



Speed. Efficiency. Accuracy.

The power of innovation.



**Straight, pistol
26C air screwdrivers**

- Torque range: from 0,4 to 12 Nm
- Automatic shut-off

Fiam[®]
PEOPLE AND SOLUTIONS

Searching for excellence, developing ideas.

Are you looking for innovation, practicality and accuracy?

Only the range of 26C tools can satisfy your needs. A modern 260 Watt power range, ideal in every type of industrial assembly: to overcome the performance's challenge with **different functionality levels** and thanks to the **control of the whole assembly process**.

For this reason each 26C tool is also designed to monitor the tightening cycle (poka-yoke system, anti-error system) or the assembled component, ensuring extraordinary results.

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Level 1

Screwdrivers with TRACS2 and TRACS3 torque control

Accurate, reliable, constant tightenings, cycle after cycle.
High torque repeatability on hard and soft joints.

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Level 2

Screwdrivers with TRACS2 and TRACS3 torque control + SCREWS COUNTING

26C tools with pneumatic pick up signal, subsequently converted into electric signal: it reports if the clutch shuts-off during the time set in the program. Therefore it allows to discriminate the screws that have been tightened incorrectly with consequent quality improvement of the assembled product.

Straight screwdriver



"Forward" pistol screwdriver



Pistol screwdriver



Control levels of the assembly process



Level 1

TRACS2 and TRACS3 torque control.

- TRACS CLUTCH
- ACCURATE TIGHTENINGS
- HIGH REPEATABILITY



Level 2

TRACS2 and TRACS3 torque control + screws counting.

- TRACS CLUTCH
- ACCURATE TIGHTENINGS
- HIGH REPEATABILITY
- COUNTING OF TIGHTENED SCREWS
- OK / KO CYCLE
- MONITORING OF THE TIGHTENING TIME

Pistol UpGrip screwdriver



Solution with TOM monitoring unit

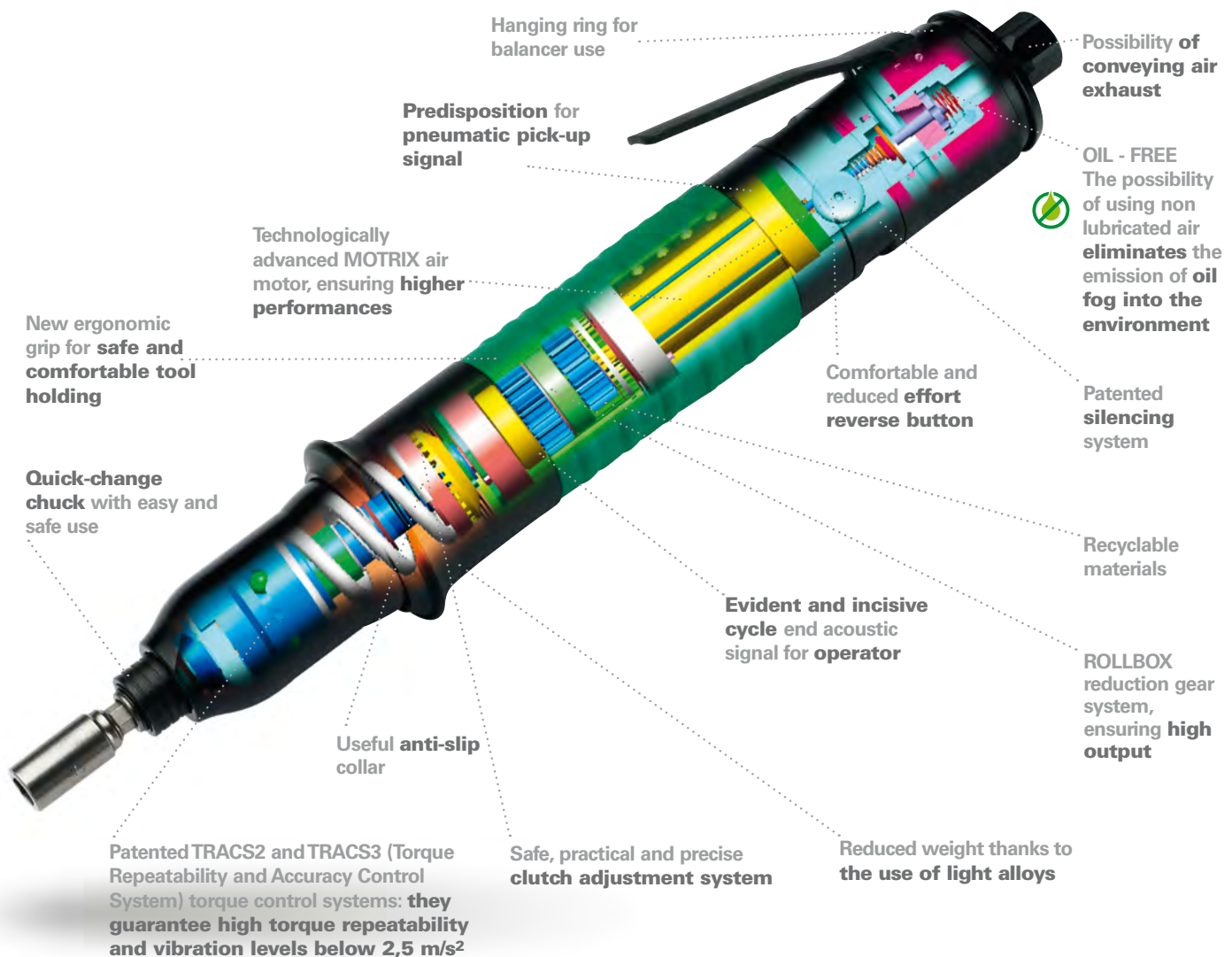


All Fiam innovation in your hands

For over 65 years Fiam has been moving towards the **future** and **research**. So it has designed the modern 26C air screwdrivers, increasing quality and performances.

Straight, pistol and pistol UpGrip tools are characterized by **their extreme handiness and ergonomic grip**: ideal for working with high productivity and minimum effort.

Modern solutions ideal in **mechanical, electrical, electronics and furniture fields**.





Reversibility next to starting button and triple air inlet

This range of tools is particularly suitable for applications where screw loosening is recurring as into electric/electronic fields, assembly of wires harness and when it is necessary to untighten several times to realign parts when not correctly tightened on the component. **Reversibility next to the start button** allows a **practical and fast change of rotation**.

If in addition to the reversibility, the screwdriver is equipped with **triple air inlet**, it is possible to use the **same pistol grip** for different **working lay-out** with rapid sequence.



The pistol UpGrip model

Exclusive pistol UpGrip model that allows a comfortable access to those working places otherwise unreachable by the traditional air screwdrivers. These situations can occur in different fields, such as those of the appliances field (e.g. in the assembly of the ovens). The air feed from the top and ergonomic studies of the grip have brought to the design of **an extremely light, balanced and particularly handy tool**.

For all further details, please apply to the [Fiam Technical Advice service](#).





Be demanding

Reliability

Long lifetime of the components thanks to careful design and to quality of the productive process which results in less maintenance and repair costs

MOTRIX: newly conceived air motor ensures **long lifetime, high specific power and maximum torque**

ROLLBOX: new reduction gear system has been designed to guarantee **maximum output, long lifetime of the kinematic chain and reduced noise level**

TRACS2 and TRACS3 (Torque Repeatability and Accuracy Control System): for torques respectively up to 5 Nm and 12 Nm, they are the **new tightening torque control systems** that ensure a very **high torque repeatability**, i.e. a very low Mean Shift value also in the presence of variability of the joint softness level. These systems maintain same torque values for hundreds of thousands of cycles. The TRACS systems guarantee a **high quality improvement** in the tightening process



The reversibility cursor can be positioned on the right or left of the start button: an advantage to make assembly operations more practical and faster, even for left-handed operators.

Don't be satisfied with the maximum

Productivity

Considerable increase of the efficiency of the tightening cycle thanks to innovative systems

MOTRIX: innovative project principles guarantee a higher rotating speed of the new air motor with equal tightening torque, with evident **reduction of tightening cycle time**

TRACS2 and TRACS3: the modern torque control systems reduce to a minimum level the need of quality control at the end of the assembly process, with a remarkable **increase of the tightening cycle productivity**

Quick change chuck: it favours **easier and safer** bit replacement; it is available upon request, also for use of double insert bits

Clutch adjustment system: safe, practical and accurate

Grip design: it permits **extraordinary ease in handling** the screwdriver with **less operator fatigue** and significant increase of the productivity

More evident and incisive cycle end acoustic signal: emitted by the tightening torque control system permits the operator **to pass on to the next tightening cycle more rapidly**

26C...3I and 26C...R models: suitable for applications where **screw loosening is frequently recurring**; the comfortable reversibility lever next to the start button allows to start the tool and reverse direction using the same hand making faster assembly operations with a considerable increase of the productivity

Perfection is
in your hands

Ergonomics

Optimization of the tool performances in regard to ergonomics and operator safety

Ergonomic grip: designed according to modern biomechanics principles paying particular attention to the features of the female hand. The grip is manufactured with an ergonomic sheath made of no slip material making it easier to hold the screwdriver, increasing the hand grip, **improving the handling, the thermal isolation and operator's comfort**

TRACS2 and TRACS3: the modern torque control systems **reduce the reaction to the operator's hand**. Thanks to the immediate automatic air shut-off system with the careful study of the internal gears, the vibration levels are below $2,5 \text{ m/s}^2$

Comfortable low effort reverse button (for straight models) / cursor (for pistol models): they reduce finger fatigue; they can be used by both right and left hand operators

Start lever for straight models: the **handling of the tool** is easier reducing fatigue and the effort of the operator



26C...APA

"Forward" pistol grip:

indicated when balancing systems cannot be used, and where it does not need a particular push along the fastening axis

Anti-slip collar for straight models: it avoids that the hand slips towards the tightening point, above all in case of big thrust on the screw, **increasing the safety and reducing the operator's fatigue**

Possibility of conveying air exhaust away from the operator

Reduced weight thanks to the use of light alloys

Arranged for hanging ring for balancer use eliminating any operator's effort

Patented silencing system: these screwdrivers are extremely noiseless and are equipped with a controlled spread of the exhaust air

26C...3I and 26C...R models: la **reversibility switch and starting button** can be activated by the same hand, allowing a practical change of rotation

26C...3I models: the **3 different inlets available for air supply** allow the operator using the screwdriver in the best position depending on type of use and working lay-out



26C...AP

Pistol grip

indicated for situations in which screwdriving operations require thrust along the screwdriving axis

This screwdriver is particularly suitable to the female hand

Naturally
innovative

Ecology

Innovative systems designed paying even more attention with respect to environment and of its safeguard

MOTRIX: the advanced technological design of the air motor permits very **high decrease of compressed air consumption**, without affecting tool performance

ROLLBOX: thanks to the new inner kinematic motions which optimize efficiency, the available power is being transmitted with **minimum dispersions**

TRACS2 and TRACS3: the torque control system has a high running speed which **reduces the working time of the screwdriver and the compressed air consumption**



Oil - Free: 26C screwdrivers work at maximum efficiency without need of lubrication guaranteeing in such the

absence of oil exhaust into the working environment

ECO-CONTRIBUTION WEEE ACQUITTED: Fiam carries out its obligations of producer, with full respect for the environment, and **without any extra charge for the customer**



DIFFERENT ACCESSORIES TO IMPROVE THE ERGNOMICS OF THE WORKING AREA.

Type of sawdriver		Grip	Tightening torque on soft joint		Idle speed	Starting system	Reversibility	Weight	Dimensions (mm)	Air consumption	Accessories	Noise level*	Vibrations			
			min.	max.										in lb	in lb	
Model	Code	Type	Nm	Nm	in lb	in lb	rpm	Type	Type	kg	lb	ØxLxh	l/s	Drive	dBA	m/s²
26C4A	114814350		0,4 ÷ 4		3.54 ÷ 35.4		2000			0,80	1.76	40x235	4,5	 F 1/4"	75	<2,5
26C5A	114814351		0,4 ÷ 5		3.54 ÷ 44.25		1350			0,80	1.76	40x235	6	 F 1/4"	75	<2,5
26C8A	114814352		3,5 ÷ 8		30.975 ÷ 70.8		1000			0,90	1.98	40x255	6	 F 1/4"	75	<2,5
26C10A	114814353		3,5 ÷ 9,5		30.975 ÷ 84.075		850			0,90	1.98	40x255	6	 F 1/4"	75	<2,5
26C12A	114814354		3,5 ÷ 12		30.975 ÷ 106.2		400			0,90	1.98	40x255	6	 F 1/4"	75	<2,5
26C4AL	114814950		0,4 ÷ 4		3.54 ÷ 35.4		2000			0,85	1.87	40x234	6	 F 1/4"	75	<2,5
26C5AL	114814951		0,4 ÷ 5		3.54 ÷ 44.25		1350			0,85	1.87	40x234	6	 F 1/4"	75	<2,5
26C8AL	114814952		3,5 ÷ 8		30.975 ÷ 70.8		1000			0,93	2.05	40x254	6	 F 1/4"	75	<2,5
26C10AL	114814953		3,5 ÷ 9,5		30.975 ÷ 84.075		850			0,93	2.05	40x254	6	 F 1/4"	75	<2,5
26C12AL	114814954		3,5 ÷ 12		30.975 ÷ 106.2		400			0,93	2.05	40x254	6	 F 1/4"	75	<2,5
26C4AP	114814576		0,4 ÷ 4		3.54 ÷ 35.4		2000			0,87	1.91	38x190x155	7	 F 1/4"	73	<2,5
26C5AP	114814577		0,4 ÷ 5		3.54 ÷ 44.25		1300			0,87	1.91	38x190x155	7	 F 1/4"	73	<2,5
26C8AP	114814578		3,5 ÷ 8		30.975 ÷ 70.8		1000			0,97	2.13	38x210x155	7	 F 1/4"	73	<2,5
26C10AP	114814579		3,5 ÷ 9,5		30.975 ÷ 84.075		800			0,97	2.13	38x210x155	7	 F 1/4"	73	<2,5
26C12AP	114814580		3,5 ÷ 12		30.975 ÷ 106.2		400			0,97	2.13	38x210x155	7	 F 1/4"	73	<2,5
26C4APA	114814586		0,4 ÷ 4		3.54 ÷ 35.4		2000			0,95	2.09	39x195x160	7	 F 1/4"	73	<2,5
26C5APA	114814587		0,4 ÷ 5		3.54 ÷ 44.25		1300			0,95	2.09	39x195x160	7	 F 1/4"	73	<2,5
26C8APA	114814588		3,5 ÷ 8		30.975 ÷ 70.8		1000			1,05	2.31	39x210x160	7	 F 1/4"	73	<2,5
26C10APA	114814589		3,5 ÷ 9,5		30.975 ÷ 84.075		800			1,05	2.31	39x210x160	7	 F 1/4"	73	<2,5
26C12APA	114814590		3,5 ÷ 12		30.975 ÷ 106.2		400			1,05	2.31	39x210x160	7	 F 1/4"	73	<2,5

