ASG™

Assembly • Industrial • Precision Fastening

Pneumatic Screwdrivers and Nutrunners for Automation

Products and Solutions for Assembly

Fiam® PEOPLE AND SOLUTIONS

ASG is Proud to be Fiam's Exclusive Master Distributor for North America

About ASG

We are personally committed to understanding and exceeding our customers' requirements. We are committed to continuously improving our products and processes.

We are dedicated to delivering products, services, and solutions on time and at a competitive value.

ASG, Division of Jergens, Inc. is an ISO 9001:2008 certified manufacturer and distributor and service center for products and solutions focused around threaded assembly. Since the 1970s, we have developed a first-class reputation unrivaled in the industry offering a wide range of world class products.

We offer a wide selection of ASG brand products including torque control, error-proofing and process control products, digital calibration equipment, X-PAQ™ precision fastening systems, production aides and assembly workstation accessories. ASG is proud to be a long-time U.S. Premier Distributor of HIOS® electric torque control screwdrivers and accessories, and the exclusive North American Master Distributor of Fiam® air tools.

ASG also offers a selection of value-added products and solutions including engineering and consulting services, financing, and extended protection and maintenance plans.

Industry Commitment

ASG is committed to the highest quality standards, ensuring that all processes and procedures are followed to produce the best products for our customers. We maintain ISO 9001:2008 certification for the manufacture, distribution, and service of assembly tools. Maintaining membership in key industry organizations in order to stay abreast of the most current industry trends and information is vital to serving our customers.

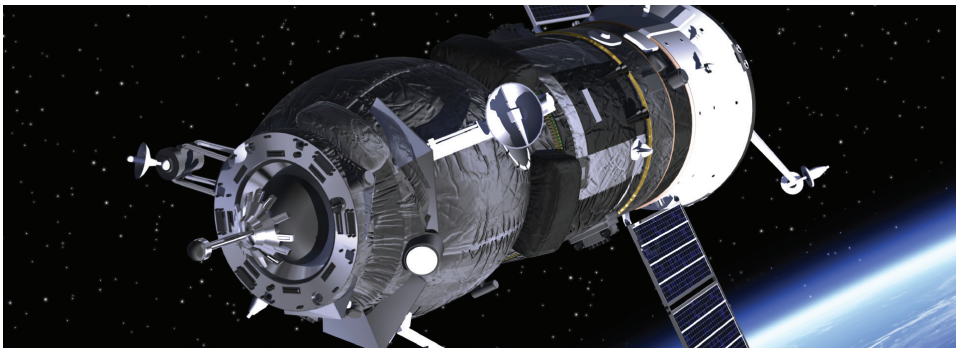
IPC®

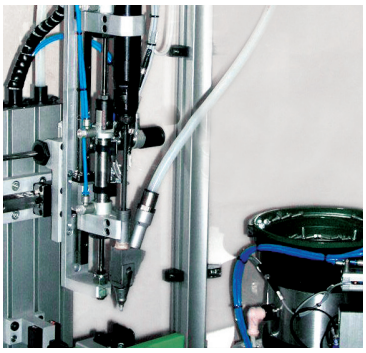
ISA
INDUSTRIAL SUPPLY ASSOCIATION

About FIAM

Fiam is a leading European company and Italy's foremost designer and manufacturer of industrial air tools and systems. Since 1949, Fiam has been on the cutting-edge of perceiving and interpreting industry demands, transforming them into innovative premier quality assembly solutions for customers worldwide. Fiam's extensive product line is world renowned for unsurpassed reliability, productivity, and ergonomic designs. As a company, Fiam is ecologically responsible, designing and manufacturing products with an eye towards environmental conservation.

Fiam is based in Vicenza, Italy and operates a division located in Saint-Priest, France. A global distribution network serves thousands of customers worldwide who count on Fiam products to offer premier quality, productivity and the latest technology. Fiam's commitment to quality in products, service and the environment is evidenced by being certified both ISO 9001 and ISO 14001.





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About Pneumatic Screwdrivers and Nutrunners for Automation

Components are designed to insure a long life and reliability, which results in high productivity, reduced maintenance and repair costs.

20MC
MOTRIX
Newly conceived air motor ensures high performances and maximum torque at low air feed pressure.
TRACS Clutch System
The innovative 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.

* Patented TRACS2 and TRACS3 (Torque Repeatability and Accuracy Control System) torque control systems: they guarantee high torque repeatability and vibration levels below 2.5 m/s.

Innovative systems designed to pay even more attention to the environment and its safeguard.

Reliability

Fiam air screwdrivers and nutrunners for automation are not just standard screwdrivers modified to be installed on a machine. Instead, they are solutions specifically and accurately designed to be used in the industrial automation field.

The main features of automation applications are:

- Robust thrust bearings to stand up to the fast and continuous thrusts of the fastening slides which often happens in the automatic production cycles.
- Ideal external geometries for fixtured application.
- Exhaust can be easily piped away in order to reduce noise level and use oil separator filters.
- Ported signal to interface with line PLC or Fiam TOM error-proofing system.

Made in Italy: designed and manufactured by Fiam. They guarantee reliable operation in every working condition.

High resistance: manufactured with high quality materials.

High performance: the reduction gear system guarantees maximum output, long lifetime of the kinematic chain and reduced noise level.

Maximum reliability: no accuracy loss in vertical or horizontal axis.

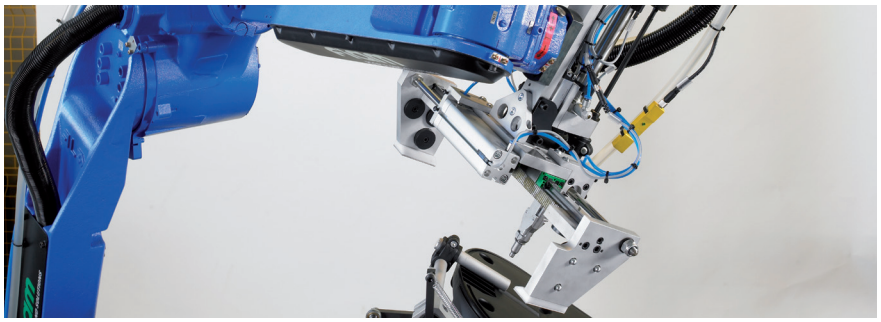
Ecology

The advanced technological design permits considerable decrease of compressed air consumption, without affecting tool performance.

Threaded exhaust ports allow use of separator filters for conveying the air exhaust and eliminate the emission of oil fog into working environment.

All the components are easy to dispose of since they are built with recyclable materials.

Eco-friendly packaging.



About Pneumatic Screwdrivers and Nutrunners for Automation

Productivity

Innovative systems improve the efficiency of the production cycle.

Reversible | Non-Reversible

20MC
Innovative design principles guarantee a higher rotating speed of the new air motor at the same tightening torque, with evident reduction of tightening cycle time.
TRACS2: The high accuracy of the clutch greatly reduces the need for additional quality control at the end of the assembly process, thus increasing productivity.
Accessory drive with quick change chuck: it favors easier and safer accessory replacement (the spring load effectively prevents incidental bit unlocking).

Reduced weight and dimensions: can be easily installed on machines, also with reduced room available.

Axial compensator: an accessory to eliminate any difference of screw height on the component. Facilitates entry of screw and reduces axial thrust on the motor's mechanical components, protecting the internal components and guaranteeing their long life.

For models without clutch, it is possible to easily adjust the torque, speed and direction by using simple control methods.

Available in reversible and non reversible models. Reversible motors are equipped with two entrances for compressed air that alternate the input and output of the compressed air.

Models with air shut-off can be manufactured with clutches for left hand torque.

Low revolution nutrunners available: suitable for different applications and with critical joints.

Customized solutions: for joint type and application.

There are two types of starting systems:

- **Push to start** is a simple and economical system for only right-hand rotation motors. The motor starts automatically when a push of about 2-3 kg (4.4-6.6 lbs.) is applied directly to it.
- **Direct start from a remote control signal** is achieved by the application of a 3-way pneumatic control valve (on right hand rotation motors), or 5-way control valve (on reversible motors). Direct start is recommended for multiple assembly applications where the operator's effort has to be reduced.

Ergonomics

Enhanced tool performance in ergonomics and operator's safety.

Reduced noise level: the effective silencing systems guarantee a reduced noise level caused by air exhaust. Advanced designs have greatly reduced internal noise and vibrations.

No risk of overheating: in heavy duty conditions. The performance is unchanged regardless of repetitive use, stops/starts or change of direction.

Extremely reduced weight and dimensions: compact design allows for mounting in most assembly equipment.

