



**Reliability and accuracy:  
real innovation knows  
no obstacles.**

#### **Air angle nutrunners**

- with 90° angle head
- with 30° angle head
- with in line tubenut open head

- Torque range: from 0,8 to 60 Nm
- Automatic shut-off

**Fiam**®  
PEOPLE AND SOLUTIONS

# Tightening in presence of limited space and where access is difficult. Also with high torques.

Particularly suitable for motorvehicle industry and household appliances, angle nutrunners are indispensable when space is limited and where access is difficult, such as up against walls, close to metal sections and profiled beams, etc.

Main features are:

- **robust angle heads to guarantee long lifetime**
- **high torque accuracy**
- **great attention to ergonomics**





A6RSA1

AD9RA1



AG40RA



15C...90



15C...30





## **With the AF nutrunners all points that need tightening are within easy reach**

These air nutrunners with a flat head drive are the most effective tool for solving all assembly situations where it's difficult to reach the point to tighten and where objects would get in the way of ordinary angle nutrunners.

More specifically, **the AF air angle nutrunners** are extremely useful where there are pressurised circuits, that is to say **components with pipes containing fluids fitted with nuts that need tightening** (as could be gas ramps in hobs, refrigerator compressor pipes, car braking system pipes, boiler pipes, coffee machine pipes and so on).

The **special heads** that adapt to numerous assembly situations render this system optimum: with their radial opening it is, in fact, possible to put the pipe inside the hex. drive making it so much easier to reach the nut. Moreover, the latest generation of design specifications guarantee **extreme reliability and maximum life** for these brand tools.





*Robust angle heads to guarantee reliability and long lifetime.*



**DISCOVER HOW IT WORKS !**



*Radial opening ideal to reach the nut.*





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

The **torque control system** with instant automatic air shut-off **improves the quality of the tightening process**, and consequently that of the **finished product**

High performance motor: **optimising performance even when supply pressures are low**

**Robust control top**, obtained by mechanic working, guarantees high resistance to hits and long lifetime

**High tightening precision:** CM/CMK values are extremely high; therefore they can be used where **great tightening accuracy is required** also with high torques, particularly in the motorvehicle fields

The **angle heads** are **extremely compact** to tighten where access is difficult. They are designed and built with **innovative materials** to ensure high wear resistance (and therefore they need less maintenance) and **high tightening precision**

The grease supplied for **lubricating** of the AF heads, a Fiam special and exclusive, guarantees **continuous performance of the nutrunner in terms of torque and life** under all conditions of use

Don't be satisfied with the maximum

## Productivity

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

The torque control system **reduces the need to perform quality controls at the end of assembly**

The high performance of the air motor and the kinematic chain supply **optimum tightening speeds, reducing the time/cycle**

**The cycle end acoustic signal** emitted by the tightening torque control system advises the operator of the end of tightening: so he can **pass on to the next tightening cycle more rapidly**

An excellent ratio **between speed and expressed torque** guarantees an accurate precision

**It's even more practical, quicker and safer to adjust the clutch** thanks to the new **rotating cursor**

For 40A...AF... models, the **start lever operates both the tightening and the realignment of the end gear** thanks to its double work stroke: by **activating** the lever from the rest position **to the first step**, the end gear is realigned, instead by **activating completely** the lever the nutrunner starts functioning and the end gear starts to rotate

For 40A...AF... models with the through gear **untightening** can be done turning the tool by 180°

Thanks to Fiam's great flexibility in proposing **customised solutions**, any production situation can be tightened, even the most complex

**Cm=** indicator of the machine (nutrunner) repeatability during operation

**CmK=** indicator of the machine (nutrunner) accuracy during operation

When the indicator refers to a nutrunner, the repeatability represents the nutrunner capability to generate the same torque value in every cycle, while the accuracy represents the nutrunner capability to respect the pre-set torque value.

Perfection is  
in your hands

## Ergonomics

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

All nutrunners, except for A...R  
models, have a **rotating cursor** for  
the adjustment of the clutch, practical,  
easy and safe

The **long ergonomic start lever**  
permits a more comfortable and  
easy grip to guarantee the operator's  
comfort

The torque control system reduces the  
reaction to the operator's hand. Thanks  
to the careful study of the internal  
gears, **the vibration levels are below  
2,5 m/s<sup>2</sup>**

The **antislip varnishing**, which is a  
feature of the start lever, makes it  
more comfortable and longer lasting

*The reduced thickness of the head makes  
tightening easier also in small spaces*



*The head with blind gear makes it easier  
to bring the nut near the joint*



**Effective built-in silencing system:**  
these nutrunners are extremely  
noiseless and are equipped with a  
controlled spread of the exhaust air

These nutrunners are particularly  
**versatile and handy** thanks to the  
ideal **weight to power ratio**

The Fiam nutrunners are **among  
the most compact tools on the  
market** thanks to the very good  
**dimensions ratio** (length/diameter/  
head dimension)

To make the tightening job even  
easier and **eliminate stress on the  
operator's arm**, special accessories  
are recommended: they permit  
higher use agility and flexibility and  
wide rotations of the tool around its  
axis (see Accessories available upon  
request)



*Rotating cursor for the adjustment of the clutch*

Naturally  
innovative

## Ecology

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

All the components are **easy to  
dispose of** because they are built  
**using recyclable materials**; therefore  
they do not represent any danger for  
environmental pollution

The technological design of the  
air motor, besides **reducing the  
consumption of compressed air**  
permits to improve the performances  
also at low air feed pressure

All Fiam products are supplied with  
**eco-friendly packaging**

The **head construction materials**  
ensure a long life resulting in a  
reduction in maintenance costs and in  
component replacement



