

AUTOMATIC SCREWFEEDING SYSTEMS





PRODUCTIVE SOLUTIONS

As an industrial process expert, we help you meet your challenges.

Productivity, safety, quality, industry 4.0 are themes on which we can offer you our expertise and our solutions. Whether in the field of assembly technology, machining or welding, our dedicated and specialised teams accompany your progress and recommend solutions and equipment to reach performance levels in line with your industrial strategy.



Certified quality

From design to commissioning, DOGA guarantees the quality of its equipments and services according to ISO 9001: 2015 certification.

5 reasons to trust us



Expertise

Our field experts propose solutions adapted to your environment and specific needs.



Innovation

By developing the products and services of tomorrow, we offer you new perspectives and prospects.



Performance

Our high value-added solutions improve your performance and guarantee the quality of the final product.



Commitment

Focusing of your objectives, we commit ourselves to helping you reach them.



Reliability

Our organization, ISO 9001 certified since 1996, is the guarantee of your satisfaction.



ASSEMBLY TECHNOLOGY

As a world-class assembly technology player, we manufacture and market equipments and solutions for the assembly industry which contribute to the improvement of your manufacturing quality and productivity.

Our assembly, ergonomics and traceability solutions contribute to enhancing your productivity, controlling your process quality and meet the requirements of industry 4.0.

We offer products designed to last, and high value-added services, by relying on our team's know-how and expertise : design, production, installation, start-up, training and maintenance. We support you locally thanks to our worldwide presence through our subsidiaries and our specialized distribution network.



Contact us

@ international@doga.fr

+33 1 30 66 41 41

www.dogasassembly.com

SUMMARY

AUTOMATIC SCREWFEEDING SYSTEMS

Pages

- ▶ **4** **OPTIMIZE YOUR CYCLE TIME**
.....
- ▶ **6** **TELESCOPIC AUTOMATIC SCREWFEEDING SYSTEM**
▶ DMS Serie
.....
- ▶ **9** **AUTO ADVANCED AUTOMATIC SCREWFEEDING SYSTEM**
▶ DMA Serie
▶ BSF 300 Serie
.....
- ▶ **15** **MAGNETIC AUTOMATIC SCREWFEEDING SYSTEM**
▶ DMM Serie
.....
- ▶ **18** **AUTOMATIC SCREWFEEDING SYSTEM FOR AUTOMATION**
▶ DA-100 Serie
▶ BSF 300 A Serie
.....
- ▶ **24** **SPECIAL APPLICATIONS**
.....
- ▶ **25** **APPLICATION CASE**
.....

OPTIMIZE YOUR CYCLE TIME

Shorter your cycle time is better your productivity is and your manufacturing cost are optimized.

Thanks to the DOGA automatic screwfeeding systems reduce your cycle time and improve your workstation ergonomics within a quick ROI .

DOGA automatic screwfeeding benefits :

- Easy to use
- No adjustment required
- A robust design
- Silent operating mode

Why invest in a screwfeeding system ?

- ▶ Eliminate manual steps such as screw positioning on the screwdriver bit.
- ▶ Increase the assembly speed avoiding repetitive loading of screws on the workstation.
- ▶ Ease and speed up the placement of small screws in restricted area.
- ▶ Eliminate manual motion that can spoil your parts during the assembly process.
- ▶ Preserve the appearance of the screws (painted) or the threadlocking coating or the micro-capping.
- ▶ Spare about 1 second per tightenign operation ! (screw placement time on the bit)

Screw gripping mode



Telescopic spring version DMS serie

System with telescopic compression spring perfectly suitable with Push to Start.



Auto advance version

System with pneumatic piston perfectly adapted when the tightening nose must not be in contact with the product.



Magnetic screw holder version - DMM serie

System with screw feeding nozzle retraction and magnetic screw holding. Perfectly suited for difficult access to screw points.



Automation version

Intended for automatic stations or the robotic tightening operations.

Selection chart

Compatible body diameters or screw threads

The automatic screw feeding systems are compatible with screws with body diameters of 2 to 6 mm depending on the model.

	Diameter or thread (mm)					
	2	2,3	3	4	5	6
DMS-30			✓	✓	✓	✓
DMA-30			✓	✓	✓	✓
BSF 300	✓	✓	✓	✓	✓	✓
DMM-30		✓	✓	✓		
DA-100			✓	✓	✓	✓

Compatible screw head shape



* Except DMM-30 version.

Compatible footprint

Philips	Pozidriv	Torx	Slotted head	Hexagon socket head
			*	

* Except DMM-30 or BSF 300 version.

TELESCOPIC AUTOMATIC SCREWFEEDING SYSTEM

DMS SERIE

DMS "DOGA Matic Spring" equipped with spring telescope delivers each screw steadily to the nose of the tightening tool, the automatic screw feeder allows a very significant time saving, particularly in the operating cycle.

- ▶ Suitable with pneumatic or electric screwdriver ideally with push to start system.
- ▶ The screw remains protruding after blowing thanks to a non-return device in the screwfeeding nozzle.



Operating mode

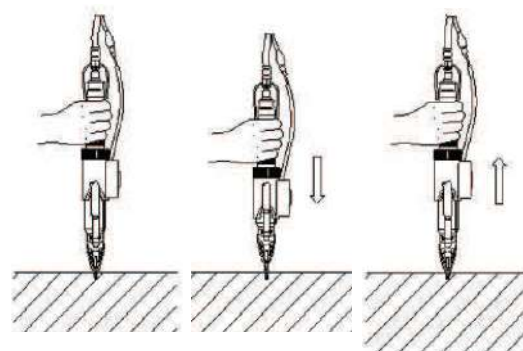
DMS Automatic screw suppliers include a hollow rocker type feeder that selects and orients the screws before transferring them into a gravity rail to the separator.

From there, a screw is blown into the pipe to the assembly head each time the screwdriver sends a request.

In parallel, a new screw is separated and transported through the blow tube.

The screw is held protruding in the tightening nose at the jaws by mechanical valves to facilitate pinning on the workpiece.

- ▶ The action on the telescope moves the nozzle up to release the screw.
- ▶ Continuous pressure on the tool allows the tightening.