Section 1: Product Specifications
Pneumatic Shut-Off Clutch

Model Number	Torque Range		Idle Speed	Starting System	Reversibility	Weight	Air Consumption	Accessories	Noise Level*
	lbf.in	N.m	RPM	Type	Type	lb.	CFM	Drive	dBA
20MC2A	3.54 - 22.125	0.4 - 2.5	2700			1.65	11.65	1/4" Hex	75
20MC3A	3.54 - 26.55	0.4 - 3	1400			1.69	11.65	1/4" Hex	75
20MC4A	3.54 - 35.4	0.4 - 4	1000			1.69	11.65	1/4" Hex	75
20MC5A	3.54 - 44.25	0.4- 5	650			1.69	11.65	1/4" Hex	75
MCSEZ4A	7.965 - 35.4	0.9 - 4	2500			2.05	19.07	1/4" Hex	76
MCSE5A	22.125 - 44.25	2.5 - 5	1500			2.16	19.07	1/4" Hex	76
MCSE8A	22.125 - 70.8	2.5 - 8	1000			2.16	19.07	1/4" Hex	76
MCSE10A	22.125 - 88.5	2.5 - 10	500			2.16	19.07	1/4" Hex	76
MCY9A	61.95 - 159.3	7 - 18	800			3.3	21.19	1/4" Hex	79
MCY11A	61.95 - 212.4	7 - 24	550			3.3	21.19	1/4" Hex	79
MCG25A1	106.2 - 221.25	12 - 25	600			4.84	27.55	3/8" Square	79
MCG40A1	159.3 - 354	18 - 40	450			4.84	27.55	3/8" Square	79
20MCS2A	3.54 - 22.125	0.4 - 2.5	2700			1.65	11.65	1/4" Hex	75
20MCS3A	3.54 - 26.55	0.4 - 3	1400			1.69	11.65	1/4" Hex	75
20MCS4A	3.54 - 35.4	0.4 - 4	1000			1.69	11.65	1/4" Hex	75
20MCS5A	3.54 - 44.25	0.4 - 5	650			1.69	11.65	1/4" Hex	75
MSCEZ4A	7.965 - 35.4	0.9 - 4	2500			2.00	19.07	1/4" Hex	76
MSCSE5A	22.125 - 44.25	2.5 - 5	1500			2.18	19.07	1/4" Hex	76
MSCSE8A	22.125 - 70.8	2.5 - 8	1000			2.18	19.07	1/4" Hex	76
MSCSE10A	22.125 - 88.5	2.5 - 10	500			2.18	19.07	1/4" Hex	76
MSCY9A	61.95 - 159.3	7 - 18	800			3.3	21.19	1/4" Hex	79
MSCY11A	61.95 - 212.4	7 - 24	550			3.3	21.19	1/4" Hex	79
20MC2RA	3.54 - 22.125	0.4 - 2.5	2700			1.67	11.65	1/4" Hex	77
20MC3RA	3.54 - 26.55	0.4 - 3	1400			1.72	11.65	1/4" Hex	77
20MC4RA	3.54 - 35.4	0.4 - 4	1000			1.72	11.65	1/4" Hex	77
20MC5RA	3.54 - 44.25	0.4 - 5	650			1.72	11.65	1/4" Hex	77
MCSEZ4RA	7.965 - 35.4	0.9 - 4	2500			2.07	19.07	1/4" Hex	78
MCSE4RA	22.125 - 44.25	2.5 - 5	1500			2.18	19.07	1/4" Hex	78
MCSE8RA	22.125 - 70.8	2.5 - 8	1000			2.18	19.07	1/4" Hex	78
MCSE10RA	22.125 - 88.5	2.5 - 10	500			2.18	19.07	1/4" Hex	78
MCY9RA	61.95 - 141.6	7 - 16	700			3.3	21.19	1/4" Hex	81
MCY11RA	61.95 - 212.4	7 - 24	450			3.3	21.19	1/4" Hex	81
MCG25RA1	106.2 - 221.25	12 - 25	600			4.84	27.55	3/8" Square	81
MCG40RA1	159.3 - 354	18 - 40	450			5.06	27.55	3/8" Square	81

Legend			
Clockwise Only	Reversible	Direct Start	Push-to-start

* Additional factor: 3dBA spread in method and production (ISO 15744)

Product Specifications
Pneumatic Shut-Off Clutch with Built-in Axial Compensator (Floating Spindle)

Model Number	Torque Range		Idle Speed	Starting System	Reversibility	Weight	Air Consumption	Spindle	Noise Level*
	lbf.in	N.m	RPM	Type	Type	lb.	CFM	Drive	dBA
MCG25A1-TEL	106.2 - 221.25	12 - 25	650	▌	↻	5.39	27.55	3/8" Square	79
MCG40A1-TEL	159.3 - 354	18 - 40	450	▌	↻	5.39	27.55	3/8" Square	79
MCG25RA1-TEL	106.2 - 221.25	12 - 25	600	▌	↻	5.39	27.55	3/8" Square	81
MCG40RA1-TEL	159.3 - 354	18 - 40	450	▌	↻	5.39	27.55	3/8"Square	81

Legend			
↻ Clockwise Only	↻ Reversible	▌ Direct Start	▌↓ Push-to-start

* Additional factor: 3dBA spread in method and production (ISO 15744)

Torque values are to be considered purely indicative and may be influenced by the softness of the type of joint, the type and length of the screw, the pressure and quantity of the feeding air, etc. In order to ensure the best performances and long life of air nutrunner motors in particularly harsh work conditions (high number of cycles per minute and/or high torque values), we advise against adjusting torque level higher than 80% of maximum torque stated in the performance chart. For more information, contact ASG.

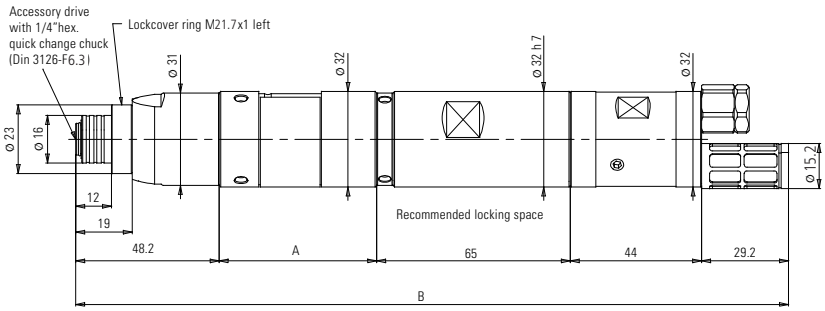
- Noise level has been measured in accordance with ISO 3744 and ISO 15744.
- Noise level has been indicated as a guide for machine manufacturer that install these motors.
- The figures shown are measured at a pressure of 6.3 bar (in accordance with ISO 2787). Approximately 90 PSI.
- Tightening torque values have been measured in accordance with ISO 5393 standard.
- Accessory drive: 1/4", 6.35 mm female hexagonal drive (ISO 1173); male square drive (ISO 1174).

Fiam air screwdrivers and nutrunners for automation are designed for use with lubricated compressed air.

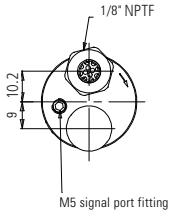
Exterior Dimensions
Pneumatic Shut-Off Clutch

20MC...A/20MC...RA/20MCS...A MODELS

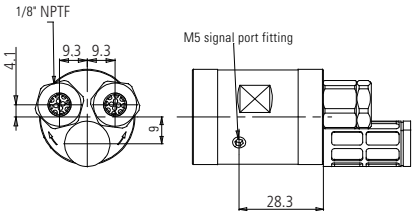
Model Number	A mm	B mm
20 MC...A / 20 MC...RA	52.8	239
20 MCS...A	54.8	241



Air exhaust silencer 20MC.../A / 20MCS...A

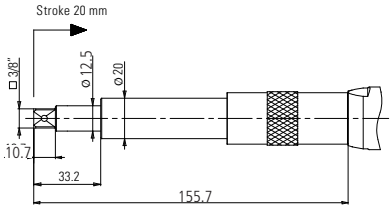


Air exhaust silencer 20MC...RA

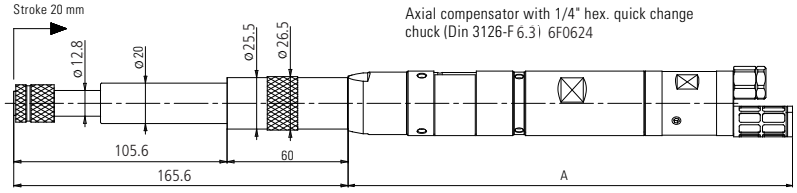


20MC...A/20MC...RA/20MCS...A MODELS WITH AXIAL COMPENSATOR

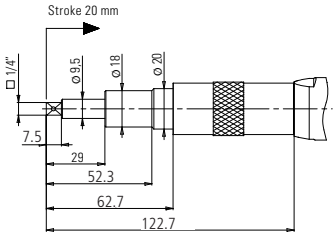
Model Number	A mm
20 MC...A / 20 MC...RA	220
20 MCS...A	222