Models with Pistol UpGrip

26C4APU	114814584		0,4 ÷ 4		3.54 ÷ 35.4		2000			1,05	2.31	39x194x160	7	Hex F 1/4"	73	<2,5
26C5APU	114814585		0,4 ÷ 5		3.54 ÷ 44.25		1300			1,05	2.31	39x194x160	7	Hex F 1/4"	73	<2,5
26C8APU	114814581		3,5 ÷ 8		30.975 ÷ 70.8		1000			1,05	2.31	39x215x160	7	Hex F 1/4"	73	<2,5
26C10APU	114814582		3,5 ÷ 9,5		30.975 ÷ 84.075		800			1,05	2.31	39x215x160	7	Hex F 1/4"	73	<2,5
26C12APU	114814583		3,5 ÷ 12		30.975 ÷ 106.2		400			1,05	2.31	39x215x160	7	Hex F 1/4"	73	<2,5

Models with reversibility next to starting button

26C4APA-2000-R	114814601		0,4 ÷ 4		3.54 ÷ 35.4		2000			0,93	2.05	37x207x155	7	Hex F 1/4"	73	<2,5
26C5APA-1300-R	114814602		0,4 ÷ 5		3.54 ÷ 44.25		1300			0,93	2.05	37x207x155	7	Hex F 1/4"	73	<2,5
26C8APA-1000-R	114814603		3,5 ÷ 8		30.975 ÷ 70.8		1000			1,06	2.33	37x234x155	7	Hex F 1/4"	73	<2,5
26C10APA-800-R	114814609		3,5 ÷ 9,5		30.975 ÷ 84.075		800			1,06	2.33	37x234x155	7	Hex F 1/4"	73	<2,5
26C12APA-400-R	114814610		3,5 ÷ 12		30.975 ÷ 106.2		400			1,06	2.33	37x234x155	7	Hex F 1/4"	73	<2,5
26C12APA-250-R	114807601		3,5 ÷ 12		30.975 ÷ 106.2		250			1,15	2.53	37x248x155	7	Hex F 1/4"	73	<2,5
26C12APA-150-R	114807602		3,5 ÷ 12		30.975 ÷ 106.2		150			1,15	2.53	37x248x155	7	Hex F 1/4"	73	<2,5

Models with reversibility next to starting button and triple air inlet

26C4APA3I	114814595		0,4 ÷ 4		3.54 ÷ 35.4		2000			0,97	2.13	37x212x155	7	Hex F 1/4"	73	<2,5
26C5APA3I	114814594		0,4 ÷ 5		3.54 ÷ 44.25		1300			0,97	2.13	37x212x155	7	Hex F 1/4"	73	<2,5
26C8APA3I	114814593		3,5 ÷ 8		30.975 ÷ 70.8		1000			1,10	2.42	37x233x155	7	Hex F 1/4"	73	<2,5
26C10APA3I	114814592		3,5 ÷ 9,5		30.975 ÷ 84.075		800			1,10	2.42	37x233x155	7	Hex F 1/4"	73	<2,5
26C12APA3I	114814591		3,5 ÷ 12		30.975 ÷ 106.2		400			1,10	2.42	37x233x155	7	Hex F 1/4"	73	<2,5

Models with threaded drive for screw suction system

26C4A- FT	114807634		0,4 ÷ 4		3.54 ÷ 35.4		2000			0,85	1.87	40x235	6	Hex F 1/4"	73	<2,5
26C5A- FT	114807635		0,4 ÷ 5		3.54 ÷ 44.25		1350			0,80	1.76	40x235	6	Hex F 1/4"	73	<2,5
26C4AL- FT	114807636		0,4 ÷ 4		3.54 ÷ 35.4		2000			0,85	1.87	40x234	6	Hex F 1/4"	73	<2,5
26C5AL- FT	114807383		0,4 ÷ 5		3.54 ÷ 44.25		1350			0,85	1.87	40x234	6	Hex F 1/4"	73	<2,5

Legend

26 = Power of the motor in Watt/10 • C = Screwdriver • 4 = Maximum tightening torque in Nm • A = Air shut-off system • L = Lever start • P = Pistol grip • PA = 'Forward' pistol grip • PU = UpGrip pistol grip • 2000 = Idle speed • R = Reversibility • 3I = 3 Inlets (3 air inlets) • FT = (Front Thread) Equipped with threaded drive for screw suction system

Legend

 **Reversibility:** all models are suitable for tightening and untightening operations

N.B.: Reversibility cursor can be positioned on the right or left of the start button.

 **Push to start**

 **Lever start**

 **Push-button start**

 **Push-button start**

 **Push-button start**

- The figures shown are measured at a pressure of 6,3 bar (ISO 2787) the recommended operating pressure.
- Tightening torque values have been measured in accordance with ISO 5393 standard.
- Noise level has been measured in accordance with ISO 3744 and ISO 15744 standards.
- *Additional factor: 3 dBA spread in method and production (ISO 15744).
- Vibrations level have been measured in accordance with ISO 28927-2 standards.
- Accessory drive: female hexagonal drive 1/4"; 6,35 mm (ISO 1173).
- The code number must be used when ordering.

Torque values refer to analysis of laboratory performing tests that comply with the standard ISO 5393 with screwdriver set at to the maximum speed and should be considered as indicative. The values in real applications can be influenced by many factors such as, for example: joint (type of joint, degree of elasticity), screw (type and length), accessory used (type or length of the blade), tightening speed, assembly conditions (free standing screwdriver, screwdriver mounted on a torque arm), operator behavior during the tightening phase. For any further details, please address to [Fiam Technical Advice service](#).

Other technical features

TRACS clutch spring

*Assembled on the tool
grey colour - Ø wire 3,2 mm
Code 595103202*

*Supplied
black colour - Ø wire 2,2 mm
Code 595102204*

Model	Tightening torque on soft joint		Tightening torque on soft joint	
	Nm	in lb	Nm	in lb
26C4...	1 ÷ 4	8.85 ÷ 35.40	0,4 ÷ 1,3	3.54 ÷ 11.51
26C5...	1 ÷ 5	8.85 ÷ 44.25	0,4 ÷ 1,3	3.54 ÷ 11.51

Model	Air inlet	Reccomended hose bore
26C...	1/4" gas	Ø 8 mm

 **26C air screwdrivers are designed for use with lubricated and unlubricated compressed air**

Standard equipment (supplied with the tool)	Models available upon request	Straight models	Pistol models
• Clutch adjustment key • Additional clutch spring (only for 26C4/5.. models) • Hanging ring • Air inlet coupling to activate the air inlet from above or behind depending on workplace requirements (only for 26C...3I models) • Use and maintenance manual • Eco-friendly packaging	Lever models for left hand operators	X	
	Models with anti-slip collar with different dimensions	X	
	Models with only right hand rotation	X	X
	Models with only left hand rotation	X	X
	Models with lever + push start (or push button + push start)	X	X
	Models for double insert bits	X	X
	Models with screws suction (see page 17)	X	
	Models with low speeds	X	X
	Angle models: see catalogue nr. 26 and contact the Fiam Technical Advice service.		

Accessories available upon request

- Bits, sockets and other accessories (see catalogue nr. 78)
- Couplings, hoses, filters, governors and other compressed air system accessories (see catalogue nr. 77)
- Collar bracket for arm stands and auxiliary grips to be used with straight models.
Code 692039006 for 26C4.. and 26C5...models
Code 692039007 for other models 26C8/10/12...



- Auxiliary grip: when carrying out **more than one assembly cycle** or when the **torques are higher than 4Nm** (straight tools) or **than 10 Nm** (pistol tools), it is recommended to use an auxiliary grip which permits a reduction of the **torque reaction dividing work load on both hands** (ISO 11148-6 standard).



- Flexible coupling with 360° rotation to ease rotation of supply hose, avoiding throttling of the compressed air (only for 26C...3I models).



Many configurations for every need. Please apply to the [Fiam Technical Advice service](#).

26C screwdrivers with TRACS2 and TRACS3 torque control + SCREWS COUNTING

0% error, 100% accuracy.

Did you lose any screws? The **'screws count'** function will help you: therefore in case of high production rate, you won't risk any omission. Moreover, the feed-back signal and the end one to pass to next piece **accelerate the production cycles and ensure control on the assembled products.** So dead times will decrease and quality will increase.

The solution includes:

- Lever or push button air shut-off **26C SCREWDRIVERS** equipped with **pneumatic pick-up signal (ported)**



- **COMPUTERIZED MONITORING UNIT TOM** (Tightening Operation Monitor): it allows the **monitoring of the tightening cycle through the double-signal pressure** coming from the screwdrivers, subsequently converted into electric signal.



A proved system against pressure changes.

The use of two pneumatic signals (tool start and clutch operated) guarantees the system functioning **regardless of the pressure changes, critical point in many production lines.**

A considerable advantage in respect to other poka-yoke systems, which are more difficult to programme and use a single signal: which are considerably affected by pressure fluctuations.

Tightening Operation Monitor

Model	Description	Code	Dimensions (mm)	Electric feed
TOM	Monitoring unit	685001062	width 208 x depth 128 x height 42	24V, 110/230V, 50/60 Hz

Standard equipment

• Feeder • Feed cable • Use and maintenance manual • Eco-friendly packaging

TOM Tightening Operation Monitor is also available in the configuration BOX TOM, that includes: **TOM unit and all its accessories already wired in a single box.**

This “Plug and Play” solution is easy to introduce into assembly lines and extremely practical since you just need to connect the air line and the power supply to start production immediately.

Model	Description	Code	Dimensions (mm)	Electric feed
BOX TOM	Monitoring unit	685001086	h 265 mm (without tower-light) x depth 165 x width 300	24V, 110/230V, 50/60 Hz

Standard equipment

BOX TOM includes:

• TOM monitoring unit • Tool locking/unlocking device • Cable to connect TOM with locking/unlocking device • Transducer • Tower light • Feeder • Feed cable • Use and maintenance manual • Eco-friendly packaging



MODEL “STOP BY TIME” AVAILABLE UPON REQUEST - Code 685001087

Used when it is necessary to **tighten** threaded elements controlling shut-off by **depth rather than torque** through the control of tightening time.

It allows the tightening of the threaded elements with a tolerance of 360° compared to target depth.

It is to order with the tool locking unit to activate the arrest “to time” of the screwdriver together to cables and Cables multi-dock.

When the time set by the operator is reached, the tools stops for a programmable time. There will be an OK signal (and not an error that requires a RESET as the standard version does). You can set up to 8 different times, one for each program available.

Model	Code
TOM “STOP BY TIME”	685001087
TOM BOX “STOP BY TIME”	685001089

Transducer for TOM

TOM needs to be purchased along with Fiam transducer, one for each tool (except when TOM is connected to EasyDriver CA).

Completely designed and manufactured by Fiam, it is a single box that receives two pneumatic signals (input) through two hoses of different colors: black for starting signal and green for torque signal; equipped with LED indicator and unique electric connecting cable (output) to carry the electrical signal to the TOM unit. Reduced dimensions and weight, easier to calibrate.

Model	Code
Transducer for TOM	687041041



What is it necessary to choose?



