



Real innovation knows no obstacles

New
AF air angle nutrunners
with flat head drive

Fiam

PEOPLE AND SOLUTIONS

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With the AF air angle nutrunners all points that need tightening are within easy reach

These new 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 screwdrivers. 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 **newly designed 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 new screwdrivers.



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Be demanding

Reliability

A careful design guarantees long lifetime and reliability of the components which results in high productive process, less maintenance and repair costs

The nutrunner

- The **JointMaster2 torque control system**, with automatic air shut off, greatly improves torque repeatability on any kind of joint thanks to the very particular system that dynamically absorbs rotation energy. This gives excellent **behaviour uniformity even on different joints which means an optimum quality finished product**
- **New high performance motor: optimising performance even when supply pressures are low**

The new head

- **The new materials used for the heads** make this important component **extremely resistant and long lasting**
- The new **grease** supplied **for lubricating**, a Fiam special and exclusive, guarantees **continuous performance of the screwdriver 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 nutrunner

- The modern **JointMaster2 torque control system greatly reduces quality control times** at the end of assembly meaning increased tightening cycles
- It's **even more practical, quicker and safer to adjust the clutch** thanks to the new **rotating cursor**
- The **cycle end acoustic signal**, given by the torque control system, allows the operator to **go to the next tightening job much quicker**
- 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

The new head

- The **new construction shapes, materials and sophisticated heat treatments** of the heads **optimise nutrunner yield** making it possible to achieve **more revolutions at the same torque**
- Thanks to Fiam's great flexibility in proposing **customised solutions**, any production situation can be tightened, even the most complex
- With the through gear **untightening** can be done turning the tool by 180°



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



Perfection is in your hands

Ergonomics

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

The independent nutrunner can be **used in any position**, from the bottom upwards and in very restricted spaces. It is **truly practical and easy to use** because the handgrip is right near the head of the tool

The modern **JointMaster2 tightening torque control system** minimises the **reaction on the operator's hand**. Thanks to the automatic air shut off system and to the accurate study of the internal components, vibration levels are less than 2.5 m/sec² meaning they comply perfectly with the laws in force concerning vibrations to the hand-arm system

Silencing system: these screwdriver are very quiet and fitted with controlled distribution of the exhaust air

The long starting lever means a **more comfortable and easier grip** almost along the entire length of the nutrunner which lessens the effort and is far less tiring for the operator

The starting lever's slip-proof paint makes it even more **resistant to wear**

To make the tightening job even easier and **eliminate stress on the operator's arm**, the **omnidirectional coupling** has been designed for use in conjunction with the cartesian arm: particularly suitable for installation on this kind of Fiam screwdriver, this highly **agile and flexible device allows the tool to be rotated freely** around its axis while **also allowing its horizontal axis** to move by +/- 15° (see Accessories available on requested)

New rotating cursor for clutch adjustment



Naturally innovative

Ecology

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

The advanced design technology of the **air motor** ensures a **reduction of compressed air** without compromising tool performances

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

ERGOTECH Ergotech project
Having full knowledge of the ergonomics needs and of the safety of the operator, Fiam optimizes the performances of its tools and offers consulting and qualified training for the correct use of the screwdrivers

Type of screwdriver		Grip	Tightening torque on soft joint		Idle speed	Starting system	Reversibility	Weight	Dimensions (mm)	Air consumption	Accessories	Noise level	Vibrations
Model	Code		Type	Nm									
40A17AF12B	114899930		7 ÷ 17		300			1,9	45x431	9	12	75	<2,5
40A17AF13B	114899931		7 ÷ 17		300			1,9	45x431	9	13	75	<2,5
40A17AF15B	114899932		7 ÷ 17		300			1,9	45x431	9	15	75	<2,5

Legend

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 = Type of end gear (Blind or Through)



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

Reversing to direction of rotation is used to realign the end gear at the end of the tightening operation

Starting lever

- The figures shown are measured at a pressure of 6,3 bar (ISO 2787), the recommended operating pressure.
- The 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.
- Vibrations level have been measured in accordance with ISO 8662-1 and ISO 8662-7 standard.
- The code number must be used when ordering

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

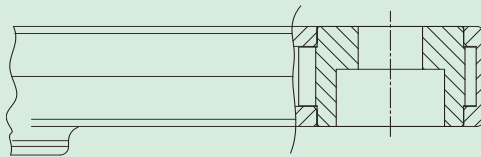
The data given in the table are indicative and can be changed without prior notice. The torque values are purely indicative and may be influenced by the softness of the type of joint, by the type and length of the screw, by the pressure and quantity of air supply, and by the type of accessory used. The values indicated for noise and vibration levels were obtained in the laboratory, performing tests that comply with the standards stated, but alone are not sufficient for calculating risks. Values measured in the single work places may be higher than those stated. The values of actual exposure and consequent risks are specific and depend on the operator's method of work, the type of work piece and the work place, as well as the operator's time of exposure and his physical conditions.