3/8" square drive axial compensator (Din 3121-F 10) 6F0623

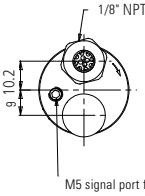


Axial compensator with 1/4" hex. quick change chuck (Din 3126-F 6.3) 6F0624

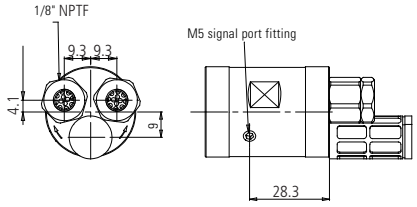


1/4" square drive axial compensator (Din 3121-F 6.3) 6F0881

Air exhaust silencer 20MC...A / 20MCS...A



Air exhaust silencer 20MC...RA

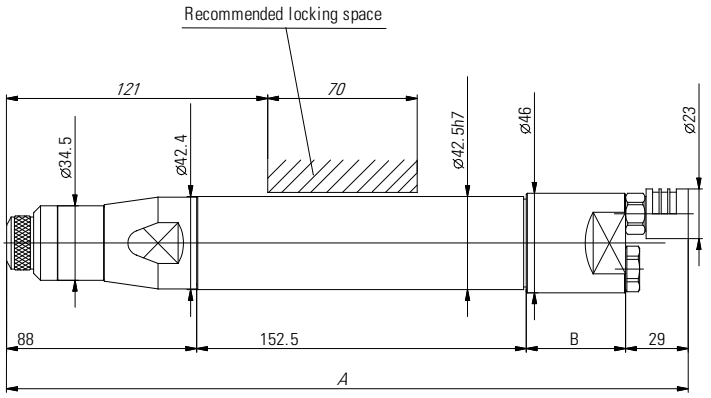


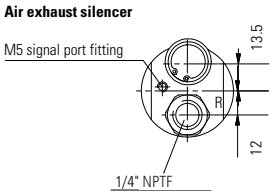
* All dimensional drawings are in mm

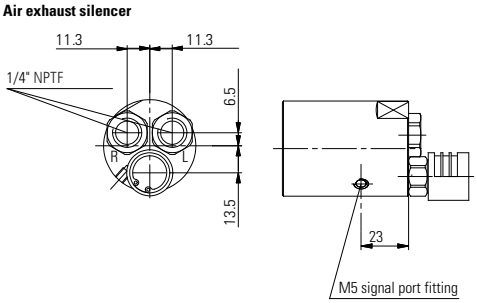
Exterior Dimensions
Pneumatic Shut-Off Clutch and Built-in Axial Compensator

MCY9-11A/MCY9-11RA/MSCY9-11A MODELS

Model Number	A mm	B mm
MCY 9 A / MCY 11 A	315.5	46
MCY 9 RA / MCY 11 RA	330.5	61
MSCY 9 A / MSCY 11 A	318	46

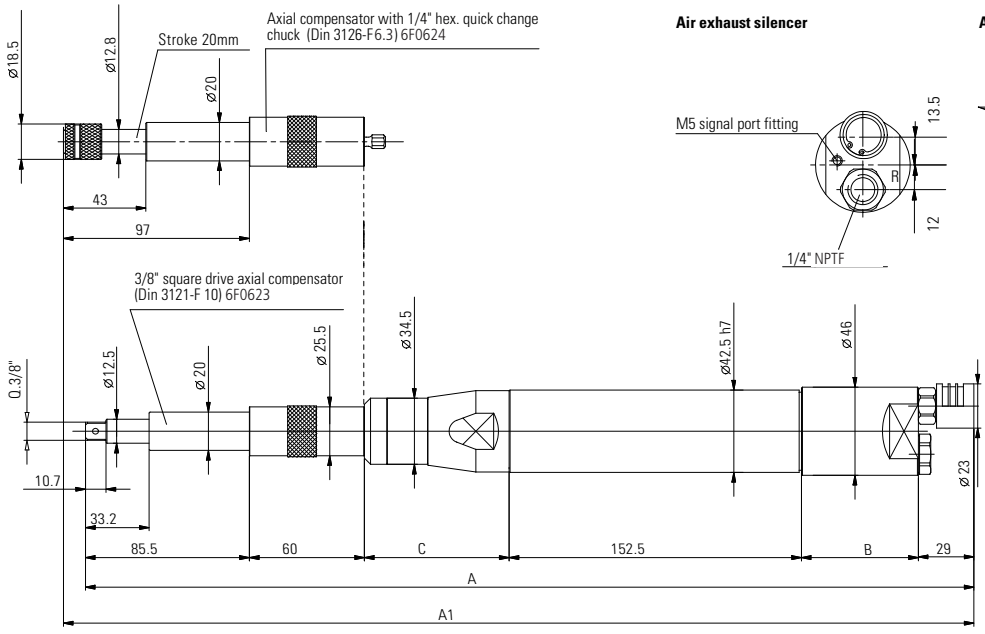


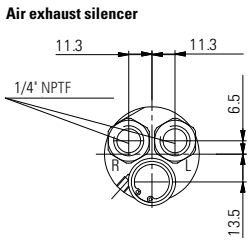


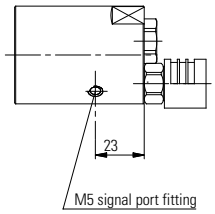


MCY9-11A/MCY9-11RA MODELS WITH AXIAL COMPENSATOR

Model Number	A mm	A1 mm	B mm	Ø C mm
MCY 9 A / MCY 11 A	448.5	458.3	46	75.5
MCY 9 RA / MCY 11 RA	463.5	473.3	61	75.5



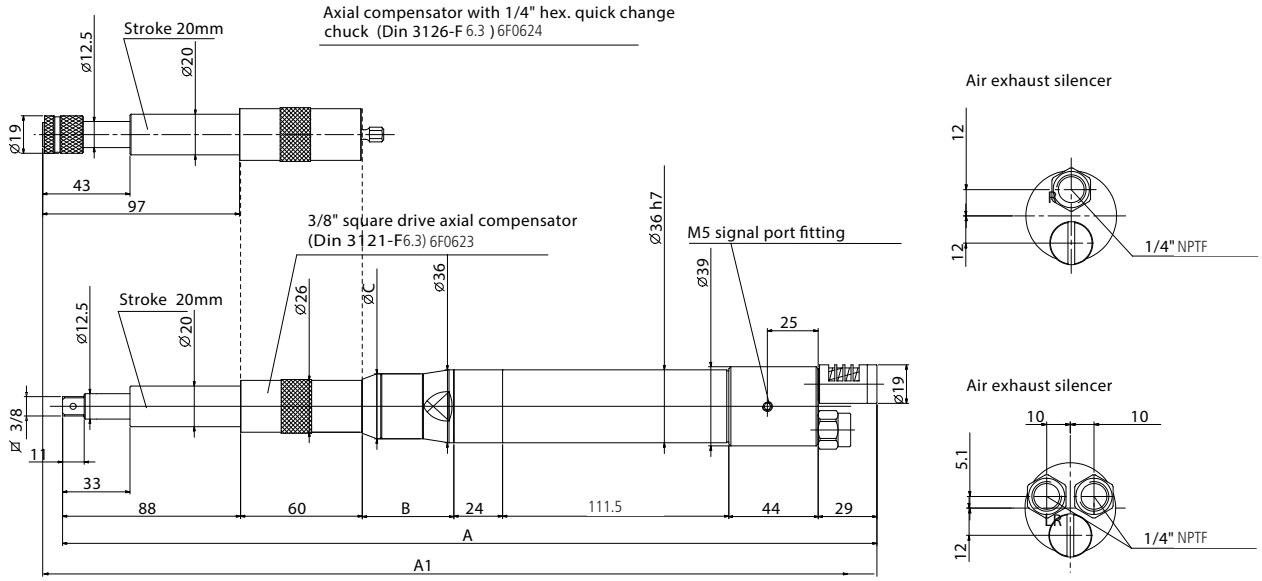




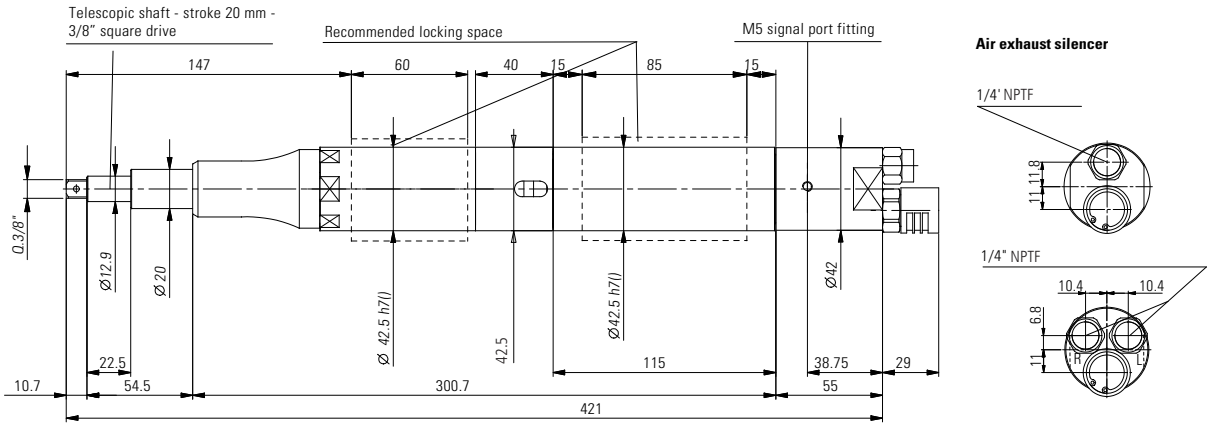
Exterior Dimensions
Pneumatic Shut-Off Clutch

