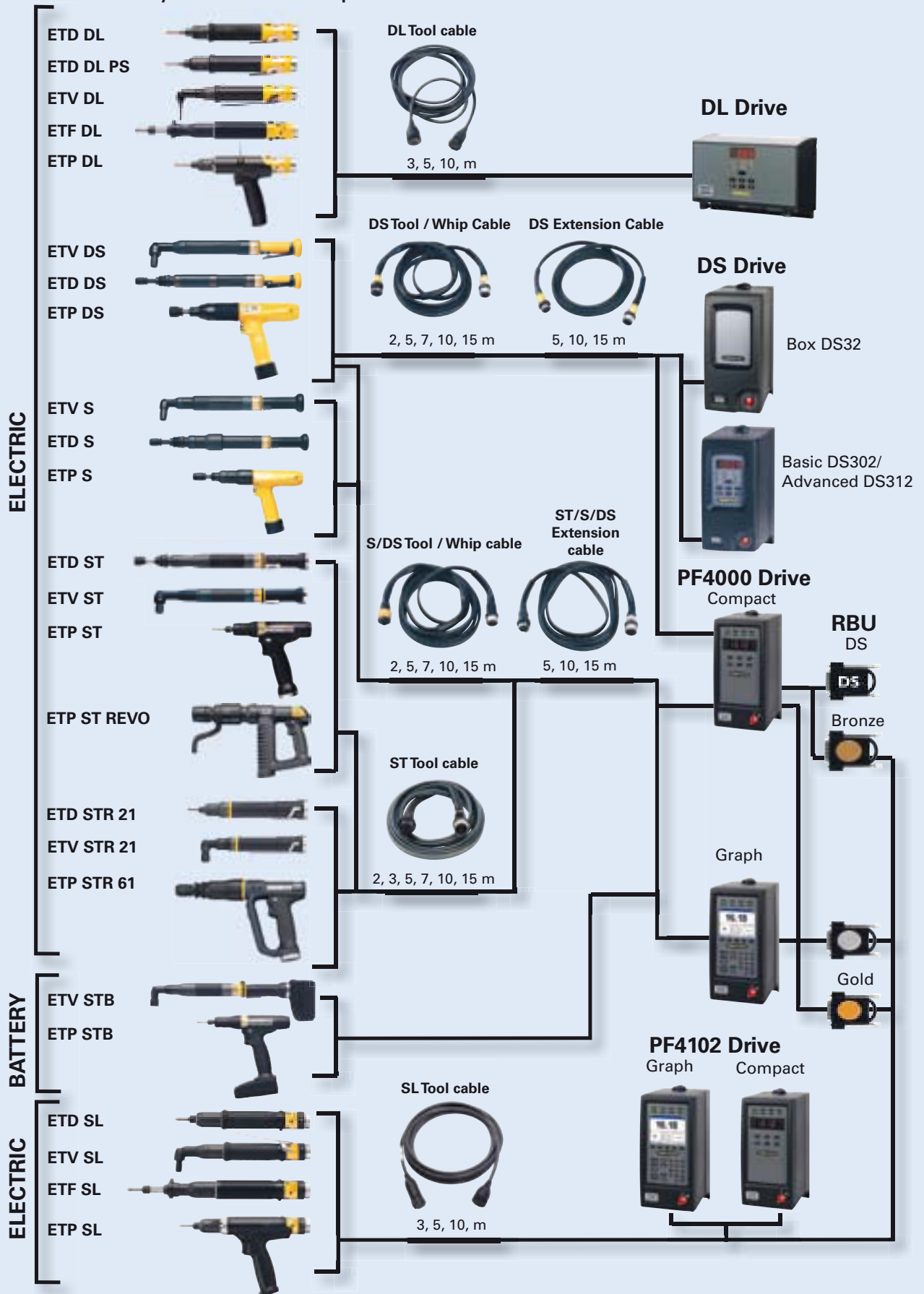
QST

Model	Travel mm	Torque range		Speed r/min	Min C-C	Weight		Gear ratio	Socket holder size in	Ordering No.	Socket holder Ordering No.
		Nm	ft lb			kg	lb				
QST34-8CT-T50-L150-H6	50	2 - 8	1.5 - 6	3000	34	2.0	4.4	7.428	1/4	8435 6000 10	4230 2753 01
QST34-20CT-T50-L150-H10	50	4 - 20	2.9 - 14.7	1000	34	2.0	4.4	21.2	3/8	8435 6010 10	4230 2753 00
QST42-20CT-T50-L134-H9.5	50	6 - 20	4 - 14	2000	43	3.1	6.9	7.50	3/8	8435 6020 10	4230 1818 00
QST42-20CT-T50-L134.5-H9.5	50	6 - 20	4 - 14	2000	31	4.2	9.3	7.50	3/8	8435 6020 20	4230 1818 00
QST42-50CT-T50-L134-H12.7	50	10 - 50	7 - 35	700	43	3.8	8.4	21.33	1/2	8435 6030 10	4230 1819 00
QST42-50CT-T50-L134.5-H12.7	50	10 - 50	7 - 35	700	31	4.5	9.9	21.33	1/2	8435 6030 20	4230 1819 00
QST50-90CT-T50-L137-H12.7	50	20 - 90	15 - 65	650	51	5.8	12.7	18.21	1/2	8435 6040 10	4230 1820 00
QST50-90CT-T50-L137-H12.7	50	20 - 90	15 - 65	650	37	7.8	17.2	18.21	1/2	8435 6040 20	4230 1820 00
QST50-150CT-T50-L137-H12.7	50	30 - 150	22 - 110	380	51	5.8	12.8	31.24	1/2	8435 6050 10	4230 1820 00
QST50-150CT-T50-L137-H12.7	50	30 - 150	22 - 110	380	37	7.8	17.2	31.24	1/2	8435 6050 20	4230 1820 00
QST62-150CT-T50-L152-H12.7	50	30 - 150	22 - 110	450	63	10.2	22.5	13.94	1/2	8435 6060 10	4230 1829 00
QST62-150CT-T50-L152.5-H12.7	50	30 - 150	22 - 110	450	45	12.8	28.2	13.94	1/2	8435 6060 20	4230 1829 00
QST62-230CT-T50-L152-H19.1	50	40 - 230	29 - 170	330	63	10.2	22.5	19.04	3/4	8435 6065 10	4230 1822 00
QST62-230CT-T50-L152.5-H19.1	50	40 - 220	29 - 162	330	45	12.8	28.2	19.04	3/4	8435 6065 20	4230 1822 00
QST62-350CT-T50-L152-H19.1	50	50 - 350	37 - 258	220	63	10.2	22.5	28.33	3/4	8435 6070 10	4230 1822 00
QST62-350CT-T50-L152-H19.1	50	50 - 330	37 - 243	220	45	12.8	28.2	28.33	3/4	8435 6070 20	4230 1822 00
QST80-450CT-T50-L146-H19.1	50	90 - 450	66 - 332	260	81	16.7	37	22.67	3/4	8435 6075 10	4230 1971 00
QST80-450CT-T50-L146-H19.1	50	90 - 450	66 - 332	260	55	21	46	22.67	3/4	8435 6075 20	4230 1971 00
QST80-600CT-T50-L146-H19.1	50	120 - 600	88 - 442	200	81	17	37	29.56	3/4	8435 6080 10	4230 1971 00
QST80-600CT-T50-L146-H19.1	50	120 - 600	88 - 442	200	55	21	46	29.56	3/4	8435 6080 20	4230 1971 00
QST90-750CT-T50-L152-H25.4	50	150 - 750	111 - 553	150	91	25	55	38.89	1	8435 6085 10	4230 1824 00
QST90-750CT-T50-L153-H25.4	50	150 - 750	111 - 553	150	63	29	64	38.89	1	8435 6085 20	4230 1824 00
QST90-1000CT-T50-L152-H25.4	50	200 - 1000	147 - 737	130	91	26	57	46.84	1	8435 6090 10	4230 1824 00
QST90-1000CT-T50-L153-H25.4	50	200 - 1000	147 - 737	130	63	30	66	46.84	1	8435 6090 20	4230 1824 00
QST95-1750CT-T50-L149-H38	50	350 - 1750	258 - 1291	60	96	28	61.7	98.21	1 1/2	8453 6095 10	4230 2767 00
QST95-1750CT-T50-L155-H38	50	350 - 1750	258 - 1291	60	73	43	94.8	98.21	1 1/2	8454 6095 20	4230 2811 00
Extended spring travel 76 mm and 100 mm											
QST42-20CT-T76-L189-H9.5	76	6 - 20	4 - 14	2000	43	3.1	6.9	7.5	3/8	8435 6020 11	4230 2114 00
QST42-50CT-T76-L189-H12.7	76	10 - 50	7 - 35	700	43	3.8	8.4	21.3	1/2	8435 6030 11	4230 2120 00
QST50-90CT-T76-L200-H12.7	76	20 - 90	15 - 65	650	51	5.78	12.7	18.2	1/2	8435 6040 11	4230 2127 00
QST50-150CT-T76-L200-H12.7	76	30 - 150	22 - 110	380	51	5.8	12.8	31.2	1/2	8435 6050 11	4230 2127 00
