Desoutter

Industrial Tools



RAPID

Desoutter

AUTOMATIC SCREW FEEDING SYSTEM

More Than Productivity

GENERAL INTRODUCTION

RAPID INTRODUCTION

SCREW FEEDING SYSTEM

Automation has significantly transformed the manufacturing industry particularly with the advent of screw feeding systems that have replaced traditional manual tightening stations. Coupled with rapidly advancing handling systems and electrical screwdriver technology, the performance production capacity, and quality control of tightening stations have reached unprecedented levels.



RAPID – SOLUTION FROM DESOUTTER



We recognize the significant impact a screw feeding system can have on the success of a tightening process and the overall performance of the final assembly. As a natural progression of our product range, we developed our in-house designed screw feeding system. Introducing "RAPID", an integrated solution that combines our screwdriver and controller, ensuring perfect compatibility, enhancing project flexibility, and aiding global standardization. This combination boosts productivity and minimizes downtime.

GENERAL INTRODUCTION

A screw feeding system encompasses more than just its two primary components—the feeder unit and tightening module. It also includes a screwdriver, controller, functional accessories, and specific design features, forming a comprehensive system topology. This system is customized to suit your fastener and application using standardized components. Its goal is to automate the tightening process, enhancing cycle time, improving quality, and preventing incorrect operations.



CUSTOMER PAIN POINTS

- Repetitive tasks
- Assembly challenges
- Complex using & maintenance
- Quality variability

Enhanced productivity

Optimized cycle time and minimized downtime

Only one supplier

Simplified communication and relationships, consistent quality, cost reduction, optimized maintenance management

Turnkey solution

Perfect compatibility between feeding, tightening, and automation.



High quality

Exceptional reliability and traceability

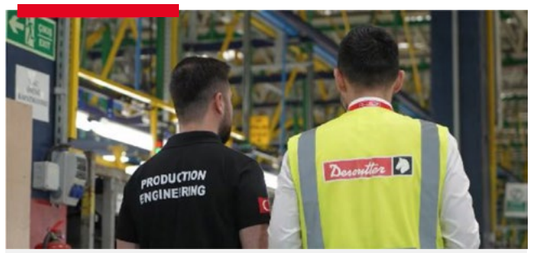
Wide range of features

Suitable for a wide range of applications and tailored requirements.

Smart maintenance

Maintenance planning integrated with other products into a single plan.

PROJECT TEAM



PROJECTS Desoutter

More than 80 project engineers around the globe who tailor our technical offer to match your specific requirements and deliver the best-fit solution.

SUB-RANGES

RAPID Desoutter

- Core range
- Variants
- Customization

To best meet your needs, our range is divided into three categories:

- Core range: Our primary recommendation for covering most applications.
- Variants: Focuses on specific design features.
- Customization: Demonstrates our agile process to address your unique requirements.

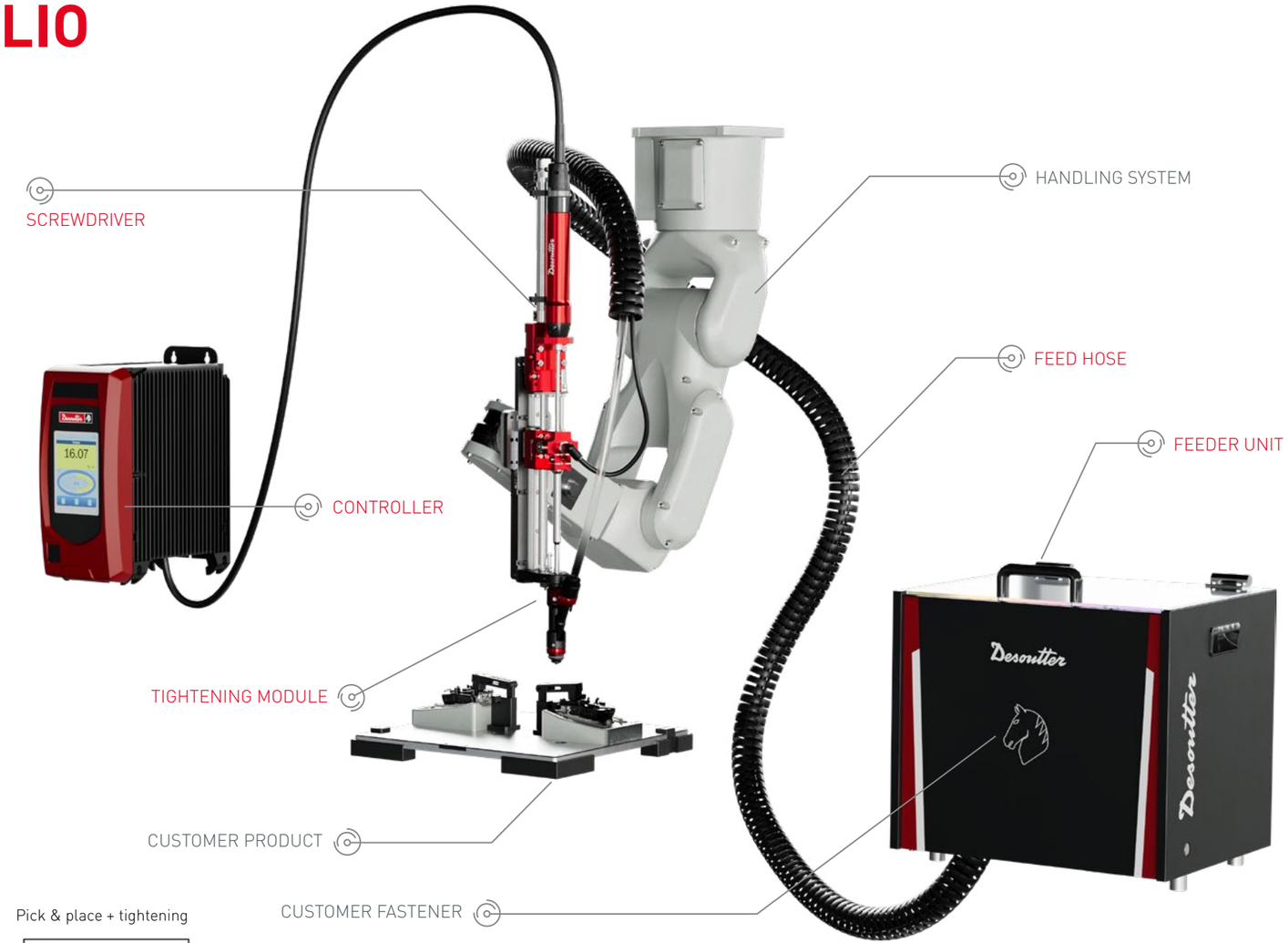
RAPID PORTFOLIO
RAPID INTRODUCTION

APPLICATION COVERAGE

FASTENER TYPE:
- Screw
- Nut
- Stud
- Others

STATION TYPE:
- Fixture Station [Automatic]
- Hand-Held Station [Manual]

FEEDING APPROACH:
- Hose-Feeding
- Pick & Place
- Combined (Hose-Feeding then picked)



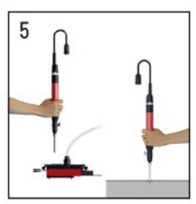
APPLICATION TYPE

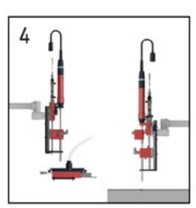
Hose-feeding + tightening



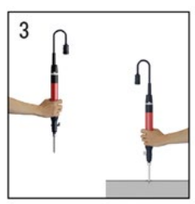


Combined Hose feeding + pick & place + tightening





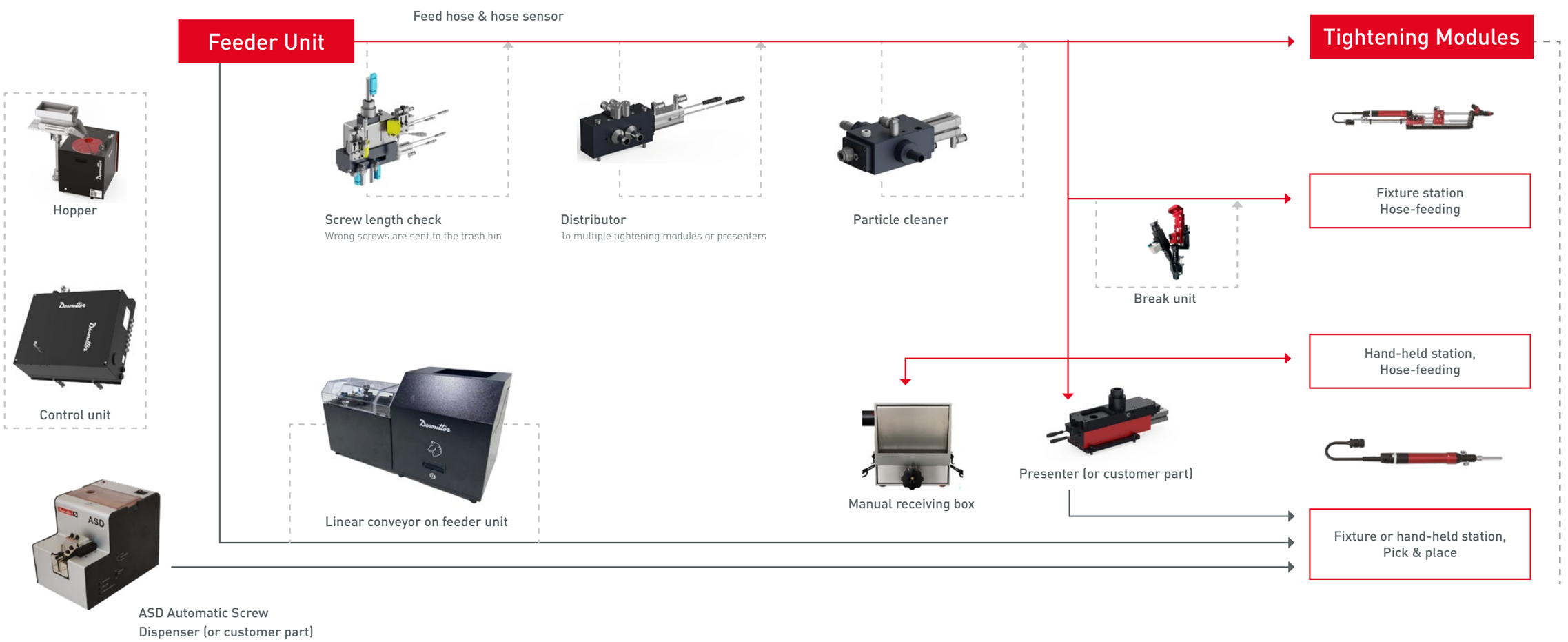
Pick & place + tightening



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RAPID PORTFOLIO
FUNCTIONAL "MAP"



FEEDING ROUTE

Hose-feeding →

Pick & place →

Options - - - - →

PICK FROM...