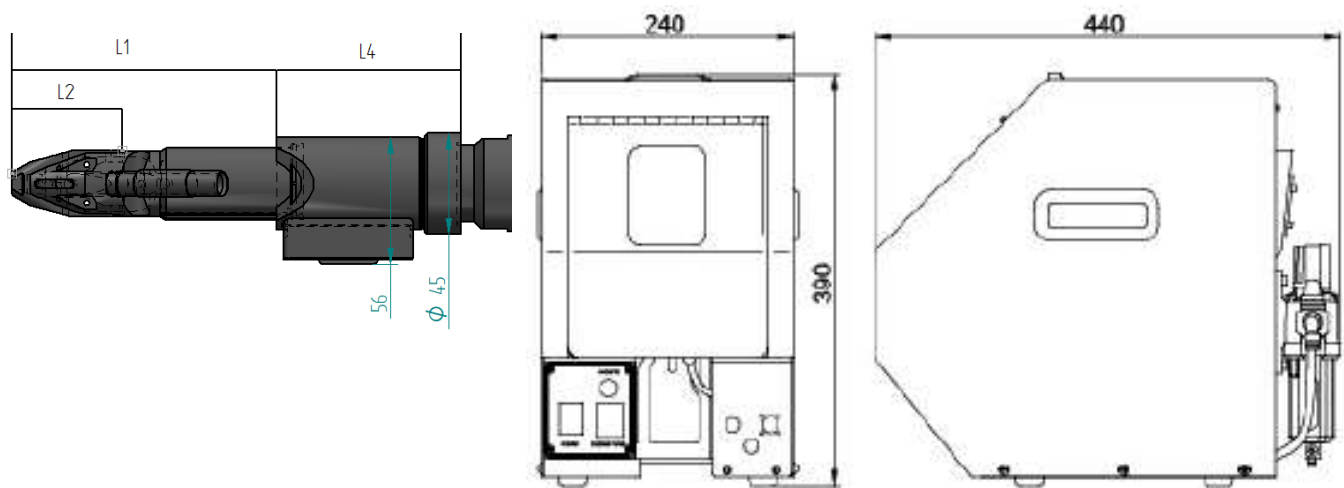
Specific application cases

- ▶ Suitable for applications where the screw nose is in contact with the product.
- ▶ Ideal for applications requiring self-tapping or self-forming screws.
- ▶ Compatible with the use of an Easy Push assistance kit on a torque reaction arm.

Technical characteristics

Suitable screw body diameter	from 3 to 6 mm
Suitable screw length	up to 22 mm
Screwfeeding rate	Max 30 screws/min
Type of feeder	Reciprocating blade hopper and gravity accumulation rail
Hopper capacity	0,7 L
Screw driver number	1
Torque	0,4 to 8 Nm
Type of screwdriver	Pneumatic or electric
Starting	Push to start
Recommandation to install	Balancer or arm

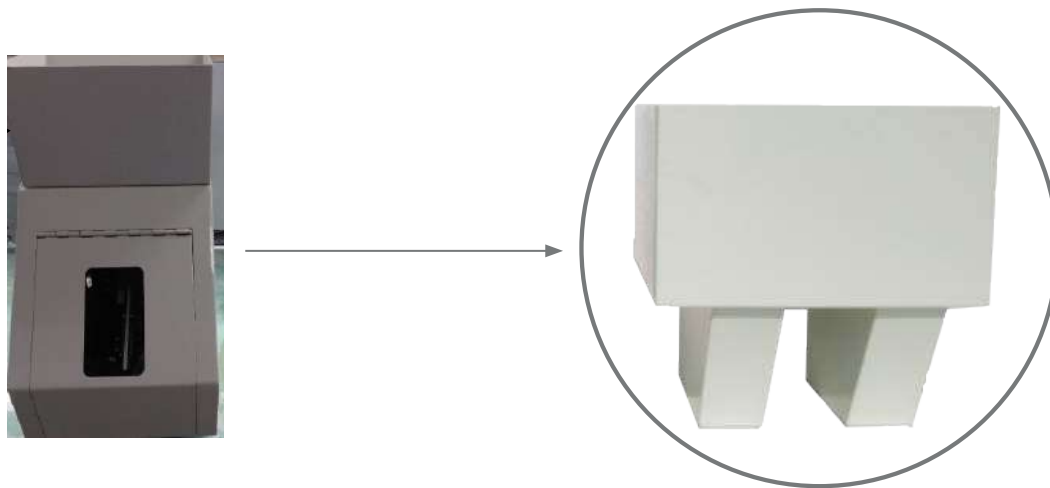
Size



Screw head diameter	L1 (mm)	L2 (mm)	L4 (mm)
Under 7 mm	106	48	75
From 7 up to 9 mm	110	49	75
From 9 up to 12 mm	111	50	75

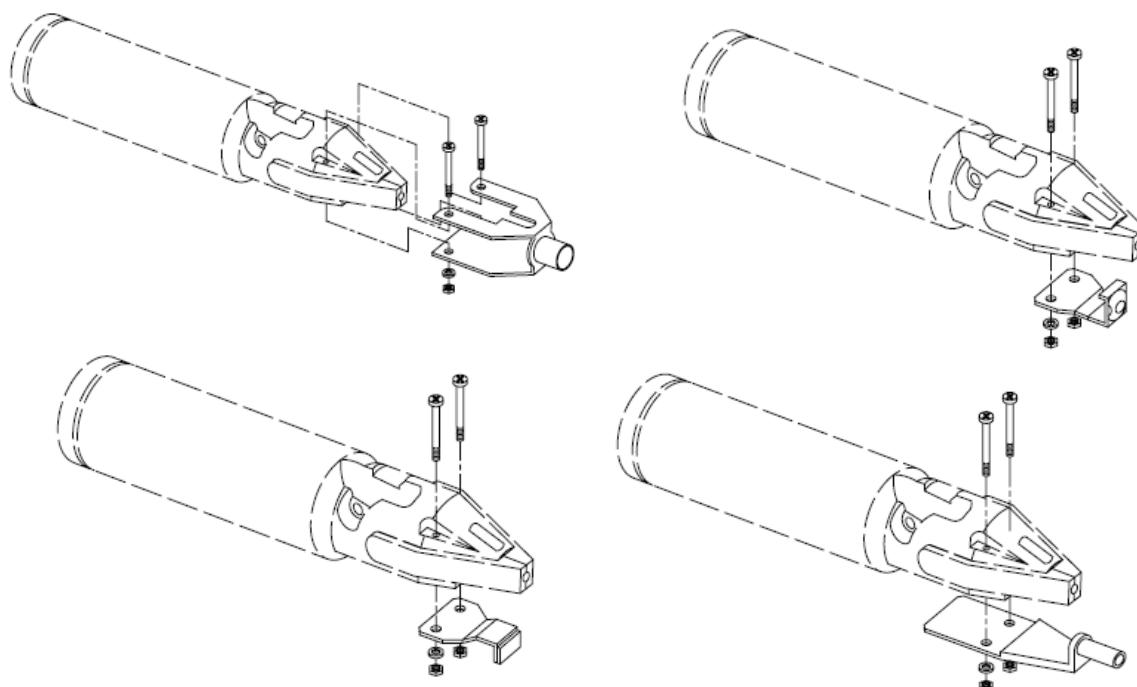
Additional hopper

In order to increase the screw storage capacity, the additional hopper option increases the loading volume.



