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BOSCH

Invented for life

2023
Katalog

**TORK KONTROLLÜ
ŞARJLI SIKICILAR**

CORDLESS AND ELECTRIC SCREWDRIVERS FOR INDUSTRY

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BIG IN PERFORMANCE, COMPACT IN SIZE

E	X	A	C	T
Ergonomic	EXtremely Light	Accurate	Cmk proven	Tool

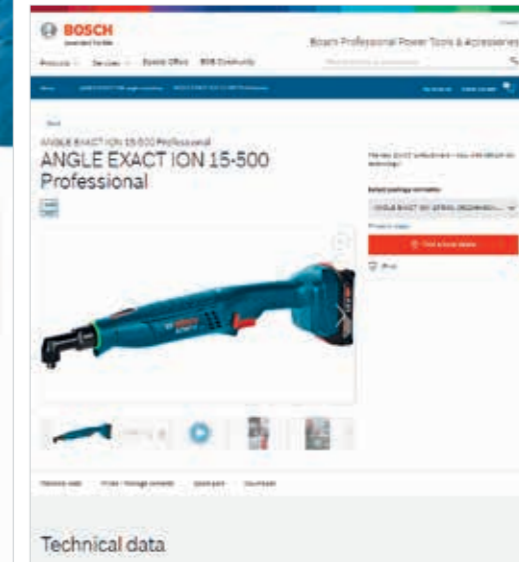
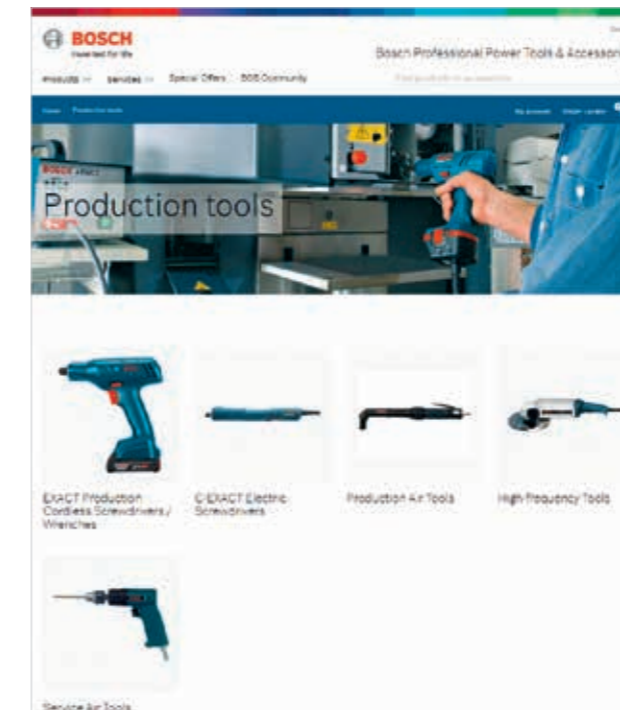


The **EXACT** and **ANGLE EXACT** tools from BOSCH are cordless shut-off screwdrivers for industry – offering the greatest accuracy, longevity and energy efficiency.

In assembly situations where cables or pneumatic hoses get in the way, the **EXACT** series enables you to optimise processes, build better products and reduce your costs.

- ▶ **Bright LED light** for illuminating the work area
- ▶ **Coloured marking rings** for easy identification
- ▶ **Rotational direction switch** operated with one hand
- ▶ **Repeat protection**
- ▶ **Low weight, balanced weight distribution** for better ergonomics
- ▶ **Rechargeable batteries in industrial design** for maximum service life
- ▶ **Torque setting** only with a special tool
- ▶ **Maximum repeatability** thanks to the Bosch clutch's design
- ▶ **Easy service** thanks to the connector plugs and common parts
- ▶ **Visual and audible signals** provide information about battery status and screwdriving quality
- ▶ **Wireless quality assurance** with the Bosch Bluetooth® radio system

AN OVERVIEW WITH A SINGLE CLICK: ALL PRODUCTION TOOLS ONLINE



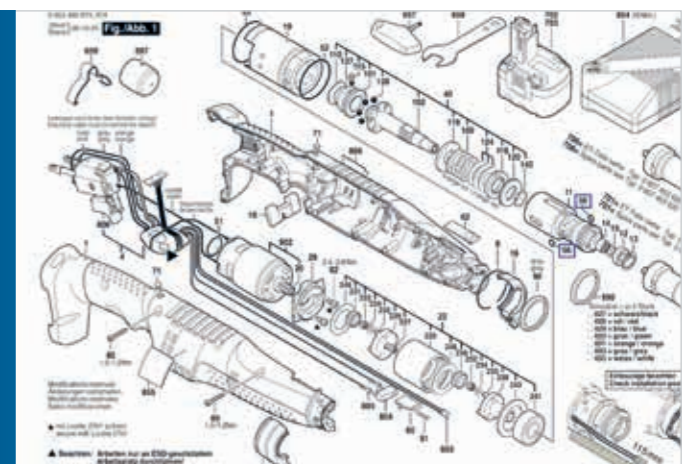
An extensive online catalogue including applications is available at www.boschproductiontools.com.

The tool selection is made easier by the ability to run comparisons between screwdrivers. For example, you can display the power and speed of different tools.

You will also find the latest information on measurement data, innovations and new developments for Bosch industrial tools. You can quickly obtain all relevant information needed to select the correct tools for your production.

Dimensional drawings, 3D data, homologation data, operating instructions, images and exploded drawings can be downloaded directly from the Internet.

A spare parts service informs users about which spare parts they need.



All specifications in this catalogue are based on the exclusive use of Bosch production tool battery packs. All weight data corresponds to EPTA 01/2003.

1

EXACT AND ANGLE EXACT WITH LITHIUM-ION TECHNOLOGY

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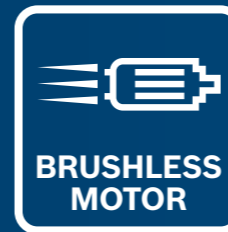


BETTER THAN EVER BEFORE! WITH BOSCH PREMIUM LITHIUM-ION TECHNOLOGY

The handy Bosch cordless shut-off screwdrivers from the EXACT series are now more powerful and efficient than ever before.

Enabling the highest repeatability, they are especially suitable for driving rows of screws and completing assembly applications with maximum performance whilst meeting very high quality demands. Thanks to Bosch lithium-ion battery technology, they deliver maximum power for high torques and speeds. They are also extremely resilient with minimal energy loss, so they additionally reduce your costs with their superior lifetime. They also impress with their low weight of only 0.8 kg (EXACT 12V) for comfortable working in shifts.

Now also with:



BRUSHLESS
MOTOR



LI-ION



EXACT 12V AND ANGLE EXACT 12V.

Smaller, shorter, lighter – the cordless industrial screwdriver with perfect ergonomics.



- ▶ **Perfect ergonomics**
With a head length of 154 mm and a weight of 0.8 kg including 12 V/3.0 Ah rechargeable battery
- ▶ **Perfect process control**
With six different screwdriving stages, adjustable according to time, speed, direction and angle of rotation, as well as torque
- ▶ **Maximum service life and robustness**
Thanks to the brushless EC motor and high-quality, wear-free components



- ▶ Compact 2.0 and 3.0 Ah rechargeable battery from the 12 V class
- ▶ The compact design is ideal for 12 V tools
- ▶ Optimised battery capacity makes it suitable for most 12 V applications
- ▶ 6.0 Ah battery with maximum runtime in Bosch's 12 V category
- ▶ Extremely high battery capacity delivers up to 300% more runtime than the 12V 2.0 Ah Professional model
- ▶ Compact and with perfect balance between size and capacity for ultimate performance with 12 V power tools
- ▶ Compatible since 2005: all of our batteries are compatible with new and existing Bosch Professional tools in the same voltage class.



EXACT 12V handling and ergonomics

- ▶ Lightest tool weighing only 0.65 kg without battery
- ▶ Shortest head length (154 mm) and smallest height (179 mm)

1/4" quick-change chuck

- ▶ For quickly changing the tool

LED ring light

- ▶ For perfect lighting in dark and tight spaces
- ▶ Adjustable via USB port

New extremely small angle head

- ▶ With 1/4" quick-change chuck or 3/8" square, can be continuously rotated

ANGLE EXACT 12V handling and ergonomics

- ▶ Lightest tool weighing only 1.0 kg without battery
- ▶ Shortest head length (346 mm)

Maximum process reliability

- ▶ Visual and audible indication of the screwdriving results and the battery status

Flexible Power System

- ▶ Compatible with all Bosch Professional 12 V rechargeable batteries from 2.0 Ah (and chargers)

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USB port for screwdriving stage speed parametrisation

- ▶ Adjustable to your specific application
- ▶ Adjustable according to switch-off, angle and time

Security

- ▶ The safest 12 V lithium-ion battery pack, with extremely long service life

Adjustable to specific applications

- ▶ USB port for screwdriving stage speed parametrisation



Robustness and service life

- ▶ Brushless high-power motor
- ▶ Maintenance-free components
- ▶ Extremely robust and high-quality tool for the longest service life



Perfect tool control

- ▶ Adjustable via USB port
- ▶ Various tightening phases
- ▶ Adjustable according to switch-off, angle and time

EXACT 12V AND ANGLE EXACT 12V.

Smaller, shorter, lighter – the cordless industrial screwdriver with perfect ergonomics.



- ▶ **Perfect ergonomics:** With a head length of 154 mm and a weight of 0.8 kg including 12 V/3.0 Ah rechargeable battery
- ▶ **Perfect process control:** With six different screw-driving stages, adjustable according to time, speed, direction and angle of rotation, as well as torque
- ▶ **Maximum service life and robustness:** Thanks to the high-quality and wear-free components
- ▶ Brushless (EC) motor for 30 % more efficiency (compared to conventional DC motors) and extremely long service life
- ▶ LED ring light for optimally illuminating the work area, adjustable via a USB port
- ▶ Precision shut-off clutch with $C_{mk} > 1.67$ (in +/-10 % tolerance range according to ISO 5393)
- ▶ Visual and audible indication of screwdriving results and battery status, for the greatest process reliability
- ▶ Bosch Premium lithium-ion technology for long lifetime and runtime

EXACT		Part number
EXACT 12V-6-670		0 602 496 400 Pack of 5: 0 602 496 500
EXACT 12V-3-1100		0 602 496 401 Pack of 5: 0 602 496 501
EXACT 12V-2-670		0 602 496 402 Pack of 5: 0 602 496 502

- ▶ **Perfect ergonomics:** With a head length of 346 mm and a weight of 1.0 kg including 12 V/3.0 Ah rechargeable battery
- ▶ LED ring light for optimally illuminating the work area, adjustable via a USB port
- ▶ New extremely small angle head with 1/4" quick-change chuck or 3/8" square, can be continuously rotated
- ▶ Precision shut-off clutch with $C_{mk} > 1.67$ (in +/-10 % tolerance range according to ISO 5393)
- ▶ Visual and audible indication of screwdriving results and battery status, for the greatest process reliability
- ▶ Bosch Premium lithium-ion technology for long lifetime and runtime

ANGLE EXACT		Part number
ANGLE EXACT 12V-12-400		0 602 496 600
		0 602 496 60A
ANGLE EXACT 12V-6-600		0 602 496 601
		0 602 496 60B
ANGLE EXACT 12V-3-600		0 602 496 602
		0 602 496 60C

Torque, hard/soft as per ISO 5393 (Nm)	Speed (no-load)	Bit holder	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)
1.5 – 6	135 – 670 *	1/4" quick-change chuck	12 V/3.0 Ah*	R/L	0.85 kg (including rechargeable battery)
1 – 3	220 – 1100 *	1/4" quick-change chuck	12 V/3.0 Ah*	R/L	0.85 kg (including rechargeable battery)
0.5 – 2	135 – 670 *	1/4" quick-change chuck	12 V/3.0 Ah*	R/L	0.85 kg (including rechargeable battery)

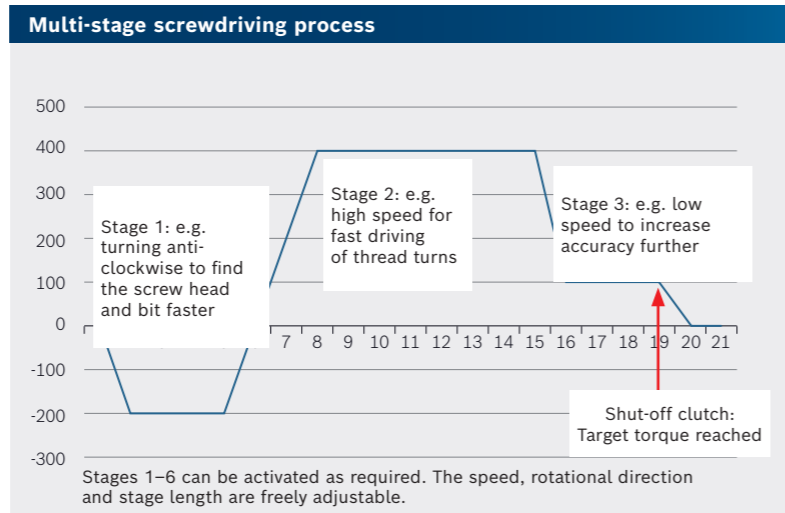
* Below 50 % speed the power may be lower