QST62-230CT-T76-L200-H19.1	76	40 - 230	29 - 170	330	63	10.2	22.5	19.0	3/4	8435 6065 11	4230 2137 00
QST62-350CT-T76-L200-H19.1	76	50 - 350	37 - 258	220	63	10.2	22.5	28.3	3/4	8435 6070 11	4231 2137 00
QST80-600CT-T76-L214-H19.1	76	120 - 600	88 - 442	200	81	17	37.0	29.6	3/4	8435 6080 11	4231 2664 99
QST90-1000CT-T76-L176-H25.4	76	200 - 1000	147 - 737	130	91	26	57.0	46.8	1	8435 6090 11	4231 1106 00
QST42-50CT-T100-L191-H12.7	100	10 - 50	7 - 35	700	43	3.8	8.4	21.3	1/2	8435 6030 12	4231 2055 00
QST50-150CT-T100-L186-H12.7	100	30 - 150	22 - 110	380	51	5.8	12.8	31.2	1/2	8435 6050 12	4231 3189 00
Angle head, CTV											
QST42-20CTV -P10	-	6 - 20	4 - 14	1200	28	3.5	7	11.6	3/8	9831 4077 27	-
QST42-20CTV -T25 -H10	25	6 - 20	4 - 14	1200	28	5	10	11.6	3/8	9831 4077 57	-
QST42-30CTV -P10	-	6 - 30	4.5 - 22	440	36	3.5	7	11.6	3/8	9831 4077 26	-
QST42-30CTV -T25 -H10	25	6 - 30	4.5 - 22	440	36	5.5	11	33.0	3/8	9831 4077 58	-
QST42-70CTV -P13	-	14 - 70	10 - 52	440	40	4.5	9	33.0	1/2	9831 4077 28	-
QST42-70CTV -T25 -H13	25	14 - 70	10 - 52	440	40	5.5	9	33.0	1/2	9831 4077 59	-
QST50-170CTV -P13	-	34 - 170	25 - 125	210	51	6.8	14	56.2	1/2	9831 4078 38	-
QST50-170CTV -T50 -P13	50	34 - 170	25 - 125	210	48	8.6	17	56.2	1/2	9831 4078 44	-
QST50-200CTV -H19	-	40 - 200	29 - 145	210	51	7.0	14	56.2	3/4	9831 4078 43	-
QST50-200CTV -T25 -H19	25	40 - 200	29 - 145	210	51	9.5	19	56.2	3/4	9831 4078 46	-
QST50-200CTV -T50 -H19	50	40 - 200	29 - 145	210	51	10	20	56.2	3/4	9831 4078 47	-
QST62-310CTV -H19	-	60 - 310	44 - 229	175	66	13.5	27	34.3	3/4	9831 4079 78	-
QST62-310CTV -T25 -H19	25	60 - 310	44 - 229	175	66	16.5	33	34.3	3/4	9831 4079 76	-
QST62-350CTV -H19	-	70 - 350	52 - 258	120	66	13.5	27	51.0	3/4	9831 4079 73	-
QST62-350CTV -T25 -H19	25	70 - 350	52 - 258	120	66	16.5	33	51.0	3/4	9831 4087 10	-
QST62-600CTV -H25	-	120 - 600	88 - 440	100	109	16.5	33	93.5	1	9831 4087 02	-

Note: This is just a selection of tools from our extensive range. Please refer to the current edition of our main catalogue, "Industrial Power Tools," to see all the versions available.

Tensor Modularity

The Tensor family uses a modular concept based on standard hardware and software.



Accessories – Pulsor / LTP/LMP

Pulsor C

Tool accessories

Model	Ordering No.
Controllers	
Pulsor Focus 4000-C-HW	8433 6900 20
Pulsor Focus 4000-C-DN-HW	8433 6940 20
Pulsor Focus 4000-C-PB-HW	8433 6942 20
Pulsor Focus 4000-C-PN-HW	8433 6948 20
Pulsor Focus 4000-C-EIP-HW	8433 6949 20
Pulsor Focus 4000-C-IB-HW	8433 6945 20
Tool Control Box	
TCB-1E	8433 0606 40
RBU	
Pulsor C - Gold	8433 6020 20
TCB cables	
Cable PF - TCB, 1,2 m	4250 2901 01
Cable PF - TCB, 5 m	4250 2901 05
Cable PF - TCB, 10 m	4250 2901 10
Tool cables	
Straight 5 m	4250 2533 05
Straight 12 m	4250 2533 12
Spiral 5 m	4250 2533 06
Spiral 12 m	4250 2533 13
Coil 3 m	4250 2533 53
Coil 5 m	4250 2533 55
Coil 7 m	4250 2533 57
Back plate	(for attaching PF and TCB in one plate)
PCU - Pulsor Control Unit	
PCU	(Includes: controller, RBU, TCB, back plate, cable 1 m)
ToolsTalk Pulsor C	
1-user license	8092 1281 01
5-user license	8092 1281 05
10-user license	8092 1281 10
Plant license	8092 1281 99
Suspension yoke	(for upside down hanging, all models)
	4250 2720 00



Tool Control Box (TCB)