MCSEZ...A/MCSEZ...RA,
MCSE...A/MCSE...RA,
MSCSEZ...A,
MSCSE...A
MODELS WITH AXIAL COMPENSATOR

Model Number	A mm	A1 mm	B mm	ø C mm
MCSEZ 4 A / MCSEZ 4 RA	394.2	403.5	38	27
MCSE...A / MCSE...RA	401.2	410.5	45	32



MCG...A/MCG...RA MODELS WITH AXIAL COMPENSATOR

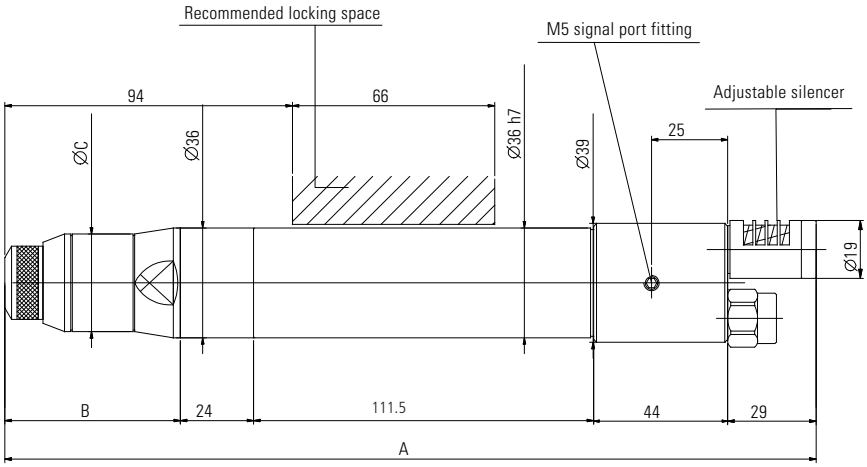


* All dimensional drawings are in mm

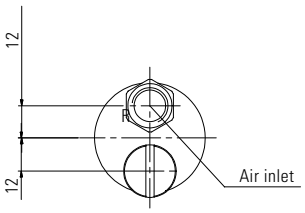
Exterior Dimensions
Pneumatic Shut-Off Clutch and Built-in Axial Compensator

MCSEZ...A/MCSEZ...RA, MCSE...A/MCSE...RA, MSCSEZ...A, MSCSE...A MODELS

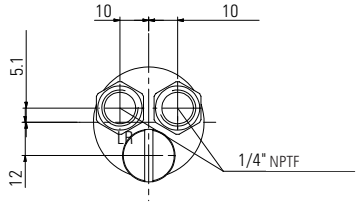
Model Number	A mm	B mm	Ø C mm
MCSEZ...A / MCSEZ...RA	259	50.5	27
MCSE...A / MCSE...RA	266	57.5	32
MSCSEZ...A	261	52.5	27
MSCSE...A	270	62.5	32



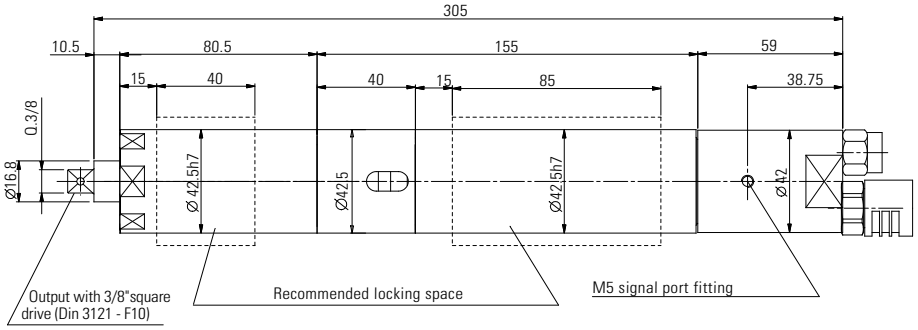
Air exhaust silencer



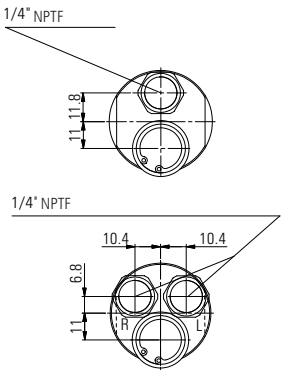
Air exhaust silencer



MCG...A/MCG...RA MODELS



Air exhaust silencer



Product Specifications
Pneumatic Shut-Off Clutch and Built-in Axial Compensator

Chart of torque range obtainable with clutch springs assembled in or supplied with the tool.

Model Number	Torque Range on Soft Joint		Torque Range on Soft Joint	
	lbf.in	N.m	lbf.in	N.m
	Assembled on the tool – Grey color - Ø wire 3.2 mm		Supplied with – Black color - Ø wire 2.2 mm	
20MC2A / 20MCS2A	7.08 - 22.125	0.8 - 2.5	5.31 - 10.62	0.6 - 1.2
20MC3A / 20MCS3A	7.08 - 26.55	0.8 - 3	3.54 - 10.62	0.4 - 1.2
20MC4A / 20MCS4A	7.08 - 35.4	0.8 - 4	3.54 - 10.62	0.4 - 1.2
20MC5A / 20MCS5A	7.08 - 44.25	0.8 - 5	3.54 - 10.62	0.4 - 1.2

Model Number	Air Inlet	Recommended Hose Bore
20MC...A, 20MCS..A, 20MC..RA	1/8" NPTF	Ø 5mm
MCSE..A,MSCSE..A,MCSE..RA	1/4" NPTF	Ø 8mm
MCY..A,MSCY..A,MCY..RA	1/4" NPTF	Ø 8mm
MCG..A1,MCG..RA1	1/4" NPTF	Ø 8mm
MCG..A1-TEL,MCG..RA1-TEL	1/4" NPTF	Ø 8mm

Standard Equipment (supplied with motor)

- Clutch adjustment key
- Supplementary clutch spring (only for 20MC...models)
- Use and maintenance manual
- Eco-friendly packaging

Accessories Available Upon Request

- Bits, sockets, conveyors and other compressed air system accessories
- Accessories for automation
- Axial compensators and flange brackets

Models Available Upon Request

- Models with quick change chuck
- Models with modified flange and/or with customized body design
- Models with axial compensator
- Models with different speeds than the ones indicated on the chart
- Models with special clutch for left tightening control
- Models with offset device

Models with offset device

Section 2: Product Specifications
Pneumatic Slip Clutch

Model Number	Torque Range on Soft Joint		Idle Speed	Starting System	Reversibility	Weight	Air Consumption	Spindle	Axial Compensator Output
	lbf.in	N.m	RPM	Type	Type	lb.	CFM	Drive	Output
MCZE2	7.08 - 22.125	0.8 - 2.5	2800			1.45	14.83	1/4" Hex	1/4" Squre
MCZE3	7.08 - 26.55	0.8 - 3	1300			1.65	14.83	1/4" Hex	1/4" Square
MCZE4	7.08 - 29.205	0.8 - 3.3	850			1.65	14.83	1/4" Hex	1/4" Square
MCZE5	5.31 - 37.17	0.6 - 4.2	600			1.65	14.83	1/4" Hex	1/4" Square
MCSE4	8.85 - 51.33	1 - 5.8	2500			1.85	19.07	1/4" Hex	3/8" Square
MCSE5	13.275 - 66.375	1.5 - 7.5	1500			1.87	19.07	1/4" Hex	3/8" Square
MCSE8	13.275 - 84.075	1.5 - 9.5	1000			1.87	19.07	1/4" Hex	3/8" Square
MCSE10	13.275 - 106.2	1.5 - 12	500			1.87	19.07	1/4" Hex	3/8" Square
MCY7-1	40.71 - 115.05	4.6 - 13	1700			2.42	21.19	1/4" Hex	3/8" Square
MCY9-1	53.1 - 141.6	6 - 16	750			2.86	21.19	1/4" Hex	3/8" Square
MCY11-1	53.1 - 194.7	6 - 22	500			2.86	21.19	1/4" Hex	3/8" Square
MSCZE2	7.08 - 22.125	0.8 - 2.5	2800			1.58	14.83	1/4" Hex	1/4" Square
MSCZE3	7.08 - 26.55	0.8 - 3	1300			1.61	14.83	1/4" Hex	1/4" Square
MSCZE4	7.08 - 29.205	0.8 - 3.3	850			1.61	14.83	1/4" Hex	1/4" Square
MSCZE5	5.31 - 37.17	0.6 - 4.2	600			1.61	14.83	1/4" Hex	1/4" Square
MSCSE4	8.85 - 51.33	1 - 5.8	2500			2.00	19.07	1/4" Hex	3/8" Square
MSCSE5	13.275 - 66.375	1.5 - 7.5	1500			2.02	19.07	1/4" Hex	3/8" Square
MSCSE8	13.275 - 84.075	1.5 - 9.5	1000			2.02	19.07	1/4" Hex	3/8" Square
MSCSE10	13.275 - 106.2	1.5 - 12	500			2.02	19.07	1/4" Hex	3/8" Square
MCZE2R	7.08 - 22.125	0.8 - 2.5	2800			1.74	14.83	1/4" Hex	1/4" Square
MCZE3R	7.08 - 26.55	0.8 - 3	1300			1.76	14.83	1/4" Hex	1/4" Square
MCZE4R	7.08 - 29.205	0.8 - 3.3	850			1.76	14.83	1/4" Hex	1/4" Square
MCZE5R	5.31 - 37.17	0.6 - 4.2	600			1.76	14.83	1/4" Hex	1/4" Square
MCSE4R	8.85 - 51.33	1 - 5.8	2500			1.72	19.07	1/4" Hex	3/8" Square
MCSE5R	13.275 - 66.375	1.5 - 7.5	1500			1.91	19.07	1/4" Hex	3/8" Square
MCSE8R	13.275 - 84.075	1.5 - 9.5	1000			1.91	19.07	1/4" Hex	3/8" Square
MCSE10R	13.275 - 106.2	1.5 - 12	500			1.91	19.07	1/4" Hex	3/8" Square
MCY7R-1	38.825 - 115.05	4.5 - 13	1600			2.42	21.19	1/4" Hex	3/8" Square
MCY9R-1	53.1 - 141.6	6 - 16	700			2.86	21.19	1/4" Hex	3/8" Square
MCY11R1	53.1 - 194.7	6 - 22	450			2.86	21.19	1/4" Hex	3/8" Square