* Rechargeable battery not in the items included

Torque, hard/soft as per ISO 5393 (Nm)	Speed (no-load)	Bit holder	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)
2 – 12	(80) 200 – 400	3/8" square	12 V/3.0 Ah*	R/L	1.0 kg (including rechargeable battery)
2 – 12	(80) 200 – 400	1/4" quick-change chuck	12 V/3.0 Ah*	R/L	1.0 kg (including rechargeable battery)
1.5 – 6	120) 300 – 600	3/8" square	12 V/3.0 Ah*	R/L	1.0 kg (including rechargeable battery)
1.5 – 6	(120) 300 – 600	1/4" quick-change chuck	12 V/3.0 Ah*	R/L	1.0 kg (including rechargeable battery)
0.7 – 3	(120) 300 – 600	3/8" square	12 V/3.0 Ah*	R/L	1.0 kg (including rechargeable battery)
0.7 – 3	(120) 300 – 600	1/4" quick-change chuck	12 V/3.0 Ah*	R/L	1.0 kg (including rechargeable battery)

* Rechargeable battery not in the items included

EXACT ION AND ANGLE EXACT ION 18V WITH LITHIUM-ION TECHNOLOGY



Greater process reliability:

- ▶ Precision shut-off clutch with $C_{mk} > 1.67$ (in $\pm 10\%$ tolerance range according to ISO 5393)
- ▶ **NEW!** Multi-stage screwdriving process, adjustable to your individual application via USB interface

Greater efficiency:

- ▶ **NEW!** Bosch Premium lithium-ion technology for long lifetime and runtime
- ▶ **NEW!** Brushless (EC) motor for 30% more efficiency (compared to conventional DC motors) and extremely long lifetime

Greater comfort:

- ▶ **NEW!** New ergonomic design and lower weight for even more comfortable work

Lower costs:

- ▶ **NEW!** Faster speeds (compared to SEC-EXACT) and screw stages can reduce production times and improve quality

1/4" quick-change chuck, for quickly changing the tool

Brushless motor: Made by BOSCH, for maintenance-free operation

Lighting LED, for optimally illuminating the work area

Visual and audible indication of screwdriving results and battery status, for the greatest process reliability

The proven Bosch shut-off clutch is adjustable with a special tool, for the highest accuracy

New switch module and new handle design, for even more ergonomic work

Innovative modular electronics, for even easier maintenance

USB interface for configuring speed of screwdriving stages, adjustable to your specific application



Angle head adjustable, for even more ergonomic use

Lighting LED adjustable, for optimum illumination of the work area

The safest 18 V lithium-ion battery pack, with extremely long service life

Flexible Power System







- ▶ **New, patented interface,** to prevent mistakes
- ▶ **Temperature monitoring and overload protection,** for extremely long service life
- ▶ **Double locking mechanism,** to prevent falling out
- ▶ **Battery charge indicator,** to identify the state of charge
- ▶ **Bosch high-capacity battery cells,** with low energy loss, for maximum speeds and torques
- ▶ **Integrated cooling,** for extremely long service life



EXACT ION NOW WITH LITHIUM-ION TECHNOLOGY

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- ▶ Precision shut-off clutch with $C_{mk} > 1.67$ (in $\pm 10\%$ tolerance range according to ISO 5393)
- ▶ Multi-stage screwdriving process, adjustable to your individual application via USB interface
- ▶ Bosch Premium lithium-ion technology for long lifetime and runtime
- ▶ Brushless (EC) motor for 30% more efficiency (compared to conventional DC motors) and extremely long lifetime
- ▶ New ergonomic design and lower weight for even more comfortable work
- ▶ Faster speeds and screwdriving stages can reduce production times and improve quality

	Part number	Torque, hard/soft as per ISO 5393 (Nm)	Speed (no-load)
EXACT ION 2-700 	0 602 494 400	0.5 – 2	70 – 700
EXACT ION 4-2000 	0 602 494 401	1 – 4	200 – 2.000
EXACT ION 6-1500 	0 602 494 402	1 – 6	150 – 1.500
EXACT ION 8-1100 	0 602 494 403	2 – 8	110 – 1.100
EXACT ION 12-700 	0 602 494 404	2 – 12	70 – 700
EXACT ION 12-450 	0 602 494 405	2 – 12	45 – 450

Bit holder	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)	Accessories included in the scope of delivery
1/4" quick-change chuck	18 V/2.0 Ah *	R/L	1.3 (including battery)	Light green colour ring
1/4" quick-change chuck	18 V/2.0 Ah *	R/L	1.3 (including battery)	Grey colour ring
1/4" quick-change chuck	18 V/2.0 Ah*	R/L	1.3 (including battery)	Black colour ring
1/4" quick-change chuck	18 V/2.0 Ah*	R/L	1.3 (including battery)	Orange colour ring
1/4" quick-change chuck	18 V/2.0 Ah*	R/L	1.3 (including battery)	Red colour ring
1/4" quick-change chuck	18 V/2.0 Ah*	R/L	1.3 (including battery)	Black colour ring

* Rechargeable battery not in the items included

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EXACT ION WK NOW WITH LITHIUM-ION TECHNOLOGY

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- ▶ Precision shut-off clutch with $C_{mk} > 1.67$ (in $\pm 10\%$ tolerance range according to ISO 5393)
- ▶ Multi-stage screwdriving process, adjustable to your individual application via USB interface
- ▶ Bosch Premium lithium-ion technology for long lifetime and runtime
- ▶ Brushless (EC) motor for 30% more efficiency (compared to conventional DC motors) and extremely long lifetime
- ▶ New ergonomic design and lower weight for even more comfortable work
- ▶ Faster speeds and screwdriving stages can reduce production times and improve quality

	Part number	Torque, hard/soft as per ISO 5393 (Nm)*	Speed (no-load)*
	0 602 494 406	2 – 8	105 – 1.050
	0 602 494 407	2 – 11	75 – 750
	0 602 494 408	2 – 16	50 – 500
	0 602 494 409	2 – 16	32 – 320

* Measured with Bosch angled screw head

Bit holder	Battery specifications (V)	Direction of rotation	Weight according to EPTA (kg)	Accessories included in the scope of delivery
Flange for angle head **	18 V/2.0 Ah***	R/L	1.4 kg (including rechargeable battery)	Black colour ring
Flange for angle head **	18 V/2.0 Ah***	R/L	1.4 kg (including rechargeable battery)	Orange colour ring
Flange for angle head **	18 V/2.0 Ah***	R/L	1.4 kg (including rechargeable battery)	Red colour ring
Flange for angle head **	18 V/2.0 Ah***	R/L	1.4 kg (including rechargeable battery)	Light blue colour ring

** Angle head not in the items included

*** Rechargeable battery not in the items included

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1 ANGLE EXACT ION NOW WITH LITHIUM-ION TECHNOLOGY

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PROFESSIONAL
18V
SYSTEM

- ▶ Precision shut-off clutch with $C_{mk} > 1.67$ (in $\pm 10\%$ tolerance range according to ISO 5393)
- ▶ Multi-stage screwdriving process, adjustable to your individual application via USB interface Bosch Premium lithium-ion technology for long lifetime and runtime
- ▶ Brushless (EC) motor for 30% more efficiency (compared to conventional DC motors) and extremely long lifetime
- ▶ New ergonomic design and lower weight for even more comfortable work
- ▶ Faster speeds and screwdriving stages can reduce production times and improve quality

	Part number	Torque, hard/soft as per ISO 5393 (Nm)	Speed (no-load)
ANGLE EXACT ION 3-500 	0 602 494 608	0.7 – 3	50 – 520
ANGLE EXACT ION 8-1100 	0 602 494 600	2 – 8	110 – 1.100
ANGLE EXACT ION 15-500 	0 602 494 601	2 – 15	50 – 520
	0 602 494 60A	2 – 15	50 – 520
ANGLE EXACT ION 23-380 	0 602 494 602	10 – 23	38 – 380
ANGLE EXACT ION 30-290 	0 602 494 607	10 – 30	29 – 290
	0 602 494 60B	10 – 30	29 – 290
ANGLE EXACT ION 30-300 	0 602 494 603	10 – 30	30 – 300
ANGLE EXACT ION 40-220 	0 602 494 604	15 – 40	22 – 220
ANGLE EXACT ION 50-210 	0 602 494 605	15 – 50	21 – 180
ANGLE EXACT ION 60-120 	0 602 494 606	15 – 60	12 – 120

Bit holder	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)	Accessories included in the scope of delivery
Flange for angle head*	18 V/2.0 Ah**	R/L	1.7 (including battery)	Light green colour ring
Flange for angle head*	18 V/2.0 Ah**	R/L	1.7 (including battery)	Light blue colour ring
Flange for angle head*	18 V/2.0 Ah**	R/L	1.7 (including battery)	Light green colour ring
3/8" square	18 V/2.0 Ah**	R/L	1.7 (including battery)	Light green colour ring Angle screwdriving head 3/8"
Flange for angle head*	18 V/4.0 Ah**	R/L	2.2 kg (including rechargeable battery)	White colour ring
Flange for angle head*	18 V/4.0 Ah**	R/L	2.2 kg (including rechargeable battery)	Grey colour ring
3/8" square	18 V/4.0 Ah**	R/L	2.2 kg (including rechargeable battery)	Grey colour ring Angle screwdriving head 3/8"
3/8" square	18 V/4.0 Ah**	R/L	2.4 (including battery)	Light grey colour ring Angle screwdriving head 3/8"
3/8" square	18 V/4.0 Ah**	R/L	2.4 (including battery)	Orange colour ring Angle screwdriving head 3/8"
3/8" square	18 V/4.0 Ah**	R/L	2.4 (including battery)	Red colour ring Angle screwdriving head 3/8"
3/8" square	18 V/4.0 Ah**	R/L	2.4 (including battery)	Black colour ring Angle screwdriving head 3/8"

* Angle head not in the items included

** Rechargeable battery not in the items included

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2

CORDLESS SHUT-OFF SCREWDRIVER WITH NIMH TECHNOLOGY

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CORDLESS ASSEMBLY WITH EXCEPTIONAL PRECISION

The EXACT and ANGLE EXACT tools from BOSCH are cordless shut-off screwdrivers for industry – offering the greatest accuracy, longevity and energy efficiency. In assembly situations where cables or pneumatic hoses get in the way, the EXACT series enables you to optimise processes, build better products and reduce your costs.



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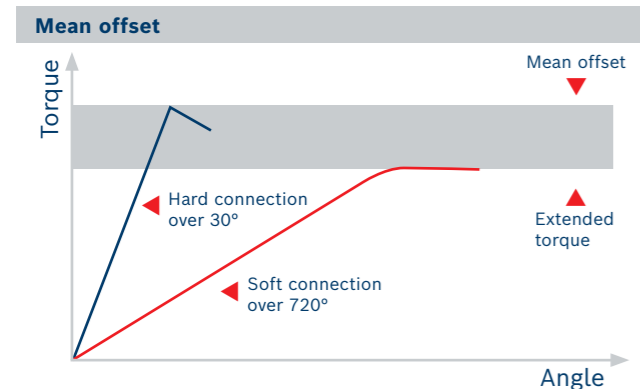
THE BOSCH SHUT-OFF CLUTCH PROVEN IN INDUSTRY

Our shut-off clutch is designed to minimise user influence on the screwdriving process. Bosch clutches are among the most precise and repeatable in the world. Our repeatability reaches the level of some controlled EC tools, which cost more than ten times as much as our EXACT cordless tools.

Precise and accurate shut-off

The EXACT clutch ensures high torque repeatability and accuracy. Whether in a hard screwdriving application of 30 degrees or a soft screwdriving application of 720 degrees, the clutch guarantees an extremely low mean value offset and consistent torque. Shut-off meets ISO 5393 requirements.

The electronics prevent the tool from running if the battery falls below a minimum voltage. The clutch is adjusted using a special tool. If the adjustment tool is stored in a location inaccessible to the user, the torque cannot be adjusted unintentionally. Colour marking rings enable quick identification of different screwdrivers in the assembly line.



Precise and stable under load

Bosch quality testing for the EXACT family is extremely rigorous. The shut-off clutch of the EXACT tools must survive 500,000 cycles* without failure before being released for production. During continuous operation, they must maintain an ISO 5393 standard Cmk value greater than 1.67 with a tolerance of ± 10%.

A proven module

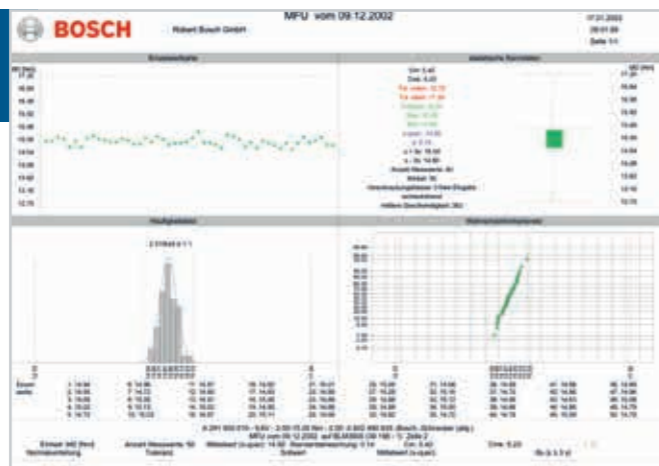
The shut-off clutch used in the EXACT cordless screwdriver family is the identical clutch used in our line of production air tools. This clutch has been used in many applications over the years and has proven itself a million times over at many of our customers' facilities.