Special nozzle equipment

To quickly position the screw driving nozzle on the part, allow the tightening in deep hole the screw driving nozzle can be equipped with specific and customized extension.



AUTO ADVANCED AUTOMATIC SCREWFEEDING SYSTEM

DMA SERIE

The portable auto advanced piston tool designated DMA for "DOGA Matic Advance" delivers each screw in a repeatable way up to the nose of the tightening tool, the automatic screw feeder allows a very important saving of time especially in the operating cycle.

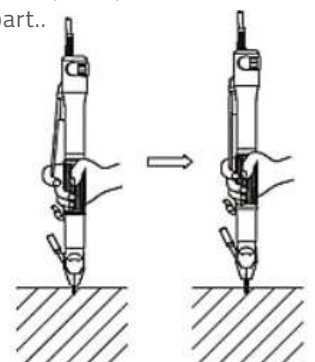
- ▶ Suitable with trigger or external start electric screwdriver.
- ▶ The screw remains protruding after blowing thanks to a non-return device in the screw feeding nozzle.



Operating mode

The DMA automatic screw feeder includes a hollow rocker arm type feeder that selects and directs the screws before transferring them to a gravity rail down to the separator. From there, a screw is blown into the pipe to the assembly head each time the screwdriver sends a request. In parallel, a new screw is separated and transported through the blow tube. The screw is kept above the screw head mandrel by mechanical shutters to make it easier to pin it on to the part. The continuous pressure of the operator on the screwdriver start control causes the pneumatic telescope to push the screwdriver bit into contact with the screw and follow it through the complete assembly into the part.

- ▶ Press the screwdriver trigger to position the screw in the screw driving nozzle.
- ▶ The pneumatic piston assists the screw during the tightening process.



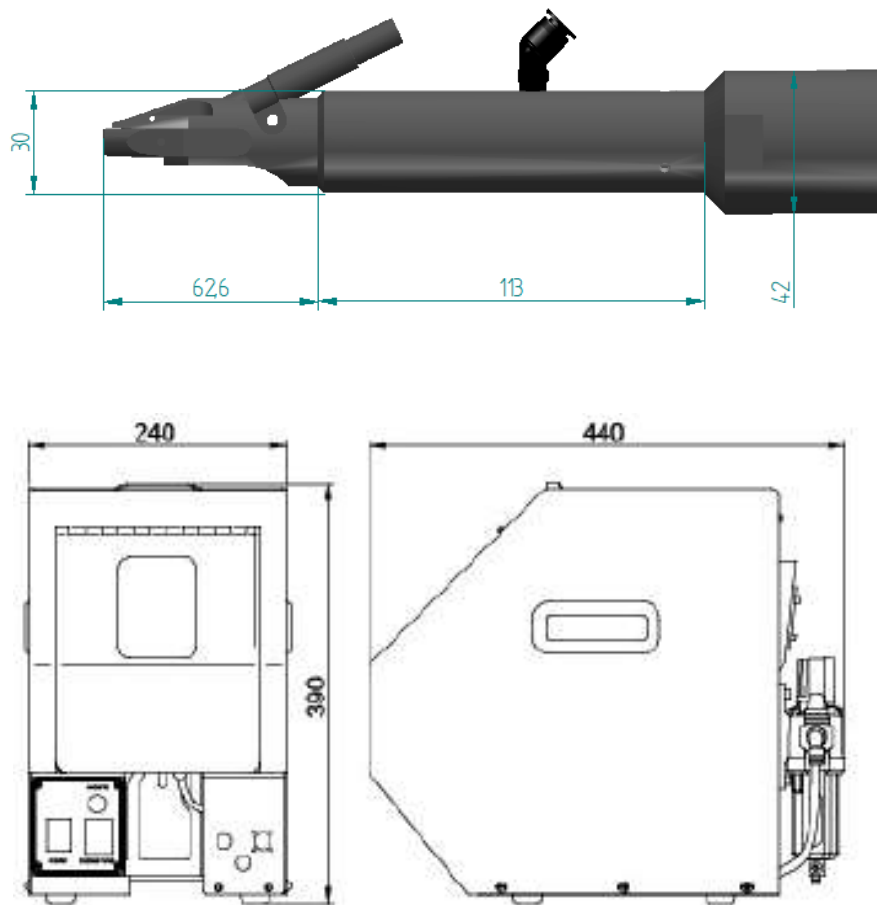
Specific application cases

- ▶ To avoid contact between the driver nozzle and the part (to prevent scratches).
- ▶ To limit the pushing force of the operator.
- ▶ Not suitable with self tapping tightening.