Legend			
Clockwise Only	Reversible	Direct Start	Push-to-start

Torque values are to be considered purely indicative and may be influenced by the softness of the type of joint, the type and length of the screw, the pressure and quantity of the feeding air, etc. In order to ensure the best performances and long life of air nutrunner motors in particularly harsh work conditions (high number of cycles per minute and/or high torque values), we advise against adjusting torque level higher than 80% of maximum torque stated in the performance chart. For more information, contact ASG.

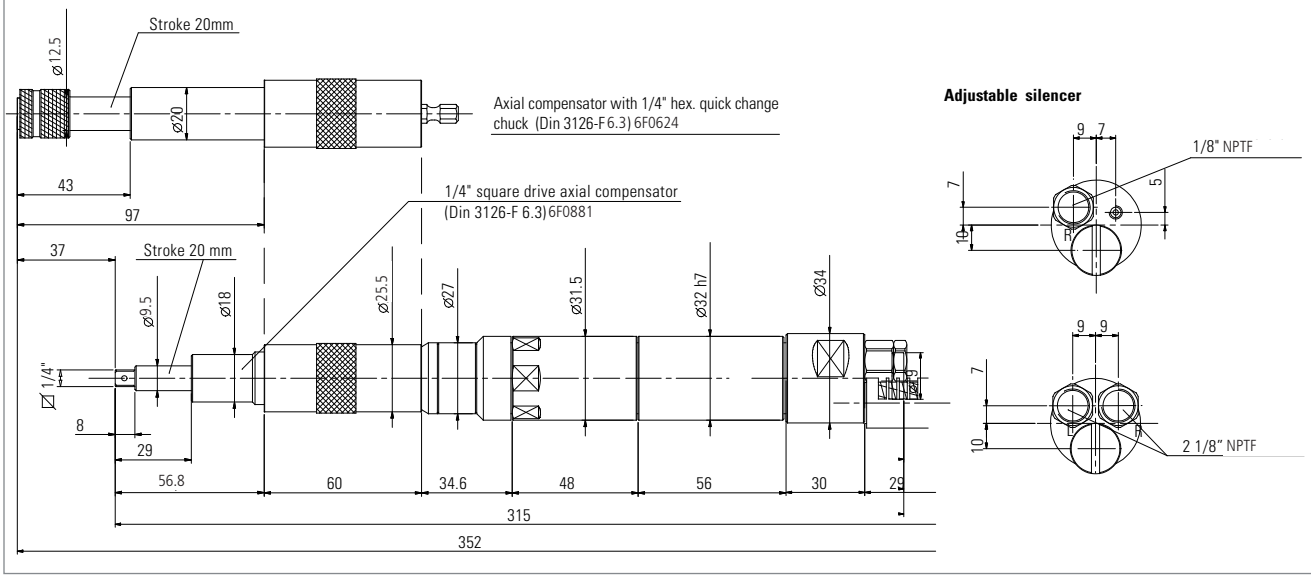
Product Specifications
Pneumatic Slip Clutch

Chart of torque range obtainable with clutch springs assembled in or supplied with the tool.

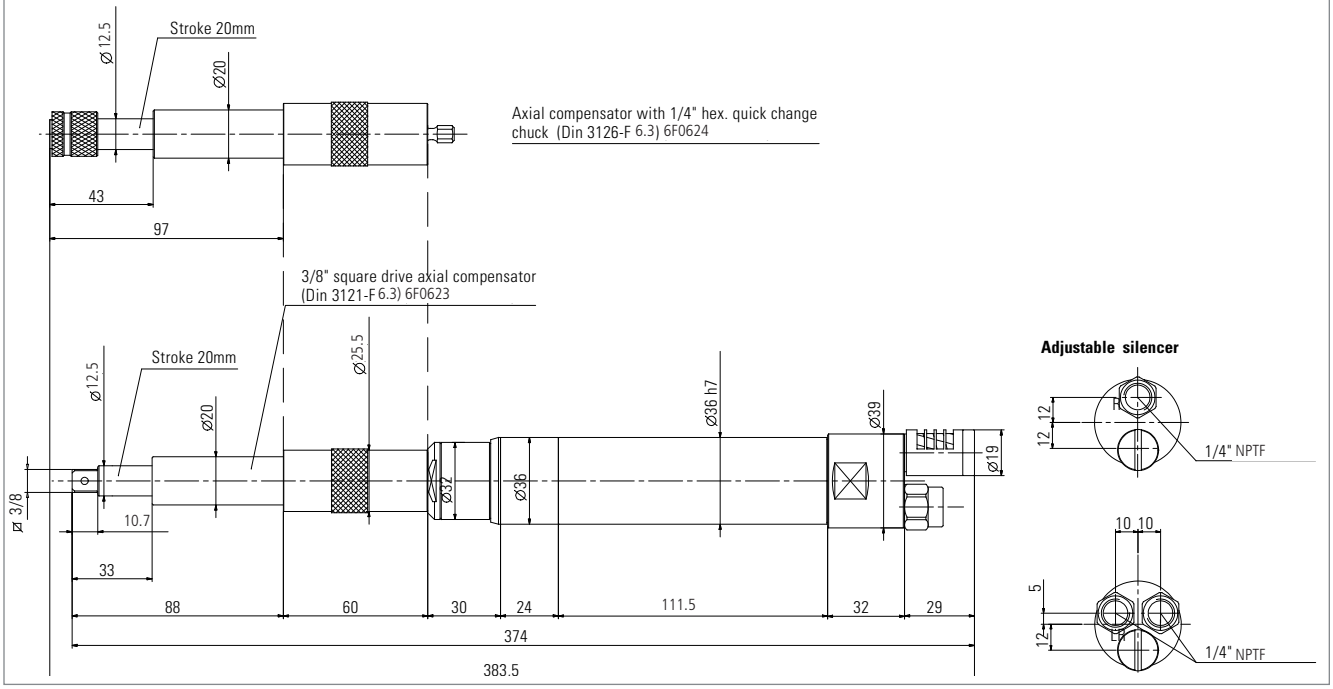
Model Number	Torque Range on Soft Joint		Torque Range on Soft Joint		Torque Range on Soft Joint		Torque Range on Soft Joint	
	lbf.in	N.m	lbf.in	N.m	lbf.in	N.m	lbf.in	N.m
	Assembled on the tool Brown color - Ø wire 1.6 mm		**Supplied with Pink color - Ø wire 2 mm**		**Supplied with Silver color - Ø wire 2.1 mm**		**Supplied with Gold color - Ø wire 2.2 mm**	
MCZE2	7.08 - 22.125	0.8 - 2.5						
MCZE3	7.08 - 19.47	0.8 - 2.2	15.93 - 26.55	1.8 - 3				
MCZE4	7.08 - 22.125	0.8 - 2.5			17.7 - 29.205	2 - 3.3		
MCZE5	5.31 - 16.815	0.6 - 1.9					8.85 - 31.17	1 - 4.2
	Assembled on the tool White color - Ø wire 1.6 mm		**Supplied with Light-blue color - Ø wire 1.5 mm**		**Supplied with Pink color - Ø wire 2 mm**		**Supplied with Red color - Ø wire 3.5 mm**	
MCSE4	26.55 - 51.33	3 - 5.8	8.85 - 28.32	1 - 3.2				
MCSE5	26.55 - 66.375	3 - 7.5			13.275 - 39.825	1.5 - 4.5		
MCSE8	13.275 - 39.825	1.5 - 4.5					30.975 - 84.075	3.5 - 9.5
MCSE10	13.275 - 39.825	1.5 - 4.5					30.975 - 106.2	3.5 - 12
	Assembled on the tool Brown color - Ø wire 1.6 mm		**Supplied with Pink color - Ø wire 2 mm**		**Supplied with Silver color - Ø wire 2.1 mm**		**Supplied with Gold color - Ø wire 2.2 mm**	
MSCZE2	7.08 - 22.125	0.8 - 2.5						
MSCZE3	7.08 - 19.47	0.8 - 2.2	15.93 - 26.55	1.8 - 3				
MSCZE4	7.08 - 22.125	0.8 - 2.5			17.7 - 29.205	2 - 3.3		
MSCZE5	5.31 - 16.815	0.6 - 1.9					8.85 - 31.17	1 - 4.2
	Assembled on the tool White color - Ø wire 1.6 mm		**Supplied with Light-blue color - Ø wire 1.5 mm**		**Supplied with Pink color - Ø wire 2 mm**		**Supplied with Red color - Ø wire 3.5 mm**	
MSCSE4	26.55 -51.33	3 - 5.8	8.85 - 28.32	1 - 3.2				
MSCSE5	26.55 - 66.375	3 - 7.5			13.275 - 39.825	1.5 - 4.5		
MSCSE8	13.275 - 39.825	1.5 - 4.5					30.975 - 84.075	3.5 - 9.5
MSCSE10	13.275 - 39.825	1.5 - 4.5					30.975 - 106.2	3.5 - 12
	Assembled on the tool Brown color - Ø wire 1.6 mm		**Supplied with Pink color - Ø wire 2 mm**		**Supplied with Silver color - Ø wire 2.1 mm**		**Supplied with Gold color - Ø wire 2.2 mm**	
MCZE2R	7.08 - 22.125	0.8 - 2.5						
MCZE3R	7.08 - 19.47	0.8 - 2.2	15.93 - 26.55	1.8 - 3				
MCZE4R	7.08 - 22.125	0.8 - 2.5			17.7 - 29.205	2 - 3.3		
MCZE5R	5.31 - 16.815	0.6 - 1.9					8.85 - 31.17	1 - 4.2
	Assembled on the tool White color - Ø wire 1.6 mm		**Supplied with Light-blue color - Ø wire 1.5 mm**		**Supplied with Pink color - Ø wire 2 mm**		**Supplied with Red color - Ø wire 3.5 mm**	
MCSE4R	26.55 - 51.33	3 - 5.8	8.85 - 28.32	1 - 3.2				
MCSE5R	26.55 - 66.375	3 - 7.5			13.275 - 39.825	1.5 - 4.5		
MCSE8R	13.275 - 39.825	1.5 - 4.5					30.975 - 84.075	3.5 - 9.5
MCSE10R	13.275 - 39.825	1.5 - 4.5					30.975 - 106.2	3.5 - 12