Pulsor Focus



Multi torque selector, LTP61



Protective cover



MultiFlex connector, swiveling type



Swivelling suspension yoke



Coil cable



Straight cable



Spiral cable

Optional accessories

Model	Ordering No.
For LTP/LMP 61	
Hose nipple	9000 0242 00
Exhaust hose	4210 2201 00
Protective cover	
LTP/LMP 61	4210 4672 00
LTP 61 with MT unit	4210 4672 01
Multi torque selector	
LTP61	4210 4636 95
Quick change retainer	
- 1/2" square models	4250 1190 00
- 3/4" square models	4210 3476 80
- 1" square models	4210 3524 80
Shut-off override for LTP61	4210 3545 80
Swivelling type MultiFlex connector, 3/8" (BSP)	8202 1350 22
Swivelling type MultiFlex connector, 3/8" (NPT)	8202 1350 28
Swivelling suspension yoke For LTP/LMP 61	
Mounting dia Ø 54 mm	4210 3088 80
H 100-13	
H 170-13	
H 230-19	
H 350-20	
H 500-20	
H 700-25	
H 900-25	
Ø 60 mm	4210 3088 84
HR 100-13	
HR 170-13	
HR 230-19	
Ø 63.5 mm	4210 3088 83
H 1900-38	
H 2800-38	
H 3800-38	
Ø 67 mm	4210 3088 82
HR 350-20	
HR 500-20	
HR 700-25	
HR 900-25	
HR 1900-38	
HR 2800-38	
HR 3800-38	
Ø 83.5 mm	4210 3088 81
H 1500-25	
HR 1500-25	



Selector 4



Stacklight DSL-03



Operator panel Basic

Controller accessories

Model	Ordering No.
Rotary selector	
I/O Expander	8433 6900 20
RE-Alarm	8433 6940 20
Selector 4	8433 6942 20
Selector 8	8433 6948 20
Operator panel basic	8433 6949 20
Operator panel advanced	8433 6945 20
Stacklights	
ESL-04 Standard	8433 0606 40
Rotating red	
Rotating yellow	8433 6020 20
Siren	
Compact	4250 2901 01
DSL-03 with push button with blanking plugs	8202 1182 13

Tool hose kits

Model	Hose kit	Ordering No.
EPP6 - EPP10	Cablair 10, 5 m + Ergo couplings	8202 1180 78
EPP11	Cablair 13, 5 m + Ergo couplings	8202 1182 13

Reaction bars

Spline dia mm	Square drive size mm/in	CC distance mm	Ordering No.
Steel bar			
Spline 1	268/36/18		4210 1798 01
Spline 2	270/35/10		4220 1903 00
Spline 3	400/56/12		4210 2219 80
Spline 4	500/62/15		4210 2183 80
Spline 5	500/62/15		4210 2726 80
Spline 6	560/80/15		4220 1200 01
Spline 9	500/85/20		4210 3899 80
Square steel bracket			
Spline 3	100/50/12		4210 2219 03
Spline 4	125/65/16		4210 2183 01
Spline 5	125/65/16		4210 2726 01
Spline 6	200/100/15		4220 1200 00
Spline 7	250/150/20		4220 1445 00
Spline 8	250/160/20		4220 1972 91
Spline 9	150/85/20		4210 3899 01
Triangular steel bracket			
Spline 2	73/72/14		4220 2137 02
Spline 3	82/80/15		4220 2137 03
Spline 6	112/109/15		4220 2137 06
Spline 7	150/145/20		4220 2137 16
Sliding drive reaction bar			
Spline 3	1/2	70-120	4210 4481 83
Spline 3	3/4	70-120	4210 4481 63
Spline 4	3/4	76-126	4210 4481 84
Spline 4	3/4	82-218	4210 4616 84
Spline 5	1	80-125	4210 4481 85
Spline 5	1	82-218	4210 4616 85
Spline 9	1	80-130	4210 4481 89
Spline 9	1	80-280	4210 4616 89
S-Type reaction bar			
Spline 3	110/18/12		4210 4480 03
Spline 4	120/22/15		4210 4480 04
Spline 5	130/25/15		4210 4480 05
Spline 6	125/25/15		4210 4480 06
Spline 8	200/65/20		4210 4480 08
Spline 9	160/40/20		4210 4480 09
L-Type aluminum bar			
Spline 3	266x300/29/15		4210 2219 08
Spline 4	144x150/42/15		4210 2183 08
Straight aluminum bar			
Spline 3	L = 400		4210 2219 01
Extended sliding drive reaction bar			
Spline 5	1	68-112	4210 4498 80
Extended sliding tube reaction bar			
Spline 5	1	68-112	4210 4498 82
STR reaction bars			
ETP STR61 - 20/30			4220 4495 00
ETP STR61 - 50/70/90/120			4220 1903 00
Bracket stepped			
Spline 1	70/36/13		4210 1798 02
Spline 2	70/41/14		4210 2134 02



Steel bar



Square steel bracket



Triangular steel bracket



Sliding drive reaction bar



S-Type reaction bar



L-Type aluminium bar



Straight aluminium bar



Extended sliding drive reaction bar



Extended sliding tube reaction bar



Bracket stepped

Accessories – Tensor software

Power Focus



Power Focus 4000 Graph



Power Focus 4000 Compact



RBU-Bronze

RBU-Silver

RBU-Gold

RBU-DS

RBU-X

Controller functionality

Hardware key	Ordering No.
RBU-Bronze	8433 0010 10
RBU-Silver	8433 0015 20
RBU-Gold	8433 0020 20
RBU-DS	8433 0005 10
RBU-X	8433 0080 20
Power Focus 4000 W 10	
PF 4000-G-HW	8433 7100 00
PF 4000-C-HW	8433 7100 05
PF 4000-G-DN- HW	8433 7140 00
PF 4000-C-DN-HW	8433 7140 05
PF 4000-G-FLN-HW	8433 7141 00
PF 4000-C-FLN-HW	8433 7141 05
PF 4000-G-PB-HW	8433 7142 00
PF 4000-C-PB-HW	8433 7142 05
PF 4000-G-CC-HW	8433 7143 00
PF 4000-C-CC-HW	8433 7143 05
PF 4000-G-IB-HW	8433 7145 00
PF 4000-C-IB-HW	8433 7145 05
PF 4000-G-MB-HW	8433 7147 00
PF 4000-C-MB-HW	8433 7147 05
PF 4000-G-PN-HW	8433 7148 00
PF 4000-C-PN-HW	8433 7148 05
PF 4000-G-EIP-HW	8433 7149 00
PF 4000-C-EIP-HW	8433 7149 05

ToolsTalk Power Focus

Model	Ordering No.
ToolsTalk PF W10	
1-user license	8092 1190 01
5-user license	8092 1190 05
10-user license	8092 1190 10
Plant license	8092 1190 99
ToolsTalk PF W05 upgrade to W10	
1-user license	8092 1190 51
5-user license	8092 1190 55
10-user license	8092 1190 60
Plant license	8092 1190 69
ToolsTalk PF W07 upgrade to W10	
1-user license	8092 1190 31
5-user license	8092 1190 35
10-user license	8092 1190 40
Plant license	8092 1190 49
ToolsTalk DS/DL	
Swedish	8092 1138 60
English	8092 1138 62
German	8092 1138 64
French	8092 1138 66
Spanish	8092 1138 68
Italian	8092 1138 70
Power Focus controller software	
PF World 10 sticker, (12 package)	4222 0820 25