- Escapement on feeder unit
- Automatic screw dispenser (or customer part)
- Presenter (or customer part)
- Escapement through linear conveyor
- Hand pick from manual receiving box

FEEDER UNIT TYPES:

- Bowl feeder
- Step feeder



TIGHTENING MODULE TYPES:

Hose-feeding types:
- Basic
- Vacuum bit
- Vacuum socket
- Short screw execution

Pick & place types:
- Vacuum pick
- Magnetic pick
- Gripper pick



OTHERS:

Automation:
- Pneumatics
- Logic control

Specific system request:
- NPN sensor system
- ESD compliant system
- Insulation design

Other fasteners:
- Nut system



SCREW FEEDING SYSTEM

GENERAL INTRODUCTION

CLARIFY APPLICATION TARGETS

Station types:
- Fixture, automatic station;
- Hand-held, manual station;

Feeding approaches:
- Hose-feeding;
- Pick & place;

EVALUATE FASTENER AND PARTS TO BE TIGHTENED

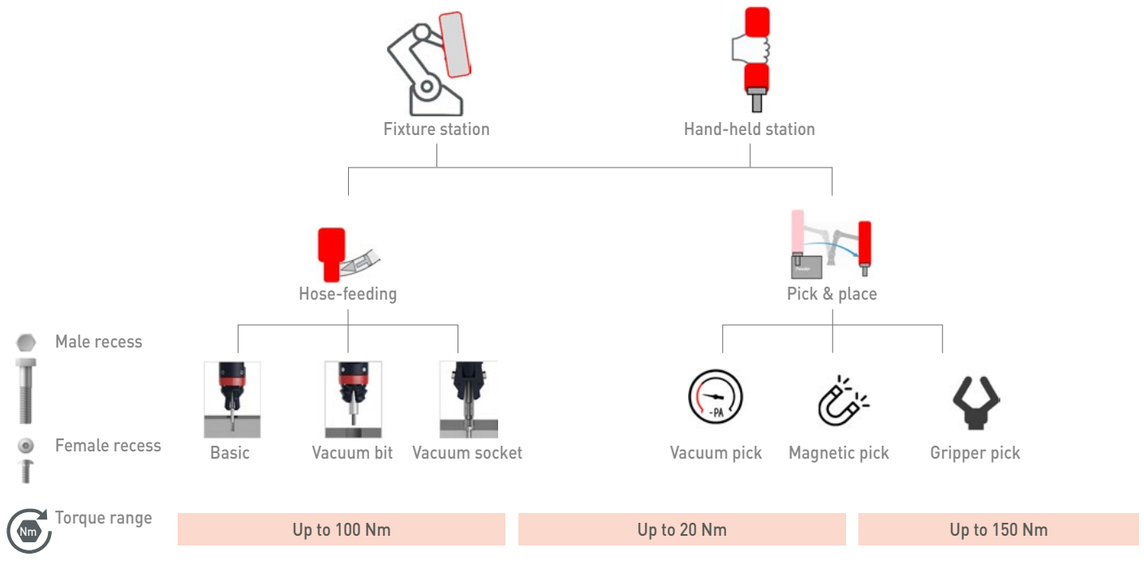
Execution types for hose-feeding types
- Basic - bit or socket;
- Vacuum bit;
- Vacuum socket;

Execution types for pick & place types
- Vacuum tube pick;
- Magnetic bit or socket pick;
- Gripper pick;

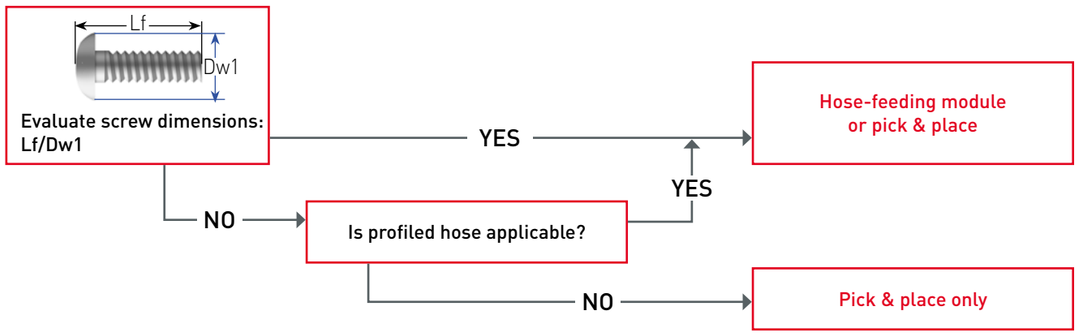
CONSIDERING **SPECIFIC** REQUIREMENTS

YOUR **BEST-FIT** SOLUTION

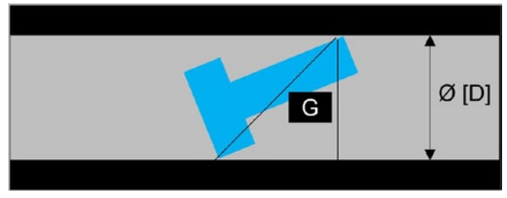




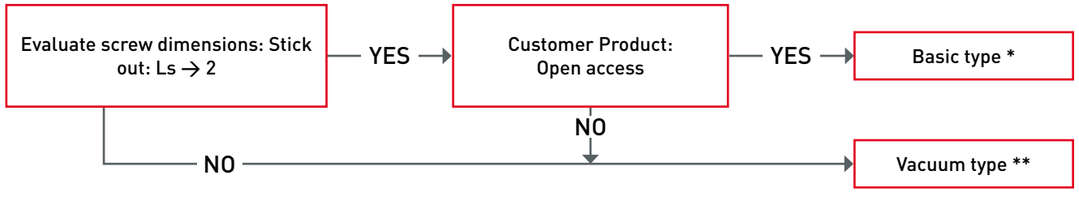
HOSE-FEEDING MODULE & PICKING MODULE

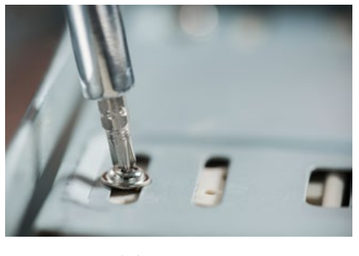


* The screw angle (g) must be carefully calculated and fully considered before selecting the feeding method. If g is less than 30°, a pick & place system is recommended instead of a hose-feeding system.



HOSE-FEEDING MODULE: BASIC OR VACUUM DESIGN?

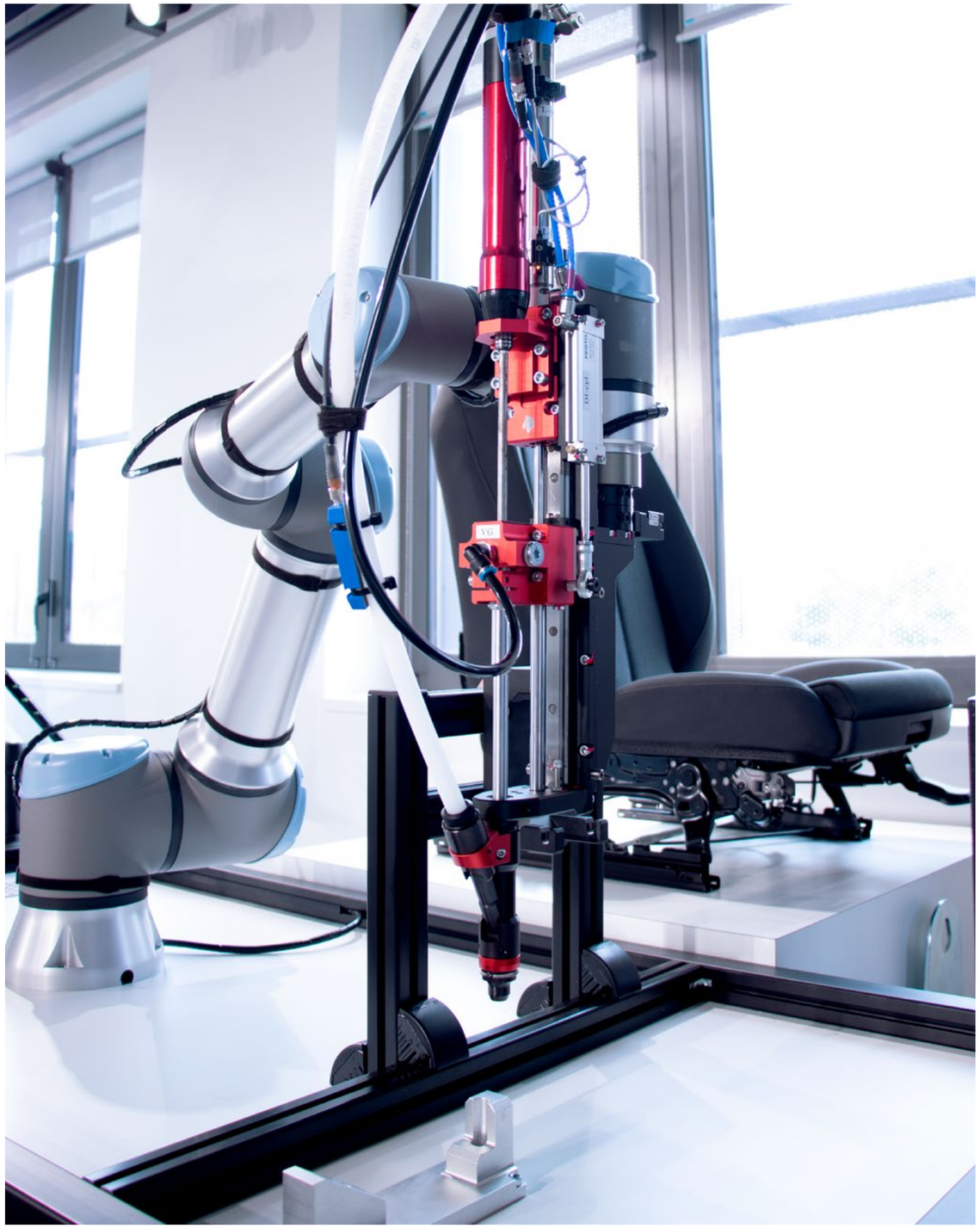




* Open access



** Difficult access



SCREW FEEDING SYSTEM

FEATURES OVERVIEW

		Features & tightening module design	Anti-drop design	Air spring	Mechanical spring	Difficult access	Feed stroke - head stroke	Feed stroke - vacuum tube extend
Fixtures	Basic	FSS1	●					
		FSS2	●				●	
	Vacuum bit	FSVS1B	●	●		●		●
		FSVS2B	●	●		●		●
	Vacuum socket	FSVS2S	●			●		●
	Picking	FSVP0			●	●		
		FSVP2B	●	●		●		●
		FSVP2S	●			●		●
		FSVP1B	●		●	●		
Handheld	Basic, vacuum bit, vacuum socket, picking	HSVC1B	●		●	●		●
		HSC1B	●		●			●
		HSVP0			●	●		

Features & tightening module design	Vacuum kit	Swivel or fixed head	Active open head	Two speed control	WRT/DRT integration	Depth sensor	Quick change spare bit	Insulation
FSS1		●		○	○	○		○
FSS2		●		○	○	○		○
FSVS1B	●	●			○	○	○	○
FSVS2B	●		●		○	○	○	○
FSVS2S	●		●		○	○	○	○
FSVP0	●							○
FSVP2B	●				○	○		○
FSVP2S	●				○	○		○
FSVP1B	●					○		○
HSVC1B	●	●				○		
HSC1B		●				○		
HSVP0	●						●	

Features & tightening module design	Number of pressure regulators	Number of 3/2 Valves	Number of 5/2 MONO Valves	Number of DIs (from sensors)	Number of DOs (to solenoids)
FSS1	1	0	1	2	1
FSS2	1	0	2	4	2
FSVS1B	2	1	1	3	2
FSVS2B	2	2	3	7	5
FSVS2S	1	1	3	7	4
FSVP0	0	1	0	1	1

- These are sample configurations of tightening modules, showing the typical accessories that may be required. Please contact our technical team for the exact quantities required for your specific application and selected module.