Exterior Dimensions
Pneumatic Slip Clutch

MCZE.../MCZE...R MODELS WITH AXIAL COMPENSATOR



MCSE.../MCSE...R MODELS WITH AXIAL COMPENSATOR

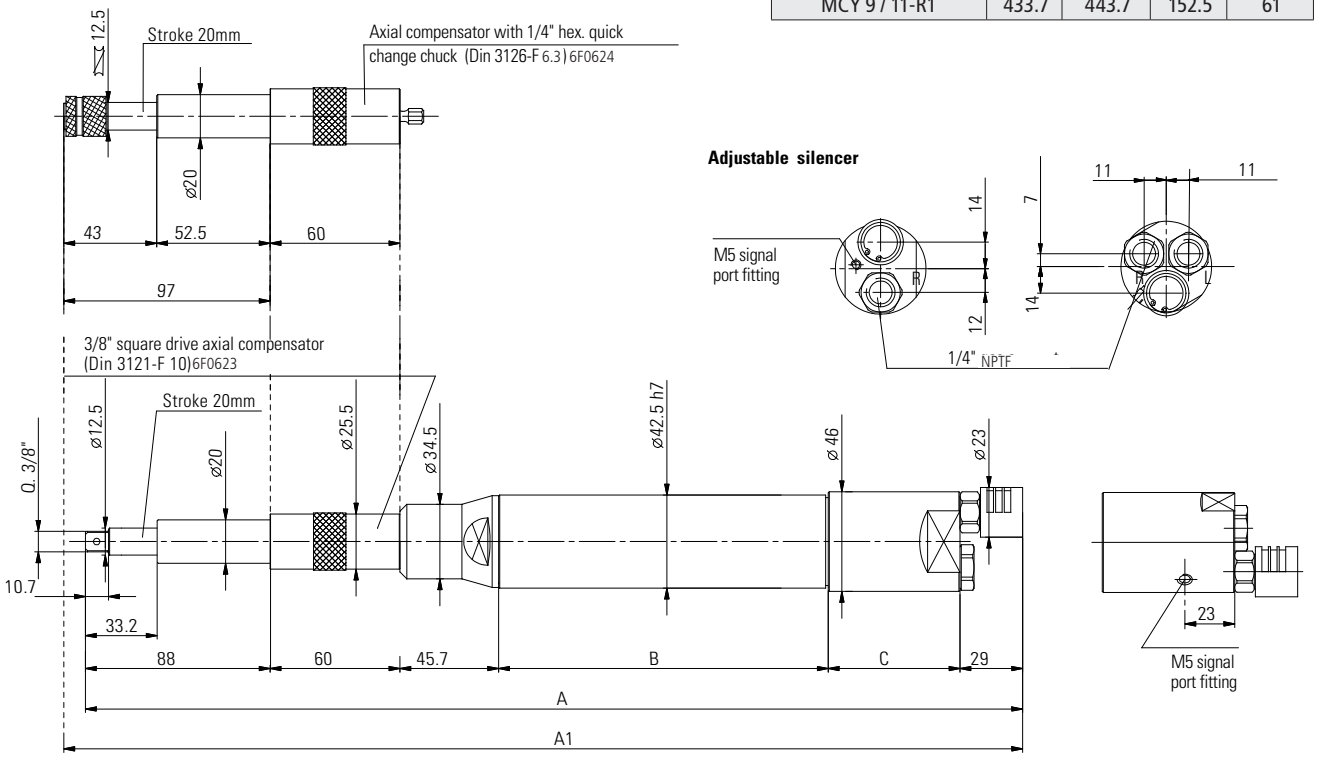


* All dimensional drawings are in mm

Exterior Dimensions
Pneumatic Slip Clutch

MCY...-1/MCY...-R1 MODELS WITH AXIAL COMPENSATOR

Model Number	A mm	A1 mm	B mm	Ø C mm
MCY 7-1	388.7	398.7	122.5	46
MCY 9 / 11-1	418.7	428.7	152.5	46
MCY 7-R1	403.7	413.7	122.5	61
MCY 9 / 11-R1	433.7	443.7	152.5	61



* All dimensional drawings are in mm

Product Specifications
Pneumatic Slip Clutch

Model Number	Air Inlet	Recommended Hose Bore
MCZE..., MCZE...R, MCSZE...	1/8" NPTF	Ø 5 mm
MCSE..., MCSE...R, MSCSE, Ø 8 mm MCY...-1, MCY...R-1	1/4" NPTF	Ø 8 mm

- The figures shown are measured at a pressure of 6.3 bar (in accordance with ISO 2787), the recommended operating pressure. Approximately 90 PSI.
- The tightening torque values have been measured in accordance with ISO 5393 standard.
- For installation instructions see 'user and maintenance manual'.

Standard Equipment (supplied with motor)

- Clutch adjustment key
- Supplementary clutch spring (except for MCY...models)
- User and maintenance manual
- Eco-friendly packaging

Accessories Available Upon Request

- Bits, sockets, conveyors and other compressed air system accessories
- Accessories for automation
- Axial compensators and flange bracket

Models Available Upon Request

- Models with modified flange and/or with customized casing
- Models with axial compensator
- Models with different speeds than the ones indicated on the chart

Fiam air screwdrivers and nutrunners for automation are designed for use with lubricated compressed air.

Section 3: Product Specifications
Pneumatic without Clutch (Stall)

The motors without clutch provide consistent tightening and maximum versatility in the presence of extremely soft joints. In fact, adjusting the air feeding pressure leads to different torque, speed, and motor power values.

Available in two versions: reversible and non-reversible. They can have different output shafts. Special order, contact ASG.

Model Number	Torque Range on Soft Joint		Idle Speed	Reversibility	Square	Axial Compensator Square	Axial Compensator with Quick Release Chuck
	lbf.in	N.m	RPM	Type			
20MC	22.125 - 88.5	2.5 - 10	600 - 2600	↻	X	X	X
28MC	39.825 - 177	4.5 - 20	560 - 2650	↻	X	X	X
MNC	44.25 - 398.25	5 - 45	320 - 2700	↻	X	X	X
MOC	159.3 - 796.5	18 - 90	400 - 2800	↻	X	X	
20MC.R	22.125 - 88.5	2.5 - 10	580 - 2500	↻	X	X	X
28MC.R	39.825 - 177	4.5 - 20	395 - 2350	↻	X	X	X
MNC.R	44.25 - 398.25	5 - 45	280 - 2500	↻	X	X	X
MOC.R	159.3 - 796.5	15 - 90	320 - 2200	↻	X	X	

Legend		
↻ Clockwise Only	↻ Reversible	All models are remote start

Torque values are to be considered purely indicative and may be influenced by the softness of the type of joint, the type and length of the screw, the pressure and quantity of the feeding air, etc. In order to ensure the best performances and long life of air nutrunner motors in particularly harsh work conditions (high number of cycles per minute and/or high torque values), we advise against adjusting torque level higher than 80% of maximum torque stated in the performance chart. For more information, contact ASG.

