### **Core innovation**



### **Body perfection**

New air angle nutrunners 15C with heads at 30° and 90°



New air angle nutrunners 15C with heads at 30° and 90°

# The future of tightening is already here

A **completely innovative range**, that doesn't find equal in the panorama of industrial manual tightening solutions; these nutrunners with heads at 30° or 90° 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. Particularly ideal for household appliances, industrial vehicle components, furniture, motor vehicles, car and electromechanical field.

# **15C: innovation continues**

	Antislip varnishing
Cor	nfortable and reduced effort reverse button
	Long start lever. The handling of the tool is easier
	Predisposition for pneumatic pick-up signal
New ergonomic comforta	grip for safe and able tool holding
TRACS 2 high repeatab torque control sys	ility tem
Newly conceived MOTRIX air motor, ensuring higher performance	
ROLLBOX reduction gear system, ensuring high output	
Cycle end acoustic signal	
Robust angle head to guarantee long life	

# **Reliability Productivity Ergonomics Ecology**

#### **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

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

### TRACS 2 (Torque Repeatability and Accuracy Control System): the new

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. TRACS 2 system guarantees a high quality improvement in the tightening process

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

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

TRACS 2: 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** 

New grip design: it permits extraordinary ease in handling the nutrunner with less operator fatigue and significant increase of the productivity

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

Pneumatic pick up signal: the nutrunners are arranged to be **easily interfaced** with electronic torque control TOCS (Tightening Operations Control System) and/or on line PLC systems







#### Perfection is in your hands

# **Ergonomics**

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

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

New 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 bi-component material of different type, density and relief, making it easier to hold the nutrunner, increasing the hand grip, **improving the** handling, the thermal isolation and operator's comfort

Comfortable low effort reverse button: it reduces finger fatigue

Long start lever: the handling of the tool is easier reducing fatigue and the effort of the operator

**TRACS 2**: 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/s<sup>2</sup> (ISO 8662-7)

Weight: extremely reduced weight and compact dimensions guarantee perfect handling

Silencing system: these nutrunners are extremely noiseless and are equipped with a controlled spread of the exhaust air

**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 e qualified training for the correct use of the nutrunners

### 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** 

TRACS 2: the torque control system has a high running speed which reduces the working time of the nutrunner and the compressed air consumption

OIL - FREE: 15C nutrunners work at maximum efficiency without need of lubrication guaranteeing in such the **absence of oil exhaust** into the working environment







		/	/ Tighter	ning torque on so	oft joint	' /.	ster,	, , /	.	notion se	/*	
Inde of		Grib	inin Mear	niin Hear	lale speed	Startings	Reversibil	Weight	Air consu	Accession	Noise leve	Vilisations
Model	Code	Туре	Nm Nm	in lb in lb	r.p.m.	Туре	Туре	kg	l/s	Drive	dBA	m/s²
15C2A90	112593942	<u> </u>	0,8÷2	7 ÷ 17,7	2000		U	0,70	4,0	M 1/4''	73	< 2,5
15C3A90	112593943		0,8÷3	7 ÷ 26,5	1400		U	0,70	5,5	M 1/4''	73	<2,5
15C4A90	112593944		0,8÷4	7 ÷ 35,4	950		U	0,70	5,5	M 1/4''	73	<2,5
15C5A90	112593945		0,8÷5	7 ÷ 44,2	650		U	0,70	5,5	M 1/4''	73	< 2,5
15C2A30	112533942		0,8÷2	7 ÷ 17,7	2000		U	0,70	4,0	M 1/4''	73	< 2,5
15C3A30	112533943		0,8÷3	7 ÷ 26,5	1400		U	0,70	5,5	M 1/4''	73	< 2,5
15C4A30	112533944	<u> </u>	0,8÷4	7 ÷ 35,4	950		U	0,70	5,5	M 1/4''	73	< 2,5
15C5A30	112533945		0,8÷5	7 ÷ 44,2	650		U	0,70	5,5	M 1/4''	73	<2,5

#### Legend

15 = Power of the motor in Watt/10 • C = Nutrunner • 2 = Maximum tightening torque in Nm • A = Air shut-off system • 30 = Head at 30° • 90 = Head at 90°

#### Legend

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

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
- With ISO 3555 stallard 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 has been measured in accordance with
- ISO 8662-1 and ISO 8662-7 standards
- Accessory drive: male square drive (ISO 1174)
   The code number must be used when ordering

The data given in the table are indicative and can be changed 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 expression and values and the same are specific and depand on actual expression. single work places may be nigher than those stated. Ine values of actual exposure and consequent risks are specific and depend on the operator's method of work, the type of work place 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. Technical Consultancy Service.

#### Dimensions (mm)

Lever start



Other technical features

Model	Air inlet	Recommended hose bore				
15C	1/4" gas	Ø 5 mm				

#### 💋 15C air nutrunners are designed for use with lubricated and unlubricated compressed air

Standard equipment (supplied with the tool)	Accessories available upon request	Models available upon request				
<ul> <li>Clutch adjustment key</li> <li>Hanging ring</li> <li>Use and maintenance manual</li> <li>Eco-friendly packaging</li> </ul>	• Bits, sockets, etc.; balancers, exhaust silencers and other compressed air system accessories (see Accessories catalogue)	<ul> <li>Models with a female hexagonal drive for inserts (BITS); when ordering, add BITS at the end of the code (e.g. 15C2A – 15C2ABITS).</li> <li>Model with quick change chuck</li> <li>Special models Please apply to the Fiam Technical Consultancy Service</li> </ul>				

# Fid **PEOPLE AND SOLUTIONS**

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