Fiam cannot be held responsible for any consequences deriving from the use of the information in the table when evaluating risks in the work place over which Fiam has no control. For all further details, please apply to the Fiam Technical Consultancy Service.

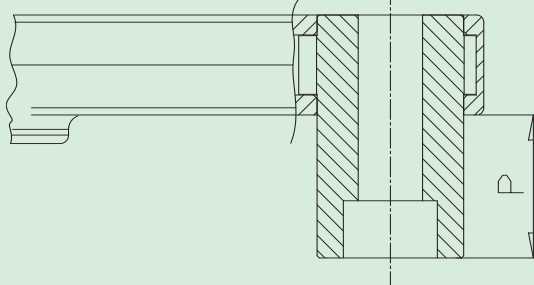
Models available upon request

- Models with **Through** end gear (T version instead of B) (i.e. 40A17AF12B → 40A17AF12**T**)
- Models with a different size end hex. drive (i.e. for 14 mm end gear 40A17AF12B → 40A17AF**14**B)
- Models with differently shaped end gear (polygonal, square, double hexagon, oval, etc.)
- Models with torque ranges lower than those given in the chart
- Models with extended end hex. drive

Standard gear



Extended gear
P = output value in mm



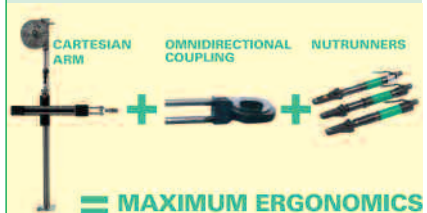
- Stall torque models, without clutch
- For all models please contact Fiam Technical Consultancy Service

Standard equipment (supplied with the tool)

- Spanner to adjust the clutch
- Grease gun
- Specific grease (50 g tube)
- Hanging ring
- Use and maintenance manual
- Eco-friendly packaging

Accessories available on request

- Accessories for compressed air (see the Accessories catalogue no. 33)
- 500 g specific grease for grease gun: code 699051018
- Cartesian arms for more ergonomic tightening operations complete with omnidirectional coupling

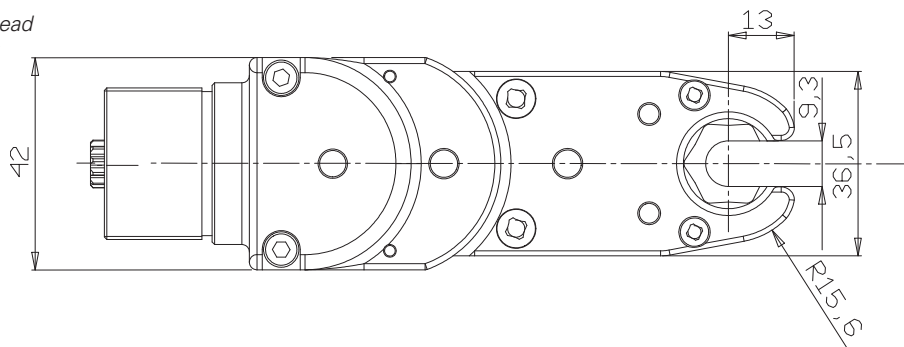


Other technical features

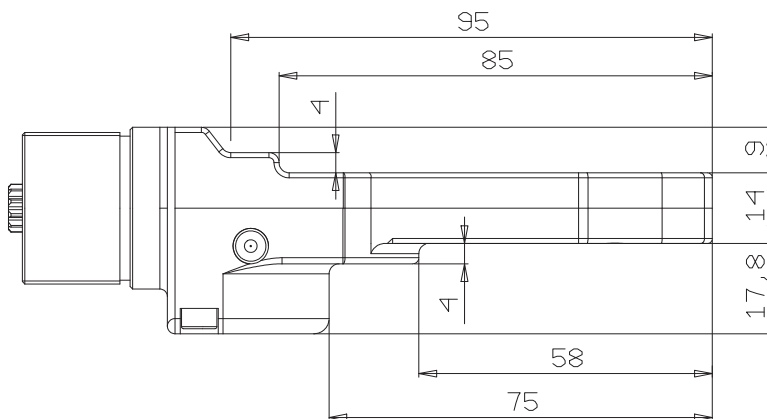
Model	Air inlet	Recommended hose bore	Supply hoses recommended			
All models	1/4" gas	Ø 8 mm	Rubber	693511022	Spiral	693011020

Standard head:

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



Overall dimensions (mm)



**THE PLUS AS USUAL:
PRE AND AFTER SALES SERVICE**

The AF solutions are characterised by **high performance heads for all assembly situations where pipes are used containing fluids.**

Fiam places its qualified technical staff at the disposal of its customers in order to provide the best solution, especially customised, to each specific assembly requirement. Contact Fiam directly or your area dealer to explain what your requirements are and to receive your "customised" tool.



PEOPLE AND SOLUTIONS

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QUALITY COMPONENTS