Features

20 INPUTS	• 8 for programmes selection, 6 for remote functioning: switching off, program activation, tool stop, tool loosening, program reset Availables with contacts 24V/GND (both pull-up and pull-down) for a great compatibility with the bench buttons (i.e: reset, block, unblocking etc.) and to be interface with the PLC of the client
24 OUTPUTS	• For results, active program, screwdriver status and possible electro-valve activation, auxiliary output, signal waste piece, in cycle signal (to check the beginning and the end of tightening cycle, useful i.e. set/unset the pieces jigs)
AUTOMATIC CHECK OF TIGHTENING TIME	• Which can be adjusted by setting the cycle time thus discriminating the different KO results
SINGLE PROGRAM 99 tightenings	• Tightening with min/max time equal for all screws • Screws count • 3 different acoustic signals: tightening end, single program end, error
SEQUENCE PROGRAM 99 tightenings x 8	• More single programmes (up to 8) in sequence • 4 different acoustic signals: tightening end, single tightening end, sequence (OK/NOK) • It can be selected from PC • For each tightening sequence it is possible to program the maximum number of tightening attempts fro NOK screws
RS 232 SERIAL PORT	• To print the following results in sequence: Date / hour - Number active output - Result – Tightening Time – Screw number - Program number - Sequence
PASSWORD	• Two modalities: one does not allow the operator changing menu's parameters; the other, in addition to former's possibilities, in case of error and consequent unit stop, allows the line manager to reactivate the process by means of a password or key (optional)
TIME	• It can be activated without buffer-battery to be replaced
MEMORY	• Parameters for statistics (they can printed through RS232): OK piece - NOK Screws - Pressed resets (NOK pieces) - Number of screws counted by TOM (data not resettable) – It stores data related to last 6,000,000 screws
LEVER RELEASED CONTROL	• In production processes where the operators tighten so fast that release the lever before the clutch shuts-off
REMOTE FUNTIONING	• From external PLC (or sensor) it is possible to stop the tool with the dedicated locking/unlocking unit. For instance, when we work with jigs, the tool is activated only when parts are correctly positioned
MASKED TIME	• This feature disable any controls for a set time during which TOM does not detect possible incorrect operations by the worker (for instance "unintentional starts" with push-to-start screwdrivers)
RELEASE TIME	• This function allows to better identify the OK tightenings, even if the lever is released in a very short time after the clutch shut-off (for example, if the operator is particularly fast to tighten and release the lever)
RUNCYCLE	• For pallet lines where, for instance, jigs locking device needs to be activated and then release the jig when the piece is assembled. Replaces some activities that are normally controlled by a PLC

Models available upon request

- **Multi-dock connector:** connecting up to 8 tools (each tool has a dedicated program) that can operate individually depending on TOM programming.
Code 685001065
- **Tool locking/unlocking device:** it permits to TOM unit to enable/disable connected tool. For 15C/26C models: code 685001069
- **Cables**
Code 685001071: to connect TOM with locking/unlocking device when a single screwdriver is used.
Code 685001072: to connect multi-dock connector with locking/unlocking device when several screwdrivers are used
- **Tower-light:** It allows immediate, visual display of the tightening outcome. Code 687041018
- **Connecting hoses** (air and signals) for use of the transducer for TOM. A very compact solution, completely spiral shape, which maintains a tidy work area for the operator. The hoses are 2.5 M long (measured with stretched hose and including 35 mm useful linear hose for connections)
Spiral multi-hose for TOM D12 code 693011027
Spiral multi-hose for TOM D10 code 693011026
- **Cover:** It prevents intentional or unintentional contacts and damages to TOM unit. It prevents modifications / tampering by unauthorized personnel.
Code 687041043
- For further information see cat. 99 - [TOM Monitoring Unit](#).

Advantages of the TOM unit vs a PLC

	TOM	PLC
LAY OUT	Compact unit compared to the PLC	To provide the same features, the PLC must be integrated with other devices (additional modules which are bigger)
	Robust: the cover is made of sheet metal 1 mm thick	The PLCs are made of plastic and must be further protected by an additional electric panel
	It doesn't require switchboard and wiring for installation	The PLC provides an electric panel instead
	Possibility to position it directly on the production line to be used by the operator to read	The PLC needs a operator panel and/or external buttons
CHEAPNESS	Integrated and easy user interface	It is necessary an operator panel to connect and adequately program
	TOM is a complete system equipped with 16 IN and 24 OUT, RS232 for data and watch	To have all these functions, it is necessary to add expansions
	Complete firmware compatible with all screwdrivers , with all setting times and calibrations and many other functions	It is required a complete programming according to the different screwdrivers to connect
	Firmware already tested by Fiam and ready to use	A program developed by the customer, in addition to costs for software development and time (often some months), requires a time for verification and resolution of the programming errors
USE	Rapid start up: a few seconds to start	Long cycle of start; the PLC always require more time to start
	Rapid visualisation of the remaining screws thanks to additional display	For the PLC, it is required an additional monitor positioned close to the user
	Fast calculation: instantaneous response to events (both screwdriver and inputs / outputs). Very rapid reading: even in the case of 1 tightening with very high cadences, counts are not lost	Slower times of answer in case of tightenings with high work rate
	Easily interfaced to signal and transmit the data with all PLC	The PLC to communicate with other devices must have additional interfaces



TOM connected with the plant's system



Process under control and print of tightening results

Screwdrivers with pneumatic pick-up signal

Type of screwdriver		Grip	Tightening torque on soft joint				Idle speed	Starting system	Reversibility	Weight		Dimensions (mm)	Air consumption	Accessories	Noise level*	Vibrations
			min.	max.	min.	max.				kg	lb					
Model	Code	Type	Nm	Nm	in lb	in lb	rpm	Type	Type	kg	lb	ØxLxh	l/s	Drive	dBA	m/s
26C4AL-2CS	114807255		0,4 ÷ 4,0		3.54÷35.4		2000			0,85	1.87	40x234	6	 F 1/4"	75	<2,5
26C5AL-2CS	114807256		0,4 ÷ 5,0		3.54÷44.25		1350			0,85	1.87	40x234	6	 F 1/4"	75	<2,5
26C8AL-2CS	114807257		3,5 ÷ 8,0		30.975÷70.8		1000			0,93	2.05	40x254	6	 F 1/4"	75	<2,5
26C10AL-2CS	114807258		3,5 ÷ 9,5		30.975÷84.075		850			0,93	2.05	40x254	6	 F 1/4"	75	<2,5
26C12AL-2CS	114807259		3,5 ÷ 12		30.975÷106.2		400			0,93	2.05	40x254	6	 F 1/4"	75	<2,5
26C4A-CS	114807519		0,4 ÷ 4,0		3.54÷35.4		2000			0,85	1.87	40x235	6	 F 1/4"	75	<2,5
26C5A-CS	114807520		0,4 ÷ 5,0		3.54÷44.25		1350			0,85	1.87	40x235	6	 F 1/4"	75	<2,5
26C8A-CS	114807521		3,5 ÷ 8,0		30.975÷70.8		1000			0,93	2.05	40x262	6	 F 1/4"	75	<2,5
26C10A-CS	114807522		3,5 ÷ 9,5		30.975÷84.075		850			0,93	2.05	40x262	6	 F 1/4"	75	<2,5
26C4A-CS	114807523		3,5 ÷ 12		30.975÷106.2		400			0,93	2.05	40x262	6	 F 1/4"	75	<2,5
26C4AP-2CS	114807224		0,4 ÷ 4,0		3.54÷35.4		2000			0,87	1.91	38x190x155	7	 F 1/4"	73	<2,5
26C5AP-2CS	114807225		0,4 ÷ 5,0		3.54÷44.25		1300			0,87	1.91	38x190x155	7	 F 1/4"	73	<2,5
26C8AP-2CS	114807226		3,5 ÷ 8,0		30.975÷70.8		1000			0,97	2.13	38x210x155	7	 F 1/4"	73	<2,5
26C10AP-2CS	114807227		3,5 ÷ 9,5		30.975÷84.075		800			0,97	2.13	38x210x155	7	 F 1/4"	73	<2,5
26C12AP-2CS	114807228		3,5 ÷ 12		30.975÷106.2		400			0,97	2.13	38x210x155	7	 F 1/4"	73	<2,5
26C4APA-2CS	114807229		0,4 ÷ 4,0		3.54÷35.4		2000			0,95	2.09	39x195x160	7	 F 1/4"	73	<2,5
26C5APA-2CS	114807230		0,4 ÷ 5,0		3.54÷44.25		1300			0,95	2.09	39x195x160	7	 F 1/4"	73	<2,5
26C8APA-2CS	114807231		3,5 ÷ 8,0		30.975÷70.8		1000			1,05	2.31	39x210x160	7	 F 1/4"	73	<2,5
26C10APA-2CS	114807232		3,5 ÷ 9,5		30.975÷84.075		800			1,05	2.31	39x210x160	7	 F 1/4"	73	<2,5
26C12APA-2CS	114807233		3,5 ÷ 12		30.975÷106.2		400			1,05	2.31	39x210x160	7	 F 1/4"	73	<2,5

Models with reversibility next to starting button

26C4APA-2000-R-2CS	114814596		0,4 ÷ 4,0		3.54÷35.4		2000			0,93	2.05	37x207x155	7	Hex F 1/4"	73	<2,5
26C5APA-1300-R-2CS	114814597		0,4 ÷ 5,0		3.54÷44.25		1300			0,93	2.05	37x207x155	7	Hex F 1/4"	73	<2,5
26C8APA-1000-R-2CS	114814598		3,5 ÷ 8,0		30.975÷70.8		1000			1,06	2.33	37x234x155	7	Hex F 1/4"	73	<2,5
26C10APA-800-R-2CS	114814599		3,5 ÷ 9,5		30.975÷84.075		800			1,06	2.33	37x234x155	7	Hex F 1/4"	73	<2,5
26C12APA-400-R-2CS	114814600		3,5 ÷ 12		30.975÷106.2		400			1,06	2.33	37x234x155	7	Hex F 1/4"	73	<2,5

Models with reversibility next to starting button and triple air inlet

26C4APA3I-2CS	114807463		0,4 ÷ 4,0		3.54÷35.4		2000			0,94	2.07	37x212x155	7	Hex F 1/4"	73	<2,5
26C5APA3I-2CS	114807464		0,4 ÷ 5,0		3.54÷44.25		1300			0,94	2.07	37x212x155	7	Hex F 1/4"	73	<2,5
26C8APA3I-2CS	114807465		3,5 ÷ 8,0		30.975÷70.8		1000			1,07	2.35	37x233x155	7	Hex F 1/4"	73	<2,5
26C10APA3I-2CS	114807466		3,5 ÷ 9,5		30.975÷84.075		800			1,07	2.35	37x233x155	7	Hex F 1/4"	73	<2,5
26C12APA3I-2CS	114807467		3,5 ÷ 12		30.975÷106.2		400			1,07	2.35	37x233x155	7	Hex F 1/4"	73	<2,5

Legend

26C = Power of the motor in Watt/10 • C = Screwdriver • 2 = Maximum tightening torque in Nm • A = Air shut-off system • L = Lever start • P = Pistol grip • PA = 'Forward' pistol grip • 2000 = Idle speed • 3I = 3 Inlets (3 air inlets) • R = Reversibility • 2CS = Double-signal pressure

Legend

Reversibility: all models are suitable for tightening and untightening operations



Lever start



Push-button start

- The figures shown are measured at a pressure of 6,3 bar (ISO 2787) the recommended operating pressure.
- Tightening torque values have been measured in accordance with ISO 5393 standard.
- Noise level has been measured in accordance with ISO 3744 and ISO 15744 standards.
- *Additional factor: 3 dBA spread in method and production (ISO 15744).
- Vibrations level have been measured in accordance with ISO 28927-2 standards.
- Accessory drive: female hexagonal drive 1/4", 6,35 mm (ISO 1173).
- The code number must be used when ordering.

Torque values refer to analysis of laboratory performing tests that comply with the standard ISO 5393 with screwdriver set at to the maximum speed and should be considered as indicative. The values in real applications can be influenced by many factors such as, for example: joint (type of joint, degree of elasticity), screw (type and length), accessory used (type or length of the blade), tightening speed, assembly conditions (free standing screwdriver, screwdriver mounted on a torque arm), operator behavior during the tightening phase. For any further details, please address to [Fiam Technical Advice service](#).

N.B.: Reversibility cursor can be positioned on the right or left of the start button.

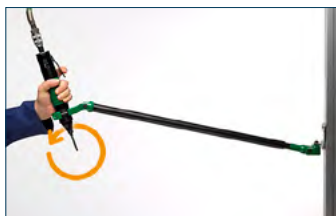
Standard equipment (supplied with the tool)

- Clutch adjustment key
- Additional clutch spring (only for 26C4/5...models)
- Air inlet coupling to activate the air inlet from above or behind depending on workplace requirements (only for models with triple air inlet)
- Hanging ring
- Use and maintenance manual
- Eco-friendly packaging

Models available upon request

- Pistol UpGrip models are available upon request with pneumatic pick-up signal
- Many configurations for every need. Please apply to the [Fiam Technical Advice service](#).

Accessories available upon request



BT-MG MAGNESIUM TELESCOPIC ARMS

Telescopic arms in magnesium alloy, designed and produced by Fiam, extremely resistant to mechanical stress thus guaranteeing reliability and long life span, thanks to accurate manufacturing process and applied innovative materials.

Designed with different telescoping extension elements, they can conform for working areas according to various productive needs. Double terminal coupling guarantees great handiness and maximum freedom of action also for inclined tightening operations. They can be easily installed on existing workplaces on ceiling or wall using a simple plate with reduced dimensions.

Model	Code	Max torque Nm in lb		Max work range (mm)	Min work range (mm)	Ø max tool (mm)
BT-MG 10 800	692071420	10	88.50	660	480	26.5-50
BT-MG 10 1000	692071421	10	88.50	800	550	26.5-50
BT-MG 15 800	692071409	15	132.70	860	505	26.5-46
BT-MG 15 1000	692071401	15	132.70	1070	575	26.5-46
BT-MG 15 1500	692071404	15	132.70	1580	745	26.5-46
BT-MG 40 800	692071410	40	354	860	505	26.5-46
BT-MG 40 1000	692071402	40	354	1070	575	26.5-46
BT-MG 40 1500	692071405	40	354	1580	745	26.5-46
BT-MG 40 2000	692071407	40	354	2120	925	26.5-46



BT-MG MAGNESIUM TELESCOPIC ARMS WITH POSITIONING DEVICE

The illustrated BT-MG arms as described above, can be equipped with a device for the detection of the correct position of the screwdriver on the tightening point. The models, come in two versions:

- BT-MG TPM-1 arms....: models with single angle movement detection

- BT-MG TPM-2 arms....: models with angle and linear movement detection.