● Standard Configurations
○ Optional Configurations

A1. ANTI-DROP DESIGN

Failure mode #1: accidental air shutdown

- Countermeasure:
  Constant air flow to keep pilot check valve open.

  If this airflow is blocked, air pressure will be exhausted.
  → Screwdriver position is held.

Failure mode #2: accidental power loss

- Counter measure:
  Spring return mono-solenoid valve.

  Without power to hold the solenoid valve in position, it will go back to home position and switch air flow.
  → Screwdriver will move up.

A2. DIFFICULT ACCESS



Jaw open
beyond interference

Interference on
tightening points



Guided screw by tube
For all vacuum modules except VS2B

Normally (except FSVS2B)

Vacuum tube diameter = Screw head diameter + 2 mm

Screw searching by mechanical guide.



Guided screw by active open head
Only for VS2B module

For FSVS2BV

Vacuum tube diameter =
Screw head diameter

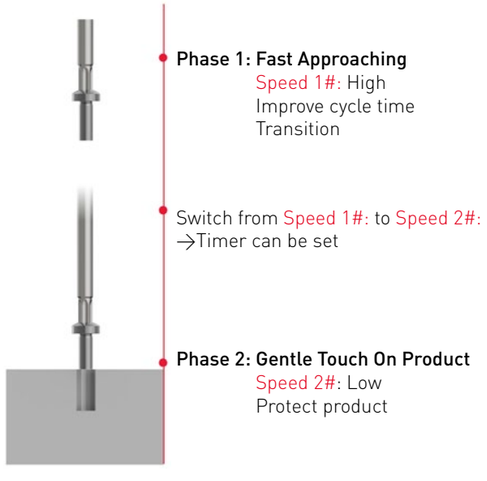
Used for extremely hard-to-reach points.

A3. TWO-STAGE SPEED CONTROL



Three knurled screws are used to adjust the timers: switching from speed 1 to speed 2.





FSS1 & FSS2:
Set the two-stage speed of the tool cylinder

Bit / Socket	Speed
Home position Pressurize air tank	**Zero**
Quick downward movement Solenoid valve activated to switch cylinder direction; Exhaust speed 1# = quick exhaust	**High** (Speed 1#)
TIMER	
Gentle touch on customer part Timer set to switch from speed 1# to 2#; Exhaust speed 2# = slow exhaust	**Low** (Speed 2#)

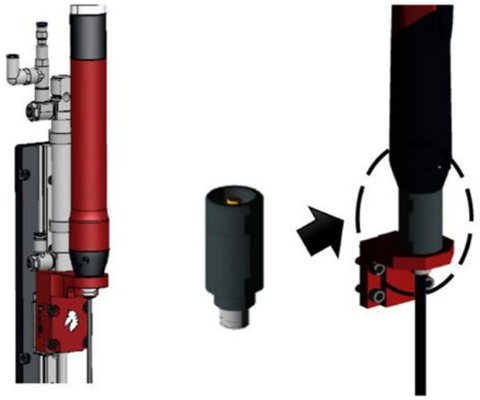


A5. TOOL PROTECTION ECS & ERS



ERSF or ECSF series

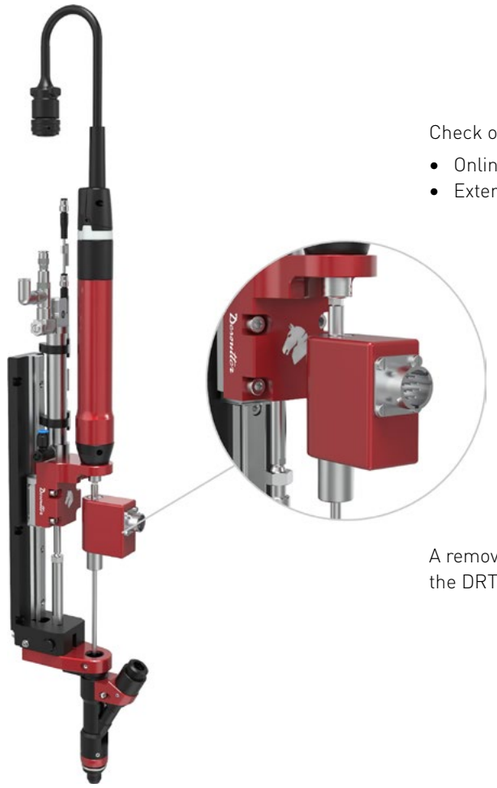
Lifetime Extension



Without bearing

With bearing

A6. DRT INTEGRATION



Check our calibration methods:

- Online calibration
- External calibration

Online calibration
[DRT/WRT integration]

A removable extension rod is designed to mount the DRT/WRT unit on tightening module.

A7. TIGHTENING DIRECTIONS

	Features & tightening module design	Vertical down	Angled vertical down	Horizontal	Bottom up	Angled bottom up
Fixtures	FSS1	●	● *	○	○	○
	FSS2	●	● *	○	○	○
	FSVS1B	●	● *	○	○	○
	FSVS2B	●	● *	●	●	●
	FSVS2S	●	● *	●	●	●
	FSVP0	●	● *	*	●	●
	FSVP2B	●	● *	*	●	●
	FSVP2S	●	● *	*	●	●
	FSVP1B	●	● *	*	●	●
Handheld	HSVC1B	●	○ *	○ *	●	●
	HSVP0	●	● *	*	●	●

● Standard configurations
○ Optional configurations
* Depends on ratio

B1. INSULATION



Product Design

1. Insulation material replacement in the conductive loop
2. Only for fixtured tightening module

Parameters:

Voltage compatibility:	1000V DC
Resistance class:	Class 1 (>1GΩ)
Resistance attenuation:	> 2 years
Mechanical failure:	Depends on the torque The exact spare-part replacement cycle will be provided later

B2. ESD CERTIFICATION

Certification Standards

- The test method corresponding to IEC 61340-2-3 / SP Method 2472
  1. Surface resistance: IEC 61340-2-3, section 8.6.1.
  2. Resistance to grounding: IEC 61340-2-3, section 8.6.3.1.
  3. Point-to-point resistance: IEC 61340-2-3, section 8.6.4.

Certification Achievements

Test	Test Requirement	Test Method	Class / Severity	Result
Surface resistance	IEC 61340-5-1:2016	IEC 61340-2-3:2016 Section 8.4.1	Class A shelves <$1\times10^9\Omega$	Passed
Resistance to grounding point	IEC 61340-5-1:2016	IEC 61340-2-3:2016 Section 8.4.3.1	Class A shelves <$1\times10^9\Omega$	Passed
Point to point resistance	IEC 61340-5-1:2016	IEC 61340-5-1:2016 Section 8.4.4	Class A shelves <$1\times10^9\Omega$	Passed
Electrostatic field test	IEC 61340-5-1:2016	IEC 61340-5-1:2016	<50V	Passed

CONTENTS

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- Step feeder for nut ..... p. 26

ACCESSORIES ..... p. 28
- Control unit ..... p. 28
- Hopper ..... p. 53
- Distributor ..... p. 54
- Presenter ..... p. 55
- Particle cleaner ..... p. 56
- Screw length check ..... p. 57

Bowl feeder for screw

Volume options: 0.4 liter 1.0 liter 3.0 liter



- Simple structure and easy maintenance
- Anti-jam sensors
- Compatible with hose feeding and pick & place
- Multi-feeder locking management
- Multiple levels of automation
- Suitable for a wide range of screw types

RA	-	BS1	-	V1	-	VL-P	-	A	-	M	-	S
		1		2		3		4		5		6

1. Type

	Description
BS04	Bowl feeder for screw, 0.4 L
BS1	Bowl feeder for screw, 1 L
BS3	Bowl feeder for screw, 3 L

2. Voltage of vibrator

	Description
V1	110V / 60Hz
V2	230V / 50Hz

3. Control unit

	Description
NV-N	No logic, only vibration controller, No pneumatic
NV-P	Incl. Control unit A: No logic, only vibration controller and pneumatic
VL-P	Incl. Control unit B: Vibration and logic controller, RA-VLC-1, with pneumatic

4. Escapement

	Description
A	Auto-feeding (slider escapement)
B	Auto-feeding (sliced escapement)
P**	Automatic picking escapement
C**	Manual picking escapement with centering guide

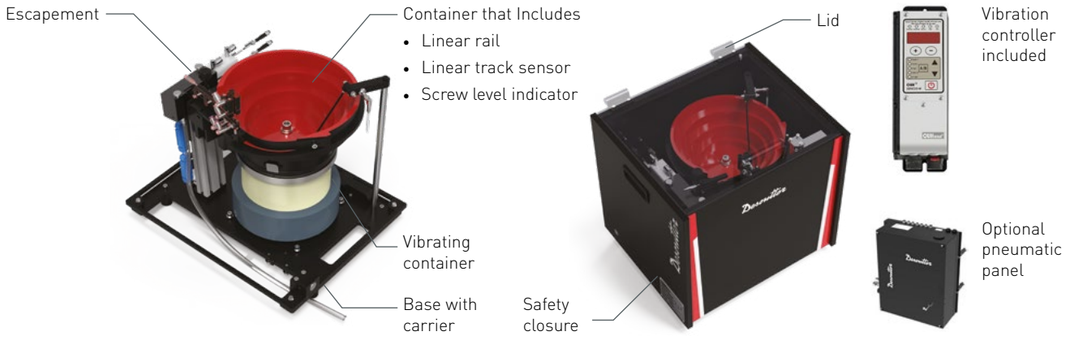
5. Options

	Description
N	No option
W	Washer hammer
H	Hopper interface on lid
C	With linear conveyor
T	For heavy head screw
M***	Mechanical key on lid
L***	E-locker on lid
Z***	Cylinder lock on lid

6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
J	NPN sensors

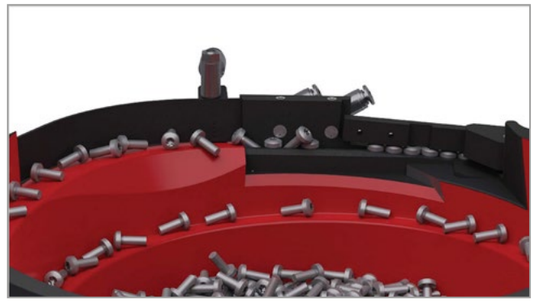
STRUCTURE



OPERATING PRINCIPLE



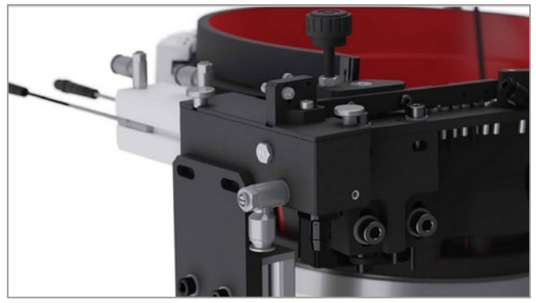
1. Screws are transferred from the container to the rail by vibration



2. Screws in the correct position are selected and incorrect ones are blown back into the container by airflow



3. Screws are sequentially conveyed along the guided track into the escapement; the sensor detects screw level and stops refilling when the rail is full to avoid jams