Quality Integrated Fastening

Controller accessories

Model	Ordering No.
Selector 4	8433 0610 04
Selector 8	8433 0610 08
Rotary selector	8433 0606 15
Bit selector	8433 0612 08
Bit selector double ^a	4222 0933 92
Bit selector single ^b	4222 0933 91
Selector for large sockets	8433 0610 44
RE-Alarm	8433 0560 03
I/O Expander	8433 0564 39
Start handle	4220 1391 91
Accessory cables	
I/O bus cable 0.5 m	4222 0917 00
I/O bus cable 1 m	4222 0917 01
I/O bus cable 3 m	4222 0917 03
I/O bus cable 5 m	4222 0917 05
I/O bus cable 10 m	4222 0917 10
I/O bus cable 15 m	4222 0917 15
I/O Termination plug	4222 0443 00
Cables Ethernet	
Crossed 0.5 m	4222 0682 00
Crossed 1 m	4222 0682 01
Crossed 3 m	4222 0682 03
Crossed 5 m	4222 0682 05
Crossed 10 m	4222 0682 10
Crossed 15 m	4222 0682 15
Crossed 25 m	4222 0682 25
Crossed 50 m	4222 0682 50
Straight 0.5 m	4222 0754 00
Straight 1 m	4222 0754 01
Straight 3 m	4222 0754 03
Straight 5 m	4222 0754 05
Straight 10 m	4222 0754 10
Straight 15 m	4222 0754 15
Straight 25 m	4222 0754 25
Straight 50 m	4222 0754 50

^a only compatible with bit selector.

^b only compatible with socket selector 4 and 8.



Operator Panel

Operator panel

Model	Ordering No.
Operator Panel advanced	8433 0565 00
Operator Panel basic	8433 0565 10

Stacklight

Model	Ordering No.
Stacklight ESL-04 standard, PF3000/4000, DS-advanced	8433 0570 13
Stacklight DSL-03 with push button	8433 0570 10
Stacklight DSL-03 with blanking plugs ^a	8433 0570 11

^a DS/DL-Basic/Box controller, PLC's or others.



RE-Alarm



I/O Expansion box



Selector 8



Bit selector



Selector for
large sockets



Start handle



ComNode



ComNode Touch
Screen

ComNode 2

Model	Ordering No.
ComNode	8433 2711 00
ComNode Touch Screen	8433 2711 10
ComNode with I/O card	8433 2711 03
ComNode Touch with I/O card	8433 2711 13
ComNode with ATS Factory Overview and Event Monitor, 10 user	8433 2711 01
ComNode Touch with ToolsNet, Factory Overview and Event Monitor, 10 user	8433 2711 11



Stacklight DSL-03



Stacklight DSL-04

For more options, see Industrial PowerTools catalogue.

Chargers Tensor STB and BCP



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

Battery – Li-Io for STB and BCP



Battery big pack



Battery flat pack

Battery	Voltage V	Capacity Ah	Weight kg	Ordering No.
Battery for BCP and STB pistol				
Li-Ion big pack	18	2.6	0.60	4211 5426 83
Li-Ion flat pack	18	1.3	0.37	4211 5426 82
Battery for STB angle models				
Li-Ion big pack	30	2.6	0.85	4211 5426 86

Tensor Cables



ST Cable



ST Spiral cable



ST Cable protection

Tensor ST/STR

Model	Ordering No.
Tool cable	
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
Cables with 90 degrees connector	
2 m	4220 3891 02
3 m	4220 3891 03
5 m	4220 3891 05
7 m	4220 3891 07
10 m	4220 3891 10
15 m	4221 3891 15
Spiral cable (length/stretched length)	
3 m / 4 m	4220 2757 03
7 m / 8 m	4220 2757 07
10 m / 12 m	4220 2757 10
Cable protection	4220 2977 90

Tensor S/ST/STB

Model	Ordering No.
Extension cable	
5 m	4220 1007 05
10 m	4220 1007 10
15 m	4220 1007 15
Extension cables for fixtured applications	
5 m	4220 1563 05
10 m	4220 1563 10
15 m	4220 1563 15



S Cable flat

Tensor S

Model	Ordering No.
Tool cable flat	
2 m	4220 3606 02
3 m	4220 3606 03
5 m	4220 3606 05
7 m	4220 3606 07
10 m	4220 3606 10
15 m	4220 3606 15
Cables with 90 degrees connector	
5 m	4220 1560 05
10 m	4220 1560 10
15 m	4220 1560 15
Cable with loop for high	
5 m	4220 1845 05
10 m	4220 1845 10
15 m	4220 1845 15



DS Tool cable



DS Extension cable for fixtured applications

Tensor DS

Model	Ordering No.
Tool cable	
2 m	4220 1616 02
5 m	4220 1616 05
7 m	4220 1616 07
10 m	4220 1616 10
15 m	4220 1616 15
Extension cable	
5 m	4220 2047 05
10 m	4220 2047 10
15 m	4220 2047 15
Extension cables for fixtured applications	
10 m	4220 2046 10
15 m	4220 2046 15

Accessories – Power MACS

Power MACS 4000 controllers



TC-P

TC-S

Model	Fieldbus version	Ordering No.
Primary controller		
TC-4000-P-ES	No Fieldbus	8435 6511 00
TC-4000-P-PB-ES	Profibus	8435 6511 10
TC-4000-P-DN-ES	DeviceNet	8435 6511 30
TC-4000-P-EIP-ES	Ethernet IP	8435 6511 60
TC-4000-P-MTCP-ES	ModBus TCP	8435 6511 70
TC-4000-P-PN-ES	Profit Net	8435 6511 50
TC-4000-P-CC-ES	CC link	8435 6511 90
Secondary controller		
TC-4000-S	No fieldbus, No Ethernet switch	8435 6500 00
TC-4000-S-ES	No fieldbus, Ethernet switch	8435 6501 00



Indicator box

Handle

Model	Ordering No.
Start handle	8435 3020 00

Indicator box and cable

Model	Ordering No.
Indicator box	8435 3010 03
Indicator box cable	4243 0158 81
Extention cable	
3 m	4243 0070 03
5 m	4243 0070 05
10 m	4243 0070 10
15 m	4243 0070 15
20 m	4243 0070 20
25 m	4243 0070 25

Power MACS 4000 Cables



Tool and extension cable



Ethernet cable

Tool and extension cables

Length	Ordering No.
2 m	4220 3799 02
3 m	4220 3799 03
5 m	4220 3799 05
7 m	4220 3799 07
10 m	4220 3799 10
15 m	4220 3799 15
20 m	4220 3799 20
25 m	4220 3799 25
30 m	4220 3799 30
35 m	4220 3799 35
40 m	4220 3799 40

Ethernet cables

Length	Ordering No.
0.5 m	4222 1246 00
1 m	4222 1246 01
2 m	4222 1246 02
3 m	4222 1246 03
5 m	4222 1246 05
10 m	4222 1246 10
15 m	4222 1246 15



Power cable between MSB and TC

Power cables between MSB and TC

Suitable for	Length	Ordering No.
TC1-TC2, TC7-TC8, TC13-TC14	1350 mm	4222 1248 13
TC3-TC4, TC9-TC10, TC15-TC16	1650 mm	4222 1248 16
TC5-TC6, TC11-TC12, TC17-TC18	1950 mm	4222 1248 19
For longer distances	5 m	4222 1248 50
	10 m	4222 1370 10
	15 m	4222 1370 15
	20 m	4222 1370 20



E-stop cable

E-stop cables and termination

Components	Length	Ordering No.
E-stop cable		4222 1247 12
E-stop cable	1200 mm	4222 1247 30
E-stop termination	3000 mm	4222 0755 00

For more options, see Industrial Power Tools catalogue.