The arms must be integrated with the TPM monitoring unit code **692078019** and with the TOM monitoring unit code **685001062**.

The system locates the positions of the screwdriver on the different tightening points and it memorizes the sequence (up to 35 positions/program for 8 programs). For more information, please see the on-line catalogue.

MODELS WITH SINGLE ANGLE MOVEMENT DETECTION

Model	Code	Max torque Nm in lb		Max work range (mm)	Min work range (mm)
BT-MG 15 800 - TPM1	692071425	15	132.70	985	630
BT-MG 15 1000 - TPM1	692071426	15	132.70	1195	700
BT-MG 15 1500 - TPM1	692071427	15	132.70	1705	870
BT-MG 40 800 - TPM1	692071428	40	354	985	630
BT-MG 40 1000 - TPM1	692071429	40	354	1195	700
BT-MG 40 1500 - TPM1	692071430	40	354	1705	870
BT-MG 40 2000 - TPM1	692071431	40	354	2245	1050

MODELS WITH ANGLE AND LINEAR MOVEMENT DETECTION

Model	Code	Max torque Nm in lb		Max work range (mm)	Min work range (mm)
BT-MG 15 800 - TPM2	692071422	15	132.70	985	630
BT-MG 15 1000 - TPM2	692071412	15	132.70	1195	700
BT-MG 15 1500 - TPM2	692071415	15	132.70	1705	870
BT-MG 40 800 - TPM2	692071423	40	354	985	630
BT-MG 40 1000 - TPM2	692071413	40	354	1195	700
BT-MG 40 1500 - TPM2	692071416	40	354	1705	870
BT-MG 40 2000 - TPM2	692071418	40	354	2245	1050

+

TPM



Code 692078019

+

TOM



+

Cable TPM/CA



Code 692079181

Accessories available upon request



BC Cartesian Arm



BCA Cartesian Arm



BCA-TOP Cartesian Arm

BC/BCA/TOP CARTESIAN ARMS

The Fiam Cartesian arms represent fundamental solutions for ergonomics workplace. They are completely designed and manufactured by Fiam and can be used with any type of tool with a diameter up to 50 mm and weight up to 11 kg. A universal clamp is supplied but, upon request, numerous accessories are available for correctly fitting different Fiam tools to ensure maximum safety and functionality.

Available in various versions:

- **Cartesian arms**
- **Articulated Cartesian arms**
- **Cartesian Arms and Articulated Cartesian Arms to be fixed to the surface or upper structure (TOP)**
- **Assisted Cartesian arms.**

All models are also available with positioning device for processing angular and linear movement detection on the work point (See previous page).

Description	Code	Max torque		Max load	Max tool diameter
		Nm	in lb	kg	mm
BC12 Cartesian Arm	692031031	12	106,20	2	32 ÷ 50
BC25 Cartesian Arm	692031032	25	221,25	2	32 ÷ 50
BC40 Cartesian Arm	692031033	40	354	2	32 ÷ 50
BC12TOP Cartesian Arm	692031076	12	106,20	2	32 ÷ 50
BC25TOP Cartesian Arm	692031066	25	221,25	2	32 ÷ 50
BC40TOP Cartesian Arm	692031077	40	354	2	32 ÷ 50

Description	Code	Max torque		Max load	Max tool diameter
		Nm	in lb	kg	mm
BCA12 Articulated Cartesian Arm	692031035	12	106,20	2	32 ÷ 50
BCA25 Articulated Cartesian Arm	692031036	25	221,25	2	32 ÷ 50
BCA40 Articulated Cartesian Arm	692031037	40	354	2	32 ÷ 50
BCA12TOP Articulated Cartesian Arm	692031068	12	106,20	2	32 ÷ 50
BCA25TOP Articulated Cartesian Arm	692031069	25	221,25	2	32 ÷ 50
BCA40TOP Articulated Cartesian Arm	692031070	40	354	2	32 ÷ 50

Models available upon request

BC25PK: cartesian arm with pneumatic push device (PUSH KIT). For manual lever start tools, helps the operator both in the tightening phase, pushing downwards, and in the completed tightening ascent phase, returning automatically in rest position.

Accessories available upon request



Cartesian Arm with a position monitoring device

CARTESIAN ARMS WITH A POSITION MONITORING DEVICE

All Fiam Cartesian arms can be fitted with a position monitoring device and, combined with the TPM monitoring unit, help make tightening systems very suitable for "Poka-Yoke" processes, while increasing the efficiency and speed of the production cycle.

The guided positioning system operates as follows:

- It locates the screwdriver position at the various tightening points and stores them (up to 35 positions/program and up to 8 programs)
- The screwdriver is enabled when it is at the first stored position (the TPM display shows POS-OK and the POS-OK LED on the telescopic arm lights)
- Each time a screw is tightened, the REMAIN display shows how many screws are left, indicating that it is ready to pass on to the next screw
- The END signal comes on when the stored cycle is complete, and gives the OK to proceed with a new work cycle
- The memorization process takes place by "self-learning": it is sufficient to carry out a work cycle and at each tightening the system stores the position realized and the number of screws
- During the memorization process, a precision tolerance can be programmed within the range: for example, for a length of 1 mm $\pm$ 10% approximately; for the angle 0.1 degrees (maximum tolerances).

There are two models which can be paired with all Fiam air and electronic tightening solutions:

- Arms with TPM-1: models with **single angle** movement detection;
- Arms with TPM-2: models with **angle and linear** movement detection.

For more information please see catalog 79 "Accessories for ergonomic workplace" or contact the Fiam Technical Advice service.



SCREW SUCTION SYSTEM

This device makes the tool's hold on the screws and their positioning easier and more secure and can be fitted on 26C straight screwdrivers.

This system holds the screw in contact with the tool bit using the vacuum created by the vacuum pump connected to it.

This ensures that the screw is picked up and held firmly by its head while it is moved and positioned on the thread of the workpiece being assembled.

The system consists of a special head (2) to be attached to the tool and to be connected to the SSU vacuum pump.

The head has a special nozzle (1), which may be either standard or customised depending on the screw or workpiece being assembled and their sizes: in this case, a sample of the component to be assembled must be sent to Fiam.

We will also assess the bit (3) to determine the best solution for the screw type and the part to be assembled.



Position	Type	Code
1	Nozzle	Standard or customized
2	Screw suction head (equipped with a suction hose to be connected to the SSU vacuum pump)	682119050
3	Bit	Standard or customized
4	Pneumatic tool type (26C FT screwdriver – see the table)	Codes at page 8
	SSU - Vacuum pump	676000120



STANDARD NOZZLE

- For tightening applications on surfaces or without particular space restrictions
- Brass nozzle, dimensions L=20mm - and Ø=15mm
- For bits L=75 mm
- Nozzle customisation is limited to its tip size, based on the screw head size.

CUSTOMISED NOZZLE

- For tightening applications with space restrictions and/or other specific conditions
- Nozzle made of custom material for screws with special dimensions
- For special bits
- Customisation extends from all nozzle dimensions to the bit to be used.

Accessories available upon request



SSU VACUUM PUMP

Designed and manufactured by Fiam. Necessary for the suction of the screws, it works at 220 Volt-50 Hz with a use of power of only 45 Watts.
Supplied with power cable.

Model	L x Width x H mm	Code
SSU - Vacuum pump for screw suction system	210 x 150 x 140	676000120

When not combined with NJ/NJR presenters, the screw suction system can handle screws with the following geometries:
MIN. HEAD Ø: 1.4 mm
MAX. HEAD Ø: 13 mm
For screws having a length higher than 18 mm, contact the [Fiam Technical Advice Service](#).

To choose the correct screw suction system, it is advisable to contact the [Fiam Technical Advice Service](#) and send Fiam samples of the screws and workpiece on which they will be tightened.



PICK AND PLACE OPERATIONS TO INCREASE PRODUCTIVITY

The pick-and-place systems for manual use consist of NJ screw presenters to ensure fast, smooth work cycles, helping to reduce production costs.

They can be used:

- For magnetisable screws with PHILLIPS or POZIDRIV recesses
- For straight air and electric screwdrivers with lever start

The benefits:

- **No manual steps** (operators do not have to pick up screws manually and place them on the screwdriver bit, reducing cycle times by over 24%)
- **Very convenient to use:** just pick the screw up from the selection channel with the screwdriver, leaving the other hand free to hold the workpiece in position for assembly
- **Feed speed:** they feed one screw per second, and the builtin electronics makes it easy to adjust the speed
- Improved **finished product quality:** no screws lost inside components
- **They come with** an accessory to magnetise the screwdriverbit for convenient screw pick-up.

NJR models are available as well. They are very versatile because they can process **screws of any material, even non-magnetisable and with any imprint types**, including Torx or hexagonal ones. The convenient pick-up point can pick up effectively, eliminating the bit/screw head coupling problems that are common with these screw types.

To find out all features and the correct choice of automatic screws presenter, consult "[Automatic screw presenters](#)" catalogue.



Accessories available upon request

Technical features

NJ MODELS			PHILLIPS BIT				POZIDRIV BIT			
Model	Code	For screws with shank Ø mm	Phillips screws	Bit Ø mm	Imprint Ø mm	Bit code	Pozidriv screws	Bit Ø mm	Imprint Ø mm	Bit code
NJ23-R20	199923020	2	PH1	3	3	605052031	PZ1	3	3	605062031
NJ23-R23	199923023	2,3	PH1	3 4,5	3 2,6	605052031 605050041	PZ1	3	3	605062031
NJ23-R26	199923026	2,6	PH1	4,5	2,6	605050041	PZ1	3	3	605062031
NJ23-R30	199923030	3	PH1	4,5	2,6	605050041	PZ1	3	3	605062031
NJ45-R35	199923035	3,5	PH2	6	4	605050036	PZ2	6	4	605060006
NJ45-R40	199923040	4	PH2	6	4	605050036	PZ2	6	4	605060006
NJ45-R50	199923050	5	PH2	6	5	605050043	PZ2	6	5	605060009

Bit dimensions in mm

NJR MODELS			BITS	SCREW SUCTION SYSTEM
Model	Code	For screws with shank Ø mm		
NJR23-RR20	199923120	2	• For any non-magnetisable material • With any recess	To choose the screw suction system and tool be paired with it, see pages 17 onwards.
NJR23-RR23	199923123	2,3		
NJR23-RR26	199923126	2,6		
NJR23-RR30	199923130	3		
NJR45-RR35	199923135	3,5		
NJR45-RR40	199923140	4		
NJR45-RR50	199923150	5		

Technical features	Models available upon request	Standard equipment (provided with the presenter)
• Feed voltage: 240 V, 50/60 Hz • Operating voltage: 15 Volt c.c. • Brushed DC motor Dimensions and weights - NJ Models (134W x 215D x 139H) Weight: 3.7 kg - NJR Models (134W x 274D x 139H) Weight: 4.4 kg	• Special models can be made available for screws with different recesses, following a thorough analysis of bit/screw head coupling efficiency • Screws with washers can also be fed	• 15V 1A c.c. electrical power supply • Screwdriver and hexagonal key for adjustments • Earth connection cable • Bit magnetiser (code 611109116) - for NJ model only • Use and maintenance manual • Eco-friendly packaging

The supply includes: presenter, 1 rail and standard equipment.

For further information about these models and other self-feeding assembly need, please contact [Fiam Technical Advice service](#).

Accessories available upon request

• 6.35 mm bits with hexagonal drive (ISO 1174) and Phillips/Pozidriv tip • Special bits with lengths different from those in the drawing	• Rails: to use the same unit with different screws.							
	Model	Screw shank Ø mm	Rail model	Rail code	Model	Screw shank Ø mm	Rail model	Rail code
	NJ23	2	R 20	649021001	NJR23	2	RR 20	649021101
	NJ23	2,3	R 23	649021002	NJR23	2,3	RR 23	649021102
	NJ23	2,6	R 26	649021003	NJR23	2,6	RR 26	649021103
	NJ23	3	R 30	649021004	NJR23	3	RR 30	649021104
	NJ45	3,5	R 35	649021005	NJR45	3,5	RR 35	649021105
	NJ45	4	R 40	649021006	NJR45	4	RR 40	649021106
	NJ45	5	R 50	649021007	NJR45	5	RR 50	649021107

The screw presenter model can be changed just by replacing the rails.
For example: the NJ/NJR 23 model can be configured with R/RR 20/23/26/30 rails while the NJ/NJR 45 model can be configured with R/RR 35/40/50 rails.

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Core innovation

Body perfection



**Straight, pistol and angle
15C air screwdrivers and nutrunners**

Torque range: from 0,4 to 5 Nm
Automatic shut-off

Fiam[®]
PEOPLE AND SOLUTIONS

Searching for excellence, developing ideas.

Are you looking for innovation, practicality and accuracy?
Only the range of 15C tools can satisfy your needs.
A modern range, ideal in every type of industrial assembly:
to overcome the performance's challenge with **different control levels of the whole assembly process**.
For this reason each 15C tool is also designed to monitor the assembly cycle (poka-yoke system, anti-error system) or the joint, ensuring extraordinary results. 15C screwdrivers: perfection has a new name and a new number.

PAGE 4

Level 1

Screwdrivers and nutrunners with TRACS2 torque control

Accurate, reliable, constant tightenings, cycle after cycle.
High torque repeatability on hard and soft joints.