4. Screws are fed into the feed hose through the escapement, from which they are transported to the tightening module or presenter

REDUCING JAMMING RATE



Rail overload ejector

- To avoid screw jam within the rail due to too many screws on the rail



Escapement screw monitoring

- To ensure that the screw is fully engaged in the escapement to guarantee successful "selection" of the screw
- Reducing the jamming rate within the escapement

Feeder unit type

▶BS0.4

Feeder size (L × W × H) (without side panel)	317 × 256 × 250 mm
Weight (with side panel)	25 kg
Screw size	M1.6–M4
Max. screw head diameter	8 mm
Max. screw total length	25 mm
Max. air consumption	5.3 L/cycle
Max. sorting performance	60 (screws/min)
Maximum air pressure	6.3 bar
Air quality	According to ISO8573-1:2010 (7:4:4)
Noise level	<70 (db)
Fill volume	0.4 L



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CORE RANGE
VARIANTS
CUSTOMIZATION

▶BS1

Feeder size (L × W × H) (without side panel)	462 × 393 × 447 mm
Weight (with side panel)	50 kg
Screw size	M2.5–M6
Max. screw head diameter	12 mm
Max. screw total length	40 mm
Max. air consumption	5.3 L/cycle
Max. sorting performance	70 (screws/min)
Maximum air pressure	6.3 bar
Air quality	According to ISO8573-1:2010 (7:4:4)
Noise level	<70 (db)
Fill volume	1 L



RAPID Desoutter
CORE RANGE
VARIANTS
CUSTOMIZATION

▶BS3

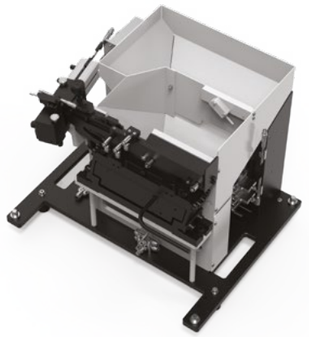
Feeder size (L × W × H) (with side panel)	749 × 548 × 490 mm
Weight (with side panel)	95 kg
Screw size	M5–M12
Max. screw head diameter	25 mm
Max. screw total length	100 mm
Max. air consumption	5.3 L/cycle
Max. sorting performance	45 (screws/min)
Maximum air pressure	6.3 bar
Air quality	According to ISO 8573-1:2010 (7:4:4)
Noise level	<85 (db)
Fill volume	3 L



RAPID Desoutter
CORE RANGE
VARIANTS
CUSTOMIZATION

Step feeder for screw

Volume options: 2.0 liter or 5.0 liter



- Low noise, low abrasion, gentle vibration
- Ideal for sensitive or surface-coated screws
- Highly resistant to screw contamination screws (oil or metallic dust)
- Anti-jam sensors
- Compatible for hose feeding and pick & place
- Multi-feeder locking management
- Multiple levels of automation
- Suitable for a wide range of screw types
- Suitable for clean room

RA	-	SS2	-	V1	-	VL-P	-	A	-	M	-	S
		1		2		3		4		5		6

1. Type

	Description
SS2	Step feeder for screw, 2 L
SS2P	Step feeder for screw, 2 L
SS5	Step feeder for screw, 5 L

2. Voltage of vibrator

	Description
V1	110V / 60Hz
V2	230V / 50Hz

3. Control unit

	Description
NV-N	No logic, only vibration controller, No pneumatic
NV-P	Incl. Control unit A: No logic, only vibration controller and pneumatic
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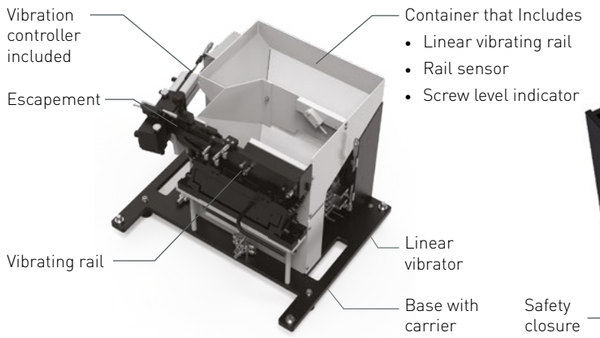
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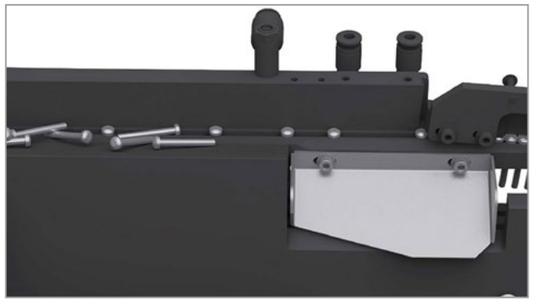
STRUCTURE



OPERATING PRINCIPLE



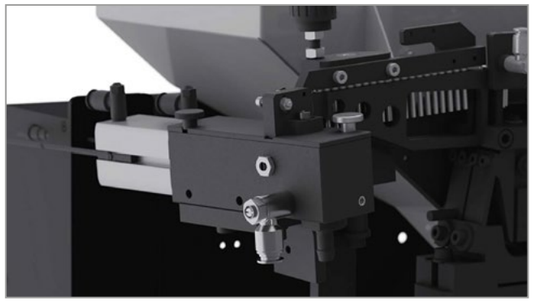
1. Screws are elevated to the guide rail by a lifting mechanism



2. Screws in the correct position are selected and incorrect ones are sorted back to the container by air flow

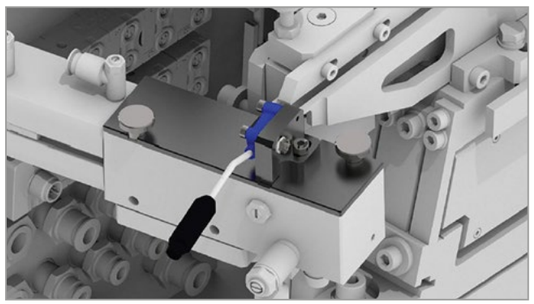


3. Screws are sequentially conveyed along the guided track into the escapement; Sensor detects screw level and stops refilling when the rail is full to avoid jams



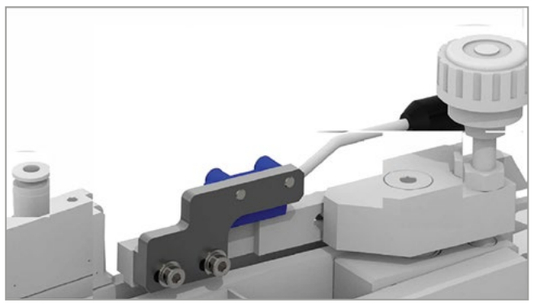
4. Screws are fed into the feed hose through the escapement, from which be transported to the tightening module or presenter

REDUCING JAMMING RATE



Rail overload ejector

- To avoid screw jam within the rail due to too many screws on the rail



Escapement screw monitoring

- To ensure that the screw is fully engaged into escapement to guarantee successful "selection" of the screw
- Reduce jamming rate within the escapement

Feeder unit type

▶ SS2 / SS2P *

Feeder size (L × W × H)	462 × 391 × 447 mm
Weight (with side panel)	40 kg
Screw size	M2.5–M8 (M10)*
Max. screw head diameter	15 mm (20 mm)*
Max. screw total length	40 mm
Max. air consumption	9 L/cycle
Max. sorting performance	60 (screws/min)
Maximum air pressure	6.3 bar
Air quality	According to ISO 8573-1:2010 (7:4:4)
Noise level	<70 (dB)
Fill volume	2 L



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VARIANTS
CUSTOMIZATION

▶ SS5

Feeder size (L × W × H)	800 × 700 × 930 mm
Weight (with side panel)	120 kg
Screw size	M6–M12
Max. screw head diameter	28 mm
Max. screw total length	100 mm
Max. air consumption	10 L/cycle
Max. sorting performance	30 (screws/min)
Maximum air pressure	6.3 bar
Air quality	According to ISO 8573-1:2010 (7:4:4)
Noise level	<80 (dB)
Fill volume	5 L



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VARIANTS
CUSTOMIZATION

Bowl feeder for nut

Volume options: 1.0 liter

- Simple structure and easy maintenance
- Suitable for nuts for which it is difficult to identify top and bottom sides, like lock nut
- Anti-jam sensors
- Rotary escapement
- Multi-feeder locking management
- Multiple levels of automation



RA - BN1 - V1 - VL-P - N - M - S

1 2 3 4 5 6

1. Type

	Description
BN1	Bowl feeder, 1.0L

2. Voltage of vibrator

	Description
V1	110V / 60Hz
V2	230V / 50Hz

3. Control unit

	Description
NV-N	No logic, only vibration controller, No pneumatic
NV-P	Incl. Control unit A: No logic, only vibration controller and pneumatic
VL-P	Incl. Control unit B: Vibration and logic controller, RA-VLC-1, with pneumatic

4. Escapement

	Description
N	Nut via rotary escapement

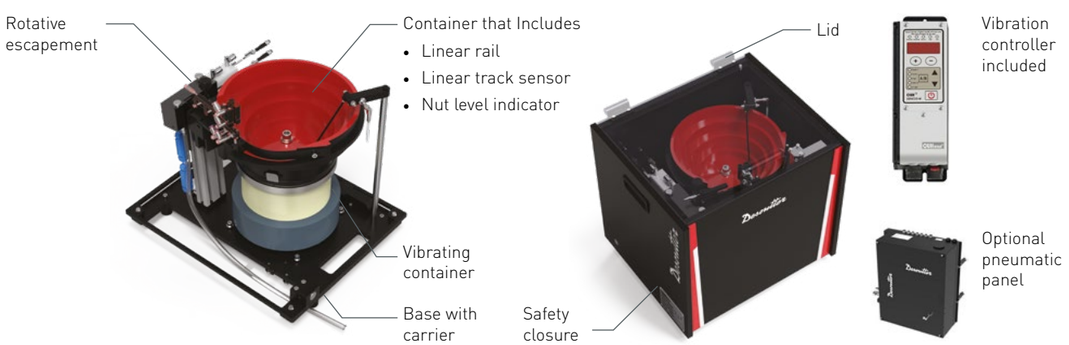
5. Options

	Description
N	No option
H	Hopper interface on lid
M	Mechanical key on lid
L	E-locker on lid
Z	Cylinder lock on lid

6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
J	NPN type

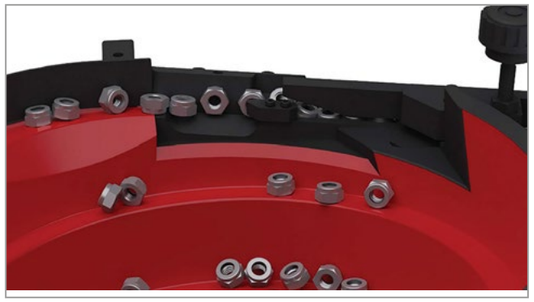
STRUCTURE



OPERATING PRINCIPLE



1. Nuts are transferred from container to the rail by vibration



2. Nuts in the correct position are selected and incorrect ones are sorted back to the container by air flow



3. Nuts are sequentially conveyed along the guided track into the escapement; Sensor detects nut level and stops refilling when the rail is full to avoid jam



4. Nuts are fed into the feed hose through the escapement, from which they are transported to the tightening module or presenter