*Ergonomic start lever*

| Type of nutrunner |           | Grip                                                                                                | Tightening torque on soft joint |                  | Idle speed | Starting system                                                                     | Reversibility                                                                       | Weight |      | Air consumption | Accessories                                                                                   | Noise level* | Vibrations |
|-------------------|-----------|-----------------------------------------------------------------------------------------------------|---------------------------------|------------------|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|------|-----------------|-----------------------------------------------------------------------------------------------|--------------|------------|
| Model             | Code      |                                                                                                     | min.<br>max.                    | min.<br>max.     |            |                                                                                     |                                                                                     | kg     | lb   |                 |                                                                                               |              |            |
| 15C2A30           | 112533942 |  30°               | 0,8 ÷ 2                         | 708 ÷ 177        | 2000       |    |    | 0,70   | 1,54 | 4,0             |  M 1/4"    | 73           | <2,5       |
| 15C3A30           | 112533943 |  30°               | 0,8 ÷ 3                         | 708 ÷ 26.55      | 1400       |    |    | 0,70   | 1,54 | 5,5             |  M 1/4"    | 73           | <2,5       |
| 15C4A30           | 112533944 |  30°               | 0,8 ÷ 4                         | 708 ÷ 35.4       | 950        |    |    | 0,70   | 1,54 | 5,5             |  M 1/4"    | 73           | <2,5       |
| 15C5A30           | 112533945 |  30°               | 0,8 ÷ 5                         | 708 ÷ 44.25      | 650        |    |    | 0,70   | 1,54 | 5,5             |  M 1/4"    | 73           | <2,5       |
| 15C2A90           | 112593942 |  90°               | 0,8 ÷ 2                         | 708 ÷ 177        | 2000       |    |    | 0,70   | 1,54 | 4,0             |  M 1/4"    | 73           | <2,5       |
| 15C3A90           | 112593943 |  90°               | 0,8 ÷ 3                         | 708 ÷ 26.55      | 1400       |    |    | 0,70   | 1,54 | 5,5             |  M 1/4"    | 73           | <2,5       |
| 15C4A90           | 112593944 |  90°               | 0,8 ÷ 4                         | 708 ÷ 35.4       | 950        |    |    | 0,70   | 1,54 | 5,5             |  M 1/4"    | 73           | <2,5       |
| 15C5A90           | 112593945 |  90°               | 0,8 ÷ 5                         | 708 ÷ 44.25      | 650        |    |    | 0,70   | 1,54 | 5,5             |  M 1/4"    | 73           | <2,5       |
| 15C5A90-250       | 112507027 |  90°               | 0,8 ÷ 5                         | 708 ÷ 44.25      | 250        |    |    | 0,76   | 1,54 | 5,5             |  M 1/4"    | 73           | <2,5       |
| 15C5A90-150       | 112509924 |  90°               | 0,8 ÷ 5                         | 708 ÷ 44.25      | 150        |    |    | 0,76   | 1,54 | 5,5             |  M 1/4"    | 73           | <2,5       |
| AD6RA1            | 114893986 |  90°               | 2,5 ÷ 6                         | 22.125 ÷ 53.1    | 1150       |    |    | 1,200  | 2.64 | 10              |  M 3/8"    | 77           | <2,5       |
| AD9RA1            | 114893989 |  90°               | 2,5 ÷ 9                         | 22.125 ÷ 79.65   | 900        |    |    | 1,200  | 2.64 | 10              |  M 3/8"    | 77           | <2,5       |
| AD14RA1           | 114893994 |  90°               | 3 ÷ 14                          | 26.55 ÷ 123.9    | 600        |    |    | 1,400  | 3.08 | 10              |  M 3/8"    | 77           | <2,5       |
| AD26RA1           | 114893996 |  90°               | 11,5 ÷ 26                       | 101.775 ÷ 230.1  | 350        |    |    | 1,450  | 3.19 | 10              |  M 3/8"    | 77           | <2,5       |
| AG40RA            | 114893975 |  90°              | 18 ÷ 40                         | 159.3 ÷ 354      | 400        |   |   | 2,050  | 4.51 | 13              |  M 3/8"   | 80           | <2,5       |
| AG60RA            | 114893980 |  90°             | 29 ÷ 60                         | 256.65 ÷ 531     | 300        |  |  | 2,300  | 5.06 | 13              |  M 1/2"  | 80           | <2,5       |
| A6RSA1            | 114893924 |  FLAT-CLOSE HEAD | 3,5 ÷ 11,5                      | 30.975 ÷ 101.775 | 600        |  |  | 1,700  | 3.74 | 9               |  F 1/4"  | 82           | <2,5       |
| A10RYA            | 116300012 |  FLAT-CLOSE HEAD | 12 ÷ 33                         | 106.2 ÷ 292.05   | 250        |  |  | 2,750  | 6.05 | 9               |  F 14 mm | 82           | <2,5       |

#### Legend



**Reversibility:** all models are suitable for tightening and untightening operations. The **A10RYA model** is reversed by using either the bottom hexagonal drive (right-hand rotation) or top hexagonal drive left-hand rotation).



**Lever 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: male square drive (ISO 1174).
- 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 Service**.

#### Models available upon request

- **Models with only right or left hand**
- **Models with quick change chuck**
- **Models with low speeds** for critical tightenings (e.g. with stainless steel)
- **Models A6RSA1 and A10RYA with hexagonal head different to the standard** (for A6RSA1 max hex. 7 mm, for A10RYA max hex. 15 mm): to order add the size of the hexagonal required after the code (A6RSA1 → A6RSA1/7; A10RYA → A10RYA/13). The non-standard hexagonal heads are normally used without accessories
- **Models with female hexagonal drive for inserts (BITS)** (except AD6RA1, AD9RA1, AG40RA and AG60RA); when ordering, add BITS at the end of the code (e.g. 15C2A... → 15C2A...-BITS)
- **Models with poka yoke system for screws counting:** to avoid any screw omission, to accelerate the production cycles and ensure control on the assembled product. See page 17 of this catalogue