PAGE 11

Level 2

Screwdrivers and nutrunners with TRACS2 torque control + SCREWS COUNTING

15C tools with pneumatic pick up signal, subsequently converted into electric signal: it reports if the clutch shuts-off during the time set in the program.

Therefore it allows to discriminate the screws that have been tightened incorrectly with consequent quality improvement of the assembled product.

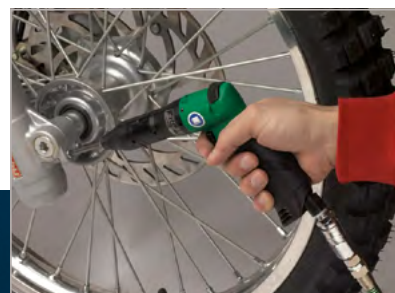
Straight screwdriver



"Forward" pistol screwdriver



Pistol screwdriver



Control levels of the assembly process



Level 1

Torque control

- TRACS2 CLUTCH
- ACCURATE TIGHTENINGS
- HIGH REPEATABILITY



Level 2

Torque control, screws counting

- TRACS2 CLUTCH
- ACCURATE TIGHTENINGS
- HIGH REPEATABILITY
- COUNTING OF TIGHTENED SCREWS
- OK / KO CYCLE
- MONITORING OF THE TIGHTENING TIME

Angle nutrunner



Solution with TOM monitoring unit

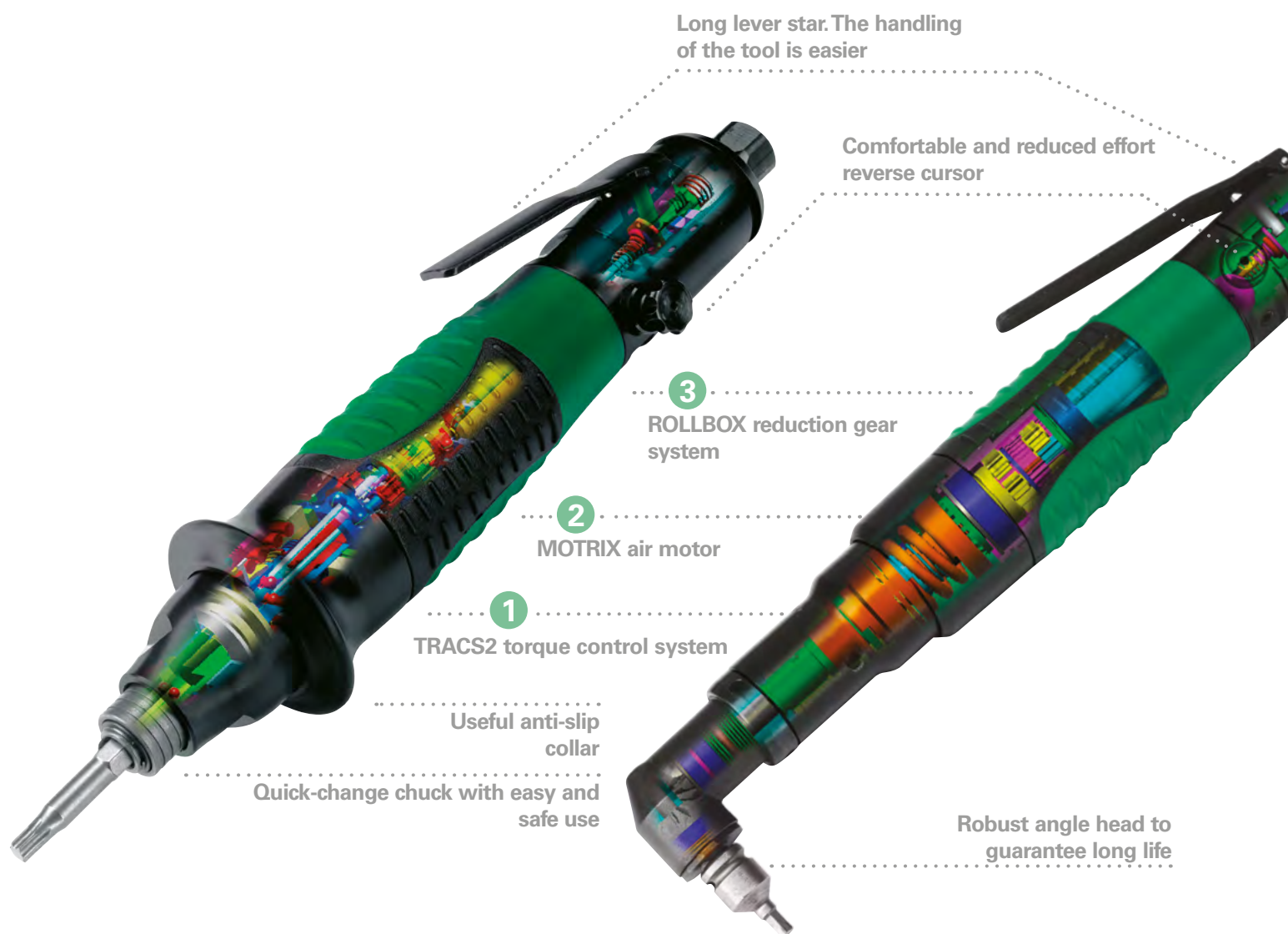


An eye for innovation, a glance to the future.

For over 65 years Fiam has been moving towards the **future** and **research**. So it has designed the modern 15C air screwdrivers/nutrunners, increasing quality and performances.

Straight, pistol and angle tools are characterized by **their extreme handiness and ergonomic grip**: ideal for working with high productivity and minimum effort.

Modern solutions ideal in **mechanical, electrical, electronics and furniture fields**.





Reversibility next to starting button and triple air inlet

This range of tools is particularly suitable for applications where screw loosening is recurring as into electric/electronic fields, assembly of wires harness and when it is necessary to untighten several times to realign parts when not correctly tightened on the component. **Reversibility next to the start button** allows a

practical and fast change of rotation.

If in addition to the reversibility, the screwdriver is equipped with **triple air inlet**, it is possible to use the **same pistol grip** for different **working lay-out** with rapid sequence.



Our name, your guarantee. For each model.

- 1** Patented **TRACS2** torque control system; it guarantees high torque repeatability and vibration levels below 2,5 m/s².
 - 2** Technologically advanced **MOTRIX** air motor, ensuring higher performances.
 - 3** **ROLLBOX** reduction gear system, ensuring high output.
- Practical cycle end acoustic signal.
 - Reduced weight thanks to the use of light alloys.
 - Hanging ring for balancer use.
 - Safe, practical and precise clutch adjustment system.
 - Possibility of conveying air exhaust.
 - Recyclable materials.

OIL FREE, the possibility of using non lubricated air eliminates the emission of oil fog into the environment.



Be demanding

Don't be satisfied
with the maximum

Reliability

Long lifetime of the components thanks to careful design and to quality of the productive process which results in less maintenance and repair costs

1 TRACS2 (Torque Repeatability and Accuracy Control System):

the torque control system ensures a very **high torque repeatability**, i.e. a very low Mean Shift value also in the presence of variability of the joint softness level.

This system maintains same torque values for hundreds of thousands of cycles. TRACS2 system guarantees a **high quality improvement** in the tightening process

2 MOTRIX: newly conceived air motor ensures **long lifetime, high specific power and maximum torque**

3 ROLLBOX: reduction gear system has been designed to guarantee **maximum output, long lifetime of the kinematic chain and reduced noise level**

30° and 90° angle heads: construction materials ensure **high resistance** and long life

Antislip varnishing for the **start lever** which makes it **longer lasting**

Productivity

Considerable increase of the efficiency of the tightening cycle thanks to innovative systems

1 TRACS2: the modern torque control system **reduces to a minimum level the need of quality control at the end of the assembly process**, with a remarkable **increase of the tightening cycle productivity**

2 MOTRIX: high rotating speed of the air motor with equal tightening torque, with evident **reduction of tightening cycle time**

Cycle end acoustic signal: it permits the operator to **pass on to the next tightening cycle more rapidly**

Grip design: it permits **extraordinary ease in handling** the tool with **less operator fatigue** and significant increase of the productivity

Quick change chuck for straight and pistol models: it favours **easier and safer** bit replacement; it is available upon request, also for use of double insert bits

Clutch adjustment system: safe, practical and accurate

Extremely compact heads for angle models: they are indispensable when space is limited or where access is difficult, such as up against walls, close to metal sections, profiles and inside of components

Low speed models: indicated for assemblies with all critical joints given by the sum of delicate and easily deformable materials, where a standard speed could compromise the result of the tightening.



Perfection is
in your hands

Ergonomics

Optimization of the tool performances in regard to ergonomics and operator safety

Minimal dimensions: these tools can be used in every position and when space is limited. Their **handling is guaranteed** because the grip is very near to the tool's head

Weight: extremely reduced weight and **compact dimensions** guarantee perfect handling

Ergonomic grips: designed according to modern biomechanics principles paying particular attention to the features of the female hand. The grips are manufactured with an ergonomic sheath made of bi-component material of different type, density and relief (for straight and angle models) and made of no slip material (for pistol models), making them easier to hold the tool, increasing the hand grip, **improving the handling, the thermal isolation and operator's comfort**

Comfortable low effort reverse button (for straight and angle models) / cursor (for pistol models): they reduce finger fatigue; they can be used by both right and left hand operators

TRACS2: the modern torque control system **reduces the reaction to the operator's hand**. Thanks to the immediate automatic air shut-off system with the careful study of the internal gears, the vibration levels are below 2,5 m/s²

"Forward" pistol grip: indicated when balancing systems cannot be used and where it does not need a particular push along the fastening axis



PISTOL GRIP

Pistol grip: indicated for situations in which screwdriving operations require thrust along the screwdriving axis

Possibility of conveying air exhaust away from the operator

Long start lever for angle models: the **handling of the tool** is easier reducing fatigue and the effort of the operator

Anti-slip collar for straight models: it avoids that the hand slips towards the tightening point, above all in case of big thrust on the screw, **increasing the safety and reducing the operator's fatigue**

Patented silencing system: these tools are extremely noiseless and are equipped with a controlled spread of the exhaust air

Hanging ring for balancer use eliminating any operator's effort



'FORWARD' PISTOL GRIP

Naturally
innovative

Ecology

Innovative systems designed paying even more attention with respect to environment and of its safeguard

1 TRACS2: the torque control system has a high running speed which, together with the push-to-start system, **reduces the working time of the tool and the compressed air consumption**

2 MOTRIX: the advanced technological design of the air motor permits **very high decrease of compressed air consumption**, without affecting tool performance

3 ROLLBOX: thanks to the new inner kinematic motions which optimize efficiency, the available power is being transmitted with **minimum dispersions**

15C screwdrivers/nutrunners work at maximum efficiency without need of lubrication guaranteeing in such the **absence of oil exhaust** into the working environment



ECO-CONTRIBUTION WEEE ACQUITTED:

Fiam carries out its obligations of producer, with full respect for the environment, and **without any extra charge for the customer**