User-friendly features

The EXACT clutch offers 15% more torque in left-hand rotation for loosening screws. Specified torque is always reached regardless of battery voltage.

* according to Bosch endurance tests

Capability study of the ANGLE EXACT 15



The Bosch EXACT and ANGLE EXACT cordless shut-off screwdrivers are suitable for virtually every screwdriving application.

EXACT CORDLESS CENTRE GRIP SCREWDRIVERS

- ▶ Precision shut-off clutch with $Cmk > 1.67$
- ▶ Low weight
- ▶ Wide torque range
- ▶ Repeat protection
- ▶ Visual and audible signals inform the worker about the battery status
- ▶ A visual and audible signal informs the worker about the screwdriving result
- ▶ Bright LED light for illuminating the work area
- ▶ One-handed operation for the rotational direction switch
- ▶ Modular design with many identical parts
- ▶ Colour marking rings for easy identification
- ▶ Protective cap for quick-change chuck
- ▶ Tool holder available
- ▶ Hanging hook available








EXACT	Part number	Torque, hard as per ISO 5393 (Nm)	Torque, soft as per ISO 5393 (Nm)
EXACT 2 Very precise in the lower torque range	0 602 490 433	0.6 – 2	0.6 – 2
EXACT 4 High speed for short cycle times	0 602 490 437	1 – 4	1 – 4
EXACT 6 Combination of speed and torque	0 602 490 431	1 – 6	1 – 6
EXACT 7 Slow screwdriver e.g. for hose clamps	0 602 490 439	1.5 – 7	1.5 – 7
EXACT 8 Performance and speed	0 602 490 443	1.5 – 8	1.5 – 8
EXACT 9 High torque with low weight	0 602 490 435	1.5 – 9	1.5 – 9
EXACT 12 Highest torques	0 602 490 441	1.5 – 12	1.5 – 12
EXACT 60 Extremely low speeds 60 min^{-1}	0 602 490 469	1.5 – 5.5	1.5 – 5.5
EXACT 700 High speed and high torque	0 602 490 447	1.5 – 8	1.5 – 8
EXACT 1100 Highest speed	0 602 490 471	1 – 4	1 – 4

No-load speed (rpm)	Bit holder	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)	Features and functions	Accessories included in the scope of delivery
600	1/4"	9.6 V *	R/L	0.8	0.7 s repeat protection	Light green colour ring
900	1/4"	9.6 V *	R/L	0.8	0.7 s repeat protection	Grey colour ring
600	1/4"	9.6 V *	R/L	0.8	0.7 s repeat protection	Black colour ring
150	1/4"	9.6 V *	R/L	0.8	0.7 s repeat protection	White colour ring
650	1/4"	12 V *	R/L	0.9	0.7 s repeat protection	Orange colour ring
350	1/4"	9.6 V *	R/L	0.8	0.7 s repeat protection	Light blue colour ring
400	1/4"	12 V *	R/L	0.9	0.7 s repeat protection	Red colour ring
60	1/4"	9.6 V *	R/L	0.8	0.7 s repeat protection	White colour ring
700	1/4"	12 V *	R/L	0.9	0.7 s repeat protection	Orange colour ring
1,100	1/4"	9.6 V *	R/L	0.8	0.7 s repeat protection	Grey colour ring

* Rechargeable battery not in the items included

2 ANGLE EXACT CORDLESS ANGLE WRENCHES

- ▶ Precision shut-off clutch with $Cmk > 1.67$
- ▶ Low weight
- ▶ Wide torque range
- ▶ Repeat protection
- ▶ Visual and audible signals for the battery status as for centre grip
- ▶ Visual and audible signals for the switch-off signal as for centre grip
- ▶ Bright LED light for illuminating the work area
- ▶ All models with clockwise/anticlockwise rotation change function on the switch
- ▶ Modular design with many common parts
- ▶ Colour marking rings for easy identification
- ▶ Protective caps available for angle heads
- ▶ Use of the same rechargeable batteries/chargers as for models with centre grip
- ▶ All models with hanging hook
- ▶ Tool weight with angle head and rechargeable battery is 1.6 kg




	Part number	Torque, hard as per ISO 5393 (Nm)	Torque, soft as per ISO 5393 (Nm)
ANGLE EXACT 2 Low torques and low speed: Suitable for titanium screws	0 602 490 647	0.7 – 2	0.7 – 2
			
ANGLE EXACT 3 Very precise in the lower torque range	0 602 490 656	0.7 – 3	0.7 – 3
			
ANGLE EXACT 6 High speed	0 602 490 652	1.5 – 6	1.5 – 6
			
ANGLE EXACT 7 Very low speed: suitable for titanium screws	0 602 490 669	2 – 7	2 – 7
			
ANGLE EXACT 8 Combination of speed and torque	0 602 490 651	2 – 9	2 – 8
			
ANGLE EXACT 15 High torque with very low weight	0 602 490 635	2 – 15	2 – 15
	0 602 490 650	2 – 15	2 – 15

No-load speed (rpm)	Angle head	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)	Features and functions	Accessories included in the scope of delivery
110	–	9.6 V *	R/L	1.0	0.7 s repeat protection	Light green colour ring
420	–	9.6 V *	R/L	1.0	0.7 s repeat protection	Light green colour ring
650	–	9.6 V *	R/L	1.0	0.7 s repeat protection	Black colour ring
110	–	9.6 V *	R/L	1.0	0.7 s repeat protection	Orange colour ring
420	–	9.6 V *	R/L	1.0	0.7 s repeat protection	Orange colour ring
250	3/8" square	9.6 V *	R/L	1.2	0.7 s repeat protection	Red colour ring
250	–	9.6 V *	R/L	1.0		

* Rechargeable battery not in the items included

2 ANGLE EXACT AND ANGLE EXACT CF CORDLESS ANGLE WRENCHES




- ▶ Performance characteristics see page 42
- ▶ Tool weight with angle head and rechargeable battery is 2.6 kg

ANGLE EXACT!	Part number	Torque, hard as per ISO 5393 (Nm)	Torque, soft as per ISO 5393 (Nm)
ANGLE EXACT 17 High speed	0 602 490 675	6 – 17	6 – 13
			
ANGLE EXACT 23 Good combination of torque and speed	0 602 490 673	7 – 23	7 – 20
			
ANGLE EXACT 30 High torque	0 602 490 671	8 – 30	8 – 28
			

The ANGLE EXACT CF models are suitable for tube nut or crowfoot heads due to their speed and torque limitation in left-hand rotation.

This special technology prevents damage to the screw-driving head.

The screwdriving heads are not manufactured by Bosch.

ANGLE EXACT!	Part number	Torque, hard as per ISO 5393 (Nm)	Torque, soft as per ISO 5393 (Nm)
ANGLE EXACT 14 CF Low weight with maximum performance	0 602 490 690	1.4 – 10 (without head)	1.4 – 10 (without head)
			
ANGLE EXACT 22 CF Good combination of torque and speed	0 602 490 693	5 – 16 (without head)	5 – 14.3 (without head)
			
ANGLE EXACT 29 CF High torque	0 602 490 691	5.7 – 21 (without head)	5.7 – 20 (without head)
			

No-load speed (rpm)	Angle head	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)	Features and functions	Accessories included in the scope of delivery
560	Flange for angle head (angle head not in the items included)	14.4 V *	R/L	1.5	0.7 s repeat protection	White colour ring
320	Flange for angle head (angle head not in the items included)	14.4 V *	R/L	1.5	0.7 s repeat protection	Orange colour ring
220	requires HD angle head	14.4 V *	R/L	1.5	0.7 s repeat protection	Red colour ring

* Rechargeable battery not in the items included

No-load speed (rpm)	Angle head	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)	Features and functions	Included accessories
350 (without head)	Custom head, not supplied by Bosch	9.6 V *	R/L	1.0	0.7 s repeat protection Same specifications as ANGLE EXACT 15 in right-hand rotation, reduced performance in left-hand rotation	Red colour ring
440 (without head)	Custom head, not supplied by Bosch	14.4 V *	R/L	1.5	0.7 s repeat protection Same specifications as ANGLE EXACT 23 in right-hand rotation, reduced performance in left-hand rotation	Orange colour ring
300 (without head)	Custom head, not supplied by Bosch	14.4 V *	R/L	1.5	0.7 s repeat protection Same specifications as ANGLE EXACT 30 in right-hand rotation, reduced performance in left-hand rotation	Red colour ring

* Rechargeable battery not in the items included

3

BT-EXACT BLUETOOTH CORDLESS SCREWDRIVERS

havasis



WHO SAYS THERE ARE NO SCREWS LOOSE HERE?

The Bluetooth EXACT cordless screwdriver system thinks for itself. The BT-EXACT screwdrivers take their commands from the EXAConnect controller, which stores the work progress in real time. The system can talk to and take commands from external devices like a PLC, barcode scanner or host network if desired. Improve your assembly process and never forget to drive a screw again.



HIGHER PRODUCTION QUALITY DUE TO BLUETOOTH EXACT

Quality assurance with cordless screwdrivers: Higher production quality through Bluetooth® EXACT

The BT-EXACT screwdriver sends radio signals (screw connection OK or not OK) to the EXAConnect control unit, which also sends commands back to the BT-EXACT screwdriver. An EXAConnect can control seven screwdrivers simultaneously, making the system very cost-effective. A class 2 Bluetooth module ensures uncompromising data transfer with a 56-Bit encryption and security mode 3 in accordance with Bluetooth Standard 1.2. Screwdrivers and controllers use proprietary communication only. The software can be configured to prevent Bluetooth from disturbing other wireless systems to ensure interference-free communication. An adjustable antenna power output function allows the system to limit its electromagnetic emissions to virtually zero.

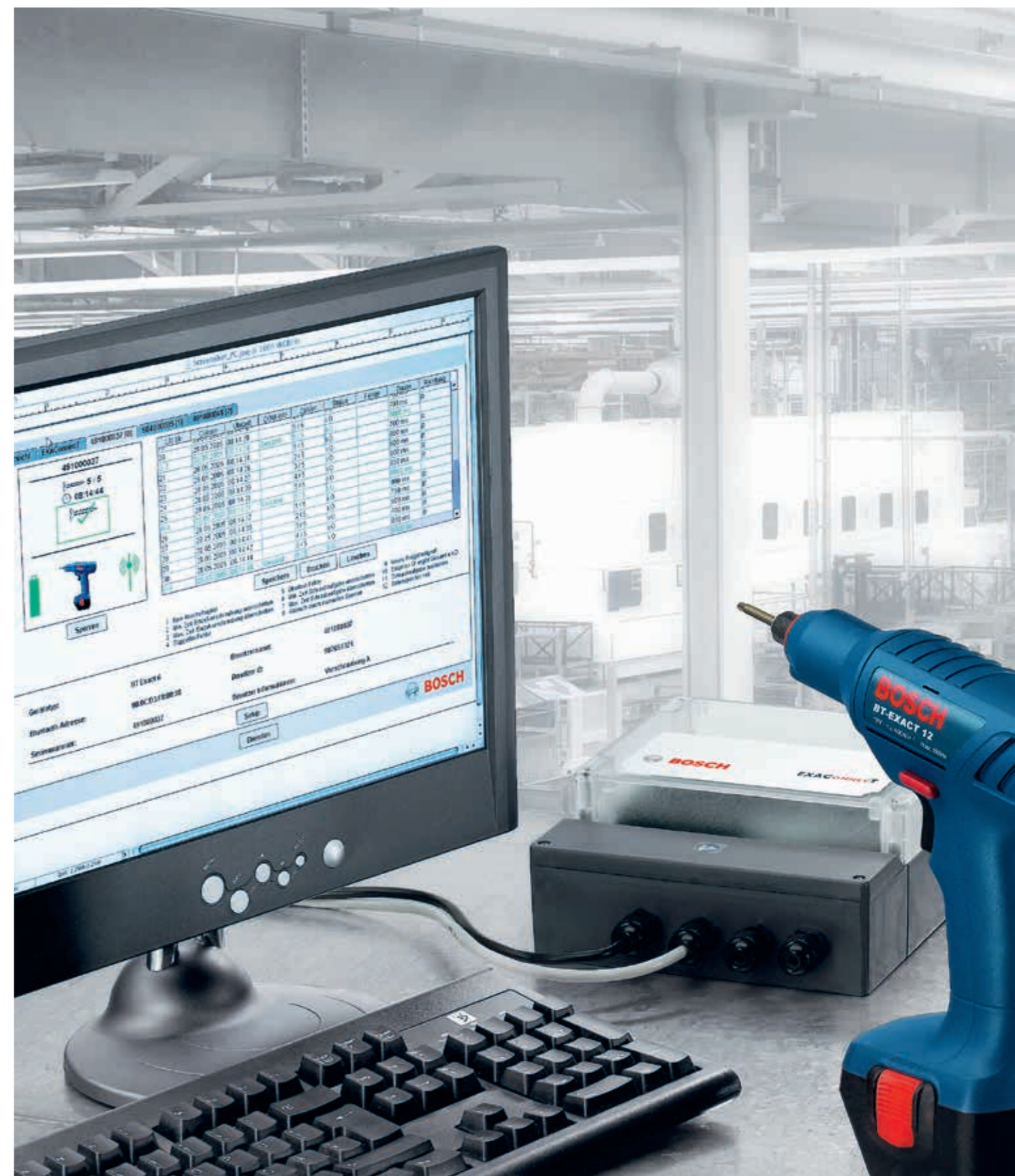
Barcode scanners, PLCs, stack lights and host network systems can be easily connected to the EXAConnect via the built-in I/O ports, RS 422 interfaces and the network connection. The system can also run as a stand-alone without additional hardware. Operating the screwdriver is prevented outside the range of the EXAConnect.