Quality assurance in tightening

Data analyzers



ACTA 4000

ACTA 4000

Model	Ordering No.
ACTA 4000	
ACTA 4000 B	8092 1177 20
ACTA 4000 QC	8092 1177 30
ACTA 4000 AA	8092 1177 40
ACTA 3000/4000 software upgrades	
ACTA 3000 software upgrade to generation 3.xx	8092 1172 02
B to QC (8092 1133 20 to 8092 1133 30)	8092 1149 07
B to AA (8092 1133 20 to 8092 1133 40)	8092 1149 18
QC to AA (8092 1133 30 to 8092 1133 40)	8092 1149 26

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



MRTT-B
Manual wrench torque transducers

MRTT-B

Model	Capacity		Drive	Weight		Length mm	Ordering No.
	Nm	ft lb		kg	lb		
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 Screwdriver

MRTT-B

Model	Capacity		Square drive in	Weight		Length mm	Ordering No.
	Nm	ft lb		kg	lb		
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

Transducers



IRTT-B

IRTT-B

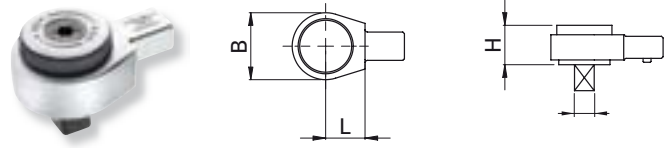
Model	Drive		Rated capacity		Ordering No.
	Hex in	Square In	Nm	ft lb	
Torque models					
IRTT-B 5-106	1/4		5	4	8059 0942 05
IRTT-B 5-06		1/4	5	4	8059 0942 07
IRTT-B 20-106	1/4		20	15	8059 0942 10
IRTT-B 20-06		1/4	20	15	8059 0942 15
IRTT-B 25-10		3/8	25	18	8059 0942 20
IRTT-B 75-10		3/8	75	55	8059 0942 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
Torque/angle models					
IRTT-B 1A-106	1/4		1	0.8	8059 0943 96
IRTT-B 2A-106	1/4		2	1.5	8059 0943 01
IRTT-B 5A-106	1/4		5	4	8059 0943 06
IRTT-B 5A-06		1/4	5	4	8059 0943 08
IRTT-B 20A-106	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.

Quality assurance in tightening



STwrench



Analysis wrenches

Model	Capacity		Drive	Weight		Length mm	Ordering No.
	Nm	ft lb		kg	lb		
Controller							
STwrench Controller				0.48	1.08	313	8059 0930 00
smartHEAD only Torque							
smartHEAD 30	30	23	9x12	0.20	0.44	167.5	8059 0920 30
smartHEAD 80	80	59	9x12	0.22	0.48	167.5	8059 0920 42
smartHEAD 150	150	111	14x18	0.55	1.21	271.0	8059 0920 48
smartHEAD 250	250	185	14x18	0.78	1.72	417.0	8059 0920 54
smartHEAD 400	400	295	14x18	0.93	2.05	584.0	8059 0920 60
smartHEAD 600	600	443	21x26	1.70	3.75	1048.5	8059 0920 66
smartHEAD A Torque + Angle							
smartHEAD A30	30	23	9x12	0.22	0.48	167.5	8059 0930 30
smartHEAD A80	80	59	9x12	0.24	0.53	167.5	8059 0930 42
smartHEAD A150	150	111	14x18	0.57	1.25	271.0	8059 0930 48
smartHEAD A250	250	185	14x18	0.80	1.76	417.0	8059 0930 54
smartHEAD A400	400	295	14x18	0.95	2.09	584.0	8059 0930 60
smartHEAD A600	600	443	21x26	1.72	3.79	1048.5	8059 0930 66
RBU Rapid Backup							
STwrench RBU Quality							8059 0930 90
STwrench RBU Production							8059 0930 91
Battery							
STwrench battery							8059 0930 86

Standard end fitting tools without TAG

Type	Hex in	B mm	H mm	L mm	g	Ordering No.	
Reversible ratchet	9 x 12	1/4	22	14.5	17.5	62	8059 0975 42
		3/8	33	24	17.5	136	8059 0975 43
		1/2	33	28.3	17.5	147	8059 0975 44
	14 x 18	1/2	43	26.2	25	302	8059 0976 32
		3/4	50	30.7	25	467	8059 0976 33
		21 x 26	3/4	69	30	62.5	1350



Standard end fitting tool
Ring end.



Standard end fitting tool
Flared end.

Note: More options can be found in our main catalogue, "Industrial Power Tools".

Accessories

Model	Ordering No.
STwrench IRC-B Module	8059 0920 10
STwrench IRC-W Module	8059 0920 11
Bar Code	8059 0920 12
Battery	8059 0930 86
Cable box	8059 0920 24
Battery charger	8059 0930 88
QATnode P	8059 0920 25
QATnode I/O	8059 0920 26
QATnode T	8059 0920 27



IRC-module



Battery



Battery charger



Bar Code



Cable box



QATnode

AIR TOOLS

Drills



LBB16



LBB26



LBB36



LBB37

Pistol grip

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	ls	cfm	mm	in		W	hp		Model	Ordering No.
Non-reversible drills with air supply through handle														
LBB16 EP-200 ^a	20000	6.5	0.6	1.2	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 60	200-U	8421 0108 61
LBB16 EP-060 ^a	6000	6.5	0.6	1.2	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 50	060-U	8421 0108 51
LBB16 EP-045 ^a	4500	6.5	0.6	1.2	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 40	045-U	8421 0108 41
LBB16 EP-033 ^a	3300	6.5	0.6	1.2	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 30	033-U	8421 0108 31
LBB16 EP-024 ^a	2400	6.5	0.6	1.2	8.0	17.0	6.3	1/4	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	1/4	290	0.4	8421 0108 10	010-U	8421 0108 11
LBB16 EP-005 ^b	500	10.0	0.7	1.5	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 06	005-U	8421 0108 07
LBB16 EP-003 ^b	300	10.0	0.7	1.5	8.0	17.0	6.3	1/4	1/4	290	0.4	8421 0108 01	003-U	8421 0108 02
LBB16 EPX-200 ^a	20000	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 82	200-U	8421 0108 63
LBB16 EPX-060 ^a	6000	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 52	060-U	8421 0108 53
LBB16 EPX-045 ^a	4500	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 42	045-U	8421 0108 43
LBB16 EPX-033 ^a	3300	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 32	033-U	8421 0108 33
LBB16 EPX-024 ^a	2400	6.5	0.6	1.2	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 22	024-U	8421 0108 23
LBB16 EPX-010 ^a	1000	10.0	0.7	1.5	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 12	010-U	8421 0108 03
LBB16 EPX-005 ^a	500	10.0	0.7	1.5	9.5	20.0	6.3	1/4	1/4	340	0.45	8421 0108 08	050-U	8421 0108 09
LBB26 EPX-060 ^a	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 ^a	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 ^a	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 ^a	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 ^a	1900	10	0.79	1.7	14.5	31.8	10.0	3/8	1/4	500	0.7	8421 0500 24	026-U	8421 0500 25
LBB26 EPX-013 ^{a,b}	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 ^b	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 ^b	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 ^b	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 ^a	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 ^a	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 ^a	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 ^a	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 ^a	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 ^b	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 ^b	500	-	1.2	3.3	16.5	34.9	10.0	3/8	3/8	700	0.9	-	-H005U	8421 0408 03
LBB37 H230	23000	6.5	1.0	2.2	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 03	-H230U	8421 0608 18
LBB37 H065	6500	6.5	1.2	2.5	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 11	-H065U	8421 0608 17
LBB37 H037	3700	10.0	1.2	2.5	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 13	-H037U	8421 0608 16
LBB37 H015	1500	10.0	1.5	3.3	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 05	-H015U	8421 0608 15
LBB37 H006	600	13.0	1.2	2.5	20.5	44.0	10.0	3/8	3/8	820	1.1	8421 0608 06	-H006U	8421 0608 14

^a Including chuck guard.