- The figures shown are measured at a pressure of 6.3 bar (ISO 2787), the recommended operating pressure. Approximately 90 PSI.
- Accessory drive: 1/4", *6.35 mm female hexagonal drive (ISO 1173).
- For installation instructions see 'user and maintenance manual'.
- Dimensions are available upon request.

Standard Equipment (supplied with motor)

- User and maintenance manual
- Eco-friendly packaging

Product Specifications
Pneumatic without Clutch (Stall)

How to get different values of power, torque and speed

Contact ASG for exterior dimensions for pneumatic without clutch models.

Performances of air screwdrivers and nutrunners for automation without clutch can be modified with continuity by means of a pressure or throttling regulator that increases or reduces the air quantity in the motor.

Consequently, there is an increase or decrease in the power, torque and speed values according to ratios shown in the chart below.

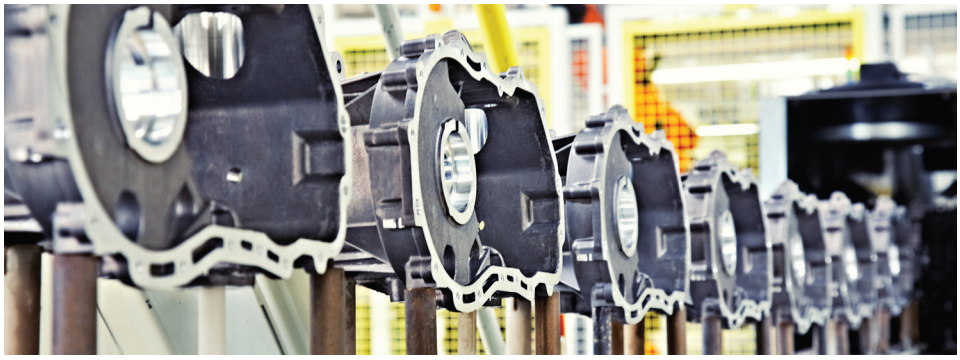
There are two methods to adjust performances of nutrunner motors without clutch:

- Installing the air flow governor on the air inlet coupling, stall torque is controlled.
- Installing the air flow governor on the air exhaust coupling, starting torque is maintained and motor's speed is adjusted.

Ratios of variation of the performances parameters of an air motor depending on air pressure.

Pressure (PSI)	Power	Torque	Speed	Consumption
100	1.21	1.17	1.03	1.15
85	1.00	1.00	1.00	1.00
75	0.77	0.83	0.95	0.82
60	0.55	0.67	0.87	0.65
45	0.37	0.50	0.74	0.47

Fiam air screwdrivers and nutrunners for automation are designed for use with lubricated compressed air.



Product Specifications
Pneumatic without Clutch (Stall)

Air Feed and its Consumption

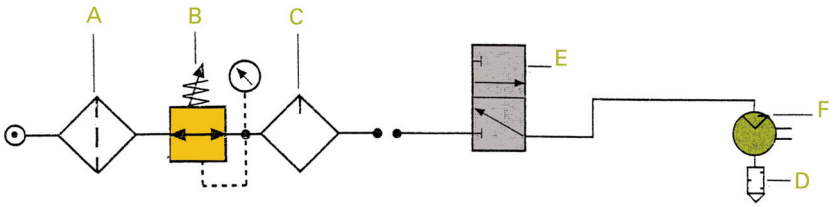
Air consumption of the air motor is at maximum when the motor turns at idle speed.

To obtain the performances in this catalog it is necessary to guarantee a correct air feeding, air exhaust and to follow these indications:

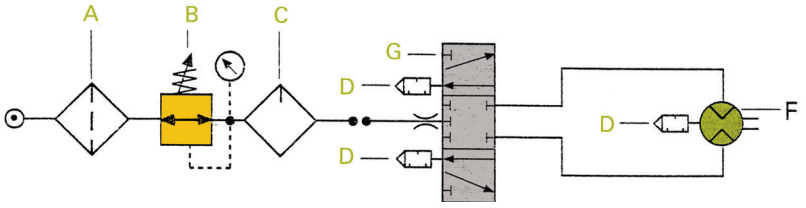
- Always use the recommended air hose bore for air feed and exhaust hoses.
- It is advisable that the diameter of the exhaust hose is greater than that of the air supply hose. In the case of a reversible motor, two inlets alternate the entrance and the exhaust of the air, i.e. the inlet that is not used is left free so that the exhaust air can flow.
- Minimize connections in supply line; they can cause flow restrictions thus reducing the air flow.
- It is always advisable to use a FRL group (filter, pressure regulator, lubricator) appropriate to motor consumption.
- It is advisable to plum exhaust away to reduce noise and oil contamination.

Pneumatic Circuit Scheme (feed - control of the motor)

Non-Reversible motor



Reversible motor



A = Filter

B = Pressure regulator

C = Lubricator

D = Silencer

E = Valve 3/2

F = Air motor

G = Valve 5/3

Section 4: Pneumatic Screwdrivers and Nutrunners for Automation Accessories

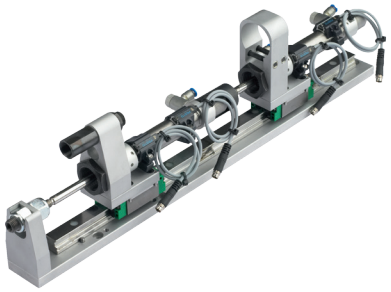
Fastening Slides

Fastening slides are important components equipped with an air nutrunner motor, screw head, bit and bit holder; suitable for being used in semi-automatic or automatic industrial tightening solutions.

These linear actuators are designed entirely by Fiam and are manufactured with high quality materials. This guarantees very high reliability and resistance over time. This is true in high production rates as well.

They are available with 3 different versions:

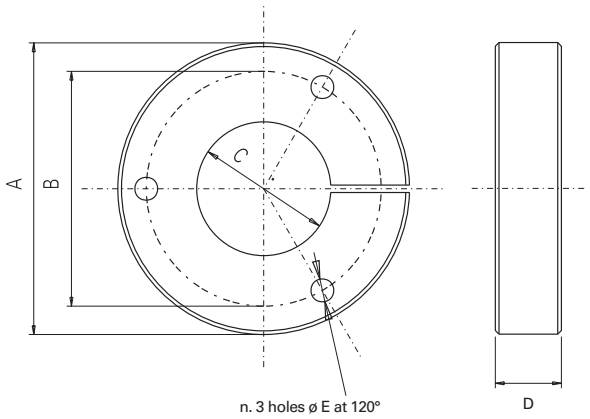
- Single-stroke fastening slide
- Dual-stroke fastening slide: the first stroke brings the screw holding jaws close to the workpiece, the second is used to run the screw.
- With anti-overturning device: used to handle screws having a ratio total length/head diameter close to 1. This device allows the "movement of the head" avoiding incorrect screw positions during tightening and prevents screws from getting stuck with consequent production stop.



Contact ASG for more infomation

Flange Bracket

We recommend using the 3 hole flange bracket to install a nutrunner motor for screwdriving applications on a fixed mounting. This avoids the possibility of any operating problems since it acts on the entire circumference of the motor casting.



Model Number	ASG Number	A mm	B mm	C mm	D mm	E mm
20MC...A / 20MC...RA 20MSC...A	6F0648	64.5	50	32	18	5.25
MCZE.../MCZE...R MSCZE						
MCSEZ..A MCSE...A / MCSE...RA MSCEZ...A MSCSE...A	6F0649	69.5	57	36	18	6.25
MCSE.../MCSE...RA MSCSE						
MCY...A/ MCY...RA MCG...A/ MCG...RA MSCY...A	6F0650	79.5	64	42.5	18	6.25
MCY...-1 / MCY...R-1						

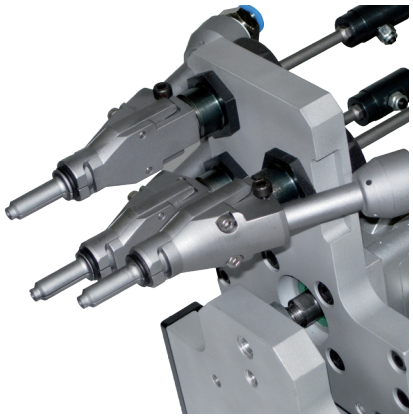
Pneumatic Screwdrivers and Nutrunners for Automation Accessories

Screw Head

This component is required to receive the screw coming through the feeding tube from the bowl feeder. The design of the screw head insures that the screw remains properly aligned ready to engage the bit and work piece.

Screw heads are extremely reliable as they are built with highest quality materials through precise and accurate machining. Together with the treatments, this guarantees high resistance to breaking and wearing.

Available in various models suitable for multiple screw types, these heads are further tailored machined by Fiam based on design of customer's screw.