## ANGLE AIR NUTRUNNER WITH IN LINE TUBENUT OPEN HEAD

| Type of nutrunner |              | Grip | Tightening torque on soft joint |              | Idle speed | Starting system | Reversibility | Weight |      | Air consumption | Accessories | Noise level* | Vibrations       |
|-------------------|--------------|------|---------------------------------|--------------|------------|-----------------|---------------|--------|------|-----------------|-------------|--------------|------------------|
|                   |              |      | min.                            | max.         | min.       | max.            |               |        |      |                 |             |              |                  |
| Model             | Code         | Type | Nm                              | in lb        | rpm        | Type            | Type          | kg     | lb   | l/s             | Drive       | dBA          | m/s <sup>2</sup> |
| 26A8AF8B          | 114807330    | FLAT | 3 ÷ 8                           | 26.5 ÷ 70.8  | 500        |                 |               | 1,50   | 3,30 | 9               | F 8         | 75           | <2,5             |
| 40A17AF11B        | 114807160    | FLAT | 7 ÷ 17                          | 61.9 ÷ 150.4 | 300        |                 |               | 1,90   | 4,10 | 9               | F 11        | 75           | <2,5             |
| 40A17AF12B        | 114899930    | FLAT | 7 ÷ 17                          | 61.9 ÷ 150.4 | 300        |                 |               | 1,90   | 4,10 | 9               | F 12        | 75           | <2,5             |
| 40A17AF13B        | 114899931    | FLAT | 7 ÷ 17                          | 61.9 ÷ 150.4 | 300        |                 |               | 1,90   | 4,10 | 9               | F 13        | 75           | <2,5             |
| 40A17AF14B        | 114807188    | FLAT | 7 ÷ 17                          | 61.9 ÷ 150.4 | 300        |                 |               | 1,90   | 4,10 | 9               | F 15        | 75           | <2,5             |
| 40A17AF15B        | 114899932    | FLAT | 7 ÷ 17                          | 61.9 ÷ 150.4 | 300        |                 |               | 1,90   | 4,10 | 9               | F 14        | 75           | <2,5             |
| 40A17AF15T        | 114807149    | FLAT | 7 ÷ 17                          | 61.9 ÷ 150.4 | 300        |                 |               | 1,90   | 4,10 | 9               | F 15        | 75           | <2,5             |
| 40A17AF16B        | 114807179    | FLAT | 7 ÷ 17                          | 61.9 ÷ 150.4 | 300        |                 |               | 1,90   | 4,10 | 9               | F 15        | 75           | <2,5             |
| 40A17AF17B 7,5    | 114807162    | FLAT | 7 ÷ 17                          | 61.9 ÷ 150.4 | 300        |                 |               | 1,90   | 4,10 | 9               | F 16        | 75           | <2,5             |
| 40A20AF14B        | 114899934    | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 17        | 75           | <2,5             |
| 40A20AF15B        | 114899933    | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 14        | 75           | <2,5             |
| 40A20AF16B        | 114899935    | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 15        | 75           | <2,5             |
| 40A20AF19B 7,5    | 114807493    | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 15        | 75           | <2,5             |
| 40A20AF12B        | upon request | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 15        | 75           | <2,5             |
| 40A20AF13B        | upon request | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 12        | 75           | <2,5             |
| 40A20AF17B...     | upon request | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 13        | 75           | <2,5             |
| 40A20AF18B...     | upon request | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 15        | 75           | <2,5             |
| 40A20AF20B...     | upon request | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 15        | 75           | <2,5             |
| 40A20AF21B...     | upon request | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 15        | 75           | <2,5             |
| 40A20AF22B....    | upon request | FLAT | 7 ÷ 20                          | 61.9 ÷ 177   | 240        |                 |               | 1,90   | 4,10 | 10              | F 15        | 75           | <2,5             |

### How to choose 40A...AF... models

40 = Nutrunner power (400 watt) • A = Angle nutrunner • 17 = Maximum torque expressed • A = Air shut-off • F = Flat (flat head drive)  
 • 12 = Hexagonal drive used • B/T = Type of end gear (Blind or Through - E.g.: B = Models with Trough end gear (T version instead of B) (i.e. 40A17AF12B → 40A17AF12T) • 7,5 = Extended hexagon size, the size can be from 7.5 mm to "n", depending on the need.



**Blind gear:**  
 this gear has a "ridge" on which the nut to tighten sits, making tightening easier



**Through gear:**  
 this gear has a hex. drive that covers the nut completely; with this gear untightening can also be done turning the tool by 180°

### Legend

**Reversibility:** all models are suitable for tightening and untightening operations  
**40A...AF... models:** reversing to direction of rotation is used to realign the end gear at the end of the tightening operation

**Lever 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.
- The code number must be used when ordering.

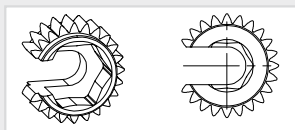
Torque values refer to analysis of laboratory performing tests that comply with the standard ISO 5393 with screwdriver set at the maximum speed and should be considered as indicative. The values in real applications can be influenced by many factors such as, for example: joint (type of joint, degree 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 Service.

To guarantee maximum nutrunner performances over time the head has to be greased, equivalent to three injections with the grease gun supplied, every 3.000 cycles

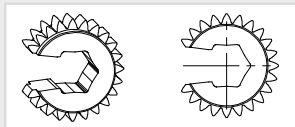
## STANDARD CONFIGURATIONS

### END GEAR FOR HEX FROM 8 TO 15 mm

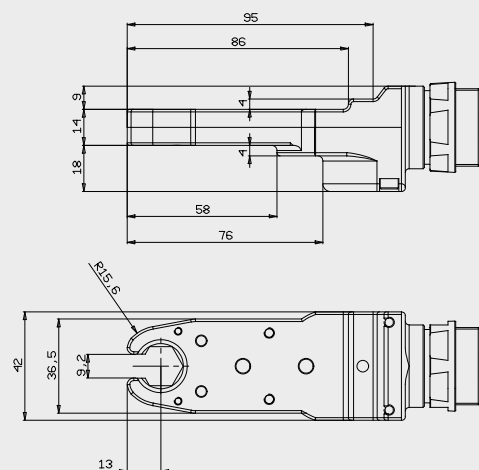
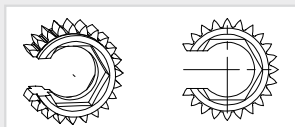
- Blind hexagon



- Through hexagon for end gears until 14 mm

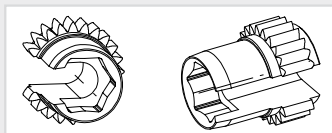


- Reinforced hexagon for end gears from 15 mm

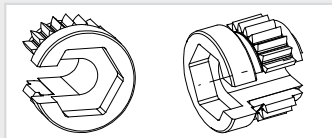


### EXTENDED END GEAR FOR HEX FROM 16 TO 22 mm

- Blind hexagon

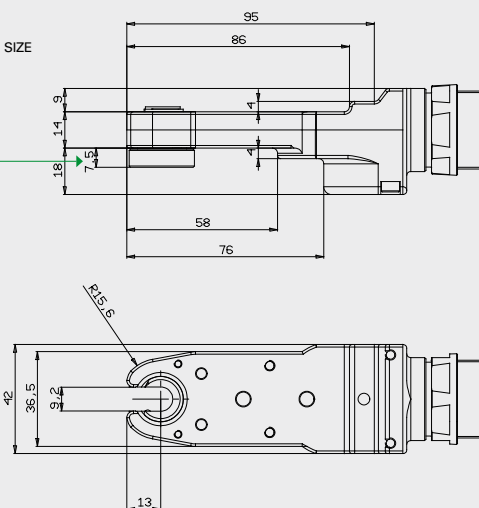


- Through hexagon



#### EXTENDED HEXAGON SIZE

- \* Size (mm) from 7.5 mm to "n," depending on the need



9 mm: maximum pipe diameter the head can hold. Different diameters upon request.