^b Including support handle.

AIRTOOLS

Drills

Straight



LBB16

Model	Free speed r/min ^a	Chuck capacity mm	Weight		Air consumption at free speed		Hose size		Air inlet thread BSP	Power		With chuck Ordering No.	Without chuck	
			kg	lb	ls	cfm	mm	in		W	hp		Model	Ordering No.
Drills with rear exhaust														
LBB16 S260	26000	0-6.5	0.55	1.1	8.0	17.0	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	1.1	8.0	17.0	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	1.1	8.0	17.0	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	17.0	6.3	1/4	1/4	350	0.47	8421 0210 03	S038-U	8421 0210 13
LBB16 S029	2900	0-8.0	0.60	1.2	8.0	17.0	6.3	1/4	1/4	350	0.47	8421 0210 04	S029-U	8421 0210 14
LBB16 S022	2200	0-10.0	0.70	1.5	8.0	17.0	6.3	1/4	1/4	350	0.47	8421 0210 05	S022-U	8421 0210 15
LBB16 S012	1200	0-10.0	0.70	1.5	8.0	17.0	6.3	1/4	1/4	350	0.47	8421 0210 06	S012-U	8421 0210 16

^a The free speed can be reduced to 50% of the maximum speed using the trim valve.

Angle



LBV11



LBV16



LBV36

Model	Free speed r/min	Setting range rpm	Collet or chuck capacity mm	Weight		Air consumption at free speed		Hose size		Air inlet thread BSP	Power		Ordering No.	With spindle lock Ordering No.
				kg	lb	ls	cfm	mm	in		W	hp		
30° angle head														
LBV11 S027-S30	2700	-	5.0	0.5	1.1	3.2	6.8	5.0	1/8	1/8	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	^a	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	^a	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 07	-
LBV36 S030-30 ^b	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 ^b	4500	-	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 72	-
LBV16 045-32	4500	3200-4500	^a	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	-	8421 0110 57
45° angle head														
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	^a	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 60	-
90° angle head														
LBV11 S025-S90	2500	-	5.0	0.5	1.1	3.2	6.8	5.0	1/8	1/8	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	^a	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	^a	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	^a	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	^a	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 24	-
LBV16 055-S92	5500	4500-5500	^a	0.45	1.0	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 58	-
LBV36 S030-90 ^b	3000	-	5.0	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 60	-
LBV36 S030-S90 ^b	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 ^b	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 ^b	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 ^b	3000	-	^a	1.0	2.2	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 64	-
LBV36 S030-S92 ^b	3000	-	^a	0.9	2.0	17.0	36.0	10.0	3/8	1/4	510	0.73	8421 0414 65	-
360° angle head														
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	^a	0.5	1.1	8.7	18.4	6.3	1/4	1/4	300	0.4	8421 0110 68	-

^a Internal thread 1/4"-28.

^b Short lever as standard.

Note: This is just a selection of tools from our extensive range. Please refer to the current edition of our main catalogue, "Industrial Power Tools," to see all the versions available.

AIR TOOLS

Grinders



GTG21



GTG40

Turbo grinders

Model	Max free speed r/min	For wheel dia mm	Max output		Weight		Height over spindle		Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No.
			kW	hp	kg	lb	mm	in	max output l/s	cfm	free speed l/s	cfm	mm	in		
For grinding and cutting																
GTG21 F120-13	12000	125	2.1	2.8	1.8	3.9	68	2.7	30	64	10	21	13	1/2	3/8	8423 2963 00
GTG21 F085-18	8500	180	2.1	2.8	2.0	4.2	72	2.8	30	64	10	21	13	1/2	3/8	8423 2963 02
GTG40 F085-18	8500	180	4.5	6.1	3.8	8.4	128	5.0	60	126	20	42	16	5/8	1/2	8423 2900 10
GTG40 F066-23	6600	230	4.5	6.1	4.0	8.8	128	5.0	60	126	20	42	16	5/8	1/2	8423 2910 10
For sanding																
GTG21 S085 ^a	8500	180	2.1	2.8	1.6	3.5	80	3.1	30	64	10	21	13	1/2	3/8	8423 2963 05
GTG21 S085 M14	8500	180	2.1	2.8	1.6	3.5	80	3.1	30	64	10	21	13	1/2	3/8	8423 2963 07
GTG21 D120	12000	125	2.1	2.8	1.6	3.5	92	3.6	30	64	10	21	13	1/2	3/8	8423 0800 00
GTG21 D085	8500	180	2.1	2.8	1.6	3.5	92	3.6	30	64	10	21	13	1/2	3/8	8423 0800 01
GTG40 S060	6000	140 ^a	4.5	6.1	3.6	7.9	132	5.2	60	126	20	42	16	5/8	1/2	8423 2930 00
For cup wheel type 11																
GTG40 S060-C15 ^b	6000	150	4.5	6.1	4.3	10.5	126	5.0	60	126	20	42	16	5/8	1/2	8423 2930 10

^a UNC 5/8"-11 spindle.

^b Spindle thread: UNC 5/8" Length 23.5 mm.

-D prepared for accessories for spot suction kit.



LSV28



LSV48

Angle grinders

Model	Max free speed r/min	For wheel dia D x T x H ^a mm	Spindle thread	Max output		Weight		Height over spindle mm	Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No.
				kW	hp	kg	lb		max output l/s	cfm	free speed l/s	cfm	mm	in		
LSV18 S170-08	17000	80x7x10	UNF 3/8"	0.45	0.6	0.7	1.55	71	11.2	23	6.6	14	10	3/8	1/4	8423 0111 10
LSV28 ST13-10E	13000	100x7x9.5	3/8	0.75	1.0	1.5	3.3	68	21.5	45	14.5	30	10	3/8	3/8	8423 0125 29
LSV28 ST12-10	12000	100x7x16	3/8	0.75	1.0	1.7	3.7	80	17.4	36.9	7.5	15.9	10	3/8	3/8	8423 0125 14
LSV28 ST12-12	12000	115x7x22	3/8	0.75	1.0	1.7	0.0	80	17.4	36.9	7.5	15.9	10	3/8	3/8	8423 0125 16
LSV28 ST12-13	12000	125x7x22	3/8	0.75	1.0	1.7	0.0	80	17.4	36.9	7.5	15.9	10	3/8	3/8	8423 0125 17
LSV28 S060-18	6000	180 ^b	5/8"-11	0.73	0.98	2.5	5.4	87	16	33.9	7.3	15.5	10	3/8	3/8	8423 0135 53
LSV38 S12-125	12000	125x7x22	M14	1.30	1.7	1.6	3.5	83	28	58	15	31	13	3/8	1/2	8423 0131 08
LSV38 ST12-125	12000	125x7x22	M14	1.30	1.7	1.8	4.0	83	28	58	15	31	13	3/8	1/2	8423 0131 09
LSV38 SA12-125	12000	125x7x22	M14	1.30	1.7	2.0	4.4	83	28	58	15	31	13	3/8	1/2	8423 0131 13
LSV48 SA120-13	12000	125x7x22	M14	1.9	2.5	2.5	5.5	78	36	76	17	36	16	5/8	1/2	8423 0132 07
LSV48 SA085-18	8500	180x7x22	M14	1.9	2.5	2.7	5.9	78	36	76	17	36	16	5/8	1/2	8423 0132 06
LSV48 SA066-23	6600	230x7x22	5/8"-11	1.9	2.5	2.9	6.4	82	36	76	17	36	16	5/8	1/2	8423 0132 08

^a D x T x H = Diameter x Thickness x Hole.