Technical characteristics

Suitable screw body diameter	From 3 up to 6 mm
Suitable screw length	Up to 22 mm
Screwfeeding rate	Max 30 screws/min
Type of feeder	Blade hopper and gravity accumulation rail
Hopper capacity	0,7 L
Screw driver number	1
Torque	0,8 up to 4 Nm
Type of screwdriver	Electric
Starting	Trigger or external start
Recommendation to install	Arm

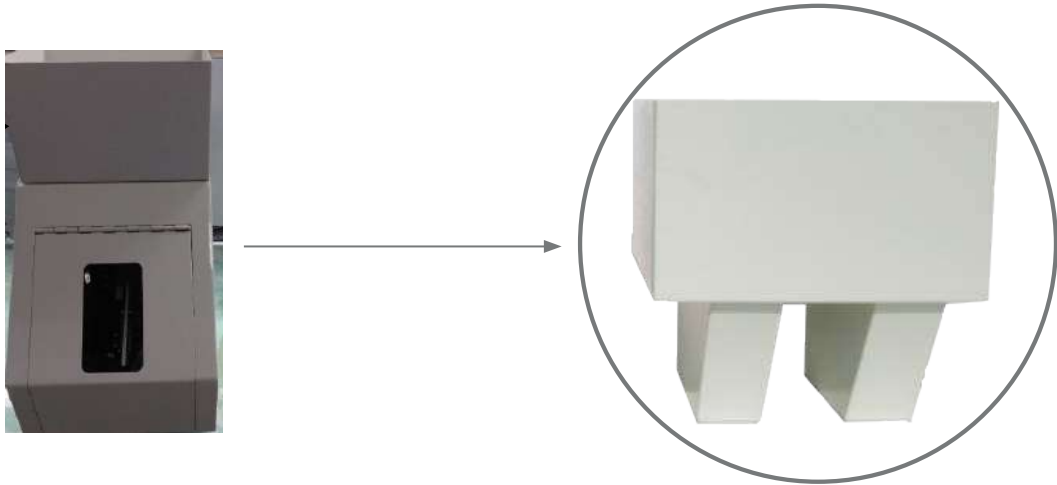
Size



DMA-30

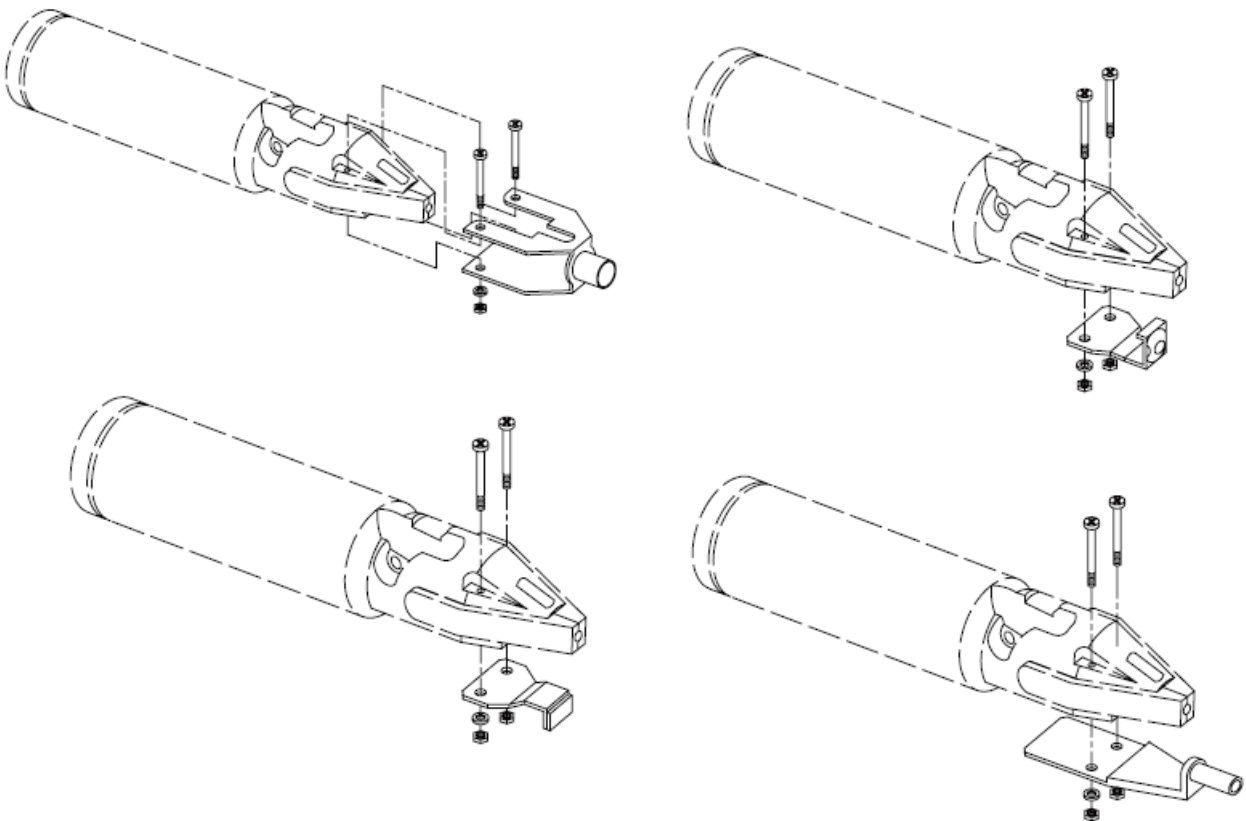
Additional hopper

In order to increase the screw storage capacity, the additional hopper option increases the loading volume.



Special nozzle equipment

To quickly position the screw driving nozzle on the part, allow the tightening in deep hole the screw driving nozzle can be equipped with a specific and customized extension.



AUTO ADVANCED AUTOMATIC SCREWFEEDING SYSTEM

BSF 300 SERIE

The portable auto advanced piston tool designated BSF 300 delivers each screw in a repeatable way up to the nose of the tightening tool, the automatic screw feeder allows a very important saving of time especially in the operating cycle.

The screw feeder is a vibrating bowl feeder, allowing the feeding of screws with a body length of up to 30 mm and a head diameter of up to 13 mm.

- ▶ Compatible with an electric screwdriver with external start only.
- ▶ The screw remains protruding after blowing thanks to a pneumatic anti-return device at the nozzle.



Operating mode

The BSF 300 automatic screw feeders incorporate a vibratory bowl feeder that selects and orients the screws before transferring them to a rail to the separator.

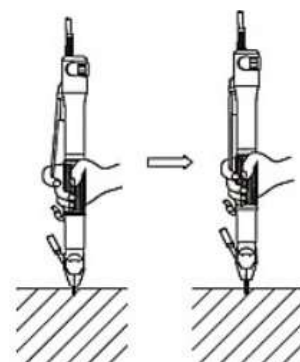
From there, a screw is blown through the pipe to the screw nose at each request sent by the tightening machine.

At the same time, a new screw is separated and fed into the blow tube.

The screw is kept protruding into the screw nose at the jaws by advancing the tightening bit to an intermediate stroke to facilitate pinning to the workpiece.

The self-advancing tool is capable of transmitting torques up to 16 Nm.