The size of the extended hexagon (\*), can be:  
- 0 to 30 mm for use of hexagons up to 15 mm max  
- 7.5 to 30 mm for use of hexagons greater than 15 mm

## CONFIGURATIONS AVAILABLE UPON REQUEST

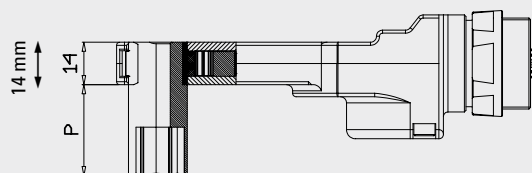
### END GEAR WITH EXTENDED HEXAGON

P = upon request

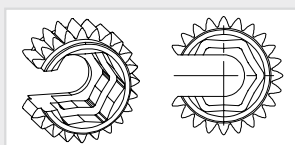


With different size and geometry hexagon  
Fox example: for 8 mm hex end gear  
and P= 15 mm:

**40A17AF8B → 40A17AF8B 15**

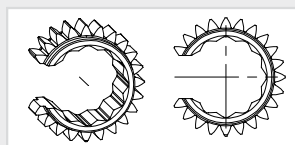


### END GEAR WITH DOUBLE BLIND HEXAGON



e.g. for hex:  
internal 12 and 15 external (mm)  
internal 13 and 15 external (mm)  
internal 13 and 16 external (mm)  
Etc.

### END GEAR WITH DIFFERENT IMPRINT AND GEOMETRIES



Polygonal, square, oval,  
etc.

## Other Technical features for all models

| Models                                | Air inlet | Recommended hose bore |
|---------------------------------------|-----------|-----------------------|
| 15C...                                | 1/4" gas  | Ø 5 mm                |
| AD...RA1, A6RSA1, A10RYA, 40A...AF... | 1/4" gas  | Ø 8 mm                |
| AG40RA, AG60RA                        | 1/4" gas  | Ø 10 mm               |

### Standard equipment (supplied with the tool)

- Clutch adjustment key
- Grease gun (only for 40A...AF... models)
- Specific grease (30 gr. tube) code 699051038 (only for 40A...AF... models)
- Hanging ring
- Use and maintenance manual
- Eco-friendly packaging

## Accessories available on request

• **Bits, sockets**, manual and magnetic adaptors for inserts, exhaust air conveyors, balancers and other accessories. See the "Fiam Accessories" catalogues n. 77 and 78.

• **Swivelling bail ring for models AD, AG**: practical accessory designed to keep the tool always in a horizontal position, perfectly balanced and swivelling allowing a considerable reduction in fatigue during tightening operations.

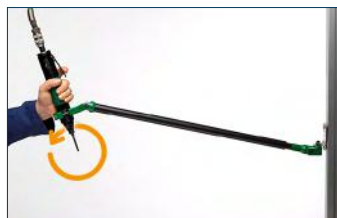
|                 | Code      | For models |
|-----------------|-----------|------------|
| Swivelling bail | 681011060 | AD...      |
| Swivelling bail | 681011055 | AG...      |



• **Specific grease for 40A...AF models**: a Fiam special and exclusive, it guarantees continuous performance of the nutrunners in terms of torque and life under all conditions of use

|                          | Code      | For models  |
|--------------------------|-----------|-------------|
| Specific grease (500 gr) | 699051018 | 40A...AF... |

## BT-MG MAGNESIUM TELESCOPIC ARMS



Telescopic arms in magnesium alloy designed and produced by Fiam, being **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** using a simple plate with reduced dimensions.

| Model         | Code      | Max torque |        | Max work range | Min work range | Ø max tool |
|---------------|-----------|------------|--------|----------------|----------------|------------|
|               |           | Nm         | in lb  |                |                |            |
| 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 70 800  | 692071411 | 70         | 619.50 | 860            | 505            | 34-50      |
| BT-MG 70 1000 | 692071403 | 70         | 619.50 | 1070           | 575            | 34-50      |
| BT-MG 70 1500 | 692071406 | 70         | 619.50 | 1580           | 745            | 34-50      |
| BT-MG 70 2000 | 692071408 | 70         | 619.50 | 2120           | 925            | 34-50      |



## Accessories available upon request

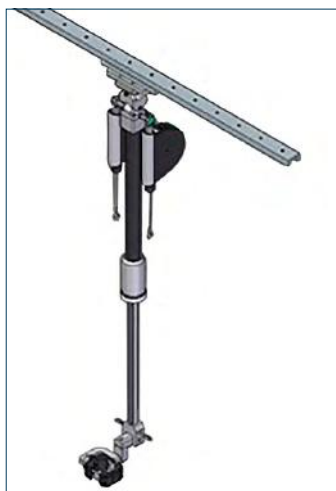
### BT-TOP TELESCOPIC ARM WITH BRACKET FROM TOP



To be installed on the top of the workbench, it offers an ergonomic layout for effortless work by sliding the tool along the vertical axis of the arm. Ideal for working in operational spaces with lateral encumbrances or to work on positioning jigs. Equipped with a NO SPIN anti-rotation device which prevents the arm from rotating on its axis, counteracting the reaction on the operator's hand-arm system. Supplied with a tool clamp for use with air and electric tools, both straight and pistol grip. Upon request additional clamps for use eTensil electric screwdrivers or angle tools.

|                |           | Max torque | Min load | Max load | Tool diameter | Max length | Stroke | Min stroke length | Max stroke length |
|----------------|-----------|------------|----------|----------|---------------|------------|--------|-------------------|-------------------|
| Model          | Code      | Nm         | kg       | kg       | mm            | mm         | mm     | mm                | mm                |
| BT-TOP 12-800  | 692071450 | 12         | 0,4      | 1,3      | 26,5 ÷ 50     | 800        | 300    | 500               | 800               |
| BT-TOP 12-1000 | 692071451 | 12         | 0,4      | 1,3      | 26,5 ÷ 50     | 1000       | 300    | 700               | 1000              |
| BT-TOP 25-1000 | 692071452 | 25         | 1,2      | 3,7      | 26,5 ÷ 50     | 1000       | 300    | 700               | 1000              |
| BT-TOP 25-1500 | 692071453 | 25         | 1,2      | 3        | 26,5 ÷ 50     | 1500       | 600    | 900               | 1500              |
| BT-TOP 40-1100 | 692071454 | 40         | 0,3      | 3,2      | 34 ÷ 50       | 1100       | 400    | 700               | 1100              |

### SL LINEAR SLIDES RAIL FOR REACTION ARMS



It optimizes the operational layout as it allows the mounted .Reaction Arm to slide fluidly on a single working axis, improving overall ergonomics. It is pre-drilled for easy and immediate installation and is equipped with a trolley, with eccentric wheels that can be adjusted with supplied wrenches, that slides along the linear rail.