Feeder unit type

▶BN1

Feeder size (L × W × H) (without side panel)	462 × 393 × 447 mm
Weight (with side panel)	50 kg
Nut size	M3–M6
Max. nut head diameter	13 mm
Max. nut total length	6 mm
Max. air consumption	5.3 L/cycle
Max. sorting performance	60 (nuts/min)
Maximum air pressure	6.3 bar
Air quality	According to ISO 8573-1:2010 (7:4:4)
Noise level	<70 (dB)
Fill volume	1 L



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VARIANTS

CUSTOMIZATION

Step feeder for nut

Volume options: 2.0 liter

- Low noise, low abrasion, gentle vibration
- Perfect for sensitive or surface-coated nuts
- Highly resistant to contaminated nuts (oil or metallic dust)
- Suitable for nuts for which it is easy to identify positive and negative side, like flanged nut, or no need to identify top and bottom sides, like hex nut
- Anti-jam sensors
- Rotary escapement
- Multi feeder locking management
- Multi levels of automation
- Suitable for clean room



RA - SN2 - V1 - VL-P - N - M - S
1 2 3 4 5 6

1. Type

	Description
SN2	Step feeder for nut, 2 L

2. Voltage of vibrator

	Description
V1	110V / 60Hz
V2	230V / 50Hz

3. Control unit

	Description
NV-N	No logic, only vibration controller, No pneumatic
NV-P	Incl. Control unit A: No logic, only vibration controller and pneumatic
VL-P	Incl. Control unit B: Vibration and logic controller, RA-VLC-1, with pneumatic

4. Escapement

	Description
N	Auto-feeding for nut (rotative escapement)

5. Options

	Description
N	No option
H	Hopper interface on lid
M	Mechanical key on lid
L	E-locker on lid
Z	Cylinder lock on lid

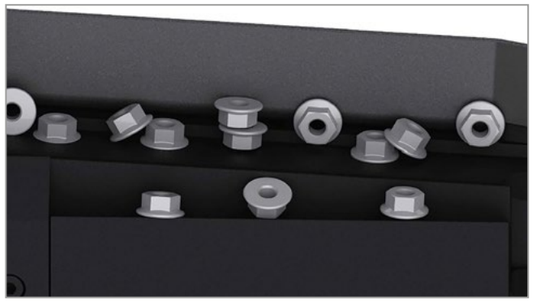
6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
J	NPN type

STRUCTURE



OPERATING PRINCIPLE



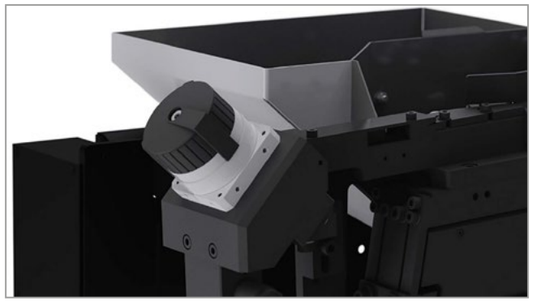
1. Nuts are elevated to the guide rail by a lifting mechanism



2. Nuts in the correct position are selected and incorrect ones are sorted back to the container by air flow



3. Nuts are sequentially conveyed along the guided track into the escapement ; Sensor detects nut level and stops refilling when the rail is full to avoid jam



4. Nuts are fed into the feed hose through the escapement, from which they are transported to the tightening module or presenter

Feeder unit type

▶SN2

Feeder size (L × W × H) (without side panel)	462 × 391 × 447 mm
Weight (with side panel)	40 kg
Nut size	M3–M6
Max. nut head diameter	14 mm
Max. nut total length	6 mm
Max. air consumption	5.3 L/cycle
Max. sorting performance	60 (nuts/min)
Maximum air pressure	6.3 bar
Air quality	According to ISO 8573-1:2010 (7:4:4)
Noise level	<70 (dB)
Fill volume	2 L



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VARIANTS
CUSTOMIZATION

Control Unit

For operating the feeder unit, tightening module and attachments

	Description
NV-N	No logic, only vibration controller, No pneumatics
NV-P	Incl. Control unit A: No logic, vibration controller and pneumatic
VL-P	Incl. Control unit B: Vibration and logic controller, RA-VLC-1, with pneumatic

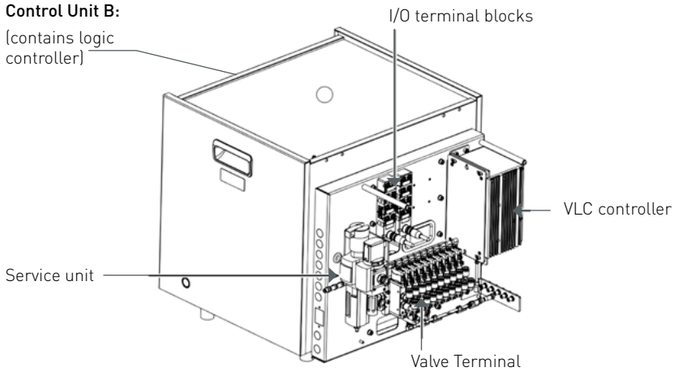


For versions NV-P and VL-P, multiple control configurations are available, enabling:

- Feeder-only operation
- Combined control of the feeder and one or more tightening modules
- Integrated control of the feeder, one or more accessories, and one or more tightening modules

STRUCTURE

Control Unit B:



VLC:



CONTENTS

TIGHTENING MODULES ..... p. 30

Fixture station

- Basic type for screw ..... p. 30
- Vacuum type for screw ..... p. 34
- Vacuum type for nut ..... p. 52

Manual station

- Basic type for screw ..... p. 42
- Vacuum type for screw ..... p. 45

FSS1

Fixture Station, Hose-feeding, Basic type

- For open spaces around tightening points
- Max. torque up to 100 Nm
- Tightening available in all directions
- Lightweight and compact design
- Easy maintenance
- Non-contact design ensures product safety
- Can be used with both a bit and a socket
- Perfect for robot applications and XYZ linear axis
- For screw with internal or external recess

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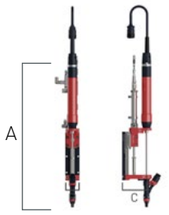
CORE RANGE

VARIANTS

CUSTOMIZATION



PRODUCT SPECIFICATIONS



Dimensions mm	Weight kg	Max. Air Consumption L/cycle
A ≥ 600; B ≥ 52; C ≥ 90	≥ 3	0.4

Max. Screw Head Diameter mm	Screw Size
25	M2.5–M12

PRODUCT SPECIFICATIONS

RA - FSS1 - [20] - [N] - [M] - [SM] - [N] - [N]

1 2 3 4 5 6

1. Max. torque

	Description
20	20 Nm
100	100 Nm

2. Feed stroke

	Description
N	No feed stroke

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

4. Loading head

	Description	Compatibility
SM	Swivel head	For vertical and angle down execution
SP	Swivel head, air holding	For bottom-up or horizontal execution
FI	Fixed head, long screws	For long screws, for vertical and angle down execution
FP	Fixed head, long screws, air holding	For long screws, bottom-up or horizontal execution

5. Options

	Description
N	No option
D	Depth sensor
Q	Quick bit change design
C	Rod for online calibration

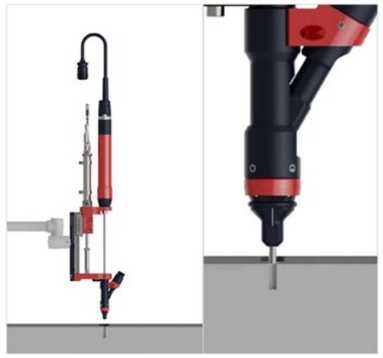
6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
I	Insulation
J	NPN sensors

OPERATING PRINCIPLE



1. The screw is sent through the hose to the Loading head and at the same time, the module moves above the target position.



2. When the tip of the screw reaches the beginning of the hole, the cycle starts.



3. The tool cylinder opens the jaws by pushing the screw.



4. The tool cylinder continues moving downward until the tightening process is complete.

FSS2

Fixture station, hose-feeding, basic type, with head stroke

- Dedicated Loading head stroke
- For tightening points with open access
- Max. torque up to 100Nm
- Tightening available in all directions
- Lightweight and compact design
- Easy maintenance
- No contact with the customer's product
- Can be used with both a bit and a socket
- Optimized for static module support structures
- For screw with internal or external recess

RAPID Desoutter

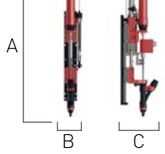
CORE RANGE

VARIANTS

CUSTOMIZATION



PRODUCT SPECIFICATIONS



Dimensions mm	Weight kg	Max. Air Consumption L/cycle
A ≥ 600; B ≥ 90; C ≥ 90	≥ 3.5	0.8

Max. Screw Head Diameter mm	Screw Size
25	M2.5–M12

PRODUCT SPECIFICATIONS

RA - FSS2 - [20] - [50] - [M] - [SM] - [N] - [N]

1 2 3 4 5 6

1. Max. torque

	Description
20	20 Nm
100	100 Nm

2. Head stroke

	Description
50	50 mm
100	100 mm

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

4. Loading head

	Description	Compatibility
SM	Swivel head	For vertical and angle down execution
SP	Swivel head, air holding	For bottom-up or horizontal execution
FI	Fixed head, long screws	For long screws, for vertical and angle down execution
FP	Fixed head, long screws, air holding	For long screws, bottom-up or horizontal execution

5. Options

	Description
N	No option
D	Depth sensor
Q	Quick bit change design
C	Rod for online calibration

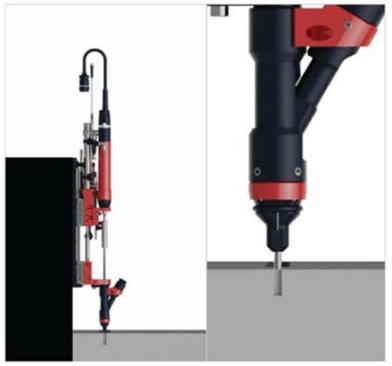
6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
I	Insulation
J	NPN sensors

OPERATING PRINCIPLE



1. Screw is sent by hose to the Loading head and at the same time, the module moves above the target position. The cycle starts



2. Loading head cylinder moves until the tip of the screw reaches the beginning of the hole



3. The tool cylinder opens the jaws by pushing the screw



4. The tool cylinder continues moving downward until the tightening process is complete

FSVS1B

Fixture Station, Hose-feeding, Vacuum bit type

- Single-stroke vacuum module
- Required for use in hard-to-reach points
- Vacuum tube holds screws
- Max. torque up to 100 Nm
- Available for tightening in all directions
- Perfect for robot applications and XY linear axis
- For screw with internal recess only

RAPID Desoutter

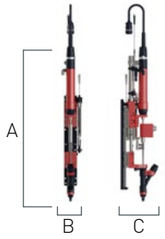
CORE RANGE

VARIANTS

CUSTOMIZATION



PRODUCT SPECIFICATIONS



Dimensions mm	Weight kg	Max. Air Consumption L/cycle
A ≥ 700; B ≥ 75; C ≥ 90	≥ 4.5	20

Max. Screw Head Diameter mm	Screw Size
25	M2.5–M12

PRODUCT SPECIFICATIONS

RA - FSVS1B - [20] - [50] - [M] - [SM] - [N] - [N]