The system is unique compared to other products; it does not require additional software to communicate with a network or computer. All information in the EXAConnect controller is accessed by using a web browser. All software and firmware is stored within the EXAConnect control unit.

The Bosch Bluetooth system: Quality control redefined

The EXAConnect can control a BT-EXACT screwdriver by workpiece, screw and number of screwdriving applications. The OK/NOK monitoring can be enhanced if desired using runtime and other parameters to accurately determine cross-threading of screws or missing screws, and it can detect the direction of rotation to detect screw removal.

The system can be programmed in such a way that only individual screw connections or the entire screwdriving application is counted and reported. Three LED lights on the BT-EXACT screwdriver tell the worker the battery status and show whether the screw was properly tightened and whether the tool is locked, unlocked or out of range of the EXAConnect. The system collects and reports all this data to ensure that your assembly process always runs perfectly.



SEVEN SCREWDRIVERS AT A SINGLE GLANCE: POWERFUL SYSTEM SOFTWARE

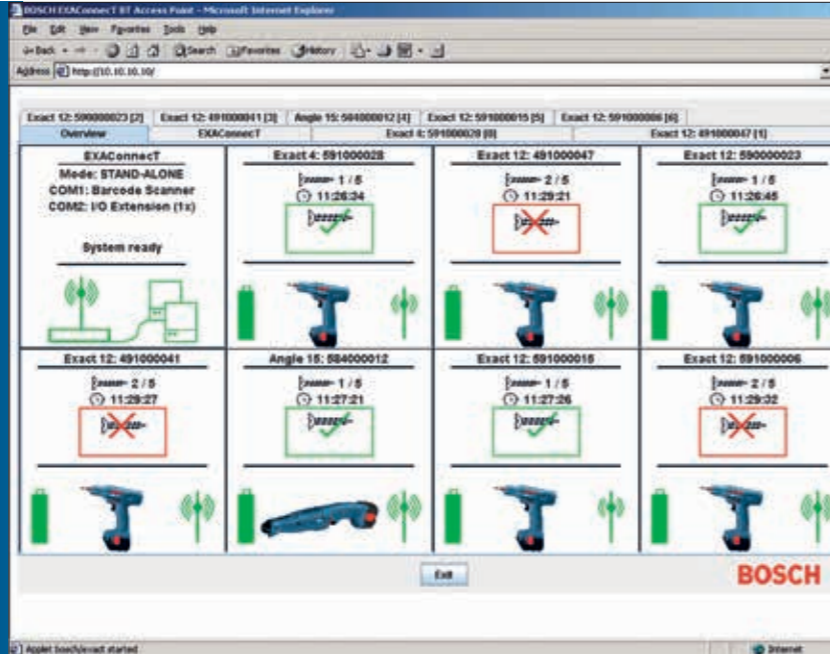
Quality control should be easy, not complicated. Our software combines powerful control functions, great flexibility and convenient programming to enable you to control the BT-EXACT screwdrivers, the EXAConnect control unit and your assembly line from any location.

The system runs in a web browser without the need for additional software as a user interface. It is password protected to ensure data security of the system.

Clicking on the "Overview" tab lets you view and control up to seven BT-EXACT screwdrivers running on one EXAConnect controller.

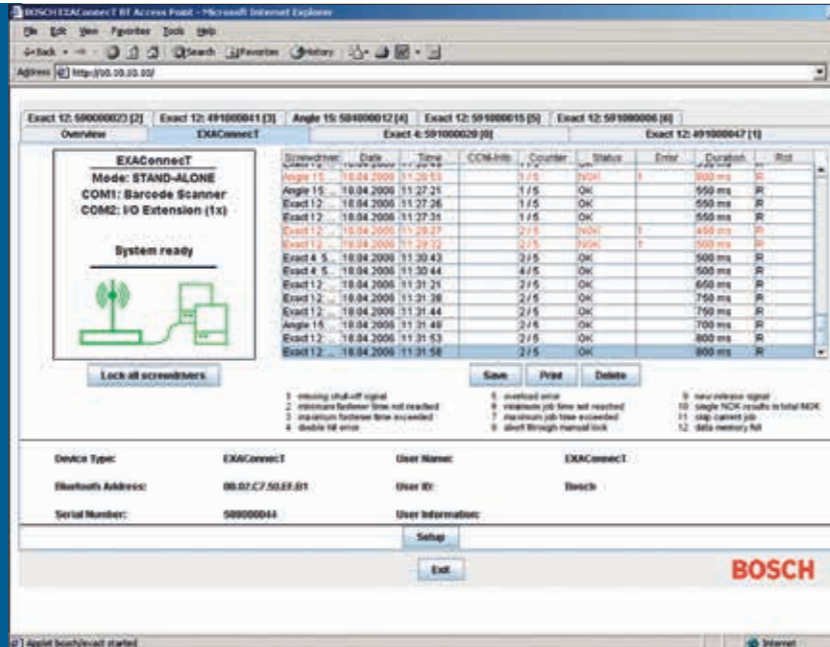
Each BT-EXACT screwdriver displays antenna signal strength, battery status, work progress and joint condition (OK/NOK shown in green or red).

The serial number and name of each BT-EXACT screwdriver are also displayed. The name of each BT-EXACT screwdriver can be customised for specific applications or locations within the assembly process.



By clicking on the "EXAConnect" tab, detailed data for up to seven BT-EXACT screwdrivers is displayed in real time. The system can display extensive data such as BT-EXACT screwdriver name, date, time of event, screw runtime, direction of rotation, error messages, work progress and additional input data (such as barcode scans or sequence numbers).

The system also displays the status of the EXAConnect controller and lists the BT-EXACT screwdrivers that are connected. System error messages are displayed here, along with detailed information about the configuration.



Screwdriver	Date	Time	ConnInfo	Counter	Status	Enter	Duration	Rot
Angle 15	18.04.2006	11:29:11	1/5	1/5	NOK	1	500 ms	R
Angle 15	18.04.2006	11:27:21	1/5	1/5	OK	1	550 ms	R
Exact 12	18.04.2006	11:27:26	1/5	1/5	OK	1	550 ms	R
Exact 12	18.04.2006	11:27:31	1/5	1/5	OK	1	550 ms	R
Exact 12	18.04.2006	11:29:27	2/5	2/5	NOK	1	450 ms	R
Exact 12	18.04.2006	11:29:22	2/5	2/5	NOK	1	500 ms	R
Exact 4	18.04.2006	11:30:43	2/5	2/5	OK	1	500 ms	R
Exact 4	18.04.2006	11:30:44	4/5	4/5	OK	1	500 ms	R
Exact 12	18.04.2006	11:31:21	2/5	2/5	OK	1	650 ms	R
Exact 12	18.04.2006	11:31:38	2/5	2/5	OK	1	750 ms	R
Exact 12	18.04.2006	11:31:44	2/5	2/5	OK	1	750 ms	R
Angle 15	18.04.2006	11:31:48	2/5	2/5	OK	1	700 ms	R
Exact 12	18.04.2006	11:31:53	2/5	2/5	OK	1	800 ms	R
Exact 12	18.04.2006	11:31:58	2/5	2/5	OK	1	900 ms	R

SEVEN PRECISELY TUNED SCREWDRIVERS: A SYMPHONY OF DATA CONTROL

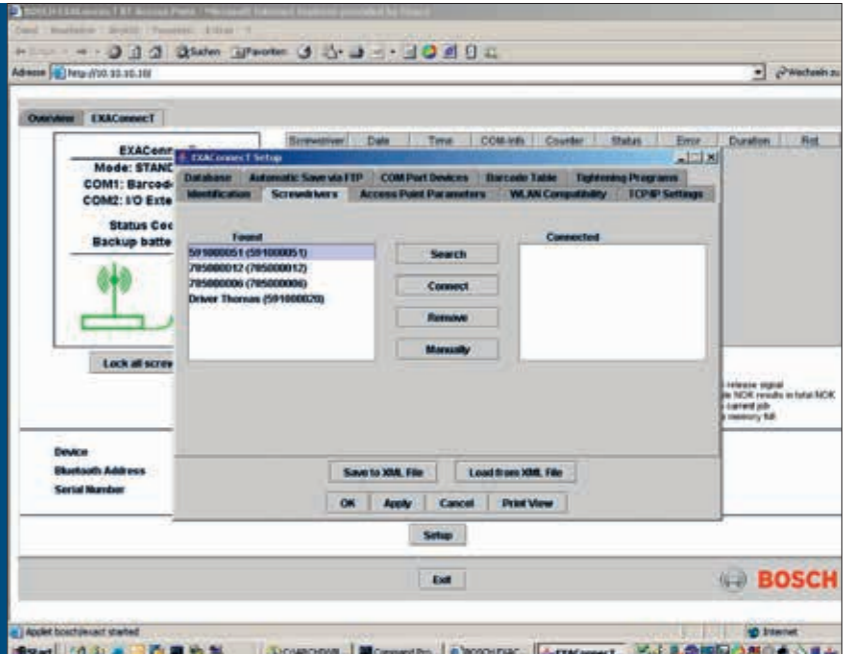
Configuration of the system is easy. All functions of the EXAConnect controller are programmed from only one user-friendly configuration screen. Standard protocols including Profibus, Ethernet TCP/IP, DeviceNet and FTP, serial interfaces, stack lights and RS 422 ports are managed from there. Each individual

BT-EXACT screwdriver can be programmed to send data to different outputs simultaneously. Each BT-EXACT screwdriver can accept data from a variety of inputs. All this capability is managed by only one setup screen for each BT-EXACT screwdriver.

The system has separate configuration windows for the EXAConnect control unit and the BT-EXACT screwdrivers. The configuration screen shows part of the EXAConnect configuration menu. The system can be password protected to prevent unauthorised use.

Each BT-EXACT screwdriver must be "found" and "connected" by the controller only one time; it will remain "connected" until removed by reprogramming.

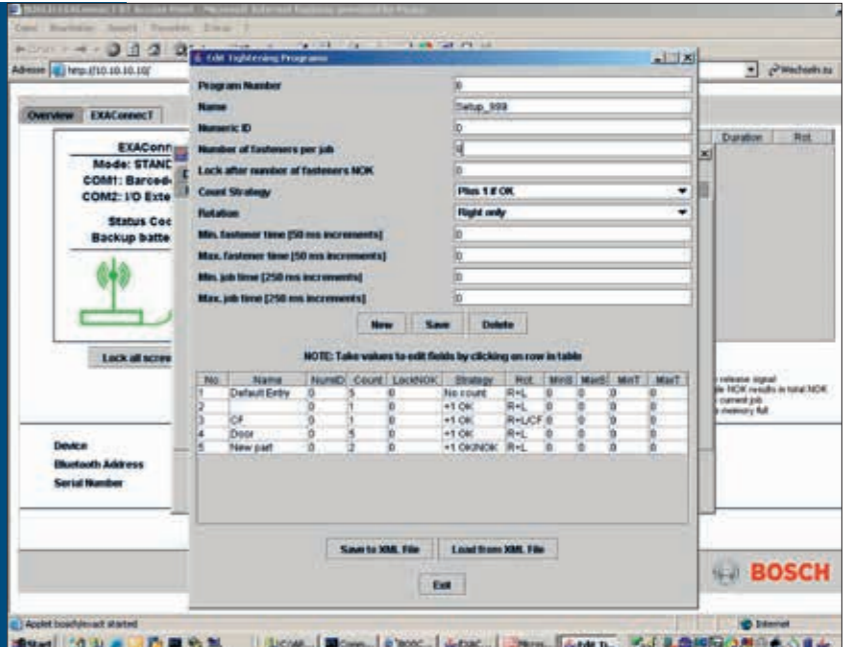
Our unique system software can be configured in such a way that interference with certain Wi-Fi channels by the system is effectively avoided.



The screwdriver configuration menu on the left controls everything from screw count to rework strategy to data output choices. The BT-EXACT screwdrivers and the EXAConnect control unit can be configured to send and receive data from a variety of systems, e.g. Ethernet control systems, PLC systems, barcode scanners or our digital I/O module.

The system can also monitor screw runtime to accurately determine cross-threading or missing screws.

Rework strategies for evaluating the assembly process can be defined in detail, including customer-specific programming by Bosch.



EXACONNECT – THE CONTROL UNIT THE HEART OF THE QUALITY ASSURANCE SYSTEM

The EXAConnect Bluetooth controller packs a lot of firepower in a small, easy to install package. The enclosure is IP 54 (NEMA 12) rated for dust and moisture resistance. The control unit has its own processor and flash memory as well as its own operating system, so that it can operate as a stand-alone unit or in conjunction with a variety of control elements. Various status LEDs and a two-digit display that can be seen through the clear cover alert you of connection status or system notifications.