It can be bracketed at the top or on the workbench and be used with the following Fiam reaction arms:

- BC / BCA and BC / BCA-TOP Cartesian arms
- BC40LK Cartesian arm
- BT-TOP Telescopic arms.

|                              | For           |           | Max Length |
|------------------------------|---------------|-----------|------------|
| Model                        |               | Code      | mm         |
| SL 1000 for BT-TOP           | BT - TOP      | 692078061 | 1.000      |
| SL 2000 for BT-TOP           | BT - TOP      | 692078062 | 2.000      |
| SL 1000 for BC and BCA 12/25 | BC12/25       | 692078063 | 1.000      |
|                              | BCA 12/25     |           |            |
|                              | BC12/25 TOP   |           |            |
|                              | BCA 12/25 TOP |           |            |
| SL 2000 for BC and BCA 12/25 | BC 12/25      | 692078064 | 2.000      |
|                              | BCA 12/25     |           |            |
|                              | BC 12/25 TOP  |           |            |
|                              | BCA 12/25 TOP |           |            |
| SL 1000 for BC and BCA 40    | BC 40         | 692078065 | 1.000      |
|                              | BCA 40        |           |            |
|                              | BCA 40LK*     |           |            |
|                              | BC40TOP       |           |            |
|                              | BCA 40 TOP    |           |            |
| SL 2000 for BC and BCA 40    | BC 40         | 692078066 | 2.000      |
|                              | BCA 40        |           |            |
|                              | BCA 40LK*     |           |            |
|                              | BC40TOP       |           |            |
|                              | BCA 40 TOP    |           |            |

• SL = Sliding Rail • 1000/2000 = Length max (mm)

## Accessories available upon request



BC Cartesian Arm



BCA Articulated Cartesian Arm



BCA-TOP Articulated Cartesian arm

### CARTESIAN ARMS BC AND BCA

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)**

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

| Model                    | Code      | Max torque |        | Max load | Max tool diameter | Arm dimension A | Arm regulation B | R1 min-max | R2 min-max |
|--------------------------|-----------|------------|--------|----------|-------------------|-----------------|------------------|------------|------------|
|                          |           | Nm         | in lb  | kg       | mm                | mm              | mm               | mm         | mm         |
| BC5 Cartesian Arm        | 692031030 | 5          | 44,25  | 2        | 32÷50             | 1041            | 160              | 285-445    | 600-760    |
| BC12 Cartesian Arm       | 692031031 | 12         | 106,2  | 2        | 32÷50             | 1065            | 160              | 285-445    | 600-760    |
| BC25 Cartesian Arm       | 692031032 | 25         | 221,25 | 2        | 32÷50             | 1065            | 160              | 285-445    | 590-750    |
| BC40 Cartesian Arm       | 692031033 | 40         | 354    | 2        | 32÷50             | 1047            | 176              | 274-450    | 564-740    |
| BC40/7 Cartesian Arm     | 692031038 | 40         | 354    | 7        | 32÷50             | 1047            | 176              | 274-450    | 564-740    |
| BC40/11 Cartesian Arm    | 692031040 | 40         | 354    | 11       | 32÷50             | 1047            | 176              | 274-450    | 564-740    |
| BC5-TOP Cartesian Arm    | 692031065 | 5          | 44,25  | 2        | 32÷50             | 1041            | 160              | 285-445    | 600-760    |
| BC12-TOP Cartesian Arm   | 692031076 | 12         | 106,2  | 2        | 32÷50             | 1065            | 160              | 285-445    | 600-760    |
| BC25-TOP Cartesian Arm   | 692031066 | 25         | 221,25 | 2        | 32÷50             | 1065            | 160              | 285-445    | 590-750    |
| BC40-TOP Cartesian Arm   | 692031077 | 40         | 354    | 2        | 32÷50             | 1047            | 176              | 274-450    | 564-740    |
| BC40/7-TOP Cartesian Arm | 692031078 | 40         | 354    | 7        | 32÷50             | 1047            | 176              | 274-450    | 564-740    |

| Model                                 | Code      | Max torque |        | Max load | Max tool diameter | Arm dimension A | Arm regulation B | R1 min-max | R2 min-max |
|---------------------------------------|-----------|------------|--------|----------|-------------------|-----------------|------------------|------------|------------|
|                                       |           | Nm         | Nm     | kg       | mm                | mm              | mm               | mm         | mm         |
| BCA5 Articulated Cartesian Arm        | 692031034 | 5          | 44,25  | 2        | 32÷50             | 1041            | 160              | 110-260    | 610-730    |
| BCA12 Articulated Cartesian Arm       | 692031035 | 12         | 106,2  | 2        | 32÷50             | 1065            | 160              | 110-260    | 610-730    |
| BCA25 Articulated Cartesian Arm       | 692031036 | 25         | 221,25 | 2        | 32÷50             | 1065            | 160              | 110-260    | 610-730    |
| BCA40 Articulated Cartesian Arm       | 692031037 | 40         | 354    | 2        | 32÷50             | 1047            | 176              | 110-260    | 610-730    |
| BCA40/7 Articulated Cartesian Arm     | 692031039 | 40         | 354    | 7        | 32÷50             | 1047            | 176              | 110-260    | 610-730    |
| BCA40/11 Articulated Cartesian Arm    | 692031041 | 40         | 354    | 11       | 32÷50             | 1047            | 176              | 110-260    | 610-730    |
| BCA5-TOP Articulated Cartesian Arm    | 692031067 | 5          | 44,25  | 2        | 32÷50             | 1041            | 160              | 110-260    | 610-730    |
| BCA12-TOP Articulated Cartesian Arm   | 692031068 | 12         | 106,2  | 2        | 32÷50             | 1065            | 160              | 110-260    | 610-730    |
| BCA25-TOP Articulated Cartesian Arm   | 692031069 | 25         | 221,25 | 2        | 32÷50             | 1065            | 160              | 110-260    | 610-730    |
| BCA40-TOP Articulated Cartesian Arm   | 692031070 | 40         | 354    | 2        | 32÷50             | 1047            | 176              | 110-260    | 610-730    |
| BCA40/7-TOP Articulated Cartesian Arm | 692031079 | 40         | 354    | 7        | 32÷50             | 1047            | 176              | 110-260    | 610-730    |

## Accessories available upon request



Cartesian Arm with a position monitoring device

### ALL THE ARMS ARE AVAILABLE 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 three models available for all air and electric Fiam tightening solutions:*

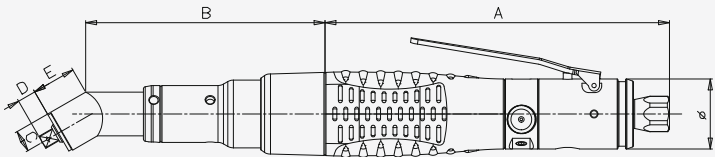
- Arms BT-MG.../BC... TPM-1: models with **single angle** movement detection
- Arms BT-MG.../BC.../BCA... TPM-2: models with **angle and linear** movement detection.