1 2 3 4 5 6

1. Max. torque

	Description
20	20 Nm
100	100 Nm

2. Feed stroke

	Description
N	50 mm
100	100 mm

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

4. Loading head

	Description	Compatibility
SM	Swivel head	For vertical and angle down execution
SP	Swivel head, air holding	For bottom-up or horizontal execution
FI	Fixed head, long screws	For long screws, for vertical and angle down execution
FP	Fixed head, long screws, air holding	For long screws, bottom-up or horizontal execution
FT	Fixed head, top heavy screw	For short screws, vertical and angle-down execution

5. Options

	Description
N	No option
C	Rod for online calibration
D	Depth sensor
Q	Quick bit change design

6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
I	Insulation
J	NPN sensors

OPERATING PRINCIPLE



1. Screw is sent by hose to the Loading head, and at the same time, the module moves into the target position. The cycle starts



2. The approach cylinder moves the vacuum tube to suck the screw and directly open the jaws by pushing



3. The vacuum tube stops when the tip of screw is in the beginning of the hole



4. Thanks to the spring-loaded cylinder, the tool cylinder continues its downward motion until the tightening process is fully completed

FSVS2B

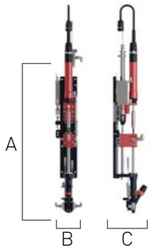
Fixture Station, Hose-feeding, Vacuum bit type

- Double-stroke vacuum module
- Required for use in very hard-to-reach points and complex screws
- Vacuum tube holds screws
- Max. torque up to 100Nm
- Available for tightening in all directions
- Perfect for robot applications and XY linear axis
- For screw with internal recess only

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CORE RANGE
VARIANTS
CUSTOMIZATION



PRODUCT SPECIFICATIONS



	Dimensions mm	Weight kg	Max. Air Consumption L/cycle
FSVS2B	L ≥700; W ≥100; H ≥90	≥ 5.5	20

	Max. Screw Head Diameter mm	Screw Size
FSVS2B	25	M2.5–M12

MODEL CONFIGURATION

RA - FSVS2B - [20] - [50] - [M] - [PP] - [N] - [N]
1 2 3 4 5 6

1. Max. torque

	Description
20	20 Nm
100	100 Nm

2. Feed stroke

	Description
50	50 mm
100	100 mm
150	150 mm

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

4. Loading head

	Description	Compatibility
PP	Lock head, pneumatic open	For bottom- up or horizontal execution

5. Options

	Description
N	No option
C	Rod for online calibration
D	Depth sensor
Q	Quick bit change design

6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
I	Insulation
J	NPN sensors

OPERATING PRINCIPLE



1. Screw is sent by hose to the Loading head, securely clamped by jaws and at the same time, the module moves to the target position. The cycle starts



2. The search cylinder moves the vacuum tube to suck the screw and stays in position





3. The pilot-operated jaws-locking cylinder and pilot-operated jaw-opening cylinder opens the jaws



4. The vacuum tube stops when the tip of the screw is in the beginning of the hole



5. Thanks to the spring-loaded cylinder, the tool cylinder continues its downward motion until the tightening process is fully completed



6. Once fastening is completed, the tool cylinder retracts, vacuum deactivates, jaw cylinder returns

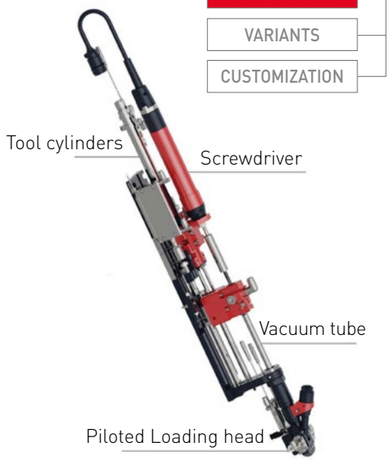
FSVS2S

Fixture Station, Hose-feeding, Vacuum socket type for screws with external recess

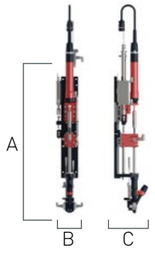
- Double-stroke vacuum module
- Suitable for situations with surrounding interference at the tightening location
- Vacuum tube holds screws
- Max. torque up to 100Nm
- Available for tightening in all directions
- Perfect for robot applications and XY linear axis
- For screw with external recess only

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VARIANTS
CUSTOMIZATION



PRODUCT SPECIFICATIONS



	Dimensions mm	Weight kg	Max. Air Consumption L/cycle
FSVS2S	L ≥700; W ≥100; H ≥90	≥ 6	20

	Max. Screw Head Diameter mm	Screw Size
FSVS2S	25	M2.5–M12

MODEL CONFIGURATION

RA - FSVS2S - [1] - [2] - [3] - [4] - [5] - [6]

1. Max. torque

	Description
20	20 Nm
100	100 Nm

2. Feed stroke

	Description
50	50 mm
100	100 mm
150	150 mm

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

4. Loading head

	Description	Compatibility
PM	Lock head, mechanical open	For bottom- up or horizontal execution

5. Options

	Description
N	No option
C	Rod for online calibration
D	Depth sensor
Q	Quick bit change design

6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
I	Insulation
J	NPN sensors

OPERATING PRINCIPLE



1. Screw is sent by hose to the Loading head, securely clamped by jaws and at the same time,the module moves to the target position. The cycle starts



2. The tool cylinder moves and rotates the vacuum tube to suck and engage the screw

3. The pilot-operated jaws-locking cylinder opens and the tool cylinder moves and rotates the vacuum tube to engage the screw. The tool cylinder continues its downward motion until the tightening process is fully completed





4. Fastening completed, tool cylinder retracts, vacuum deactivates, jaw cylinder returns

FSVL1B

Fixture Station, Hose-feeding, Vacuum bit type, Lightweight design

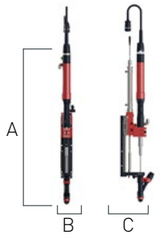
- The lightweight design of FSVS1B
- Single-stroke vacuum module
- Required for use in hard-to-reach points
- Vacuum tube holds screws
- Max. torque up to 20 Nm
- Available for all tightening directions
- Perfect for robot applications and XY linear axis
- For screw with internal recess only

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CUSTOMIZATION



PRODUCT SPECIFICATIONS



Dimensions mm	Weight kg	Max. Air Consumption L/cycle
A ≥600; B ≥52; C ≥90	3.6	20

Max. Screw Head Diameter mm	Screw Size
15	M2.5–M6

MODEL CONFIGURATION

RA - FSVL1B - [1] - [2] - [3] - [4] - [5] - [6]

1. Max. torque

	Description
20	20 Nm

2. Feed stroke

	Description
50	50 mm
100	100 mm

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

4. Loading head

	Description	Compatibility
SM	Swivel head	For vertical and angle down execution
SP	Swivel head, air holding	For bottom-up or horizontal execution
FI	Fixed head, long screws	For long screws
FP	Fixed head, long screws, air holding	For long screws, bottom-up or horizontal execution

5. Options

	Description
N	No option
C	Rod for online calibration
D	Depth sensor
Q	Quick bit change design

6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
I	Insulation
J	NPN sensors

Optional pneumatics

Air pressure regulation
Vacuum valve

OPERATING PRINCIPLE



1. Screw is sent by hose to the Loading head, and at the same time, the module moves to the target position. The cycle starts



2. The tool cylinder moves the vacuum tube to suck the screw and directly to open the jaws by pushing the screw



3. The vacuum tube descends until the tip of the screw is at the beginning of the hole. The spring inside the tube then releases the tip, allowing tightening to begin.



4. The tool cylinder continues its downward motion until the tightening process is fully completed.

HSC1

Hand-held station, Hose-feeding, Basic type, Integrated cylinder

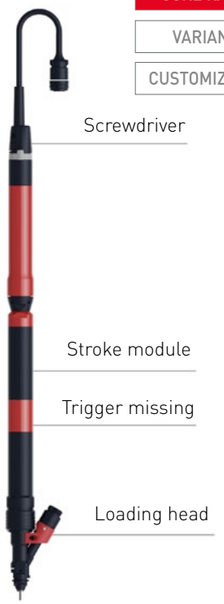
- Dedicated to manual station
- Recommended for use with D53 and guidance

RAPID Desoutter

CORE RANGE

VARIANTS

CUSTOMIZATION



PRODUCT SPECIFICATIONS



Dimensions mm	Weight kg	Max. Air Consumption L/cycle
A ≥754; B ≥45; C ≥86	2.2	0.8

Max. Screw Head Diameter mm	Screw Size
8	M2.5–M4

MODEL CONFIGURATION

RA - HSC1 - [20] (1) - [N] (2) - [M] (3) - [SQ] (4) - [N] (5) - [N] (6)

1. Max. torque

	Description
20	20 Nm

2. Feed stroke

	Description
N	No feed stroke

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS

4. Loading head

	Description	Compatibility
SQ	Swivel head	For vertical down execution
FQ	Fixed head, long screws	For vertical down execution, long screw

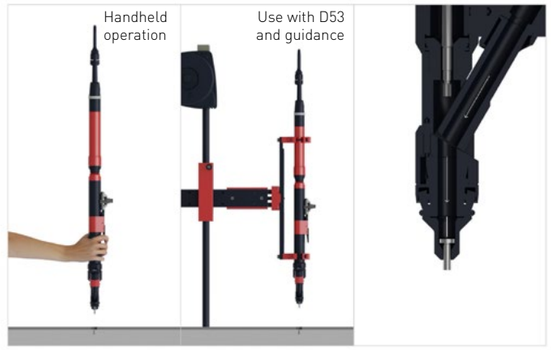
5. Options

	Description
N	No option

6. Additional information

	Description
N	No option

OPERATING PRINCIPLE



1. Screw is sent by hose to the Loading head, and at the same time, the operator moves the module above the target position.



2. When the tip of screw is at the beginning of the hole, pull the trigger to run bit downward and open the jaws.



3. The bit continues its downward motion until the tightening process is fully completed.

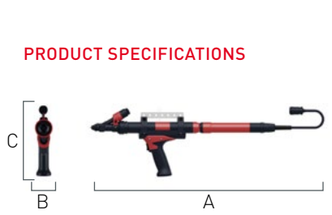
HSC1P

Hand-held station, Hose-feeding, Basic type, Integrated cylinder

RAPID Desoutter
CORE RANGE
VARIANTS
CUSTOMIZATION

- Dedicated to manual stations
- Suitable for tightening in a horizontal position

PRODUCT SPECIFICATIONS





Dimensions mm	Weight kg	Max. Air Consumption L/cycle	Max. Screw Head Diameter mm	Screw Size
A ≥754; B ≥45; C ≥210	2.3	0.8	8	M2.5–M6

MODEL CONFIGURATION

RA - HSC1P - 20 (1) - N (2) - M (3) - SQ (4) - N (5) - N (6)

1. Max. torque

	Description
20	20 Nm

2. Feed stroke

	Description
N	No feed stroke

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS

4. Loading head

	Description	Compatibility
SQ	Swivel head	Normal use
FQ	Fixed head, long screws	For long screw

5. Options

	Description
N	No option

6. Additional information

	Description
N	No option

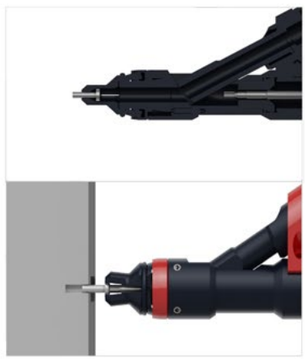
OPERATING PRINCIPLE



1. Screw is sent by hose to the Loading head and at the same time, the operator moves the module in front of the target position.