The EXAConnect control unit is the link between your process network and the BT-EXACT cordless screwdriver connected via Bluetooth®. Information about the screwdriving process can be exchanged bidirectionally in real time to ensure that each BT-EXACT cordless screwdriver knows exactly what it has to do and when to do it. One EXAConnect controller can run seven BT-EXACT screwdrivers simultaneously, making it very cost-effective compared to other systems.

Using the Ethernet connection, the EXAConnect control unit can output data from up to seven BT-EXACT screwdrivers (up to four BT-EXACT screwdrivers on one PLC system, using 24 V inputs and outputs). When controlling seven BT-EXACT screwdrivers via a PLC, an additional digital I/O module is required. For details, see page 49.

A wide-range power supply ensures the system works anywhere in the world without the need for additional power transformers. An internal backup memory and real-time clock ensure that critical data is always saved, even in the event of a power loss.

	Part number	Power supply	24-V power supply (output)	Standard interfaces
EXAConnect Bluetooth screwdriver controller	0 602 491 003	100 – 240 V, 50/60 Hz	max. 4.8 W	Ethernet (TCP/IP) 1 x RS-232 2 x RS-422 4 x 24-V inputs 4 x 24-V outputs

Software requirements:
Operating system: Microsoft Windows XP, Windows 7
Browser: Internet Explorer, Netscape Navigator, Mozilla Firefox
Required plugin (freeware): Java Runtime Environment 1.4.2 or higher

DIGITAL I/O MODULE EXTENSION MODULE FOR UP TO SEVEN BT-EXACT SCREWDRIVERS

The digital I/O module is used with the EXAConnect controller. It allows 24-volt signals from up to seven BT-EXACT screwdrivers to be sent to a PLC. The module is IP 54 (NEMA 12) rated for dust and moisture resistance.



The digital I/O module takes its power from the EXAConnect controller and receives its screwdriving data from the controller's RS 422 interface. The module has 16 inputs and outputs for exchanging data with a PLC. The configuration is carried out via the EXAConnect software (in a web browser).

The EXAConnect control unit allows the operation of up to four BT-EXACT screwdrivers (via PLC system) with limited data volume. The digital I/O module is required when two to seven BT-EXACT screwdrivers need to exchange detailed data with a PLC system.

The I/O module is not required if an Ethernet connection to a host computer network is available. There are different possible PLC configurations for any given situation. Contact your distributor for details.

	Part number	Power input	Standard interfaces
Bluetooth digital I/O module	0 602 491 004	24 V	Ethernet (TCP/IP) 2 x RS-422 16 x 24-V inputs 16 x 24-V outputs

BT-EXACT CORDLESS CENTRE GRIP SCREWDRIVERS

- ▶ Precision shut-off clutch with $Cmk > 1.67$
- ▶ Low weight
- ▶ Wide torque range
- ▶ Repeat protection
- ▶ A visual and audible signals inform the worker about the battery status
- ▶ Visual and audible signals inform the worker about the screwdriving result
- ▶ Bright LED light for illuminating the work area
- ▶ One-handed operation for the rotational direction switch
- ▶ Modular design with many identical parts
- ▶ Colour marking rings for easy identification
- ▶ Protective cap for quick-change chuck
- ▶ Tool holder
- ▶ Hanging hook available
- ▶ All models require EXAConnect radio control











EXACT	Part number	Torque, hard as per ISO 5393 (Nm)	Torque, soft as per ISO 5393 (Nm)
BT-EXACT 2 Bluetooth-capable 	0 602 491 433	0.6 – 2	0.6 – 2
BT-EXACT 4 Bluetooth-capable 	0 602 491 437	1 – 4	1 – 4
BT-EXACT 6 Bluetooth-capable 	0 602 491 431	1 – 6	1 – 6
BT-EXACT 7 Bluetooth-capable 	0 602 491 439	1.5 – 7	1.5 – 7
BT-EXACT 8 Bluetooth-capable 	0 602 491 443	1.5 – 8	1.5 – 8
BT-EXACT 9 Bluetooth-capable 	0 602 491 435	1.5 – 9	1.5 – 9
BT-EXACT 12 Bluetooth-capable 	0 602 491 441	1.5 – 12	1.5 – 12

No-load speed (min ⁻¹)	Bit holder	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)	Features and functions	Accessories included in the scope of delivery
600	1/4"	9.6 V *	R/L	0.8	Class 2 Bluetooth module	Light green colour ring
900	1/4"	9.6 V *	R/L	0.8	Class 2 Bluetooth module	Grey colour ring
600	1/4"	9.6 V *	R/L	0.8	Class 2 Bluetooth module	Black colour ring
150	1/4"	9.6 V *	R/L	0.8	Class 2 Bluetooth module	White colour ring
650	1/4"	12 V *	R/L	0.9	Class 2 Bluetooth module	Orange colour ring
350	1/4"	9.6 V *	R/L	0.8	Class 2 Bluetooth module	Light blue colour ring
400	1/4"	12 V *	R/L	0.9	Class 2 Bluetooth module	Red colour ring

* Rechargeable battery not in the items included

BT-ANGLE EXACT CORDLESS ANGLE WRENCHES

- ▶ Precision shut-off clutch with $Cmk > 1.67$
- ▶ Low weight
- ▶ Wide torque range
- ▶ Repeat protection
- ▶ Visual and audible signals for the state of charge
- ▶ Visual and audible signals for the switch-off
- ▶ Bright LED light for illuminating the work area
- ▶ One-handed operation for the rotational direction switch
- ▶ Modular design with many identical parts
- ▶ Colour marking rings for easy identification
- ▶ Protective cap available for angle heads
- ▶ Angle heads and rechargeable batteries are not included in scope of delivery
- ▶ Use of the same rechargeable batteries/chargers as for models with centre grip
- ▶ Hanging hook available
- ▶ All Bluetooth® models require EXAConnect radio control
- ▶ Tool weight with angle head and rechargeable battery is 1.6 kg (BT-ANGLE EXACT 17, 23, 30: 2.6 kg)

	Part number	Torque, hard as per ISO 5393 (Nm)	Torque, soft as per ISO 5393 (Nm)
BT-ANGLE EXACT 2 Bluetooth-capable 	0 602 491 647	0.7 – 2	0.7 – 2
BT-ANGLE EXACT 3 Bluetooth-capable 	0 602 491 656	0.7 – 3	0.7 – 3
BT-ANGLE EXACT 6 Bluetooth-capable 	0 602 491 652	1.5 – 6	1.5 – 6
BT-ANGLE EXACT 7 Bluetooth-capable 	0 602 491 669	2 – 7	2 – 7
BT-ANGLE EXACT 8 Bluetooth-capable 	0 602 491 651	2 – 9	2 – 8
BT-ANGLE EXACT 15 Bluetooth-capable 	0 602 491 650	2 – 15	2 – 15
BT-ANGLE EXACT 17 Bluetooth-capable 	0 602 491 675	6 – 17	6 – 13
BT-ANGLE EXACT 23 Bluetooth-capable 	0 602 491 673	7 – 23	7 – 20
BT-ANGLE EXACT 30 Bluetooth-capable 	0 602 491 671	8 – 30	8 – 28

No-load speed (min ⁻¹)	Angle head	Battery specifications (V)	Direction of rotation	Weight as per EPTA (kg)	Features and functions	Accessories included in the scope of delivery
110	Flange for angle head *	9.6 V **	R/L	1.0	Class 2 Bluetooth module	Light green colour ring
420	Flange for angle head *	9.6 V **	R/L	1.0	Class 2 Bluetooth module	Light green colour ring
650	Flange for angle head *	9.6 V **	R/L	1.0	Class 2 Bluetooth module	Black colour ring
110	Flange for angle head *	9.6 V **	R/L	1.0	Class 2 Bluetooth module	Orange colour ring
420	Flange for angle head *	9.6 V **	R/L	1.0	Class 2 Bluetooth module	Orange colour ring
250	Flange for angle head *	9.6 V **	R/L	1.0	Class 2 Bluetooth module	Red colour ring
560	Flange for angle head *	14.4 V **	R/L	1.5	Class 2 Bluetooth module	White colour ring
320	Flange for angle head *	14.4 V **	R/L	1.5	Bluetooth® module class 2	Orange colour ring
220	requires HD angle head Flange for HD angle head (HD angle head not in the items included)	14.4 V **	R/L	1.5	Class 2 Bluetooth module	Red colour ring

* Angle head not in the items included ** Rechargeable battery not in the items included

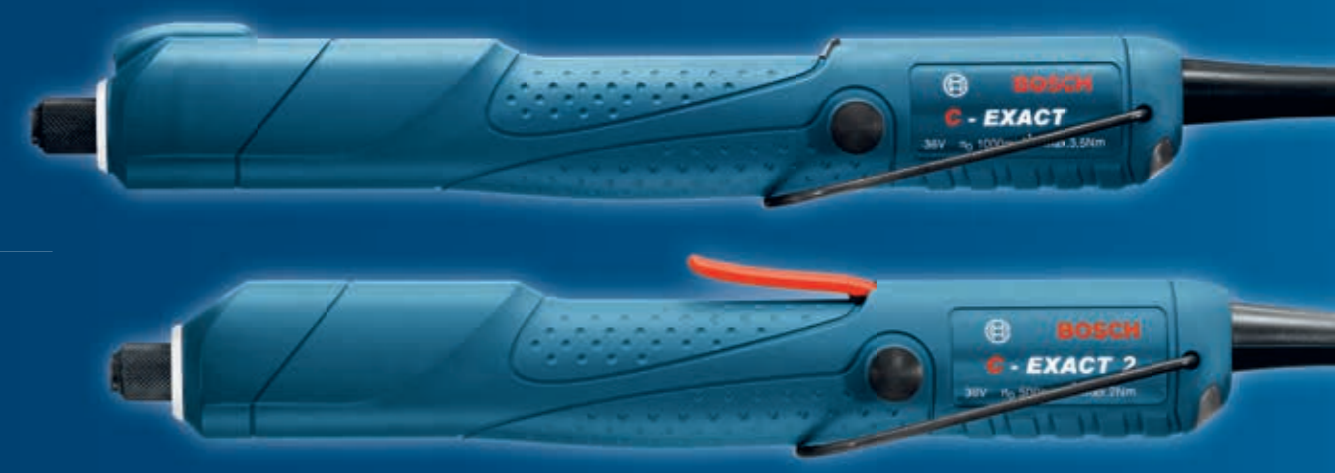
4 C-EXACT PRODUCTION SCREWDRIVERS

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HOPEFULLY, YOU WILL NOT RUN OUT OF SCREWS

C-EXACT and PUC-EXACT. The production screwdriver system from Bosch. The new C-EXACT electric screwdrivers offer much more than just a robust housing. High accuracy and repeatability are guaranteed, even after driving 1 million* screws.



* according to Bosch endurance tests

NEVER LETS YOU DOWN EVEN AFTER 1 MILLION SCREWS

Robust, efficient and user-friendly

Low-voltage operation, brushless EC motor technology and key components from the EXACT cordless screwdriver series make the new C-EXACT electric screwdrivers cost-effective tools with innovative performance features. When required, the clutch offers 15% more torque in left-hand rotation for loosening screws. The clutch is adjusted using a special tool. If the adjustment tool is stored in a location inaccessible to the user, the torque cannot be adjusted unintentionally. Colour marking rings enable quick identification of different screwdrivers in the assembly line.

Precise and stable under load

Whether assembling computer drives, electronics or precision mechanical equipment, the C-EXACT is the right choice when precision is what matters most.

Bosch subjects the C-EXACT family to extremely strict quality tests. In the endurance test, the C-EXACT must survive one million* cycles without failure before being released for production. During continuous operation, they must maintain an ISO 5393 standard Cmk value greater than 1.67 with a tolerance of ± 10%.

Our production tools are therefore among the most accurate on the planet.

* according to Bosch endurance tests

C-EXACT electric screwdrivers

The C-EXACT screwdrivers are the first in a new family of electric straight screwdrivers. They are equipped with a combination of great features and therefore set new standards for accuracy and longevity.

- ▶ Brushless EC motor technology
- ▶ Rotational direction switch operated with one hand
- ▶ Electrical discharge capability (ESD compliant)

PUC-EXACT power supplies

The C-EXACT electric screwdrivers use the PUC-EXACT power supply unit as a clean, silent energy source for the brushless EC motor.

The power supply unit helps to reduce operating costs by efficiently supplying the tool with low voltage.



The electrical discharge capability makes the screwdriving system ideal for use in the electronics and electrical industry.

The new electric screwdrivers from the C-EXACT series (electric screwdrivers with 6 Nm or 53 in/lbs maximum torque) are available in lever start or push start versions.

The PUC-EXACT power supply unit safely generates the low voltage required for efficient operation.