^b Specially for flexible depressed center wheel.

SA = Autobalancer.

E = Extended version.

With wheel guard for disc -08 = Ø 75 mm
 -12 = Ø 115 mm
 -13 = Ø 125 mm
 -18 = Ø 180 mm
 -23 = Ø 230 mm

AIR TOOLS

Grinders and sanders



LSF18



LSF28

Die grinders

Model	Max free speed r/min	Rec. max dia. of			Max output		Weight		Length mm	Air consumption at				Rec. hose size		Air inlet thread BSP	Ordering No. with collet	
		Tungsten carbide burrs mm	Mounted point mm		kW	hp	kg	lb		max output		free speed		mm	in		6 mm	1/4"
										l/s	cfm	l/s	cfm					
Straight models																		
LSF18 S460-1 ^a	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 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 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	
LSF28 S250 ^a	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 11	-	
LSF28 S250E ^a	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 S180 ^a	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 ^a	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 S150 ^a	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 ^a	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 S120 ^a	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 ^a	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	-	

^a Not lubrication-free. -1 = 6 mm collet E = Extended version R = Model is rigid, without scatter damping



LST21



LST22

Orbital and Random Orbital Sanders

Model	Max free speed r/min	Pad size mm	Orbit dia mm	Max output		Weight		Height mm	Length mm	Air consumption at free speed		Rec. hose size mm	Air inlet thread BSP	Ordering No.
				kW	hp	kg	lb			l/s	cfm			
Extraction model - self suction														
LST21 R350	12000	90	5	0.2	0.27	0.85	1.85	95	133 ^b	8	17	8	1/4	8423 0361 66
LST21 R550	12000	125	5	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 70
LST21 R650	12000	150	5	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 74
LST21 R525	12000	125	2.4	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 82
LST21 R625	12000	150	2.4	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 85
Extraction model - central suction^a														
LST22 R350	12000	90	5	0.2	0.27	0.85	1.85	95	133 ^b	8	17	8	1/4	8423 0361 67
LST22 R550	12000	125	5	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 71
LST22 R650	12000	150	5	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 75
LST22 R650-9	12000	150	5	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 40
LST22 R325	12000	92	2.4	0.2	0.27	0.85	1.85	95	133 ^b	8	17	8	1/4	8423 0361 78
LST22 R525	12000	125	2.4	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 83
LST22 R625	12000	150	2.4	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 86
LST22 R625-9	12000	150	2.4	0.2	0.27	0.85	1.85	83	133 ^b	8	17	8	1/4	8423 0361 50

^a Required air flow 60 m³/h or 35 cfm.

^b 186 mm (7.3") suction hose connector included.

H = With handle.

S = Without handle.

All data at 6.3 bar.

-9 Velcro pad, 9 holes.

Note: This is just a selection of tools from our extensive range. Please refer to the current edition of our main catalogue, "Industrial Power Tools," to see all the versions available.

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 work-piece 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.

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/VIBGUIDE.htm We recommend a programme of health surveillance to detect early symptoms which may relate to vibration exposure, so that management procedures can be modified to help prevent future impairment.

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.

Additional information about the tests, vibration control and regarding in-use vibrations can be found at:

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 ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Pneumatic screwdrivers					
Pistol grip					
Shut-off					
LUM22 HR	<2.5	-	<2.5	78	-
LUM32 HR	<2.5	-	<2.5	77	-
LUM12 HRX	<2.5	-	<2.5	74	-
LUM22 HRX	<2.5	-	<2.5	78	-
LUM10 HRX	<2.5	-	<2.5	72	-
LUM12 HRF	<2.5	-	<2.5	<70	-
LUM25 HRF	<2.5	-	<2.5	74	-
Straight					
Shut-off					
LUM02 PR	<2.5	-	<2.5	71	-
LUM10 PR	<2.5	-	<2.5	<70	-
LUM12 PR	<2.5	-	<2.5	75	-
LUM22 PR	<2.5	-	<2.5	75	-
LUM12 SR	<2.5	-	<2.5	75	-
LUM22 SR	<2.5	-	<2.5	78	-
Angle					
Shut-off					
LTV009	<2.5	-	<2.5	75	-
LTV18	<2.5	-	<2.5	71	-
Pistol grip					
Direct drive					
LUD12 HRX	<2.5	-	<2.5	74	-
LUD22 HR	<2.5	-	<2.5	76	-
LUF34 HRD	<2.5	-	<2.5	79	90
COMBI22	<2.5	-	<2.5	76	-
COMBI34	<2.5	-	<2.5	79	-
Pneumatic screwdrivers					
Slip clutch^b					
Pistol grip					
TWIST12 HRF	<2.5	-	6	80	-
TWIST12 HRX	<2.5	-	6	80	-
TWIST22 HR	<2.5	-	6	86	97
TWIST22 HRX	<2.5	-	6	86	97
TWIST HRF	<2.5	-	6	80	-
LUF34 HR	<2.5	-	6	81	92
Straight					
TWIST12 SR3	<2.5	-	6	85	96
TWIST12 SR4	<2.5	-	16	85	96
TWIST22 PR	<2.5	-	15	86	97
TWIST22 SR6	<2.5	-	15	86	97
TWIST22 SR10	<2.5	-	>30	86	97
Angle					
TWIST VR07	<2.5	-	6	81	92
TWIST VR13	<2.5	-	8	82	93
Hydraulic impulse nutrunners					
Pistol grip					
Shut-off					
EP3PTX5 HR42	<2.5	-	<2.5	76	-
EP4PTX9 HR42	<2.5	-	<2.5	<70	-
EP4PTX9 HR10	<2.5	-	<2.5	<70	-
EP5PTX17 HR42	<2.5	-	<2.5	74	-
EP5PTX19 HR10	<2.5	-	<2.5	73	-
EP6PTX28 HR42	3	1	<2.5	77	-
EP6PTX32 HR10	<2.5	-	<2.5	75	-
EP7PTX55 HR10	4.2	0.8	<2.5	79	-
EP8PTX70 HR10	3.5	1	<2.5	80	-
EP9PTX80 HR13	5.6	0.8	<2.5	82	93
EP11PTX120 HR13	5.4	1.2	2.8	83	94
EP13PTX150 HR13	4.7	0.7	6.2	85	96
EP15PTX250 HR20	6.5	0.4	6	88	99
EP19PTX450 HR20	8.2	1	8.2	88	99
EP5PTS12 HR42	4.3	0.7	<2.5	75	-
EP5PTS14 HR10	2.8	0.8	<2.5	73	-
EP6PTS20 HR42	3.4	0.5	<2.5	76	-
EP6PTS22 HR10	2.9	0.7	<2.5	77	-
EP7PTS30 HR42	5.9	0.9	<2.5	78	-
EP7PTS35 HR10	4.3	0.8	3	76	-
EP8PTS40 HR42	5.7	0.7	<2.5	79	-
EP8PTS55 HR10	4.6	1.5	<2.5	76	-
EP10PTS90 HR13	4.8	0.9	3.5	80	-
EP12PTS150 HR13	4.7	0.6	3.6	82	93
EP14PTS250 HR20	6.3	1	5.3	85	96
EP18PTS450 HR20	7.1	0.8	7.6	87	98
EP7PTS35 HRF10	4.3	0.8	2.9	76	-
EP8PTS55 HRF10	4.6	1.5	2.8	76	-
EP10PTS90 HRF13	4.8	0.9	2.6	80	-
Non shut-off					
EP5XS HR42	<2.5	-	<2.5	78	-
EP6XS HR42	3	0.5	<2.5	81	92
EP6XS HR10	<2.5	-	<2.5	79	-
EP6PS HR42	3.7	0.5	<2.5	81	92
EP6PS HR10	3.1	0.7	<2.5	79	-
EP8PS HR10	4.1	1.2	<2.5	82	93
EP7XS HR42	2.7	0.7	<2.5	80	-
EP7XS HR10	2.8	1	<2.5	79	-
EP8XS HRX42	2.8	0.6	3.7	78	-
EP8XS HRX10	3	0.7	3.7	82	93
EP10XS HR13	4.6	0.8	<2.5	83	94
EP12XS HR13	6	1.1	2.5	85	96
EP14XS HR13	4	1.4	3.9	85	96
EP16XS HR20	6.7	0.9	5.5	86	97
EP20XS HR20	6.8	1.4	5.8	87	100