2. When the tip of screw arrives in the beginning hole, pull the trigger to move bit forward and open the jaws.



3. The bit continues its motion until the tightening process is fully completed.

HSVC1B / HSVC1S

HSVC1B: Hand-held station, Hose-feeding, Vacuum bit type, Integrated cylinder
HSVC1S: Hand-held station, Hose-feeding, Vacuum socket type, Integrated cylinder

RAPID Desoutter
CORE RANGE
VARIANTS
CUSTOMIZATION

- Dedicated to manual station
- Recommended for use with D53 or guidance

PRODUCT SPECIFICATIONS



	Dimensions mm	Weight kg	Max. Air Consumption L/cycle
HSVC1B	A ≥804; B ≥45; C ≥86	≥ 2.3	20
HSVC1S	A ≥846; B ≥56; C ≥138	≥ 2.5	20

	Max. Screw Head Diameter mm	Screw Size
HSVC1B	15	M2.5–M6
HSVC1S	17	M3–M8



MODEL CONFIGURATION

RA - HSVC1B / HSVC1S - 20 (1) - 50 (2) - M (3) - SQ (4) - N (5) - N (6)

1. Max. torque

	Description
20	20 Nm

2. Feed stroke

	Description
50	50 mm
100	100 mm

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS

4. Loading head

	Description	Compatibility
SQ	Swivel head	Normal use
FQ	Fixed head, long screws	For long screw

5. Options

	Description
N	No option

6. Additional information

	Description
N	No option

WORK PRINCIPLE



1. The screw is sent through the hose to the Loading head, and at the same time, the operator moves the module above the target position.



2. Pull the trigger to move the vacuum tube downward and open the jaws.



3. The vacuum tube descends until the tip of the screw is at the beginning of the hole. The spring inside the tube then releases the tip, allowing tightening to begin and continues its motion until the tightening process is fully completed.

HSVC1PB / HSVC1PS

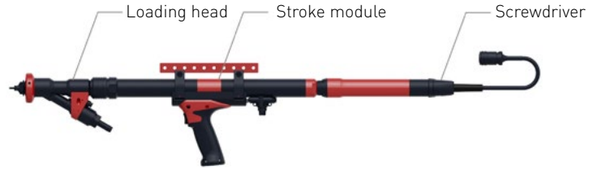
HSVC1PB: Hand-held station, Hose-feeding, Vacuum bit type, Integrated cylinder
HSVC1PS: Hand-held station, Hose-feeding, Vacuum socket type, Integrated cylinder

RAPID Desoutter
CORE RANGE
VARIANTS
CUSTOMIZATION

Suitable for tightening in a horizontal position

PRODUCT SPECIFICATIONS





	Dimensions mm	Weight kg	Max. Air Consumption L/cycle	Max. Screw Head Diameter mm	Screw Size
HSVC1B	A ≥454; B ≥45; C ≥1377	≥ 3.18	20	15	M2.5–M6
HSVC1S	A ≥568; B ≥56; C ≥138	≥ 3.38	20	17	M3–M8

MODEL CONFIGURATION

RA - HSVC1PB / HSVC1PS - [20] - [N] - [M] - [SQ] - [N] - [N]
1 2 3 4 5 6

1. Max. torque

	Description
20	20 Nm

2. Feed stroke

	Description
50	50 mm
100	100 mm

5. Options

	Description
N	No option

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS

6. Additional information

	Description
N	No option

OPERATING PRINCIPLE



1. Screw is sent by hose to the Loading head.



2. Move to the correct working position



3. Pull the trigger to move vacuum tube forward and open the jaws.



4. The vacuum tube descends until the tip of the screw is at the beginning of the hole. The spring inside the tube then releases the tip, allowing tightening to begin and continues its motion until the tightening process is fully completed.

FSVP0 / HSVP0

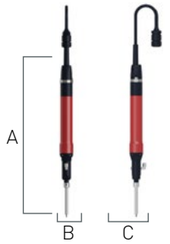
Vacuum pick-up type, No stroke
Fixture station or hand-held station

RAPID Desoutter
CORE RANGE
VARIANTS
CUSTOMIZATION

Generally used in conjunction with a presenter



PRODUCT SPECIFICATIONS



Dimensions mm	Weight kg	Max. Air Consumption L/cycle
A ≥450; B ≥40; C ≥20	≥ 0.5	20

Max. Screw Head Diameter mm	Screw Size
25	M2.5–M6

MODEL CONFIGURATION

RA - FSVP0 / HSVP0 - [20] - [N] - [M] - [N] - [N]
1 2 3 4 5

1. Max. torque

	Description
20	20 Nm

2. Feed stroke

	Description
N	No feed stroke

5. Options

	Description
N	No option
D	Depth sensor

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

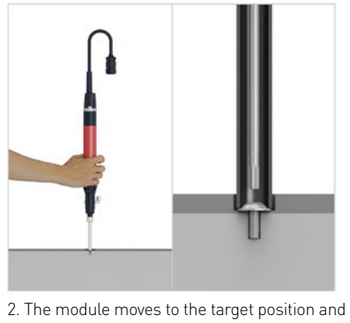
6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340

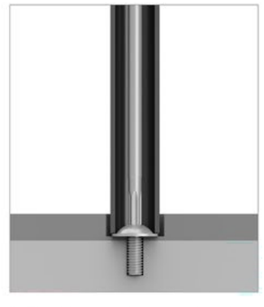
OPERATING PRINCIPLE



1. Screw is taken from presenter or other picking device.



2. The module moves to the target position and the vacuum tube descends until the tip of the screw is at the beginning of the hole. The spring inside the tube then releases the tip, allowing tightening to begin.



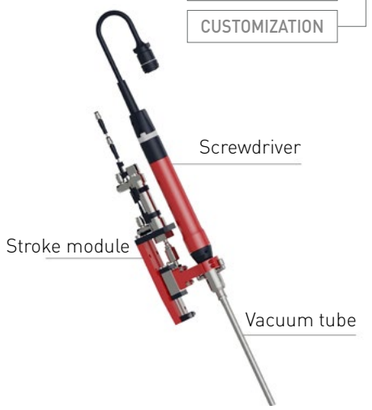
3. The bit runs downward to the tightening point, completing the fastening process.

FSVP1B / FSVP1S

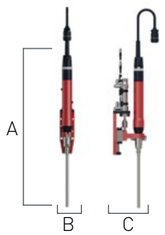
FSVP1B: Fixture Station, Vacuum pick-up bit type
FSVP1S: Fixture Station, Vacuum pick-up socket type

RAPID Desoutter
CORE RANGE
VARIANTS
CUSTOMIZATION

- Generally used in conjunction with a presenter
- Perfect for robot applications and XY linear axis
- Very compact and lightweight design
- Easy maintenance



PRODUCT SPECIFICATIONS



Dimensions mm	Weight kg	Max. Air Consumption L/cycle
A ≥450; B ≥50; C ≥75	≥0.5	20

Max. Screw Head Diameter mm	Screw Size
25	M2.5–M6

MODEL CONFIGURATION

RA - FSVP1B / FSVP1S - [20] - [30] - [M] - [N] - [N]
1 2 3 4 5

1. Max. torque

	Description
20	20 Nm

2. Feed stroke

	Description
30	30 mm

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

4. Options

	Description
N	No option
D	Depth sensor

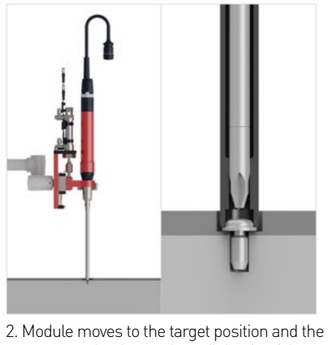
5. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340

OPERATING PRINCIPLE



1. Screw is taken from presenter or other picking device.



2. Module moves to the target position and the vacuum tube descends until the tip of the screw is at the beginning of the hole. The cycle starts. The spring inside the tube then releases the tip, allowing tightening to begin.



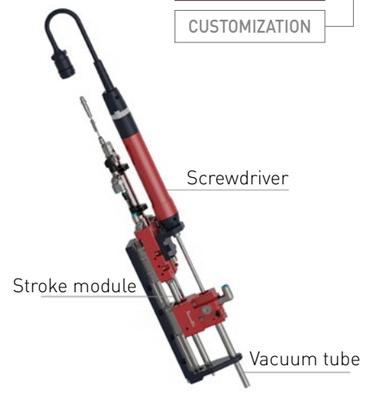
3. The bit continues its motion until the tightening process is fully completed.

FSVP2B / FSVP2S

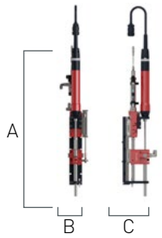
FSVP2B: Fixture Station, Vacuum pickup bit type, Head by approach
FSVP2S: Fixture Station, Vacuum pickup socket type, Head by approach

RAPID Desoutter
CORE RANGE
VARIANTS
CUSTOMIZATION

- Generally used in conjunction with a presenter



PRODUCT SPECIFICATIONS



Dimensions mm	Weight kg	Max. Air Consumption L/cycle
A ≥550; B ≥75; C ≥90	≥4.9	20

Max. Screw Head Diameter mm	Screw Size
25	M2.5–M6

MODEL CONFIGURATION

RA - FSVP2B / FSVP2S - [20] - [50] - [M] - [N] - [N]
1 2 3 4 5

1. Max. torque

	Description
20	20 Nm

2. Feed stroke

	Description
50	50 mm

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

4. Options

	Description
N	No option
D	Depth sensor
Q	Quick bit change design

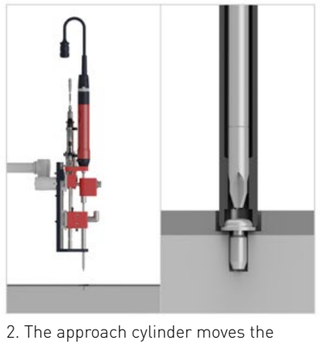
5. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
I	Insulation
J	NPN sensors

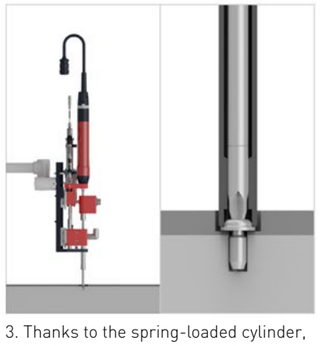
OPERATING PRINCIPLE



1. Screw is taken from presenter or other picking device.



2. The approach cylinder moves the vacuum tube downward to the target position. The cycle starts.

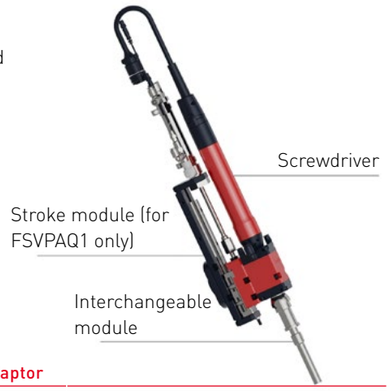


3. Thanks to the spring-loaded cylinder, the tool cylinder continues its downward motion until the tightening process is complete.