C-EXACT ELECTRIC SCREWDRIVERS









► **Bosch proves robustness** and durability through endurance tests with over one million working cycles

► **Bosch SEC motor**
All models with brushless EC motor technology

► **High shut-off accuracy** with very low tolerance

► **Wide torque range**

► **Visual and audible switch-off** signals


	Part number	Torque, hard as per ISO 5393 (Nm)	Torque, soft as per ISO 5393 (Nm)
Electric screwdrivers C-EXACT 1 	0 602 495 202	0.2 – 0.8	0.2 – 0.8
	0 602 495 207	0.2 – 0.8	0.2 – 0.8
Electric screwdrivers C-EXACT 2 	0 602 495 203	0.5 – 2	0.5 – 2
	0 602 495 208	0.5 – 2	0.5 – 2
Electric screwdrivers C-EXACT 4 	0 602 495 200	0.5 – 3.5	0.5 – 3.5
	0 602 495 205	0.5 – 3.5	0.5 – 3.5
Electric screwdrivers C-EXACT 6 	0 602 495 210	1 – 6	1 – 6
Electric screwdrivers C-EXACT 6 	0 602 495 211	1 – 6	1 – 6
Electric screwdrivers C-EXACT 6 	0 602 495 215	1 – 6	1 – 6
Electric screwdrivers C-EXACT 6 	0 602 495 216	1 – 6	1 – 6

► **Robust and durable design**

► **Displays** for operational readiness and overload

► **Available with** connection options for 1–3 screwdrivers simultaneously

► **Temperature-controlled** cooling fan

	Part number	Input voltage (V)	Input frequency (Hz)
Power supply PUC-EXACT 3 	0 602 495 003	100 – 240 AC	50 – 60

No-load speed (rpm)	Voltage (V)	Power (W)	Rotational direction	Weight as per EPTA (kg)	Features and functions	Accessories included in the scope of delivery
1,000	36 DC	360	R/L	0.65	Lever start	Connecting cable 2.5 m Suspension hook Green colour ring
1,000	36 DC	360	R/L	0.65	Push start	
500	36 DC	360	R/L	0.65	Lever start	Connecting cable 2.5 m Suspension hook White colour ring
500	36 DC	360	R/L	0.65	Push start	
1,000	36 DC	360	R/L	0.65	Lever start	Connecting cable 2.5 m Suspension hook Grey colour ring
1,000	36 DC	360	R/L	0.65	Push start	
1,000	36 DC	360	R/L	0.65	Lever start	Connecting cable 2.5 m Suspension hook Black colour ring
500	36 DC	360	R/L	0.65	Lever start	Connecting cable 2.5 m Suspension hook Black colour ring
1,000	36 DC	360	R/L	0.65	Push start	Connecting cable 2.5 m Suspension hook Black colour ring
500	36 DC	360	R/L	0.65	Push start	Connecting cable 2.5 m Suspension hook Black colour ring

Power input (W)	Output voltage (V)	Features and functions	Included accessories
400	36 DC	Power supply for up to three C-EXACT tools	Power cable 3 m

ACCESSORIES EXACT ORIGINAL ACCESSORIES

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FUNCTION ENSURED: EXACT ORIGINAL ACCESSORIES

Intelligent battery chargers, original BOSCH battery packs, general accessories and dimensional drawings.



BOSCH BATTERY TECHNOLOGY MAXIMUM EFFICIENCY PRE-PROGRAMMED

ProCORE18V 4.0Ah battery pack

Performance of a standard rechargeable battery with the most compact size and minimum weight:


- ▶ New cell technology delivers same performance as standard 4.0 Ah batteries with an optimised size and weight
- ▶ Compatible since 2008: all of our batteries are compatible with new and existing Bosch Professional tools in the same voltage class.
- ▶ COOLPACK 2.0 technology provides superior heat dissipation for 135% longer lifetime than standard batteries


The ProCORE18V 4.0Ah Professional is the lightest and most compact of the Bosch ProCORE18V series. It features a new generation of cell technology that delivers the same performance as a standard 4.0 Ah battery in an optimised size and weight. For added flexibility, it is compatible with all new and existing Bosch Professional 18-volt tools and chargers (Professional 18V System).

The battery also features COOLPACK 2.0 technology for superior heat dissipation from the inside to the outside of the battery. As heat can damage the cells, this COOLPACK 2.0 technology provides an impressive 135% longer battery lifetime than standard batteries, enabling it to perform for longer work periods.

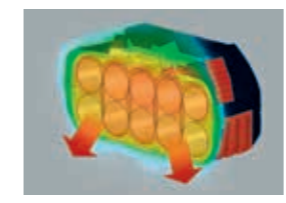
The ProCORE18V 4.0Ah Professional is a lithium-ion rechargeable battery with a display for the state of charge.



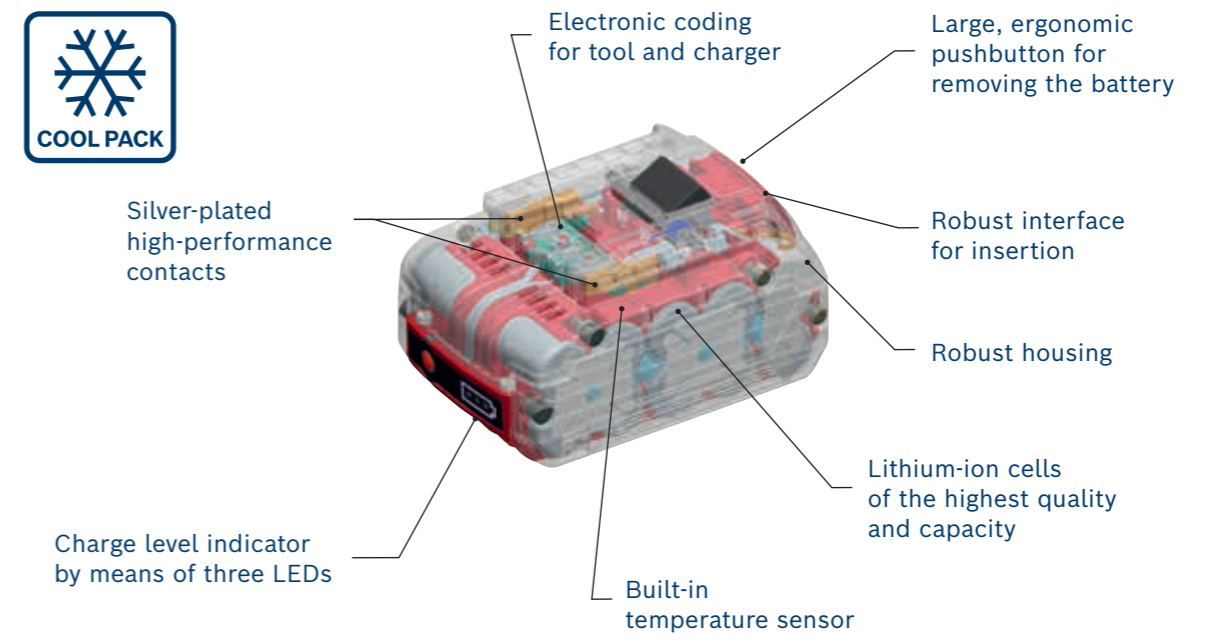
 Bosch CoolPack for up to 100 % longer service life

 100 % compatibility within the 18 V range

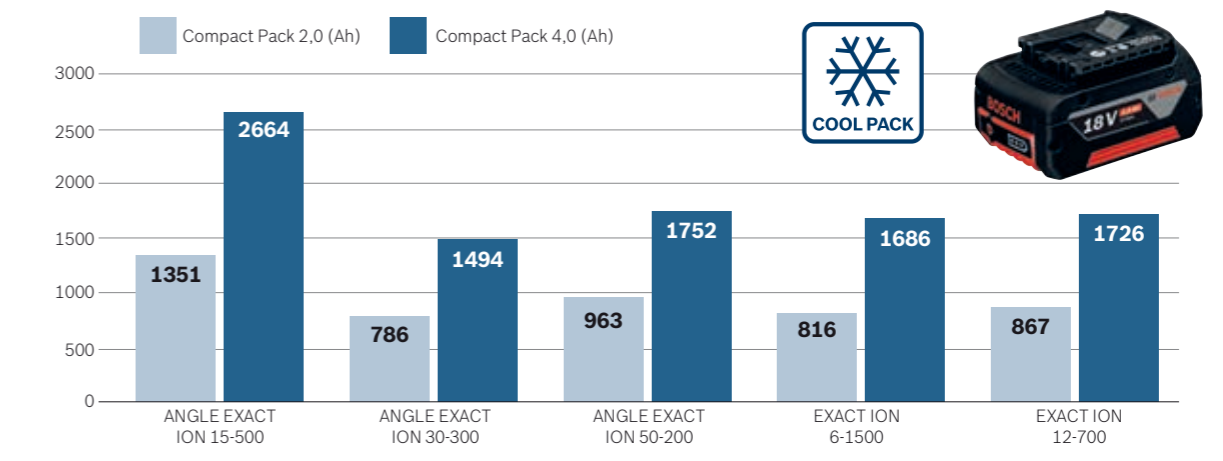
Exceptional runtime and lifetime thanks to CoolPack



Red **CoolPack** housing made of heat-conductive material for up to 100% more lifetime compared to a Bosch battery without **CoolPack**. Bosch **CoolPack** ensures balanced warming and reduces heat build-up!



Number of screwdriving applications per battery charge



Results of endurance test 02/2013, at maximum torque and a medium-hard screwdriving application at 80° rotation angle, measured from a threshold torque of 50%, at screw size M8

BATTERY PACKS AND CHARGERS FOR EXACT AND ANGLE EXACT LITHIUM-ION



12 V battery packs and chargers

Lithium-ion	Part number	Description	Voltage (V)	Capacity (Ah)	Weight as per EPTA (kg)
GBA 12 V/2.0 Ah Professional 	0 602 494 020	GBA 12V 2.0 Ah rechargeable battery, pack of 27	12	2,0	27 x 0.175
GBA 12 V/3.0 Ah Professional 	0 602 496 012	GBA 12V 3.0 Ah rechargeable battery, pack of 28	12	3,0	28 x 0.18
GBA 12 V/6.0 Ah Professional 	0 602 496 013	GBA 12V 6.0 Ah rechargeable battery, pack of 12	12	6,0	12 x 0.385

Li-Ion quick charger	Part number	Description	Voltage (V)	Weight as per EPTA (kg)
GAL 12V-40 Fully charges the GBA 12V/3.0 Ah in 50 minutes and the GBA 12V/6.0 Ah in 95 minutes. 	0 602 494 007	GAL 12V-40 charger, pack of 18	230	18 x 0.45
	0 602 496 014	GAL 12V-40 charger, pack of 18 (UK plug)	230	18 x 0.45

18 V lithium-ion battery packs and chargers



Lithium-ion	Part number	Description	Voltage (V)	Capacity (Ah)	Weight as per EPTA (kg)
18 V/2.0 Ah 	0 602 494 002	Pack of 12 batteries	18	2,0	12 x 0.35
18 V/4.0 Ah 	0 602 494 004	Pack of 12 batteries	18	4,0	12 x 0.6
18 V/5.0 Ah 	0 602 494 003	Pack of 12 batteries	18	5,0	12 x 0.6
ProCORE18V 4.0Ah 	0 602 494 034	Pack of 12 batteries	18	4,0	12 x 0.515










Li-Ion quick charger	Part number	Description	Voltage (V)	Weight as per EPTA (kg)
GAL 1880 CV Fully charges the GBA 18V/2.0 Ah in 30 minutes and the GBA 18V/5.0 Ah in 45 minutes. 	0 602 494 035	GAL 1880 CV charger, pack of 18	230	18 x 0.7
	0 602 494 036	GAL 1880 CV charger, pack of 18 (UK plug)	230	18 x 0.7
GAL 18V-40 Fully charges the GBA 18V/2.0 Ah in 35 minutes and the GBA 18V/5.0 Ah in 70 minutes. 	0 602 494 039	GAL 18V-40 charger, pack of 18	230	18 x 0.55
	0 602 494 040	GAL 18V-40 charger, pack of 18 (UK plug)	230	18 x 0.55

BATTERY PACKS AND CHARGERS FOR EXACT AND BT-EXACT

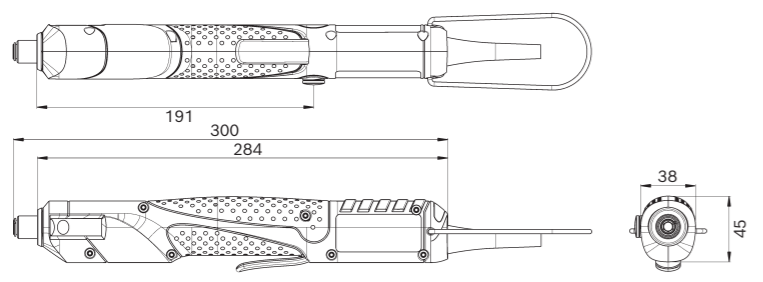
Nickel metal hydride	Part number	Description	Voltage (V)	Capacity (Ah)	Weight as per EPTA (kg)
9.6 V batteries 	2607335681	Battery pack	9.6	2.6	0.55
	0602490025	Pack of 10 batteries	9.6	2.6	5.5
12 V batteries 	2607335683	Battery pack	12	2.6	0.7
	0602490026	Pack of 10 batteries	12	2.6	7
14.4 V batteries 	2607335685	Battery pack	14.4	2.6	0.8
	0602490027	Pack of 10 batteries	14.4	2.6	8

Quick charger	Part number	Voltage (V)	Weight as per EPTA (kg)
AL 2450 DV Multivolt charger. Charges all Bosch NTC battery packs from 7.2-14.4 V with APT shank. 	2 607 225 027	230	1.0