*For more information please see catalog 79 “Accessories for ergonomic workplace” or contact Fiam Technical Consultancy Service.*

Overall dimensions (in mm)

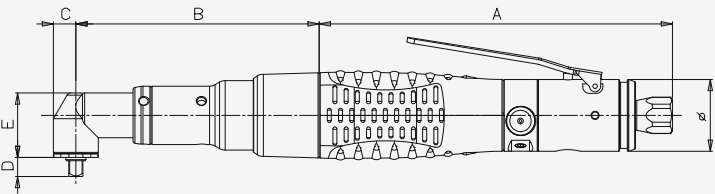
15C...A30 MODELS

| Modelli   | A   | B   | C  | D   | E  | Ø  |
|-----------|-----|-----|----|-----|----|----|
| 15C...A30 | 157 | 109 | 10 | 8,5 | 20 | 32 |



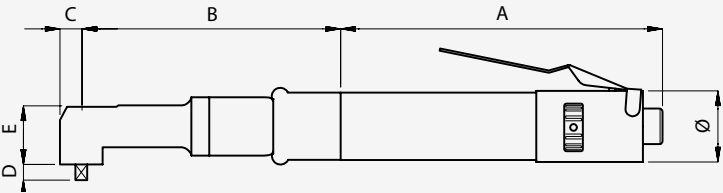
15C...A90 MODELS

| Modelli   | A   | B   | C  | D   | E  | Ø  |
|-----------|-----|-----|----|-----|----|----|
| 15C...A90 | 157 | 109 | 10 | 8,5 | 29 | 32 |

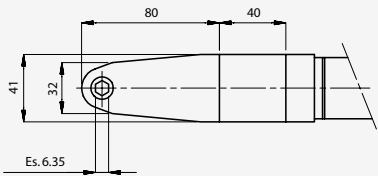
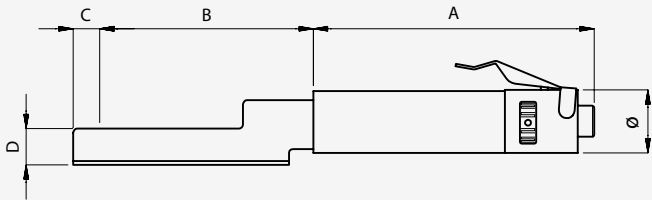


AD.../AG... MODELS

| Models  | A   | B   | C    | D    | E    | Ø  |
|---------|-----|-----|------|------|------|----|
| AD6RA1  | 195 | 97  | 12,5 | 12   | 30   | 40 |
| AD9RA1  | 195 | 97  | 12,5 | 12   | 30   | 40 |
| AD14RA1 | 195 | 125 | 14   | 12   | 34,5 | 40 |
| AD26RA1 | 180 | 137 | 14   | 12   | 34,5 | 40 |
| AG40RA  | 240 | 163 | 16   | 12   | 40   | 40 |
| AG60RA  | 240 | 178 | 20   | 16,5 | 45,5 | 40 |



A6RSA1 MODELS

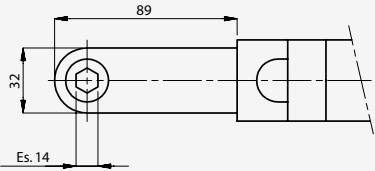
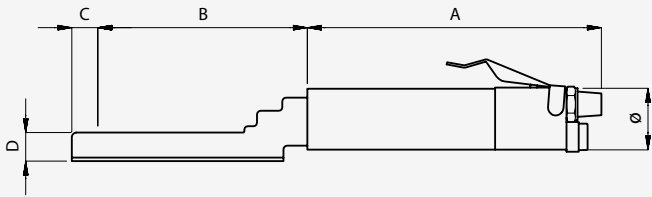


| Modello | A   | B   | C  | D  | Ø  |
|---------|-----|-----|----|----|----|
| A6RSA1  | 295 | 108 | 12 | 18 | 40 |



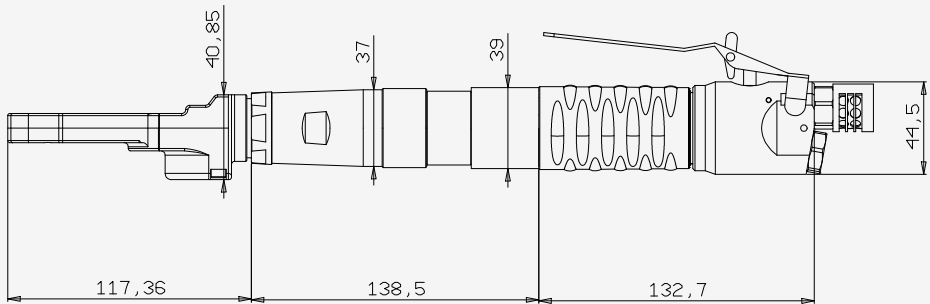
Overall dimensions (in mm)

A10RYA MODELS

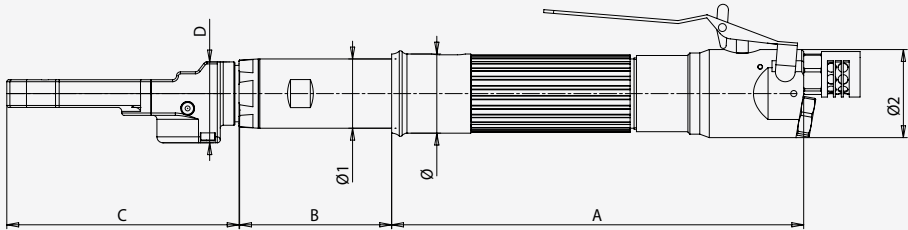


| Modello | A   | B   | C  | D  | Ø  |
|---------|-----|-----|----|----|----|
| A10RYA  | 370 | 134 | 16 | 18 | 46 |

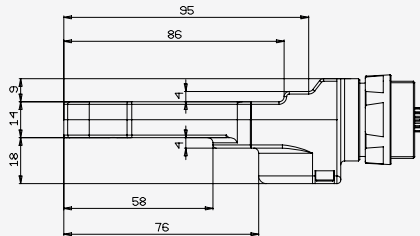
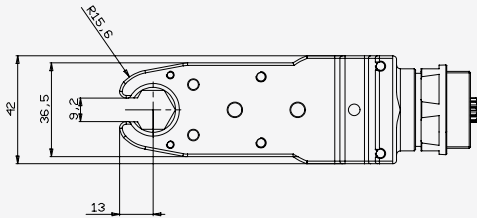
26A8AF8B MODELS



40A... AF... MODELS



**Standard head:**  
maximum pipe diameter  
the head can hold is 9 mm  
(for different diameters  
please contact the Fiam  
Technical Consultancy  
Service)



| Modelli       | A   | B  | C   | D  | Ø  | Ø1 | Ø2   |
|---------------|-----|----|-----|----|----|----|------|
| 40A9AF..B     | 195 | 77 | 117 | 41 | 40 | 35 | 44,5 |
| 40A17-20AF..B | 213 | 77 | 117 | 41 | 40 | 35 | 44,5 |