FSVPAQ0 / HSVPAQ0 / FSVPAQ1

FSVPAQ0: Fixture station, Quick-change, Vacuum pick-up bit/socket type, No stroke
HSVPAQ0: Hand-held station, Quick-change pick-up bit/socket type, No stroke
FSVPAQ1: Fixture station, Quick-change, Vacuum pick-up bit/socket type

- Meets customer flexibility requirements
- Single unit supports multiple screw sizes
- For robotic applications, FSVPAQ1 quick-change configuration is recommended
- For manual applications, HSCPAQ0 should be assembled on D53 arm



MODEL CONFIGURATION

quick change:

RA	-	FSVPAQ0	-	S	-	20-80	-	M	-	N
		1		2		3		4		5

quick change storage:

RA	-	ST	-	S	-	9
				2		6

1. Tightening module type

	Description
FSVPAQ0	Fixture Station, no stroke
HSVPAQ0	Hand-held Station, no stroke
FSVPAQ1	Fixture Station, stroke model

2. Module size

	Description	Compatibility
S	Small	M2.5-M6, d≤10 mm
L	Large	M6-M12

3. Max. torque and feed stroke

	Max. torque (Nm)	Feed stroke (mm)
20-0	20	0
20-80	20	80
100-0	100	0
100-80	100	80

4. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
E	E43/51	EFD43, EFD51
C	Clamping	ERF

5. Options

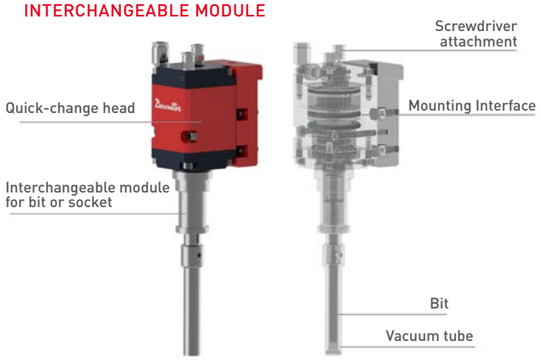
	Description
N	No option

6. Code

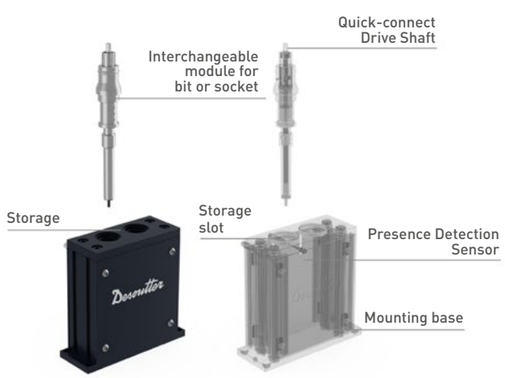
	Description	Compatibility
n	n	2, 3, 4

MAIN STRUCTURE

- QUICK-CHANGE HEAD AND INTERCHANGEABLE MODULE



- INTERCHANGEABLE MODULE AND STORAGE BOX



OPERATING PRINCIPLE



1. The quick-change head securely grips the interchangeable module from the storage box.



2. The screw is taken from a presenter or other picking device.



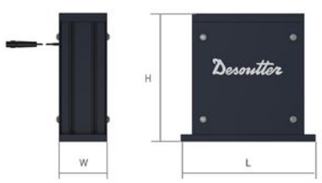
3. The module moves to the target position and the vacuum tube descends until the tip of the screw is at the beginning of the hole of the hole. The cycle starts. The spring inside the tube then releases the tip, allowing tightening to begin.



4. The tool cylinder continues its downward motion until the tightening process is fully completed.

STORAGE BOX

Dimensions Schematic:



		Dual-slot	Triple-slot	Quad-slot
Dimensions (mm)	L	180	230	280
	W	64	64	64
	H	172	172	172
Weight (kg)		2.5	3	3.5

FNVNS1N

- Fixture station, Hose-feeding module, Nut system, Vacuum type
- Suitable for tightening various types of nuts
- Dedicated for nut feeding
- Tightening in all directions
- Lightweight design
- Perfect for robot applications

PRODUCT SPECIFICATIONS



Dimensions mm	Weight kg	Max. Air Consumption L/cycle
A ≥673; B ≥52; C ≥92	4.3	20

Max. Screw Head Diameter mm	Screw Size
15	M3–M6

MODEL CONFIGURATION

RA - FNVNS1N - [20] - [50] - [M] - [NS] - [N]

1 2 3 4 5

1. Max.torque

	Description
20	20 Nm
100	100 Nm

2. Feed stroke

	Description
50	50 mm
100	100 mm

3. Mounting adaptor

	Description	Compatibility
M	M20	ERS-M20, ECS-M20, ECSF, ERSF, EIDS
MB	M20, shock resistant	
E	E43/51	EFD43, EFD51
C	Clamping	ERF, ECF

4. Options

	Description
N	No option
D	Depth sensor

6. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
I	Insulation
J	NPN sensors

RAPID Desoutter

CORE RANGE
VARIANTS
CUSTOMIZATION



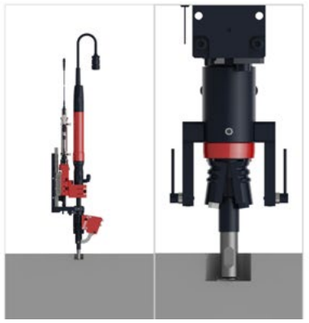
OPERATING PRINCIPLE



1. The nut is sent through the hose to the Loading head and at the same time, the module moves to the target position. The cycle starts.



2. The tool cylinder moves the vacuum tube to suck the nut and directly opens the jaws by pushing.



3. The tool cylinder continues its downward motion until the tightening process is fully completed.

HPB

Belt Hopper

- For refilling the feeder
- Increases screw storage capacity

MODEL CONFIGURATION

RA - [HPB10] - [V2] - [N] - [N]

1 2 3 4

5. Fill volume

	Description
3	3.5 L
10	10 L
20	20 L
80	80 L
200	200 L

4. Voltage

	Description
V1	110V / 60Hz
V2	230V / 50Hz



5. Options

	Description
N	No option
M	Mechanical key on lid
L	E-locker on lid
Z	Cylinder lock on lid

4. Additional information

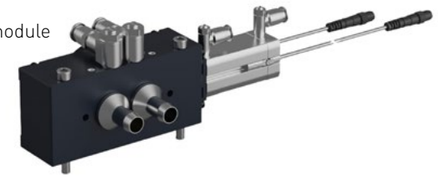
	Description
N	No option
S	ESD compliant to IEC 61340
J	NPN type

APPLICATION SCENARIOS



DT
Distributor

- Screws from one feeder can be distributed to multiple tightening modules
- Similar screws can be distributed from multiple feeders to one tightening module



MODEL CONFIGURATION

RA - DT - 12 - S-8 - N

1 2 3 4

1. Accessory type

	Description
DT	Distributor for screw
DTN	Distributor for nut

3. Inner diameter

	Description	Note
S-n	n(mm)	6 ≤ n ≤ 10
M-n		11 ≤ n ≤ 15
L-n		16 ≤ n ≤ 25

5. Distributor type

	Description
12	1 in, 2 out
14	1 in, 4 out
21	2 in, 1 out
41	4 in, 1 out

4. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
J	NPN type

APPLICATION SCENARIOS



2 in 1 out



1 in 2 out

PS
Presenter

- Suitable for pick & place models



MODEL CONFIGURATION

RA - PS - N - S-8 - N

1 2 3 4

4. Accessory type

	Description
PS	Presenter for screw
PN	Presenter for nut

3. Inner diameter

	Description	Note
S-n	n(mm)	6 ≤ n ≤ 10
M-n		11 ≤ n ≤ 15
L-n		16 ≤ n ≤ 25

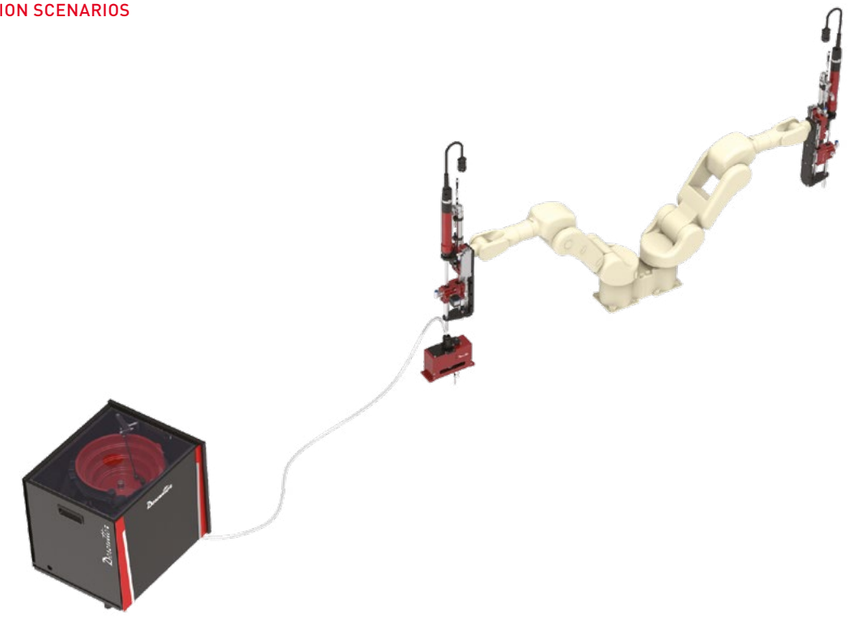
4. Presenter type

	Description
G	Male recess screw
N	Female recess screw

4. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
J	NPN type
C	Centering guide for manual pick & place module

APPLICATION SCENARIOS



SC

Particle Cleaner

Cleans the screw during the blowing process



MODEL CONFIGURATION

RA	-	SC	-	V	-	S-8	-	N
		1		2		3		4

1. Accessory Type

	Description
SC	Particle cleaner for screw
NC	Particle cleaner for nut

2. Clean function

	Description
V	Vacuum suction

3. Inner diameter

	Description	Note
S-n	n(mm)	6 ≤ n ≤ 10
M-n		11 ≤ n ≤ 15
L-n		16 ≤ n ≤ 25

4. Additional information

	Description
N	No option
S	ESD compliant to IEC 61340
J	NPN type

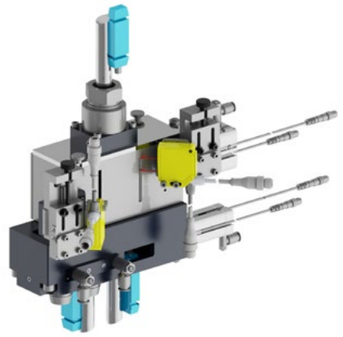
APPLICATION SCENARIOS



SLC

Screw length check

For automatic detection of screw length



MODEL CONFIGURATION

RA	-	SLC	-	1	-	N
		1		2		3

1. Accessory type

	Description
SLC	Shaft length check

2. Version

	Description
1	Standard version
2	Customized version

3. Inner diameter

	Description	Note
S-n	n(mm)	6 ≤ n ≤ 10
M-n		11 ≤ n ≤ 15
L-n		16 ≤ n ≤ 25

4. Additional information

	Description
N	No option
J	NPN sensors

1st Version

Shaft diameter	Max. Head Diameter (mm)	Head thickness (mm)	Shaft length (mm)
M3–M6	15	8	40 mm – head thickness

NOTES

More Than Productivity

English
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