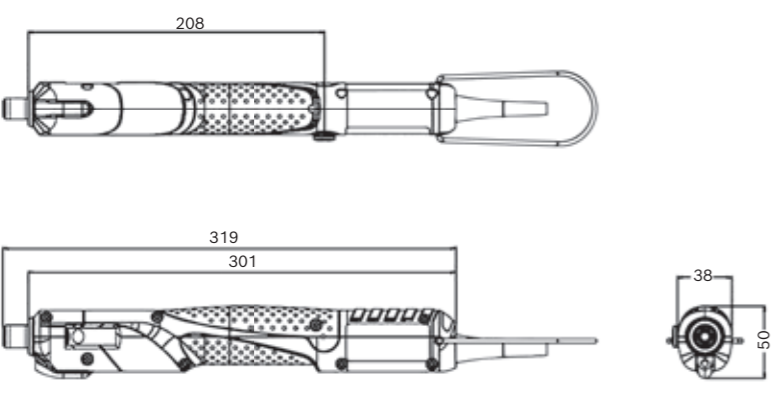
C-EXACT AND PUC-EXACT ACCESSORIES AND DIMENSIONAL DRAWINGS

Accessories	Part number	Quantity
Protective cap For every 1/4" quick-change chuck, prevents damage to the workpiece	 3 605 500 210	5
Colour rings For quickly identifying the torque range, suitable for every C-EXACT straight screwdriver and every EXACT cordless screwdriver with centre grip	 black 3 600 106 010  red 3 600 106 011  light blue 3 600 106 012  light green 3 600 106 013  orange 3 600 106 014  grey 3 600 106 017  white 3 600 106 019  mixed (1 of each: black, red, blue, green, orange) 3 600 106 015	5

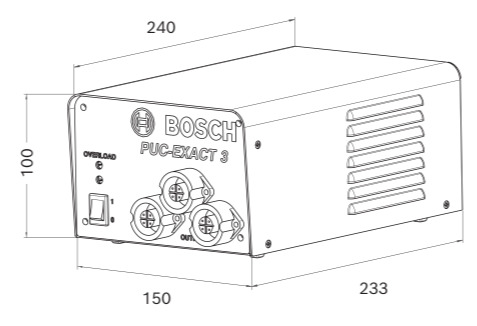
C-EXACT lever start Dimensions in mm

















C-EXACT push start Dimensions in mm



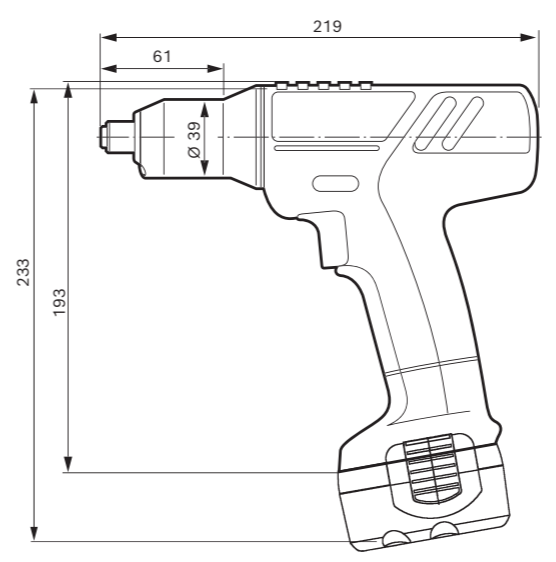
PUC-EXACT 3 Dimensions in mm



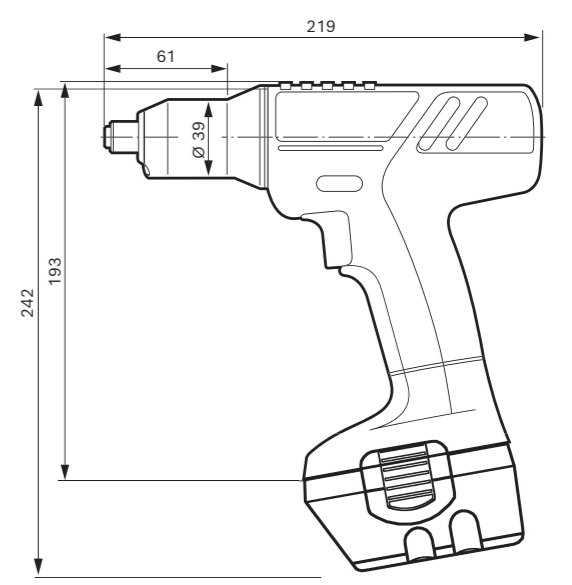
EXACT ACCESSORIES AND DIMENSIONAL DRAWINGS

Accessories	Part number	Quantity
Protective cap For all 1/4" quick-release chucks Prevents damage to the workpiece	 3 605 500 210	5
Colour rings For quickly identifying the torque range, suitable for every C-EXACT straight screwdriver and every EXACT cordless screwdriver with centre grip	 black 3 600 106 010  red 3 600 106 011  light blue 3 600 106 012  light green 3 600 106 013  orange 3 600 106 014  grey 3 600 106 017  white 3 600 106 019  mixed (1 of each: black, red, blue, green, orange) 3 600 106 015	5
Tool holder (for all tools with centre grip)	 0 602 490 001	10
Protectors Prevent damage to the workpiece Suitable for all EXACT cordless screwdrivers with centre grip Will not block motor air vents Available only as a pack of 10	 transparent 0 602 490 011  red 0 602 490 012  blue 0 602 490 013  green 0 602 490 014	10












All 9.6-volt EXACT and BT-EXACT models Dimensions in mm



All 12 volt EXACT and BT-EXACT models Dimensions in mm



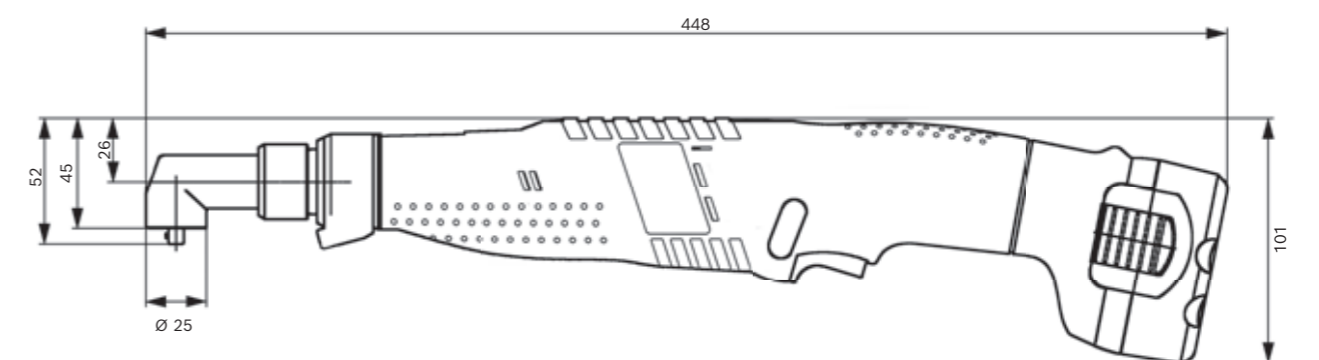
EXACT AND ANGLE EXACT ACCESSORIES AND DIMENSIONAL DRAWINGS

Accessories	Part number	Quantity
Colour rings		
For quick identification of the torque range Suitable for all ANGLE EXACT tools	 black	3 600 106 027 5
	 red	3 600 106 028 5
	 light blue	3 600 106 029 5
	 light green	3 600 106 030 5
	 orange	3 600 106 031 5
	 grey	3 600 106 032 5
	 white	3 600 106 033 5
Protectors		
Prevent damage to the workpiece Suitable for all ANGLE EXACT tools Will not block motor air vents Available only as a pack of 10	 transparent	0 602 490 015 10
	 blue	0 602 490 017 10
	 green	0 602 490 018 10
	 red	0 602 490 016 10

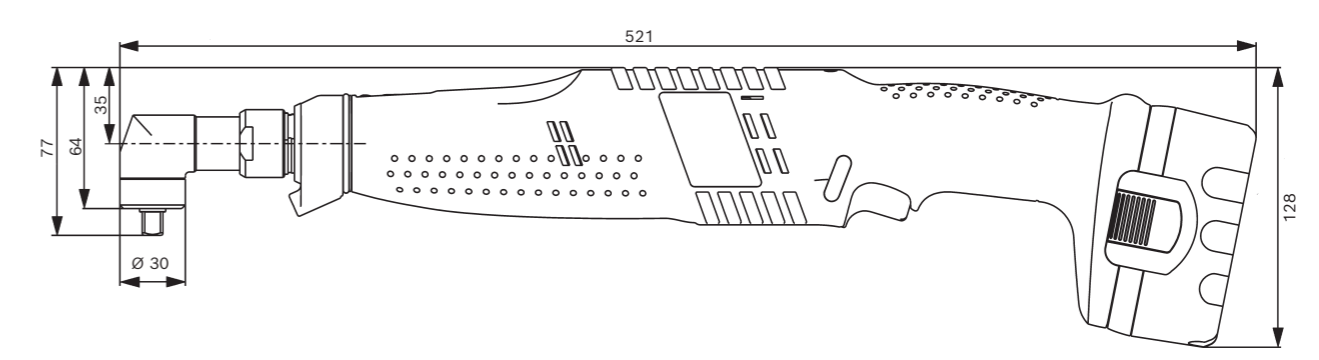
	Part number	Max. torque (Nm)	Drive end	Weight (kg)	Quantity	
Straight head 	0 607 453 631	6	1/4" QRC	0.2	1	
Angle head For ANGLE EXACT 2, 3, 6, 7, 8, 15, 17, 23 7-900, 10-650, 14-420 Gear ratio 1.4:1		0 607 453 617	27	1/4" square	0.2	1
		0 607 453 618	27	1/4" internal hex	0.2	1
		0 607 453 620	27	3/8" square	0.2	1
		0 607 453 630	27	1/4" QRC	0.2	1
HD angle head Required for ANGLE EXACT 30 (gear ratio of 1.4:1)		0 607 451 618	35	3/8" square	0.22	1
Protective cap For angle heads	Suitable for 0 607 453 617, -618, -620, -630	3 605 500 171	-	-	1	
	Suitable for 0 607 451 618	3 605 500 175	-	-	1	
Protective cap for large angle head Prevents damage to the workpiece Suitable for SEC-ANGLE EXACT 25-250, 30-380, 40-280, 50-210, 60-170		3 609 202 A29	-	-	1	

EXACT AND ANGLE EXACT DIMENSIONAL DRAWINGS

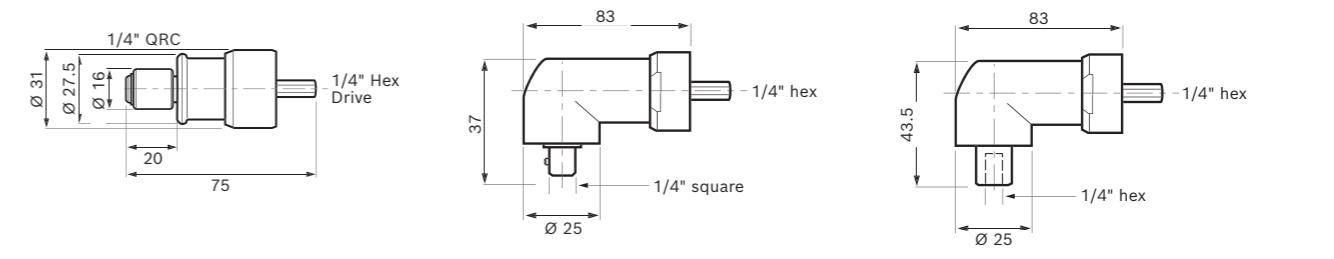
ANGLE EXACT models 2, 3, 6, 7, 8, 15, 14 CF
Dimensions in mm



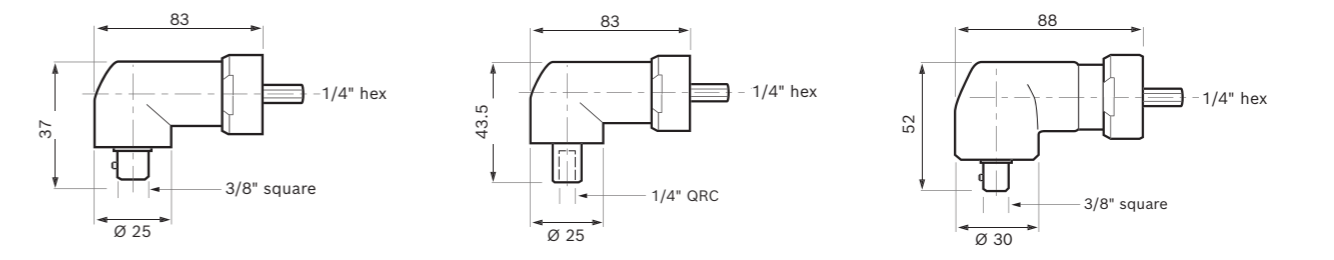
ANGLE EXACT models 17, 23, 30, 22 CF, 29 CF
Dimensions in mm




0 607 453 631 Dimensions in mm **0 607 453 617** Dimensions in mm **0 607 453 618** Dimensions in mm



0 607 453 620 Dimensions in mm **0 607 453 630** Dimensions in mm **0 607 451 618** Dimensions in mm