DIFFERENT ACCESSORIES TO IMPROVE
ERGONOMIC WORKPLACES

Type of screwdriver / nutrunner		Grip	Tightening torque on soft joint		Idle speed	Starting system	Reversibility	Weight		Dimensions (mm)	Air consumption	Accessories	Noise level*	Vibrations
Model	Code	Type	Nm	in lb	rpm	Type	Type	kg	lb	ØxLxh	l/s	Drive	dBA	m/s ²
15C2A	112514372		0,4 ÷ 2,0	3.54÷17.7	2000			0,58	1,28	38x230	4,0	 F 1/4"	73	<2,5
15C3A	112514373		0,4 ÷ 3,5	3.54÷30.975	1400			0,59	1,30	38x230	5,5	 F 1/4"	73	<2,5
15C4A	112514374		0,4 ÷ 4,5	3.54÷39.825	950			0,59	1,30	38x230	5,5	 F 1/4"	73	<2,5
15C5A	112514375		0,4 ÷ 5,0	3.54÷44.25	650			0,59	1,30	38x230	5,5	 F 1/4"	73	<2,5
15C5A250	112509851		0,4 ÷ 5,0	3.54÷44.25	250			0,65	1,43	38x240	5,5	 F 1/4"	73	<2,5
15C5A150	112509935		0,4 ÷ 5,0	3.54÷44.25	150			0,65	1,43	38x240	5,5	 F 1/4"	73	<2,5
15C2AL	112514382		0,4 ÷ 2,0	3.54÷17.7	2000			0,59	1,30	38x228	4,0	 F 1/4"	73	<2,5
15C3AL	112514383		0,4 ÷ 3,5	3.54÷30.975	1400			0,60	1,32	38x228	5,5	 F 1/4"	73	<2,5
15C4AL	112514384		0,4 ÷ 4,5	3.54÷39.825	950			0,60	1,32	38x228	5,5	 F 1/4"	73	<2,5
15C5AL	112514385		0,4 ÷ 5,0	3.54÷44.25	650			0,60	1,32	38x228	5,5	 F 1/4"	73	<2,5
15C5AL250	112509921		0,4 ÷ 5,0	3.54÷44.25	250			0,66	1,45	38x242	5,5	 F 1/4"	73	<2,5
15C5AL150	112509925		0,4 ÷ 5,0	3.54÷44.25	150			0,66	1,45	38x242	5,5	 F 1/4"	73	<2,5
15C2APA	112514522		0,6 ÷ 2,2	5.31÷19.47	2200			0,70	1,54	31x178x156	6	 F 1/4"	71	<2,5
15C4APA	112514523		0,4 ÷ 3,5	3.54÷30.975	1400			0,72	1,58	31x178x156	6	 F 1/4"	71	<2,5
15C4APA	112514524		0,4 ÷ 4,5	3.54÷39.825	950			0,72	1,58	31x178x156	6	 F 1/4"	71	<2,5
15C5APA	112514525		0,4 ÷ 5,0	3.54÷44.25	650			0,72	1,58	31x178x156	6	 F 1/4"	71	<2,5
15C2AP	112514532		0,6 ÷ 2,2	5.31÷19.47	2200			0,70	1,54	37x209x157	6	 F 1/4"	71	<2,5
15C3AP	112514533		0,4 ÷ 3,5	3.54÷30.975	1400			0,72	1,58	37x209x157	6	 F 1/4"	71	<2,5
15C5AP	112514534		0,4 ÷ 4,5	3.54÷39.825	950			0,72	1,58	37x209x157	6	 F 1/4"	71	<2,5
15C5AP	112514535		0,4 ÷ 5,0	3.54÷44.25	650			0,72	1,58	37x209x157	6	 F 1/4"	71	<2,5
15C5AP250	112307250		0,4 ÷ 5,0	3.54÷44.25	250			0,78	1,72	37x221x157	6	 F 1/4"	73	<2,5
15C5AP150	112507063		0,4 ÷ 5,0	3.54÷44.25	150			0,78	1,72	37x221x157	6	 F 1/4"	73	<2,5
15C2A90	112593942		0,8 ÷ 2	7.08÷17.7	2000			0,70	1,54	see page 10	4,0	 M 1/4"	73	<2,5
15C3A90	112593943		0,8 ÷ 3	7.08÷26.55	1400			0,70	1,54	see page 10	5,5	 M 1/4"	73	<2,5
15C4A90	112593944		0,8 ÷ 4	7.08÷35.4	950			0,70	1,54	see page 10	5,5	 M 1/4"	73	<2,5
15C5A90	112593945		0,8 ÷ 5	7.08÷44.25	650			0,70	1,54	see page 10	5,5	 M 1/4"	73	<2,5
15C2A30	112533942		0,8 ÷ 2	7.08÷17.7	2000			0,70	1,54	see page 10	4,0	 M 1/4"	73	<2,5
15C3A30	112533943		0,8 ÷ 3	7.08÷26.55	1400			0,70	1,54	see page 10	5,5	 M 1/4"	73	<2,5
15C4A30	112533944		0,8 ÷ 4	7.08÷35.4	950			0,70	1,54	see page 10	5,5	 M 1/4"	73	<2,5
15C5A30	112533945		0,8 ÷ 5	7.08÷44.25	650			0,70	1,54	see page 10	5,5	 M 1/4"	73	<2,5
15C5A90-250	112507027		0,8 ÷ 5	7.08÷44.25	250			0,76	1,67	see page 10	5,5	 M 1/4"	73	<2,5
15C5A90-150	112509924		0,8 ÷ 5	7.08÷44.25	150			0,90	1,98	see page 10	5,5	 M 1/4"	73	<2,5

Models with reversibility next to starting button

15C2APA-2200-R	112514551		0,6 ÷ 2,2	5.31÷19.47	2200			0,75	1,65	37x186x155	6	 F 1/4"	71	<2,5
15C3APA-1400-R	112514552		0,4 ÷ 3,5	3.54÷30.975	1400			0,77	1,69	37x186x155	6	 F 1/4"	71	<2,5
15C4APA-950-R	112514553		0,4 ÷ 4,5	3.54÷39.825	950			0,77	1,69	37x186x155	6	 F 1/4"	71	<2,5
15C5APA-650-R	112514554		0,4 ÷ 5,0	3.54÷44.25	650			0,77	1,69	37x186x155	6	 F 1/4"	71	<2,5
15C5APA-250-R	112507064		0,4 ÷ 5,0	3.54÷44.25	250			0,82	1,80	37x198x155	6	 F 1/4"	71	<2,5
15C5APA-150-R	112507065		0,4 ÷ 5,0	3.54÷44.25	150			0,82	1,80	37x198x155	6	 F 1/4"	71	<2,5

Models with reversibility next to starting button and triple air inlet

15C2APA3I	112514529		0,6 ÷ 2,2	5.31÷19.47	2200			0,76	1.67	37x190x155	6	 F 1/4"	71	<2,5
15C3APA3I	112514528		0,4 ÷ 3,5	3.54÷30.975	1400			0,78	1.72	37x190x155	6	 F 1/4"	71	<2,5
15C4APA3I	112514527		0,4 ÷ 4,5	3.54÷39.825	950			0,78	1.72	37x190x155	6	 F 1/4"	71	<2,5
15C5APA3I	112514526		0,4 ÷ 5,0	3.54÷44.25	650			0,78	1.72	37x190x155	6	 F 1/4"	71	<2,5

Models with threaded drive for screw suction system

15C2A-FT	112509919		0,4 ÷ 2,0	3.54÷17.7	2000			0,58	1.28	38x230	4,0	 F 1/4"	73	<2,5
15C3A- FT	112509920		0,4 ÷ 3,5	3.54÷30.975	1400			0,59	1.30	38x230	5,5	 F 1/4"	73	<2,5
15C4A- FT	112507013		0,4 ÷ 4,5	3.54÷39.825	950			0,59	1.30	38x230	5,5	 F 1/4"	73	<2,5
15C5A- FT	112509913		0,4 ÷ 5,0	3.54÷44.25	650			0,59	1.30	38x230	5,5	 F 1/4"	73	<2,5
15C5A250- FT	112509956		0,4 ÷ 5,0	3.54÷44.25	250			0,59	1.30	38x240	5,5	 F 1/4"	73	<2,5
15C5A150- FT	112507072		0,4 ÷ 5,0	3.54÷44.25	150			0,59	1.30	38x240	5,5	 F 1/4"	73	<2,5
15C2AL-FT	112507073		0,4 ÷ 2,0	3.54÷17.7	2000			0,60	1.32	38x228	4,0	 F 1/4"	73	<2,5
15C3AL- FT	112507074		0,4 ÷ 3,5	3.54÷30.975	1400			0,60	1.32	38x228	5,5	 F 1/4"	73	<2,5
15C4AL- FT	112507047		0,4 ÷ 4,5	3.54÷39.825	950			0,60	1.32	38x228	5,5	 F 1/4"	73	<2,5
15C5AL- FT	112509949		0,4 ÷ 5,0	3.54÷44.25	650			0,60	1.32	38x228	5,5	 F 1/4"	73	<2,5
15C5AL250- FT	112507075		0,4 ÷ 5,0	3.54÷44.25	250			0,70	1.54	38x242	5,5	 F 1/4"	73	<2,5
15C5AL150- FT	112507076		0,4 ÷ 5,0	3.54÷44.25	150			0,70	1.54	38x242	5,5	 F 1/4"	68	<2,5

Legend

15 = Power of the motor in Watt/10 • C = Screwdriver/Nutrunner • 2 = Maximum tightening torque in Nm • A = Air shut-off system • L = Lever start • PA = 'Forward' pistol grip • 30 = Head at 30° • 90 = Head at 90° • 2200 = Idle speed • R = Reversibility • 3I = 3 Inlets (3 air inlets) • FT = (Front Thread) Equipped with threaded drive for screw suction system

Legend

 **Reversibility:** all models are suitable for tightening and untightening operations

 **Lever start**
 **Push to start**
 **Push-button start**

- The figures shown are measured at a pressure of 6,3 bar (ISO 2787) the recommended operating pressure.
- Tightening torque values have been measured in accordance with ISO 5393 standard.
- Noise level has been measured in accordance with ISO 3744 and ISO 15744 standards.
- * Additional factor: 3 dBA spread in method and production (ISO 15744).
- Vibrations level have been measured in accordance with ISO 28927-2.
- Accessory drive: male square drive (ISO 1174); female hexagonal drive 1/4"; 6,35 mm (ISO 1173).
- The code number must be used when ordering.

N.B.: Reversibility cursor can be positioned on the right or left of the start button.

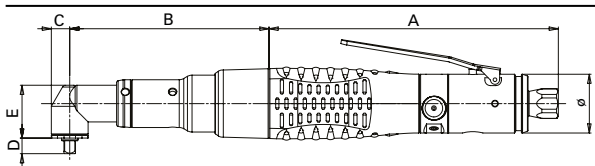
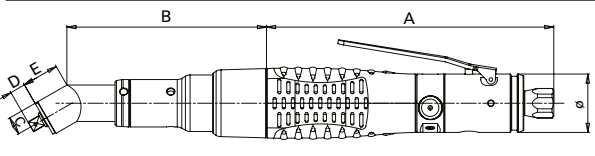
Torque values refer to analysis of laboratory performing tests that comply with the standard ISO 5393 with screwdriver set at to the maximum speed and should be considered as indicative.

The values in real applications can be influenced by many factors such as, for example: joint (type of joint, degree of elasticity), screw (type and length), accessory used (type or length of the blade), tightening speed, assembly conditions (free standing screwdriver, screwdriver mounted on a torque arm), operator behavior during the tightening phase. For any further details, please address to [Fiam Technical Advice service](#).

Other technical feature

TRACS2 clutch spring		Assembled on the tool grey colour - Ø wire 3,2 mm Code 595103202		Supplied black colour - Ø wire 2,2 mm Code 595102204	
Model	Tightening torque on soft joint (Nm)	Air inlet	Tightening torque on soft joint (Nm)	Recommended hose bore	
15C...	0,8 ÷ at MAX torque	1/4" gas	From min torque ÷ 1,2	Ø 5 mm	

Dimensions (mm) of angle models

							Models	A	B	C	D	E	Ø
							15C2A90	157	109	10	8,5	29	32
							15C3A90	157	109	10	8,5	29	32
							15C4A90	157	109	10	8,5	29	32
							15C5A90	157	109	10	8,5	29	32
							Models	A	B	C	D	E	Ø
							15C2A30	157	109	10	8,5	20	32
							15C3A30	157	109	10	8,5	20	32
							15C4A30	157	109	10	8,5	20	32
							15C5A30	157	109	10	8,5	20	32



15C air screwdrivers/nutrunners are designed for use with lubricated and unlubricated compressed air

Standard equipment (supplied with the tool)	Accessories available upon request
- Clutch adjustment key - Additional clutch spring (only for straight and pistol models) - Hanging ring - Use and maintenance manual - Eco-friendly packaging	- Bits, sockets and other accessories (see catalogue nr. 78) - Couplings, hoses, filters, governors and other compressed air system accessories (see catalogue nr. 77) - Collar bracket for straight models to be installed on arm stands and with auxiliary grip (cod. 692039006)

Models available upon request	Straight models	Pistol models	Angle models
Lever models for left hand operators	X		X
Models with anti-slip collar with different dimensions	X		
Models with only right hand rotation	X	X	X
Models with only left hand rotation	X	X	X
Models with lever + push start (or push button + push start)	X	X	
Models for double insert bits	X	X	X
Models with screws function (see page 18)	X	X	
Models with low speeds	X	X	X
Models with a female hexagonal drive for inserts (BITS): when ordering, add BITS at the end of the code (e.g. 15C2A... → 15C2A...-BITS)			X
Models with quick change chuck	Standard	Standard	X
15C...LT models for low torques	X	X	X

15C screwdrivers/nutrunners with TRACS2 torque control + SCREWS COUNTING

0% error, 100% accuracy.

Did you lose any screws? The **'screws count'** function will help you: therefore in case of high production rate, you won't risk any omission. Moreover, the feed-back signal and the end one to pass to next piece **accelerate the production cycles and ensure control on the assembled products.** So dead times will decrease and quality will increase.

The solution includes:

- Lever or push button air shut-off **15C SCREWDRIVERS** equipped with pneumatic pick-up signal (ported)



- **COMPUTERIZED MONITORING UNIT TOM** (Tightening Operation Monitor): it allows the **monitoring of the tightening cycle through the double-signal pressure** coming from the screwdrivers, subsequently converted into electric signal.



A proved system against pressure changes.

The use of two pneumatic signals (tool start and clutch operated) guarantees the system functioning **regardless of the pressure changes, critical point in many production lines.**

A considerable advantage in respect to other poka-yoke systems, which are more difficult to programme and use a single signal: which are considerably affected by pressure fluctuations.

Tightening Operation Monitor

Model	Description	Code	Dimensions (mm)	Electric feed
TOM	Monitoring unit	685001062	width 208 x depth 128 x height 42	24V, 110/230V, 50/60 Hz

Standard equipment

• Feeder • Feed cable • Use and maintenance manual • Eco-friendly packaging

TOM Tightening Operation Monitor is also available in the configuration BOX TOM, that includes: **TOM unit and all its accessories already wired in a single box.**

This **“Plug and Play” solution is easy to introduce into assembly lines and extremely practical** since you just need to connect the air line and the power supply to start production immediately.

Model	Description	Code	Dimensions (mm)	Electric feed
BOX TOM	Monitoring unit	685001086	h 265 mm (without tower-light) x depth 165 x width 300	24V, 110/230V, 50/60 Hz

Standard equipment

BOX TOM includes:
 • TOM monitoring unit • Tool locking/unlocking device • Cable to connect TOM with locking/unlocking device • Transducer • Tower light • Feeder • Feed cable • Use and maintenance manual • Eco-friendly packaging



MODEL “STOP BY TIME” AVAILABLE UPON REQUEST - Code 685001087

Used when it is necessary to **tighten** threaded elements controlling shut-off by **depth rather than torque** through the control of tightening time.