## Air angle nutrunners + 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 **AIR ANGLE NUTRUNNERS** 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 (see pag. 22). 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

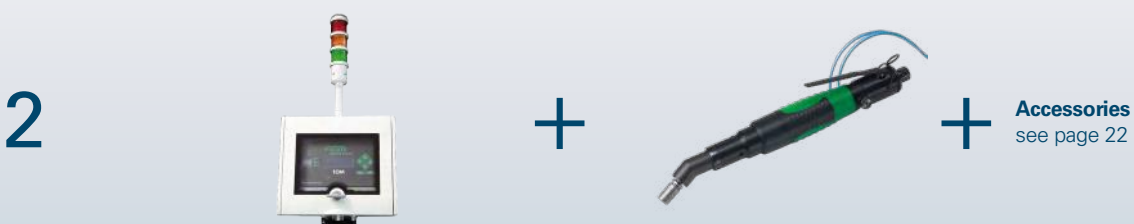
**TOM needs to be purchased along with Fiam transducer, one for each tool (except when TOM is connected to EasyDriver CA).**

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

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>20 INPUTS</b>                              | <ul style="list-style-type: none"> <li>• 8 for programmes selection, 6 for remote functioning: switching off, program activation, tool stop, tool loosening, program reset</li> </ul> <p>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</p> |
| <b>24 OUTPUTS</b>                             | <ul style="list-style-type: none"> <li>• 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)</li> </ul>                                                                                                |
| <b>AUTOMATIC CHECK OF TIGHTENING TIME</b>     | <ul style="list-style-type: none"> <li>• Which can be adjusted by setting the cycle time thus discriminating the different KO results</li> </ul>                                                                                                                                                                                                                                                |
| <b>SINGLE PROGRAM</b><br>99 tightenings       | <ul style="list-style-type: none"> <li>• Tightening with min/max time equal for all screws</li> <li>• Screws count</li> <li>• 3 different acoustic signals: tightening end, single program end, error</li> </ul>                                                                                                                                                                                |
| <b>SEQUENCE PROGRAM</b><br>99 tightenings x 8 | <ul style="list-style-type: none"> <li>• More single programmes (up to 8) in sequence</li> <li>• 4 different acoustic signals: tightening end, single tightening end, sequence (OK/NOK)</li> <li>• It can be selected from PC</li> <li>• For each tightening sequence it is possible to program the maximum number of tightening attempts fro NOK screws</li> </ul>                             |
| <b>RS 232 SERIAL PORT</b>                     | <ul style="list-style-type: none"> <li>• To print the following results in sequence: Date / hour - Number active output - Result – Tightening Time – Screw number - Program number - Sequence</li> </ul>                                                                                                                                                                                        |
| <b>PASSWORD</b>                               | <ul style="list-style-type: none"> <li>• 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)</li> </ul>                                                                         |
| <b>TIME</b>                                   | <ul style="list-style-type: none"> <li>• It can be activated without buffer-battery to be replaced</li> </ul>                                                                                                                                                                                                                                                                                   |
| <b>MEMORY</b>                                 | <ul style="list-style-type: none"> <li>• Parameters for statistics (they can printed through RS232):<br/>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</li> </ul>                                                                                                               |
| <b>LEVER RELEASED CONTROL</b>                 | <ul style="list-style-type: none"> <li>• In production processes where the operators tighten so fast that release the lever before the clutch shuts-off</li> </ul>                                                                                                                                                                                                                              |
| <b>REMOTE FUNTIONING</b>                      | <ul style="list-style-type: none"> <li>• 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</li> </ul>                                                                                                                               |
| <b>MASKED TIME</b>                            | <ul style="list-style-type: none"> <li>• 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)</li> </ul>                                                                                                                                         |
| <b>RELEASE TIME</b>                           | <ul style="list-style-type: none"> <li>• 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)</li> </ul>                                                                                                               |
| <b>RUNCYCLE</b>                               | <ul style="list-style-type: none"> <li>• 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</li> </ul>                                                                                                                                        |

## 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 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   | <b>Compact unit</b> compared to the PLC                                                                                                                                                                     | To provide the same features, the PLC must be integrated with other devices (additional modules which are bigger)                                                                          |
|           | <b>Robust:</b> 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                                                                                                 |
|           | <b>It doesn't require switchboard and wiring</b> for installation                                                                                                                                           | The PLC provides an electric panel instead                                                                                                                                                 |
|           | Possibility to <b>position it directly on the production line</b> to be used by the operator to read                                                                                                        | The PLC needs a operator panel and/or external buttons                                                                                                                                     |
| CHEAPNESS | <b>Integrated and easy user interface</b>                                                                                                                                                                   | It is necessary an operator panel to connect and adequately program                                                                                                                        |
|           | <b>TOM is a complete system</b> equipped with 16 IN and 24 OUT, RS232 for data and watch                                                                                                                    | To have all these functions, it is necessary to add expansions                                                                                                                             |
|           | <b>Complete firmware compatible with all screwdrivers</b> , with all setting times and calibrations and many other functions                                                                                | It is required a complete programming according to the different screwdrivers to connect                                                                                                   |
|           | <b>Firmware already tested by Fiam</b> 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       | <b>Rapid start up:</b> a few seconds to start                                                                                                                                                               | Long cycle of start; the PLC always require more time to start                                                                                                                             |
|           | <b>Rapid visualisation</b> of the remaining screws thanks to additional display                                                                                                                             | For the PLC, it is required an additional monitor positioned close to the user                                                                                                             |
|           | <b>Fast calculation:</b> instantaneous response to events (both screwdriver and inputs / outputs). <b>Very rapid reading:</b> 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                                                                                                                          |
|           | <b>Easily interfaced</b> 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 angle nutrunners with pneumatic pick-up signal