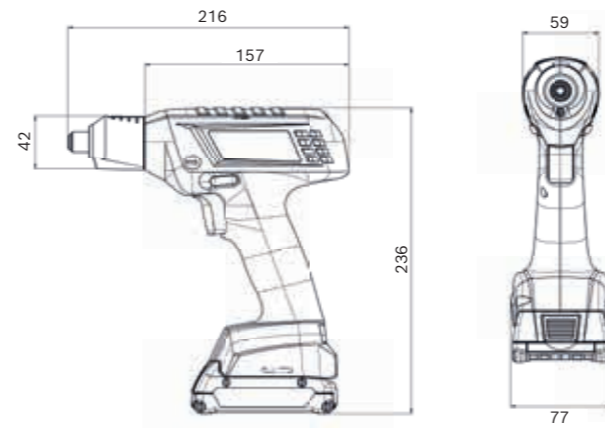


EXACT ION AND ANGLE EXACT ION ACCESSORIES

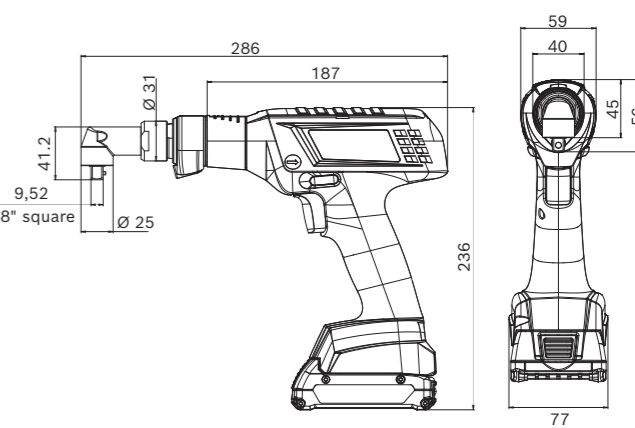
EXACT ION accessories		Part number	Quantity
Colour rings For quick identification of the torque range Suitable for all EXACT ION centre grip screwdrivers			
	black	3 600 106 010	5
	red	3 600 106 011	5
	light blue	3 600 106 012	5
	light green	3 600 106 013	5
	orange	3 600 106 014	5
	grey	3 600 106 017	5
	white	3 600 106 019	5
Protectors Prevent damage to the workpiece Suitable for all EXACT ION centre grip screwdrivers Will not block motor air vents Available only as a pack of 10			
	transparent	0 602 494 016	10
	red	0 602 494 018	10
	blue	0 602 494 017	10
	yellow	0 602 494 032	10
	green	0 602 494 019	10
ANGLE EXACT ION accessories		Part number	Quantity
Colour rings For quick identification of the torque range Suitable for all ANGLE EXACT ION centre grip screwdrivers			
	black	3 600 106 027	5
	red	3 600 106 028	5
	light blue	3 600 106 029	5
	light green	3 600 106 030	5
	orange	3 600 106 031	5
	grey	3 600 106 032	5
	white	3 600 106 033	5
Protectors Prevent damage to the workpiece Suitable for all ANGLE EXACT ION centre grip screwdrivers Will not block motor air vents Available only as a pack of 10			
	transparent	0 602 494 010	10
	red	0 602 494 012	10
	blue	0 602 494 011	10
	yellow	0 602 494 033	10
	green	0 602 494 013	10
Battery pack accessories			
Battery pack protectors Prevent damage to the battery Will not block the CoolPack housing Suitable for 18 volt Li-Ion battery packs Available only as a pack of 10			
	transparent – for the ProCORE18V 4.0Ah battery pack	0 602 494 034	10
	transparent – for the 2.0 Ah Compact battery pack	0 602 494 014	10
	transparent – for the 4.0 Ah Premium battery pack	0 602 494 015	10

EXACT ION, EXACT WK AND ANGLE EXACT ION ACCESSORIES AND DIMENSIONAL DRAWINGS

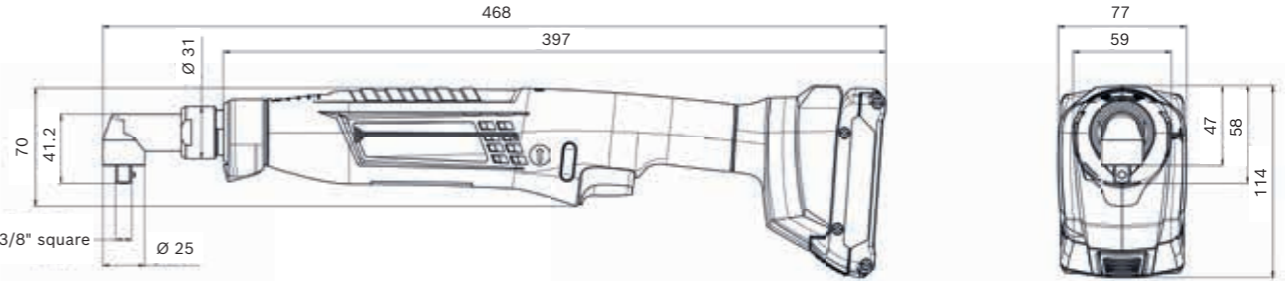
EXACT ION
Dimensions in mm



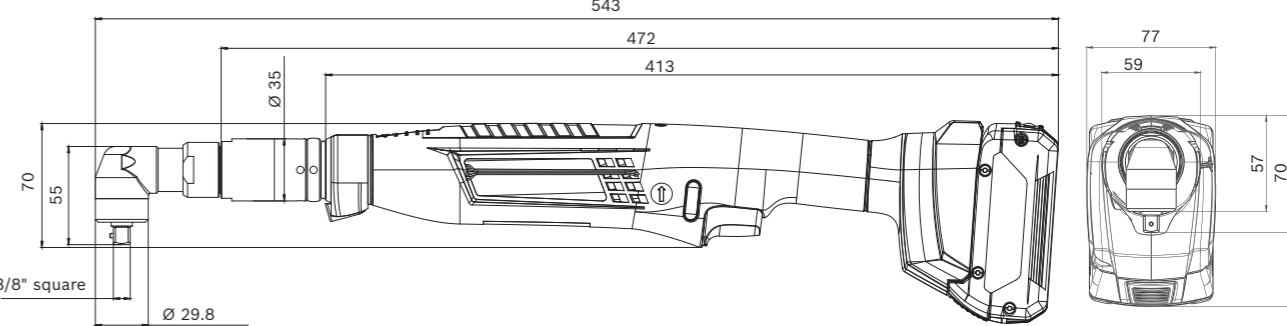
EXACT ION WK
Dimensions in mm



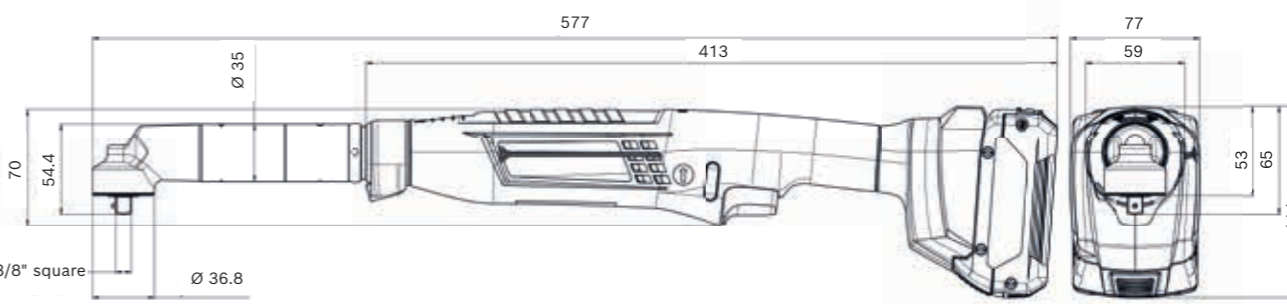
ANGLE EXACT ION model: 15-500 and 8-1100



ANGLE EXACT ION model: 23-380 and 30-290



ANGLE EXACT ION model: 30-300, 40-220, 50-200 and 60-120



EXACT 12V AND ANGLE EXACT 12V ACCESSORIES

EXACT 12V and ANGLE EXACT 12V accessories	Part number	Quantity	
Covers coloured For quickly identifying the torque range and with extra large bonding surface Suitable for every EXACT 12V and ANGLE EXACT 12V	black blue red green yellow	0 602 497 008 0 602 497 004 0 602 497 005 0 602 497 006 0 602 497 007	5 5 5 5 5
RFID attachment Black cover with NFC chip for wireless screwdriver identification. Suitable for every EXACT 12V and ANGLE EXACT 12V Only available as a pack of 5	Black (Chip: NXP NTAG 216 – 924 bytes)	0 602 496 011	5

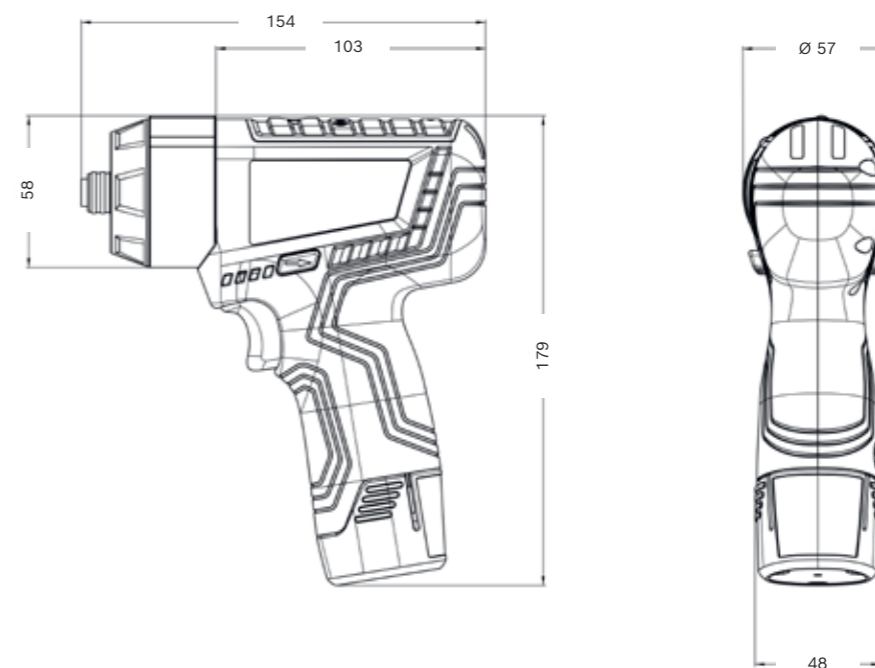
EXACT 12V accessories	Part number	Quantity	
Protectors Prevent damage to the workpiece Suitable for every EXACT 12V centre grip screwdriver Will not block motor air vents Only available as a pack of 5	Clear Fig. example Blue Fig. example Red Fig. example Green Fig. example Yellow Fig. example	0 602 496 000 0 602 496 001 0 602 496 002 0 602 496 003 0 602 496 004	5 5 5 5 5

ANGLE EXACT 12V accessories	Part number	Quantity	
Protectors Prevent damage to the workpiece Suitable for every ANGLE EXACT 12V angle wrench Will not block motor air vents Only available as a pack of 5	Clear Fig. example Blue Fig. example Red Fig. example Green Fig. example Yellow Fig. example	0 602 496 005 0 602 496 006 0 602 496 007 0 602 496 008 0 602 496 009	5 5 5 5 5

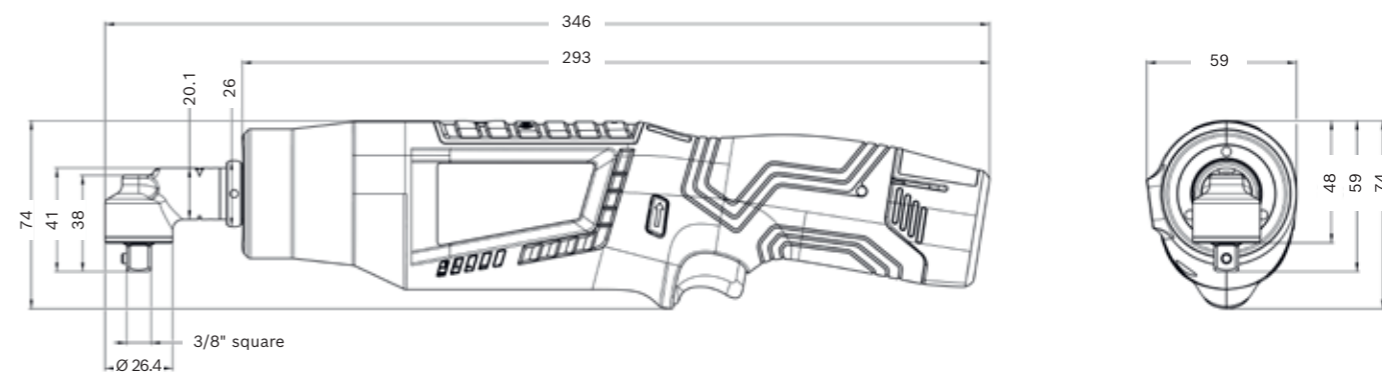
Accessories for battery packs	Part number	Quantity	
Battery pack protectors Prevent damage to the battery Only available as a pack of 5	Clear For the GBA 12V 6.0 Ah Fig. example	0 602 496 010	5

EXACT 12V AND ANGLE EXACT 12V ACCESSORIES AND DIMENSIONAL DRAWINGS

EXACT 12V Dimensions in mm



ANGLE EXACT 12V Dimensions in mm



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