Contact ASG for more information

Instructions for Installation: Air Feed

To check whether the nutrunner is being supplied with the correct PSI, insert a pressure gauge at the air inlet coupling and measure the air pressure with the motor running: it must be about 90 PSI. Always use the air passage recommended by Fiam for supply hoses.

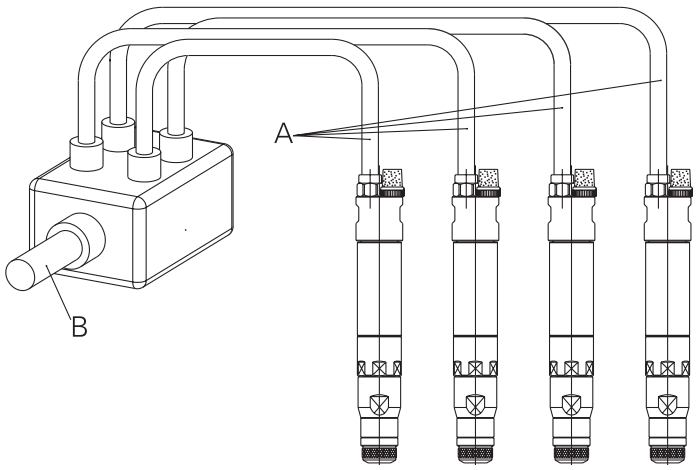
If possible, avoid joints and quick couplings which locally reduce the air passage.

Connect the exhaust hoses to the oil separator filter with built-in silencing system. This further reduces the noise level and lubricates the motor with no emission of air exhaust in the working environment, allowing oil to be collected and reused.

To convey the air exhaust of more motors, follow the instructions below.

To obtain the performances in this catalog, it is necessary to guarantee correct air feeding and air exhaust.

Scheme for correct feeding of Air Screwdriver and Nutrunners for Automation

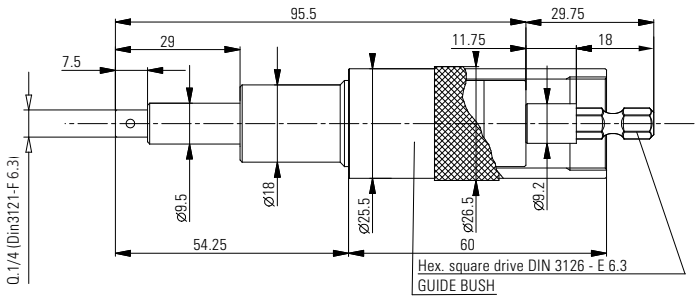


A - Feed Hoses
Air bore minimum internal diameter: see chart of motors
B - Primary Feed Hose
$D = \sqrt{nxa^2}$ D = Ø primary hose minimum internal diameter d = Ø motor hose minimum internal diameter n = number of motors

Pneumatic Screwdrivers and Nutrunners for Automation Accessories

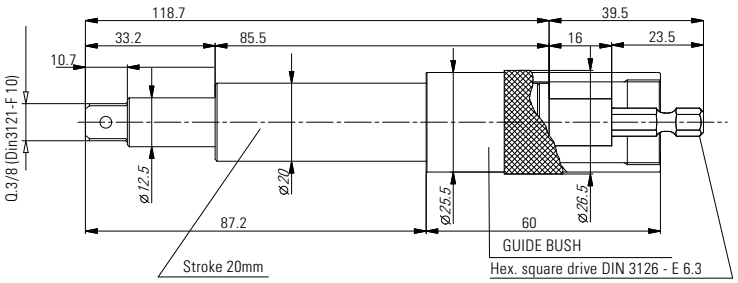
Axial Compensators (Floating Spindle)

Ease entry of screw and reduce axial thrust on the motor's mechanical components. When fastening more screws simultaneously, the axial compensation device in the bit compensates for the differences in height between the screws before starting the tightening process.



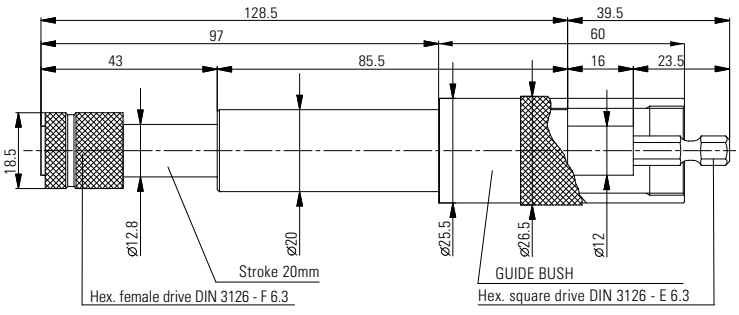
☐ 1/4" drive axial compensation bit

ASG Number	Axial Compensator (mm)
6F0881	20



☐ 3/8" drive axial compensation bit

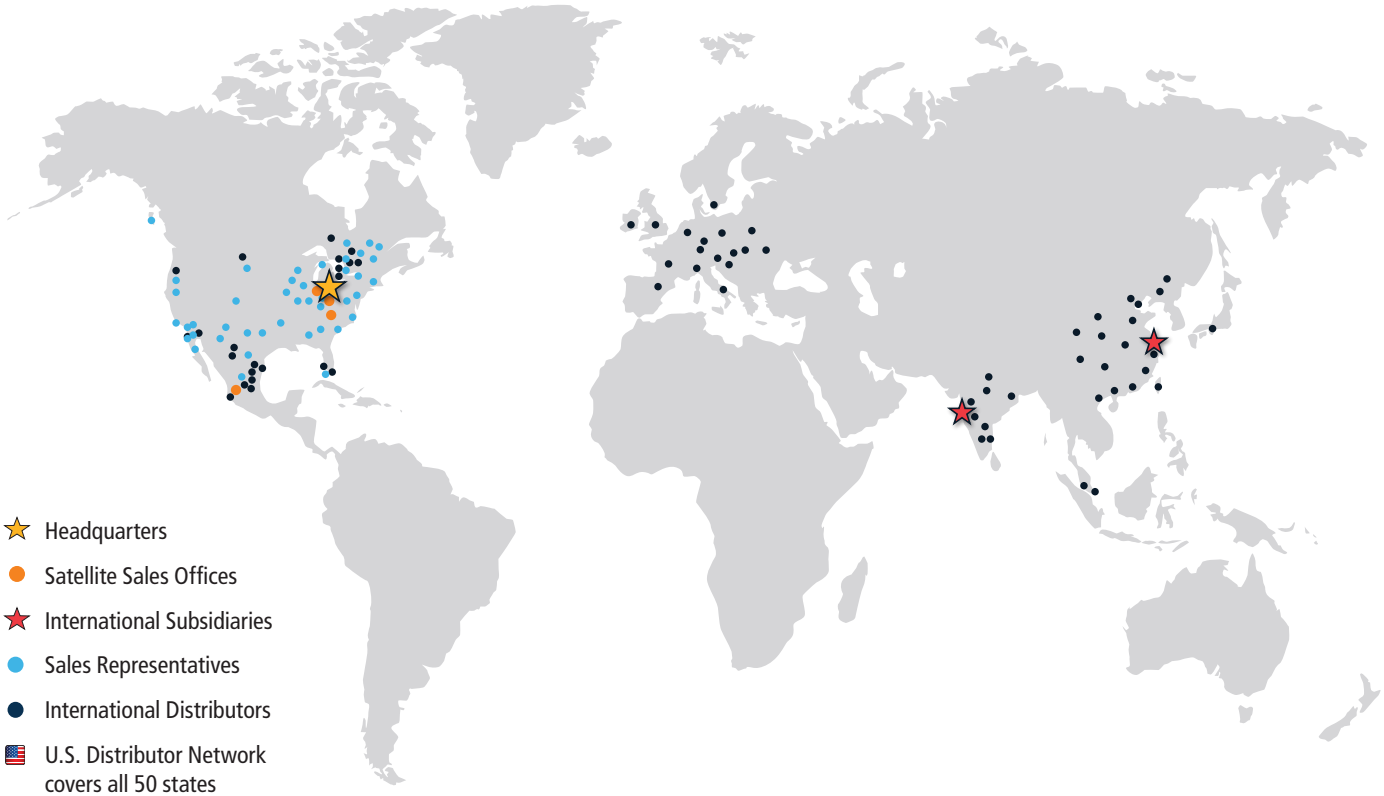
ASG Number	Axial Compensator (mm)
6F0623	20



Axial compensation bit with ⬡ 1/4" quick change chuck

ASG Number	Axial Compensator (mm)
6F0624	20

* All dimensional drawings are in mm



Our footprint covers the globe!

Global Support

ASG employs a team of technical experts to provide support, repair, calibration and preventative maintenance services. We welcome the opportunity to provide assistance by telephone or online chat Monday through Friday, 8 a.m. to 5 p.m. (U.S. Eastern Time) excluding holidays.

ASG maintains subsidiaries in Shanghai, China and Mumbai, India, and a sales office in Guadalajara, Mexico to provide direct support to our international customers. We work together with our global Field Sales Representative and Distributor Network to help customers standardize their assembly equipment and processes around the world.

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