It allows the tightening of the threaded elements with a tolerance of 360° compared to target depth.

It is to order with the tool locking unit to activate the arrest “to time” of the screwdriver together to cables and Cables multi-dock.

When the time set by the operator is reached, the tools stops for a programmable time. There will be an OK signal (and not an error that requires a RESET as the standard version does). You can set up to 8 different times, one for each program available.

Model	Code
TOM “STOP BY TIME”	685001087
TOM BOX “STOP BY TIME”	685001089

Transducer for TOM

TOM needs to be purchased along with Fiam transducer, one for each tool (except when TOM is connected to EasyDriver CA).

Completely designed and manufactured by Fiam, it is a single box that receives two pneumatic signals (input) through two hoses of different colors: black for starting signal and green for torque signal; equipped with LED indicator and unique electric connecting cable (output) to carry the electrical signal to the TOM unit. Reduced dimensions and weight, easier to calibrate.

Model	Code
Transducer for TOM	687041041



What is it necessary to choose?



Features

20 INPUTS	• 8 for programmes selection, 6 for remote functioning: switching off, program activation, tool stop, tool loosening, program reset Availables with contacts 24V/GND (both pull-up and pull-down) for a great compatibility with the bench buttons (i.e: reset, block, unblocking etc.) and to be interface with the PLC of the client
24 OUTPUTS	• For results, active program, screwdriver status and possible electro-valve activation, auxiliary output, signal waste piece, in cycle signal (to check the beginning and the end of tightening cycle, useful i.e. set/unset the pieces jigs)
AUTOMATIC CHECK OF TIGHTENING TIME	• Which can be adjusted by setting the cycle time thus discriminating the different KO results
SINGLE PROGRAM 99 tightenings	• Tightening with min/max time equal for all screws • Screws count • 3 different acoustic signals: tightening end, single program end, error
SEQUENCE PROGRAM 99 tightenings x 8	• More single programmes (up to 8) in sequence • 4 different acoustic signals: tightening end, single tightening end, sequence (OK/NOK) • It can be selected from PC • For each tightening sequence it is possible to program the maximum number of tightening attempts fro NOK screws
RS 232 SERIAL PORT	• To print the following results in sequence: Date / hour - Number active output - Result – Tightening Time – Screw number - Program number - Sequence
PASSWORD	• Two modalities: one does not allow the operator changing menu's parameters; the other, in addition to former's possibilities, in case of error and consequent unit stop, allows the line manager to reactivate the process by means of a password or key (optional)
TIME	• It can be activated without buffer-battery to be replaced
MEMORY	• Parameters for statistics (they can printed through RS232): OK piece - NOK Screws - Pressed resets (NOK pieces) - Number of screws counted by TOM (data not resettable) – It stores data related to last 6,000,000 screws
LEVER RELEASED CONTROL	• In production processes where the operators tighten so fast that release the lever before the clutch shuts-off
REMOTE FUNTIONING	• From external PLC (or sensor) it is possible to stop the tool with the dedicated locking/unlocking unit. For instance, when we work with jigs, the tool is activated only when parts are correctly positioned
MASKED TIME	• This feature disable any controls for a set time during which TOM does not detect possible incorrect operations by the worker (for instance "unintentional starts" with push-to-start screwdrivers)
RELEASE TIME	• This function allows to better identify the OK tightenings, even if the lever is released in a very short time after the clutch shut-off (for example, if the operator is particularly fast to tighten and release the lever start)
RUNCYCLE	• For pallet lines where, for instance, jigs locking device needs to be activated and then release the jig when the piece is assembled. Replaces some activities that are normally controlled by a PLC

Models available upon request

- **Multi-dock connector:** connecting up to 8 tools (each tool has a dedicated program) that can operate individually depending on TOM programming.
Code 685001065
- **Tool locking/unlocking device:** it permits to TOM unit to enable/disable connected tool. For 15C/26C models: code 685001069
- **Cables**
Code 685001071: to connect TOM with locking/unlocking device when a single screwdriver is used.
Code 685001072: to connect multi-dock connector with locking/unlocking device when several screwdrivers are used
- **Tower-light:** It allows immediate, visual display of the tightening outcome. Code 687041018
- **Connecting hoses** (air and signals) for use of the transducer for TOM. A very compact solution, completely spiral shape, which maintains a tidy work area for the operator. The hoses are 2.5 M long (measured with stretched hose and including 35 mm useful linear hose for connections)
Spiral multi-hose for TOM D12 code 693011027
Spiral multi-hose for TOM D10 code 693011026
- **Cover:** It prevents intentional or unintentional contacts and damages to TOM unit. It prevents modifications / tampering by unauthorized personnel.
Code 687041043
- For further information see cat. 99 - [TOM Monitoring Unit](#).

Advantages of the TOM unit vs a PLC

	TOM	PLC
LAY OUT	Compact unit compared to the PLC	To provide the same features, the PLC must be integrated with other devices (additional modules which are bigger)
	Robust: the cover is made of sheet metal 1 mm thick	The PLCs are made of plastic and must be further protected by an additional electric panel
	It doesn't require switchboard and wiring for installation	The PLC provides an electric panel instead
	Possibility to position it directly on the production line to be used by the operator to read	The PLC needs a operator panel and/or external buttons
CHEAPNESS	Integrated and easy user interface	It is necessary an operator panel to connect and adequately program
	TOM is a complete system equipped with 16 IN and 24 OUT, RS232 for data and watch	To have all these functions, it is necessary to add expansions
	Complete firmware compatible with all screwdrivers , with all setting times and calibrations and many other functions	It is required a complete programming according to the different screwdrivers to connect
	Firmware already tested by Fiam and ready to use	A program developed by the customer, in addition to costs for software development and time (often some months), requires a time for verification and resolution of the programming errors
USE	Rapid start up: a few seconds to start	Long cycle of start; the PLC always require more time to start
	Rapid visualisation of the remaining screws thanks to additional display	For the PLC, it is required an additional monitor positioned close to the user
	Fast calculation: instantaneous response to events (both screwdriver and inputs / outputs). Very rapid reading: even in the case of 1 tightening with very high cadences, counts are not lost	Slower times of answer in case of tightenings with high work rate
	Easily interfaced to signal and transmit the data with all PLC	The PLC to communicate with other devices must have additional interfaces



TOM connected with the plant's system



Process under control and print of tightening results

Air screwdrivers with pneumatic pick-up signal

Type of screwdriver / nutrunner	Code	Grip	Campo di coppia su giunzione elastica		Idle speed	Starting system	Reversibility	Weight		Dimensions mm	Air consumption	Accessories	Noise level*	Vibrations
			min.	max.				kg	lb					
Model	Code	Type	Nm	in lb	giri/1'	Type	Type	kg	lb	Ø x l x h	l/s	Drive	dBA	m/s²
15C2A-CS	112507035		0,4÷2,0	3.54÷177	2000			0,59	1,30	38x230	4	⬡ F 1/4"	73	<2,5
15C3A-CS	112507036		0,4÷3,5	3.54÷30.975	1400			0,60	1,32	38x230	5,5	⬡ F 1/4"	73	<2,5
15C4A-CS	112507037		0,4÷4,5	3.54÷39.825	950			0,60	1,32	38x230	5,5	⬡ F 1/4"	73	<2,5
15C5A-CS	112507038		0,4÷5,0	3.54÷44.25	650			0,60	1,32	38x230	5,5	⬡ F 1/4"	73	<2,5
15C2AL - 2CS	112509891		0,4÷2,0	3.54÷177	2000			0,59	1,30	38x228	4	⬡ F 1/4"	73	<2,5
15C3AL - 2CS	112509892		0,4÷3,5	3.54÷30.975	1400			0,60	1,32	38x228	5,5	⬡ F 1/4"	73	<2,5
15C4AL - 2CS	112509893		0,4 ÷ 4,5	3.54÷39.825	950			0,60	1,32	38x228	5,5	⬡ F 1/4"	73	<2,5
15C5AL - 2CS	112509894		0,4÷5,0	3.54÷44.25	650			0,60	1,32	38x228	5,5	⬡ F 1/4"	73	<2,5
15C2AP - 2CS	112509895		0,6÷2,2	5.31÷19.47	2200			0,70	1,54	37x209x157	6	⬡ F 1/4"	71	<2,5
15C3AP - 2CS	112509896		0,4÷3,5	3.54÷30.975	1400			0,72	1,58	37x209x157	6	⬡ F 1/4"	71	<2,5
15C4AP - 2CS	112509829		0,4÷4,5	3.54÷39.825	950			0,72	1,58	37x209x157	6	⬡ F 1/4"	71	<2,5
15C5AP - 2CS	112509830		0,4÷5,0	3.54÷44.25	650			0,72	1,58	37x209x157	6	⬡ F 1/4"	71	<2,5
15C2APA - 2CS	112509899		0,6÷2,2	5.31÷19.47	2200			0,70	1,54	31x178x156	6	⬡ F 1/4"	71	<2,5
15C3APA - 2CS	112509900		0,4÷3,5	3.54÷30.975	1400			0,72	1,58	31x178x156	6	⬡ F 1/4"	71	<2,5
15C4APA - 2CS	112509876		0,4÷4,5	3.54÷39.825	950			0,72	1,58	31x178x156	6	⬡ F 1/4"	71	<2,5
15C5APA - 2CS	112509883		0,4÷5,0	3.54÷44.25	650			0,72	1,58	31x178x156	6	⬡ F 1/4"	71	<2,5
15C2A30 - 2CS	112509903		0,8÷2,0	708÷177	2000			0,70	1,54	see on page 10	4	⬡ M 1/4"	73	<2,5
15C3A30 - 2CS	112509904		0,8÷3,0	708÷26.55	1400			0,70	1,54	see on page 10	5,5	⬡ M 1/4"	73	<2,5
15C4A30 - 2CS	112509905		0,8÷4,0	708÷35.4	950			0,70	1,54	see on page 10	5,5	⬡ M 1/4"	73	<2,5
15C5A30 - 2CS	112509906		0,8÷5,0	708÷44.25	650			0,70	1,54	see on page 10	5,5	⬡ M 1/4"	73	<2,5
15C2A90 - 2CS	112509907		0,8÷2,0	708÷177	2000			0,70	1,54	see on page 10	4	⬡ M 1/4"	73	<2,5
15C3A90 - 2CS	112509908		0,8÷3,0	708÷26.55	1400			0,70	1,54	see on page 10	5,5	⬡ M 1/4"	73	<2,5
15C4A90 - 2CS	112509909		0,8÷4,0	708÷35.4	950			0,70	1,54	see on page 10	5,5	⬡ M 1/4"	73	<2,5
15C5A90 - 2CS	112509910		0,8÷5,0	708÷44.25	650			0,70	1,54	see on page 10	5,5	⬡ M 1/4"	73	<2,5

Models with reversibility next to starting button

15C2APA-2200-R-2CS	112514555		0,6÷2,2	5.31÷19.47	2200			0,75	1,65	37x186x155	6	⬡ F 1/4"	71	<2,5
15C3APA-1400-R-2CS	112514556		0,4÷3,5	3.54÷30.975	1400			0,77	1,69	37x186x155	6	⬡ F 1/4"	71	<2,5
15C4APA-950-R-2CS	112514557		0,4÷4,5	3.54÷39.825	950			0,77	1,69	37x186x155	6	⬡ F 1/4"	71	<2,5
15C5APA-650-R-2CS	112514558		0,4÷5,0	3.54÷44.25	650			0,77	1,69	37x186x155	6	⬡ F 1/4"	71	<2,5

Models with reversibility next to starting button and triple air inlet

15C2APA3I-2CS	112507008		0,6÷2,2	5.31÷19.47	2200			0,76	1,67	37x190x155	6	⬡ F 1/4"	71	<2,5
15C3APA3I-2CS	112507009		0,4÷3,5	3.54÷30.975	1400			0,78	1,72	37x190x155	6	⬡ F 1/4"	71	<2,5
15C4APA3I-2CS	112507010		0,4÷4,5	3.54÷39.825	950			0,78	1,72	37x190x155	6	⬡ F 1/4"	71	<2,5
15C5APA3I-2CS	112507011		0,4÷5,0	3.54÷44.25	650			0,78	1,72	37x190x155	6	⬡ F 1/4"	71	<2,5

Legend

15 = Power of the motor in Watt/10 • C = Screwdriver/Nutrunner • 2 = Maximum tightening torque in Nm • A = Air shut-off system • L = Lever start • P = Pistol grip • PA = 'Forward' pistol grip • 30 = Head at 30° • 90 = Head at 90° • 2200 = Idle speed • R = Reversibility • 2CS = Double-signal pressure

Legend

Reversibility: all models are suitable for tightening and untightening operations

Lever start

Push-button start

- The figures shown are measured at a pressure of 6,3 bar (ISO 2787) the recommended operating pressure.
- Tightening torque values have been measured in accordance with ISO 5393 standard.
- Noise level has been measured in accordance with ISO 3744 and ISO 15744 standards.
- * Additional factor: 3 dBA spread in method and production (ISO 15744).
- Vibrations level have been measured in accordance with ISO 28927-2.
- Accessory drive: male square drive (ISO 1174); female hexagonal drive 1/4", 6,35 mm (ISO 1173).
- The code number must be used when ordering.

Torque values refer to analysis of laboratory performing tests that comply with the standard ISO 5393 with screwdriver set at to the maximum speed and should be considered as indicative.

The values in real applications can be influenced by many factors such as, for example: joint (type of joint, degree of elasticity), screw (type and length), accessory used (type or length of the blade), tightening speed, assembly conditions (free standing screwdriver, screwdriver mounted on a torque arm), operator behavior during the tightening phase. For any further details, please address to [Fiam Technical Advice service](#).