^a The uncertainty in the sound levels is 3 dB(A).

^b 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.

Material removal tools

Model	Vibration total value (3 axes value) according to ISO 28927-1 Valid from 2010		Vibration value (1 axis value) according to EN 60745-2-3 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Grinders					
Turbo grinder					
Angle					
GTG40 F085-18	3.5	0.8	<2.5	84	95
GTG40 F066-23	<2.5	-	<2.5	84	95
GTG40 S060-C15	3.4	0.8	<2.5	84	95
Model	Vibration total value (3 axes value) according to ISO 28927-4 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-4 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Turbo grinder					
Straight					
GTR40 S072-13	<2.5	-	<2.5	85	96
GTR40 S060-15	<2.5	-	<2.5	85	96
GTR40 S060-20	3.3	0.8	<2.5	85	96
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 ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Turbo sander					
GTG40 S060	<2.5	-	<2.5	84	95
Model	Vibration total value (3 axes value) according to ISO 28927-5 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-1 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Drills					
Pistol grip					
LBB16 EP	<2.5	-	<2.5	80	-
LBB16 EPX	<2.5	-	<2.5	82	93
LBB26 EPX	<2.5	-	<2.5	82	93
LBB36	<2.5	-	<2.5	83	94
LBB37	<2.5	-	<2.5	86	97
Straight					
LBB16 S260	<2.5	-	<2.5	75	-
LBB16 S064	<2.5	-	<2.5	75	-
LBB16 S045	<2.5	-	<2.5	75	-
LBB16 S038	<2.5	-	<2.5	75	-
LBB16 S029	<2.5	-	<2.5	75	-
Angle					
LBV16 90° Large	<2.5	-	<2.5	75	-
LBV36 90° Large	<2.5	-	<2.5	81	92
LBV37 90° Heavy duty	<2.5	-	<2.5	84	95

Model	Vibration total value (3 axes value) according to ISO 28927-12 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-13 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Grinders					
Die grinder					
Straight					
LSF18 S460	4.7	2	<2.5	79	-
LSF18 S460E	3.6	1.3	<2.5	82	-
LSF18 S300	<2.5	-	<2.5	70	-
LSF18 S300/R	3.2	2.2	<2.5	73	-
LSF18 S300E	3.4	1.8	<2.5	73	-
LSF18 S300E/R	3.3	1	<2.5	73	-
LSF18 S200	3.4	0.9	<2.5	<70	-
LSF18 S200E	3.1	1.8	<2.5	70	-
LSF28 S250	2.7	0.7	5.6	81	92
LSF28 S250E	<2.5	-	<2.5	81	92
LSF28 S250E-R	3	0.7	<2.5	81	92
LSF28 S250-R	3.1	1.8	<2.5	81	92
LSF28 S180	2.8	1.1	4	74	-
LSF28 S180E	<2.5	-	<2.5	74	-
LSF28 S180E-R	2.8	1	<2.5	74	-
LSF28 S180-R	3.4	0.9	<2.5	74	-
LSF28 S150	3.6	1.2	5.7	<70	-
LSF28 S150E	<2.5	-	3.1	<70	-
LSF28 S120	2.8	0.7	<2.5	<70	-
LSF38 S250E	2.8	1.3	<2.5	90	101
LSF38 S180E	<2.5	-	<2.5	86	97
LSF38 S180E/R	<2.5	-	<2.5	85	96
LSF38 S150E/R	<2.5	-	<2.5	81	92
LSF28 ST030	<2.5	-	<2.5	74	-
LSF28 ST030E	2.7	1.5	<2.5	74	-
LSF28 ST070	<2.5	-	3.5	81	92
LSF28 ST070E	2.7	1.2	4.2	81	92
LSF07 S850	<2.5	-	<2.5	75	-
Angle					
LSV18 S200	<2.5	-	<2.5	73	-
LSV18 S120	<2.5	-	<2.5	73	-
LSV18 S080	<2.5	-	<2.5	70	-

^a 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.

Material removal tools

Model	Vibration total value (3 axes value) according to ISO 28927-4 Valid from 2010		Vibration value (1 axis value) according to ISO 8662-4 Valid until 2009	Sound pressure levels and sound power levels ^a according to ISO 15744	
	Value 3-axes m/s ²	Uncertainty m/s ²	Value 1-axis m/s ²	Sound pressure dB(A)	Sound power dB(A)
Grinders					
Angle grinders					
LSV28 ST13-10E	8.3	2.8	4.4	81	92
LSV28 ST12-10	4	1.3	3.9	86	97
LSV28 ST12-12	5.3	1.6	3.9	86	97
LSV28 ST12-13	5.6	1.7	3.9	86	97
LSV28 S060-18	4.5	1.4	<2.5	81	92
LSV38 S12-125	5.2	1.6	3	77	-
LSV38 ST12-125	4.9	1.5	4.4	77	-
LSV38 SA12-125	3.3	0.8	<2.5	77	-
LSV48 SA120-13	4.8	1.1	<2.5	87	98
LSV48 SA085-18	3.9	0.9	<2.5	87	98
LSV48 SA066-23	3.9	1.6	<2.5	87	98
Angle sanders					
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
Vertical sanders					
LSS53 S060	<2.5	-	<2.5	76	-
LSS64 S060	<2.5	-	4.4	81	92
Orbital and random orbital sanders					
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	-

^a 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.

Twój dystrybutor:



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