- ▶ Press the autoadvance trigger to position the screw in the screw driving nozzle.
- ▶ The pneumatic piston assists the screw during the tightening process.



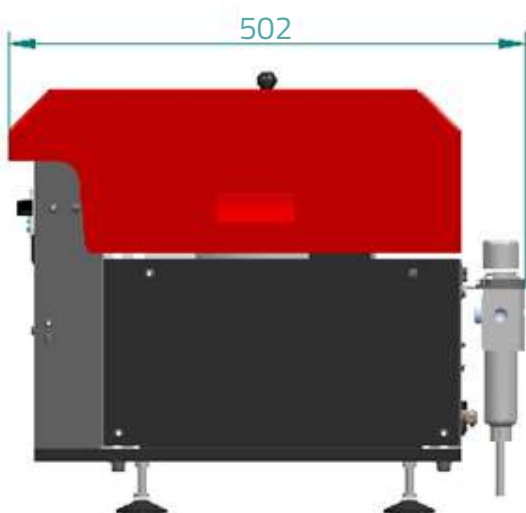
Specific application cases

- ▶ To avoid contact between the driver nozzle and the part (to prevent scratches).
- ▶ To limit the pushing force of the operator.
- ▶ Not suitable with self tapping tightening.

Technical characteristics

Suitable screw body	Mini 2 mm maxi 6 mm
Suitable screw length	Mini 1.3 x head diameter up to 30 mm
Screw feeding rate	Up to 40 screws / minute
Type of feeder	Vibrating bowl material aluminium
Bowl capacity	2 liters
Screw driver number	1
Torque	Min 0.4 Nm max 16 Nm
Type of screwdriver	Electric
Starting	External
Auto-advance telescope stroke	60 mm or 100 mm
Recommandation to install	Balancer or arm without lowering assistance

Size



Additional hopper

In order to increase storage capacity, the additional hopper option increases the loading volume.

Capacity 5 / 10 / 20 litres

Supplied with :

- ▶ Stand-alone control unit.
- ▶ Screw level detection in the bowl.
- ▶ Loading chute.



BSF 400 large capacity bowl (subject to feasibility study)

For applications where the screw head diameter is greater than 13 mm or the screw length is greater than 30 mm.



MAGNETIC AUTOMATIC SCREWFEEDING SYSTEM

DMM SERIE

The DMM portable magnetic holding tool is dedicated for applications where accessibility to screwdriving points is reduced.

- ▶ Suitable with an external start electric screwdriver.
- ▶ The screw is blown in the screw driving nozzle.
- ▶ The screw remains maintained on the magnetic bit holder once the nozzle is retracted.



Operating mode

The DMM automatic screw feeders include a hollow balance valve that selects and orients the screws before transferring them to a gravity rail to the separator.

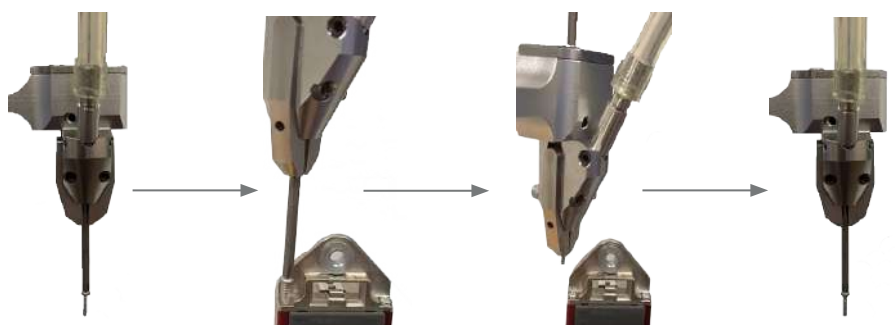
From there, a screw is blown through the pipe to the screwdriver's nose at each request sent by the screwdriver.

At the same time, a new screw is separated and routed into the blow tube.

The screw is held at the end of the screwdriver after the dispensing nose has retracted.

This solution combines the advantage of a conventional screw supply by avoiding the need for the operator to place the screw on the end piece at each screw, as well as access to the screwdriving points in terms of optimal footprint, compared to a traditional device. It is also characterized by extreme robustness and absolute comfort of use, silent and without vibration.

- ▶ Activate the remote start signal.
- ▶ At the end of the previous tightening, a screw is fed and the nozzle witch then lift up to release to screw.



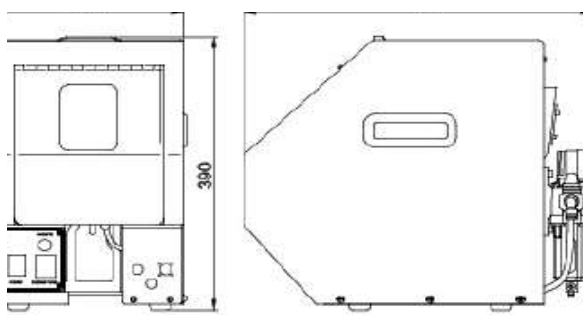
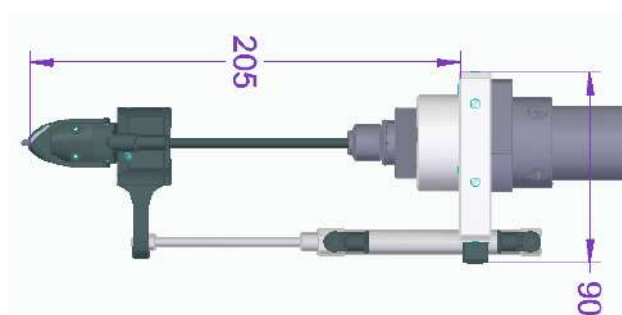
Specific application cases

- ▶ Particularly suitable for screw points not accessible with a screw feed nose such as deep countersinks incompatible with the use of a nose end tube or screw points in a curved surface of near a wall.
- ▶ Only magnetizable screws are compatible.
- ▶ Ideally, the head diameter / length ratio, overall should be 1.5.