Standard equipment (supplied with the tool)

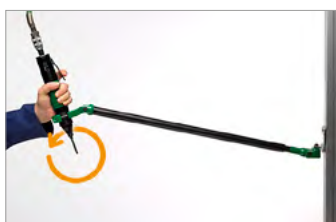
- Clutch adjustment key
- Additional clutch spring (only for straight and pistol models)
- Hanging ring
- Use and maintenance manual
- Eco-friendly packaging

Accessories available upon request

- Bits, sockets and other accessories ([see catalogue nr. 78](#))
- Couplings, hoses, filters, governors and other compressed air system accessories ([see catalogue nr. 77](#))
- Collar bracket for straight models to be installed on arm stands and with auxiliary grips (cod. 692039006)

N.B.: Reversibility cursor can be positioned on the right or left of the start button

Accessories available upon request



BT-MG MAGNESIUM TELESCOPIC ARMS

Telescopic arms in magnesium alloy, designed and produced by Fiam, extremely resistant to mechanical stress thus guaranteeing reliability and long life span, thanks to accurate manufacturing process and applied innovative materials.

Designed with different telescoping extension elements, they are conform for working areas according to various productive needs.

Double terminal coupling guarantees great handiness and maximum freedom of action also for inclined tightening operations. They can be easily installed on existing workplaces on ceiling or wall using a simple plate with reduced dimensions.

Model	Code	Max torque Nm in lb		Max work range (mm)	Min work range (mm)	Ø max tool (mm)
BT-MG 10 800	692071420	10	88,50	660	480	26.5-50
BT-MG 10 1000	692071421	10	88,50	800	550	26.5-50
BT-MG 15 800	692071409	15	132,70	860	505	26.5-46
BT-MG 15 1000	692071401	15	132,70	1070	575	26.5-46
BT-MG 15 1500	692071404	15	132,70	1580	745	26.5-46



+

TPM



Code 692078019

+

TOM



+

Cable TPM/CA



Code 692079181

BT-MG MAGNESIUM TELESCOPIC ARMS WITH POSITIONING DEVICE

The illustrated BT-MG arms as described above, can be equipped with a device for the detection of the correct position of the screwdriver on the tightening point.

The models, come in two versions:

- BT-MG TPM-1 arms...: models with single angle movement detection
- BT-MG TPM-2 arms...: models with angle and linear movement detection.

The arms must be integrated with the TPM monitoring unit code **692078019** and with the TOM monitoring unit code **685001062**.

The system locates the positions of the screwdriver on the different tightening points and it memorizes the sequence (up to 35 positions/program for 8 programs).

For more information, please see the [on-line catalogue](#).

MODELS WITH SINGLE ANGLE MOVEMENT DETECTION

Model	Code	Max torque Nm in lb		Max work range (mm)	Min work range (mm)
BT-MG 15 800 - TPM1	692071425	15	132,70	985	630
BT-MG 15 1000 - TPM1	692071426	15	132,70	1195	700
BT-MG 15 1500 - TPM1	692071427	15	132,70	1705	870

MODELS WITH ANGLE AND LINEAR MOVEMENT DETECTION

Model	Code	Max torque Nm in lb		Max work range (mm)	Min work range (mm)
BT-MG 15 800 - TPM2	692071422	15	132,70	985	630
BT-MG 15 1000 - TPM2	692071412	15	132,70	1195	700
BT-MG 15 1500 - TPM2	692071415	15	132,70	1705	870

Accessories available upon request



BC Cartesian Arm



BCA Cartesian Arm



Cartesian Arm with a position monitoring device

BC/BCA/TOP CARTESIAN ARMS

The Fiam Cartesian arms represent fundamental solutions for ergonomics workplace. They are completely designed and manufactured by Fiam and can be used with any type of tool with a diameter up to 50 mm and weight up to 11 kg.

Available in various versions:

- **Cartesian Arms**
- **Articulated Cartesian Arms**
- **Cartesian Arms and Articulated Cartesian Arms to be fixed to the surface or upper structure (TOP)**
- **Assisted Cartesian Arms.**

All models are also available with positioning device for processing angular and linear movement detection on the work point (See previous page).

Description	Code	Max torque		Max load	
		Nm	in lb	kg	mm
BC5 Cartesian Arm	692031030	5	44,25	2	32÷50
BC5-TOP Cartesian Arm	692031065	5	44,25	2	32÷50

Description	Code	Max torque		Max load	
		Nm	in lb	kg	mm
BCA5 Articulated Cartesian Arm	692031034	5	44,25	2	32÷50
BCA5-TOP Articulated Cartesian Arm	692031067	5	44,25	2	32÷50

Models available upon request

BC25PK: cartesian arm with pneumatic push device (PUSH KIT). For manual lever start tools, helps the operator both in the tightening phase, pushing downwards, and in the completed tightening ascent phase, returning automatically in rest position.

Accessories available upon request



Cartesian Arm with a position monitoring device

CARTESIAN ARMS WITH A POSITION MONITORING DEVICE

All Fiam Cartesian arms can be fitted with a position monitoring device and, combined with the TPM monitoring unit, help make tightening systems very suitable for "Poka-Yoke" processes, while increasing the efficiency and speed of the production cycle.

The guided positioning system operates as follows:

- It locates the screwdriver position at the various tightening points and stores them (up to 35 positions/program and up to 8 programs)
- The screwdriver is enabled when it is at the first stored position (the TPM display shows POS-OK and the POS-OK LED on the telescopic arm lights)
- Each time a screw is tightened, the REMAIN display shows how many screws are left, indicating that it is ready to pass on to the next screw
- The END signal comes on when the stored cycle is complete, and gives the OK to proceed with a new work cycle
- The memorization process takes place by "self-learning": it is sufficient to carry out a work cycle and at each tightening the system stores the position realized and the number of screws
- During the memorization process, a precision tolerance can be programmed within the range: for example, for a length of 1 mm $\pm$ 10% approximately; for the angle 0.1 degrees (maximum tolerances).

There are two models which can be paired with all Fiam air and electronic tightening solutions:

- Arms with TPM-1: models with **single angle** movement detection;
- Arms with TPM-2: models with **angle and linear** movement detection.

For more information please see catalog 79 "Accessories for ergonomic workplace" or contact the Fiam Technical Advice Service.



SCREW SUCTION SYSTEM

This device makes the tool's hold on the screws and their positioning easier and more secure and can be fitted on 15C straight screwdrivers.

This system holds the screw in contact with the tool bit using the vacuum created by the vacuum pump connected to it.

This ensures that the screw is picked up and held firmly by its head while it is moved and positioned on the thread of the workpiece being assembled.

The system consists of a special head (2) to be attached to the tool and to be connected to the SSU vacuum pump.

The head has a special nozzle (1), which may be either standard or customised depending on the screw or workpiece being assembled and their sizes: in this case, a sample of the component to be assembled must be sent to Fiam.

We will also assess the bit (3) to determine the best solution for the screw type and the part to be assembled.



Position	Type	Code
1	Nozzle	Standard or customized
2	Screw suction head (equipped with a suction hose to be connected to the SSU vacuum pump)	682119050
3	Bit	Standard or customized
4	Pneumatic tool type (15C FT screwdriver – see the table)	Codes at page 9
	SSU - Vacuum pump	676000120



STANDARD NOZZLE

- For tightening applications on surfaces or without particular space restrictions
- Brass nozzle, dimensions L=20mm - and Ø=15mm
- For bits L=75 mm
- Nozzle customisation is limited to its tip size, based on the screw head size.

CUSTOMISED NOZZLE

- For tightening applications with space restrictions and/or other specific conditions
- Nozzle made of custom material for screws with special dimensions
- For special bits
- Customisation extends from all nozzle dimensions to the bit to be used.

Accessories available upon request



SSU VACUUM PUMP

Designed and manufactured by Fiam. Necessary for the suction of the screws, it works at 220 Volt-50 Hz with a use of power of only 45 Watts.
Supplied with power cable.

Model	L x Width x H mm	Code
SSU - Vacuum pump for screw suction system	210 x 150 x 140	676000120

When not combined with NJ/NJR presenters, the screw suction system can handle screws with the following geometries:
MIN. HEAD Ø: 1.4 mm
MAX. HEAD Ø: 13 mm
For screws having a length higher than 18 mm, contact the [Fiam Technical Advice Service](#).

To choose the correct screw suction system, it is advisable to contact the [Fiam Technical Advice Service](#) and send Fiam samples of the screws and workpiece on which they will be tightened.



PICK AND PLACE OPERATIONS TO INCREASE PRODUCTIVITY

The pick-and-place systems for manual use consist of NJ screw presenters to ensure fast, smooth work cycles, helping to reduce production costs.

They can be used:

- For magnetisable screws with PHILLIPS or POZIDRIV recesses
- For straight air and electric screwdrivers with lever start

The benefits:

- **No manual steps** (operators do not have to pick up screws manually and place them on the screwdriver bit, reducing cycle times by over 24%)
- **Very convenient to use:** just pick the screw up from the selection channel with the screwdriver, leaving the other hand free to hold the workpiece in position for assembly
- **Feed speed:** they feed one screw per second, and the builtin electronics makes it easy to adjust the speed
- Improved **finished product quality:** no screws lost inside components
- **They come with** an accessory to magnetise the screwdriverbit for convenient screw pick-up.

NJR models are available as well. They are very versatile because they can process **screws of any material, even non-magnetisable and with any imprint types**, including Torx or hexagonal ones. The convenient pick-up point can pick up effectively, eliminating the bit/screw head coupling problems that are common with these screw types.

To find out all features and the correct choice of automatic screws presenter, consult "[Automatic screw presenters](#)" catalogue.

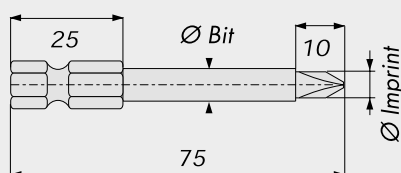


Accessories available upon request

Technical features

NJ MODELS			PHILLIPS BIT				POZIDRIV BIT			
Model	Code	For screws with shank Ø mm	Phillips screws	Bit Ø mm	Imprint Ø mm	Bit code	Pozidriv screws	Bit Ø mm	Imprint Ø mm	Bit code
NJ23-R20	199923020	2	PH1	3	3	605052031	PZ1	3	3	605062031
NJ23-R23	199923023	2,3	PH1	3 4,5	3 2,6	605052031 605050041	PZ1	3	3	605062031
NJ23-R26	199923026	2,6	PH1	4,5	2,6	605050041	PZ1	3	3	605062031
NJ23-R30	199923030	3	PH1	4,5	2,6	605050041	PZ1	3	3	605062031
NJ45-R35	199923035	3,5	PH2	6	4	605050036	PZ2	6	4	605060006
NJ45-R40	199923040	4	PH2	6	4	605050036	PZ2	6	4	605060006
NJ45-R50	199923050	5	PH2	6	5	605050043	PZ2	6	5	605060009

Bit dimensions in mm



NJR MODELS			BITS	SCREW SUCTION SYSTEM
Model	Code	For screws with shank Ø mm		
NJR23-RR20	199923120	2	- For any non-magnetisable material - With any recess	To choose the screw suction system and tool be paired with it, see pages 18 onwards.
NJR23-RR23	199923123	2,3		
NJR23-RR26	199923126	2,6		
NJR23-RR30	199923130	3		
NJR45-RR35	199923135	3,5		
NJR45-RR40	199923140	4		
NJR45-RR50	199923150	5		

Technical features

- Feed voltage: 240 V, 50/60 Hz
- Operating voltage: 15 Volt c.c.
- Brushed DC motor

Dimensions and weights

- NJ Models (134W x 215D x 139H) Weight: 3.7 kg
- NJR Models (134W x 274D x 139H) Weight: 4.4 kg

Models available upon request

- Special models can be made available for screws with different recesses, following a thorough analysis of bit/screw head coupling efficiency
- Screws with washers can also be fed

Standard equipment (provided with the presenter)

- 15V 1A c.c. electrical power supply
- Screwdriver and hexagonal key for adjustments
- Earth connection cable
- Bit magnetiser (code 611109116) - for NJ model only
- Use and maintenance manual
- Eco-friendly packaging

The supply includes: presenter, 1 rail and standard equipment.

For further information about these models and other self-feeding assembly need, please contact [Fiam Technical Advice service](#).

Accessories available upon request

- 6.35 mm **bits** with hexagonal drive (ISO 1174) and Phillips/Pozidriv tip

- Special bits** with lengths different from those in the drawing

- Rails:** to use the same unit with different screws.

Model	Screw shank Ø mm	Rail model	Rail code	Model	Screw shank Ø mm	Rail model	Rail code
NJ23	2	R 20	649021001	NJR23	2	RR 20	649021101
NJ23	2,3	R 23	649021002	NJR23	2,3	RR 23	649021102
NJ23	2,6	R 26	649021003	NJR23	2,6	RR 26	649021103
NJ23	3	R 30	649021004	NJR23	3	RR 30	649021104
NJ45	3,5	R 35	649021005	NJR45	3,5	RR 35	649021105
NJ45	4	R 40	649021006	NJR45	4	RR 40	649021106
NJ45	5	R 50	649021007	NJR45	5	RR 50	649021107

The screw presenter model can be changed just by replacing the rails.

For example: the NJ/NJR 23 model can be configured with R/RR 20/23/26/30 rails while the NJ/NJR 45 model can be configured with R/RR 35/40/50 rails.

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