| Type of screwdriver / nutrunner |           | Grip | Tightening torque on soft joint |              | Idle speed | Starting system | Reversibility | Weight |      | Dimensions (mm) | Air consumption | Accessories | Noise level * | Vibrations |
|---------------------------------|-----------|------|---------------------------------|--------------|------------|-----------------|---------------|--------|------|-----------------|-----------------|-------------|---------------|------------|
|                                 |           |      | min.                            | max.         |            |                 |               |        |      |                 |                 |             |               |            |
| Model                           | Code      | Type | Nm                              | in lb        | rpm        | Type            | Type          | kg     | lb   | ØxLxH           | l/s             | Drive       | dBA           | m/s²       |
| 15C2A30 - 2CS                   | 112509903 | 30°  | 0,8 ÷ 2,0                       | 708 ÷ 177    | 2000       |                 |               | 0,70   | 1.54 | see on page 15  | 4               | M 1/4"      | 73            | <2,5       |
| 15C3A30 - 2CS                   | 112509904 | 30°  | 0,8 ÷ 3,0                       | 708 ÷ 26.55  | 1400       |                 |               | 0,70   | 1.54 | see on page 15  | 5,5             | M 1/4"      | 73            | <2,5       |
| 15C4A30 - 2CS                   | 112509905 | 30°  | 0,8 ÷ 4,0                       | 708 ÷ 35.4   | 950        |                 |               | 0,70   | 1.54 | see on page 15  | 5,5             | M 1/4"      | 73            | <2,5       |
| 15C5A30 - 2CS                   | 112509906 | 30°  | 0,8 ÷ 5,0                       | 708 ÷ 44.25  | 650        |                 |               | 0,70   | 1.54 | see on page 15  | 5,5             | M 1/4"      | 73            | <2,5       |
| 15C2A90 - 2CS                   | 112509907 | 90°  | 0,8 ÷ 2,0                       | 708 ÷ 177    | 2000       |                 |               | 0,70   | 1.54 | see on page 15  | 4               | M 1/4"      | 73            | <2,5       |
| 15C3A90 - 2CS                   | 112509908 | 90°  | 0,8 ÷ 3,0                       | 708 ÷ 26.55  | 1400       |                 |               | 0,70   | 1.54 | see on page 15  | 5,5             | M 1/4"      | 73            | <2,5       |
| 15C4A90 - 2CS                   | 112509909 | 90°  | 0,8 ÷ 4,0                       | 708 ÷ 35.4   | 950        |                 |               | 0,70   | 1.54 | see on page 15  | 5,5             | M 1/4"      | 73            | <2,5       |
| 15C5A90 - 2CS                   | 112509910 | 90°  | 0,8 ÷ 5,0                       | 708 ÷ 44.25  | 650        |                 |               | 0,70   | 1.54 | see on page 15  | 5,5             | M 1/4"      | 73            | <2,5       |
| AD6RA1-2CS                      | 114807210 | 90°  | 2,5 ÷ 6                         | 22.13÷53.1   | 1150       |                 |               | 1,20   | 2.64 | see on page 15  | 10              | M 3/8"      | 73            | <2,5       |
| AD9RA1-2CS                      | 114807094 | 90°  | 2,5 ÷ 9                         | 22.13÷79.65  | 900        |                 |               | 1,20   | 2.64 | see on page 15  | 10              | M 3/8"      | 73            | <2,5       |
| AD14RA1-2CS                     | 114807129 | 90°  | 3 ÷ 14                          | 26.55÷123.9  | 600        |                 |               | 1,40   | 3.08 | see on page 15  | 10              | M 3/8"      | 73            | <2,5       |
| AD26RA1-2CS                     | 114807086 | 90°  | 11,5 ÷ 26                       | 101.78÷230.1 | 350        |                 |               | 1,45   | 3.19 | see on page 15  | 10              | M 3/8"      | 73            | <2,5       |
| AG40RA-2CS                      | 114809914 | 90°  | 18 ÷ 40                         | 159.3÷354    | 400        |                 |               | 2,05   | 4.51 | see on page 15  | 13              | M 3/8"      | 73            | <2,5       |
| AG60RA-2CS                      | 114809915 | 90°  | 29 ÷ 60                         | 256.65÷531   | 300        |                 |               | 2,30   | 5.06 | see on page 15  | 13              | M 3/8"      | 73            | <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 • 30 = Head at 30° • 90 = Head at 90° • 2CS = Double-signal pressure

### Legend

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

**Lever 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 standard.
- Accessory drive: male square drive (ISO 1174).
- 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 Service**.

### Standard equipment (supplied with the tool)

- Clutch adjustment key
- Hanging ring
- Use and maintenance manual.
- Eco-friendly packaging.

### Accessories available upon request

- Bits, sockets, etc., balancers, exhaust silencers and other compressed air system accessories (see Accessories catalogue)

## Accessories 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. There are 2 LEDs for each screwdriver: one indicates the enabled screwdriver (to be used) and one indicates the tool is working.

Geared for additional feeding in case of need (feeder upon request).

Supplied with adapter for connection with TOM and 2 connecting cables.

| Model                                     | Code             |
|-------------------------------------------|------------------|
| Multi-dock connector for air screwdrivers | <b>685001065</b> |

### TOOL LOCKING/UNLOCKING UNIT



It permits to TOM unit to enable/disable connected tool. Including status led. Extremely silent and equipped with device to convey the exhaust away from the working area. To be used with specific connecting cables (see below).

| Model                                                                | Code             |
|----------------------------------------------------------------------|------------------|
| Unit for 15C/26C<br>(including couplings for 10 mm Ø hose bore)      | <b>685001069</b> |
| Unit for AD/AG/IHE/CY<br>(including couplings for 12 mm Ø hose bore) | <b>685001070</b> |

### CABLES



| Model                                                 | Specific                                                                                         | Code             |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------|
| Cable TOM / stop unit                                 | To connect TOM with locking/unlocking device when a <b>single</b> screwdriver is used            | <b>685001071</b> |
| Cable multi-dock connector / locking/unlocking device | To connect multi-dock connector with locking/unlocking device when several screwdrivers are used | <b>685001072</b> |

### TOWER-LIGHT



3 colour tower-light to be connected to TOM through supplied cable. It allows immediate, visual display of the tightening outcome.

| Model                 | Code             |
|-----------------------|------------------|
| 3 colours tower-light | <b>687041018</b> |

### COVER



Covering device for the upper part of TOM unit, compact and easy to install. It hides any anti aesthetic wiring. It prevents intentional or unintentional contacts and damages to TOM unit. It prevents modifications / tampering by unauthorized personnel. It protects the electrical contacts from any traction thanks to the presence of 3 cable glands.

| Model | Code             |
|-------|------------------|
| Cover | <b>687041043</b> |

### CONNECTING HOSES (AIR AND SIGNALS)



New exclusive air hoses, designed by Fiam. They provide specific features for use of the new transducer for TOM (cod. 687041041). The two hoses for the pneumatic signal pick-up are fixed to air supply hose, while the transducer can be placed at the opposite end of the hose rather than on the tool. 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); this dimension is the one that guarantees the transducer perfect efficiency. For different lengths, we recommend the connections to linear hoses.

| Model                            | Code             | L<br>mt | Ø<br>spiral<br>mm | Ø ext<br>x int<br>mm | 2 hoses for pneumatic<br>spiral<br>Ø ext x int mm |
|----------------------------------|------------------|---------|-------------------|----------------------|---------------------------------------------------|
| Spiral multi-hose<br>for TOM D12 | <b>693011027</b> | 2,5     | 80                | 9x12                 | 2,5x4                                             |
| Spiral multi-hose<br>for TOM D10 | <b>693011026</b> | 2,5     | 80                | 7,5x10               | 2,5x4                                             |