Technical characteristics

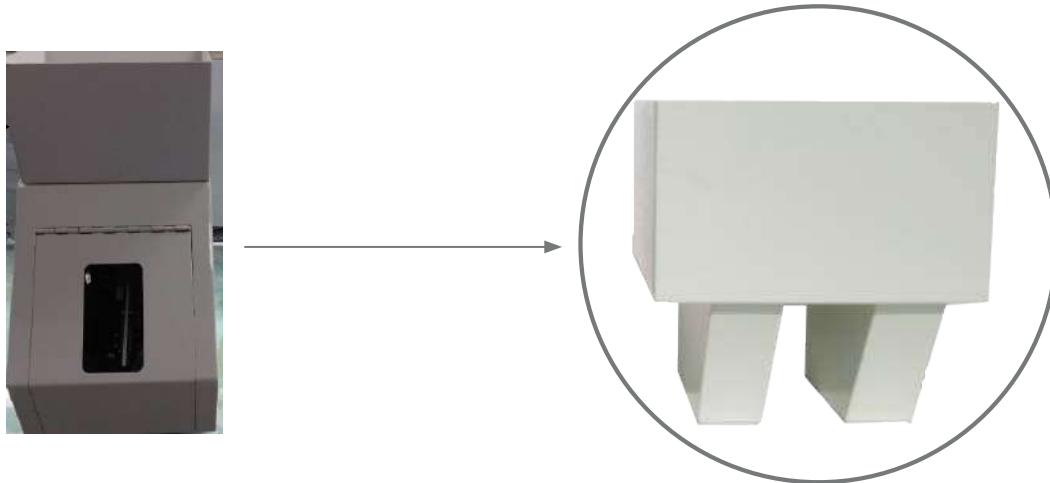
Suitable screw body diameter	From 2,3 up to 4 mm
Suitable screw length	Up to 12 mm
Screwfeeding rate	20 screws/min
Nozzle retract stroke	Max 50 mm
Free end bit length	From 25 up to 30 mm
Type of feeder	Reciprocating blade hopper and gravity accumulation rail
Hopper capacity	0,7 L
Screw driver number	1
Torque	0,4 up to 6 Nm
Type of screwdriver	Electric
Starting	External start
Recommendation of install	Arm

Size



Additional hopper

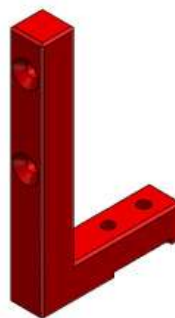
In order to increase the screw storage capacity, the additional hopper option increases the loading volume.



Mounting interface on arm

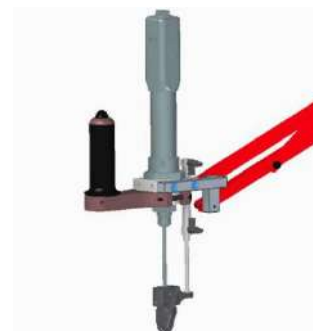
Mounting on linear torque reaction arm BA40

Designation	Code
Start handle	4-5200681
	4-5200682
	4-5200683
Handle clamp	4-5200687
Interface DMM-30 BA40 arm	4-5230050



Mounting on articulated torque reaction arm BA40 R

Designation	Code
Start handle	4-5200681
	4-5200682
	4-5200683
Handle clamp	4-5200687
Interface DMM-30 BA40R arm	4-5230051



AUTOMATIC SCREWFEEDING SYSTEM FOR AUTOMATION

DA - 100 SERIE

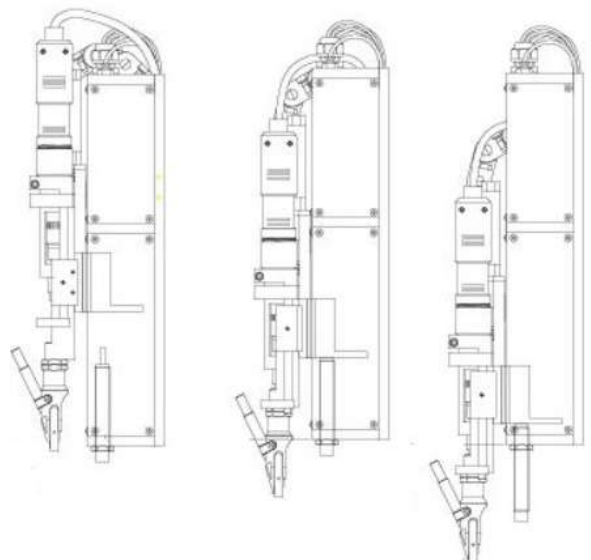
The DA-100 screw feeding system is dedicated to automatic stations or to the robotization of tightening operations.

- ▶ Suitable with an external start electric screwdriver.
- ▶ The screw remains protruding after blowing thanks to a non-return device in the screw feeding nozzle.



Operating mode

- ▶ Screw feed cycle start information by your automatism.
- ▶ Control of the tightening unit by your automation : an approach stroke of the feed nozzle as close as possible to the product.



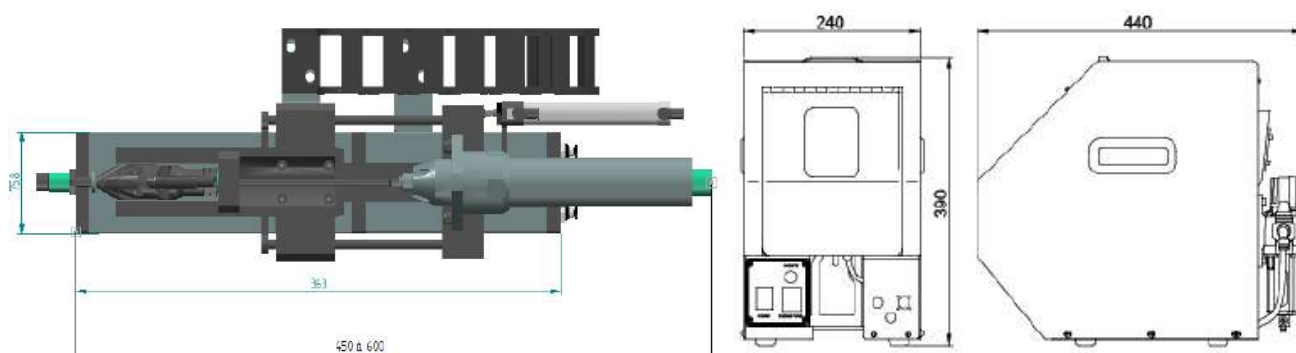
Specific application cases

- ▶ Intended for applications in stationary automatic workstation or robotization of tightening operations.

Technical characteristics

Suitable screw body diameter	from 3 up to 6 mm
Suitable screw length	Up to 22 mm
Screwfeeding rate	Up to 30 screws/min
Type of feeder	Reciprocating blade hopper and gravity accumulation rail
Hopper capacity	0,7 L
Screwdriver number	1
Torque	0,4 up to 10 Nm
Type of screwdriver	Pneumatic or electric
Starting	External start
Unit weight	8,5 kg
Approach stroke	Max 51,5 mm
Tightening stroke	Max 59 mm

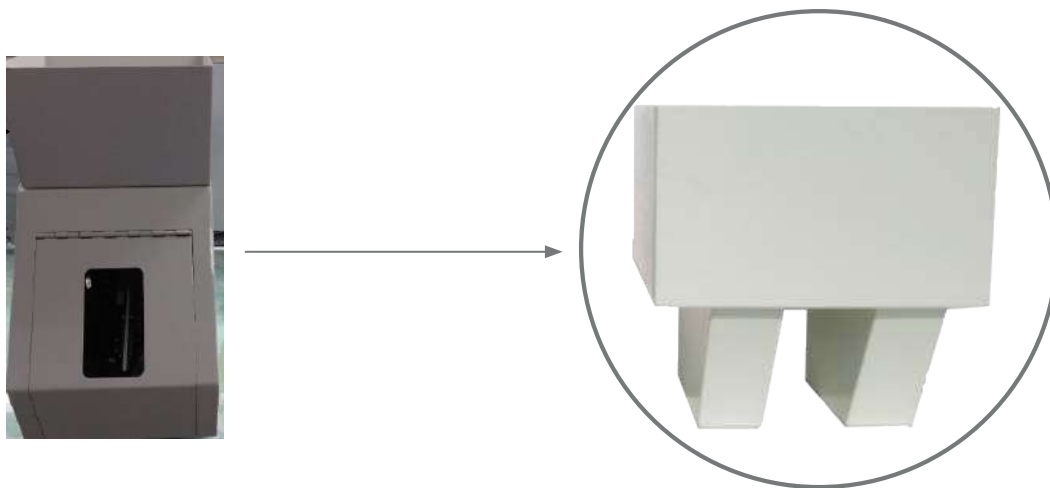
Size



DA-100

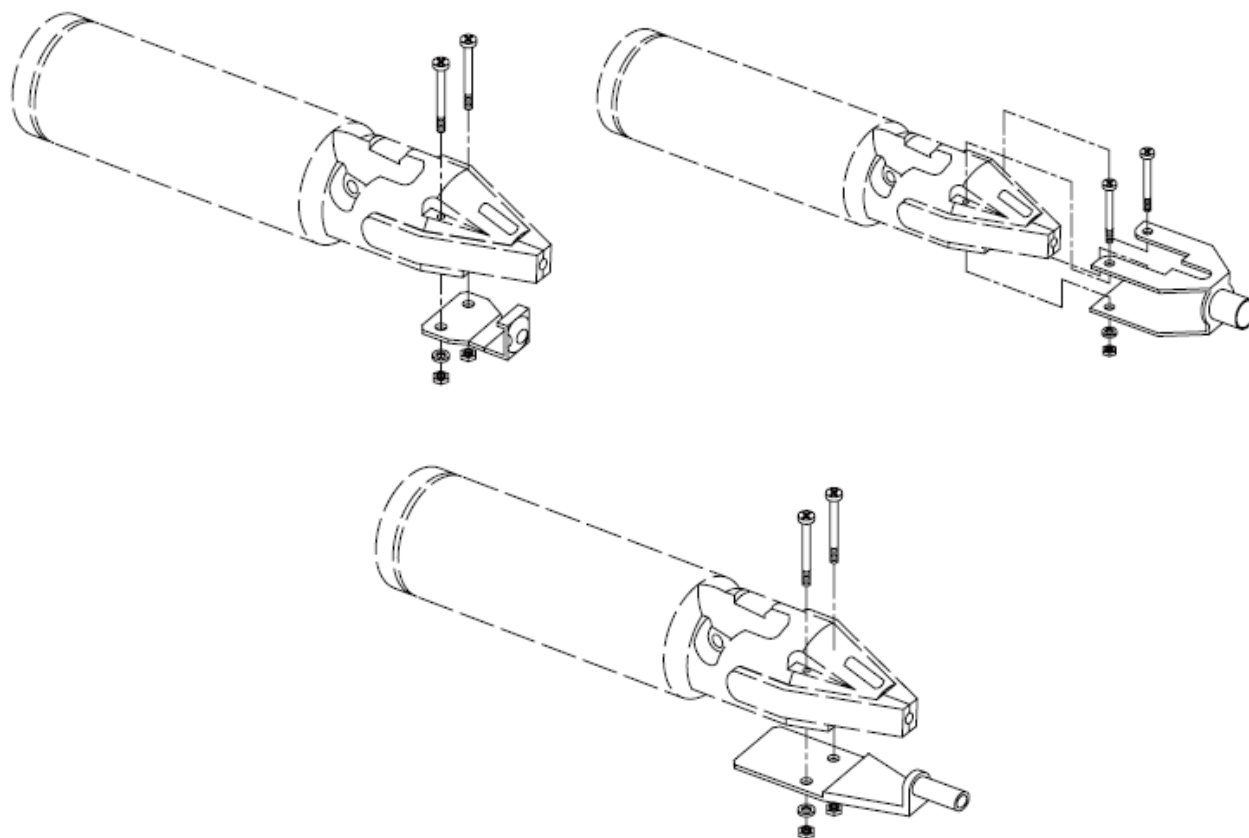
Additional hopper

In order to increase the screw storage capacity, the additional hopper option increases the loading volume.



Special nozzle equipment

To allow the tightening in deep hole the screw driving nozzle can be equipped with a specific and customized extension.



AUTOMATIC SCREWFEEDING SYSTEM FOR AUTOMATION

BSF 300 A SERIE

The portable auto advanced piston tool designated BSF 300 A delivers each screw in a repeatable way up to the nose of the tightening tool, the automatic screw feeder allows a very important saving of time especially in the operating cycle.

The screw feeder is a vibrating bowl feeder, allowing the feeding of screws with a body length of up to 30 mm and a head diameter of up to 13 mm.

- ▶ Compatible with an electric screwdriver with external start only.
- ▶ The screw remains protruding after blowing thanks to a pneumatic anti-return device at the nozzle.



Operating mode

The BSF 300 automatic screw feeders incorporate a vibratory bowl feeder that selects and orients the screws before transferring them to a rail to the separator.

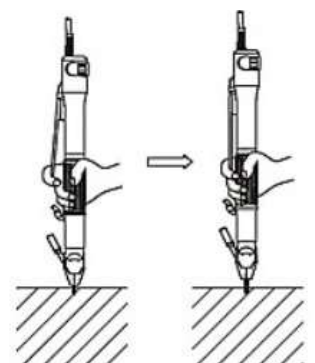
From there, a screw is blown through the pipe to the screw nose at each request sent by the tightening machine.

At the same time, a new screw is separated and fed into the blow tube.

The screw is kept protruding into the screw nose at the jaws by advancing the tightening bit to an intermediate stroke to facilitate pinning to the workpiece.

The self-advancing tool is capable of transmitting torques up to 16 Nm.

- ▶ Screw feed cycle start information by your automatism.
- ▶ Control of the autoadvance unit by your automatism :
 - Unit with a single screwing stroke
 - Approach of the screwing unit as possible to the part by your equipment



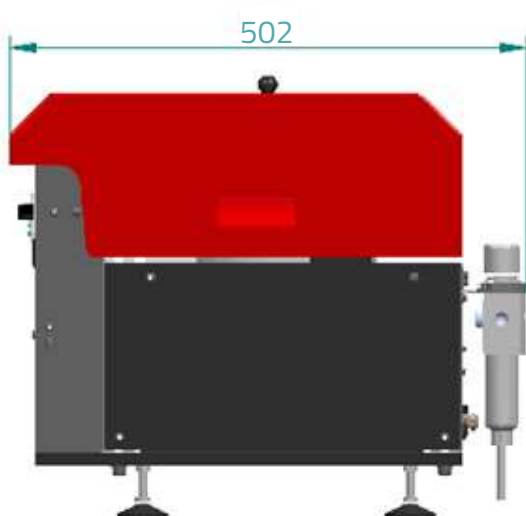
Specific application cases

- ▶ Intended for applications in stationary automatic workstation or robotization of tightening operations.

Technical characteristics

Suitable screw body	Mini 2 mm maxi 6 mm
Suitable screw length	Mini 1.3 x head diameter up to 30 mm
Screw feeding rate	Up to 40 vis / minute
Type of feeder	Vibrating bowl material aluminium
Bowl capacity	2 liters
Screw driver number	1
Torque	Min 0.4 Nm max 16 Nm
Type of screwdriver	Electric
Starting	External
Auto-advance telescope stroke	60 mm or 100 mm

Size



Additional hopper

In order to increase storage capacity, the additional hopper option increases the loading volume.

Capacity 5 / 10 / 20 litres

Supplied with :

- ▶ Stand-alone control unit.
- ▶ Screw level detection in the bowl.
- ▶ Loading chute.



BSF 400 large capacity bowl (subject to feasibility study)

For applications where the screw head diameter is greater than 13 mm or the screw length is greater than 30 mm.



SPECIAL APPLICATION AUTOMATIC SCREWFEEDING SYSTEM

Some application where the tightening point is located in a barrel or very close to walls do not allow the use of a traditional unit.

To accommodate these specific cases, we can offer a unit with magnetic or vacuum holding of the screw. A preliminary feasibility study is necessary.

Magnetic or vacuum holding of the screw

Unit with magnetic or vacuum screw holding for automatic station (fixed nose)



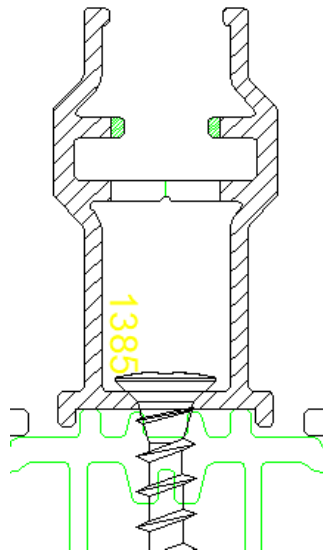
- ▶ Unit supplied with automation bowl feeder.
- ▶ Controlled by your own PLC system or by an external control box on request.

Unit with magnetic or vacuum screw holding for manual using (nozzle retraction)



- ▶ Unit supplied with automation bowl feeder.
- ▶ Controlled by your own PLC system or by an external control box on request.

APPLICATIONS



OPTIMIZE WORKSTATION ERGONOMICS

Turn-key assembly solution for assembling fasteners on profiles with difficult access and automatic screw feeder.

- ▶ Suppression of MSDs
- ▶ Easy to use without setting
- ▶ Low noise level

Scan QR code to see the application note



IMPROVE THE QUALITY OF PARTS

Special DMS40 screw feed for small screws.

- ▶ Avoids nose contact with the work piece
- ▶ Cleanliness and integrity of the room

Scan QR code to see the application note



OUR SERVICES

At DOGA we put at your disposal our reliable, accurate and user friendly tightening solutions. It is our duty to advise you of the right solution for your application.

Our Product Manager and Support engineering teams are here to analyse your manufacturing process and share with you our innovative solutions to improve your assembly process. Thanks to our technical integration service, we provide you with turnkey solutions from design to commissioning.



TURNKEY SOLUTIONS

Using all the options of our complete products range, we offer you solutions adapted to your needs.

- ▶ Custom design
- ▶ Adaptation of existing models
- ▶ Integration of automation system



TECHNICAL ASSISTANCE

To ensure the optimal performance and durability of our tools, we put our technical assistance at your disposal.

- ▶ Installation and start-up
- ▶ Maintenance agreement
- ▶ On-site maintenance
- ▶ Maintenance in our workshop



TRAINING

DOGA offers specialized training courses around its trades :

- ▶ Technical
- ▶ Practical
- ▶ Audit & consulting

RELATED PRODUCTS



Assembly tools

By combining the wide range of DOGA industrial screwdrivers and the choices we make together, we will meet your production and quality requirements.

- Torque and angle current control tools
- Torque and angle transducerized control tools
- Brushless electric tools

[> Learn more about our assembly tools](#)



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📧 international@doga.fr

☎ +33 1 30 66 41 41

📍 8, avenue Gutenberg - CS 50510
78317 Maurepas Cedex - FRANCE

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