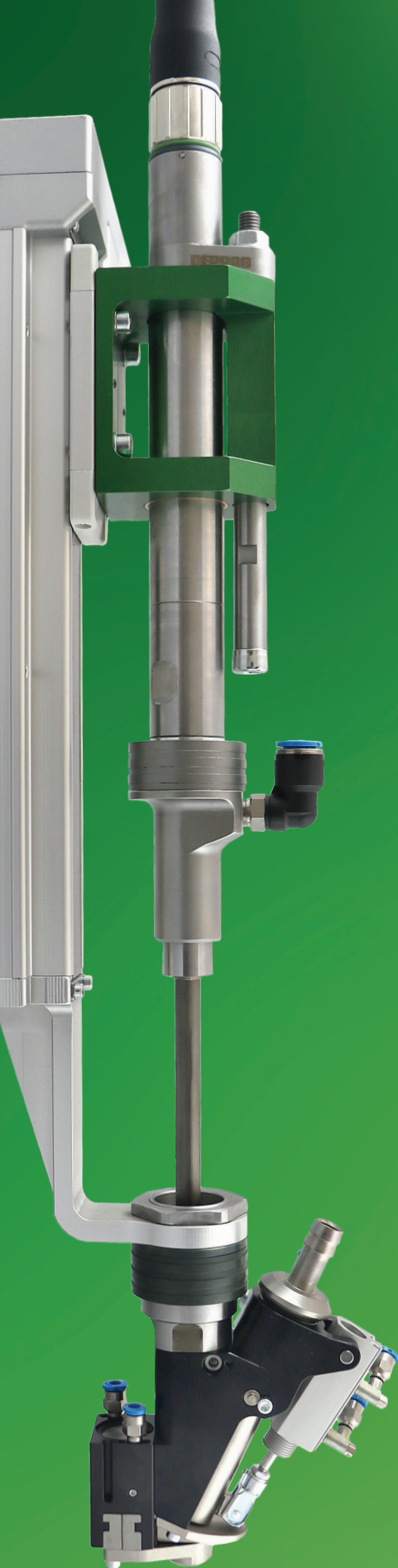# DEPRAG

machines unlimited

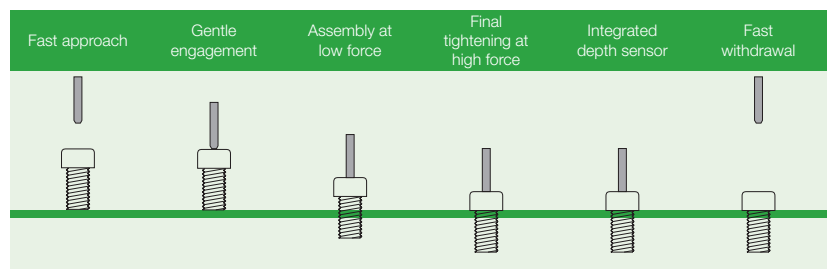# SCREWDRIVER FUNCTION MODULE WITH ELECTRONIC STROKE (E-SFM)

ADVANTAGES

> Flexibility

The Screwdriver Function Module with electronic stroke (E-SFM) has been optimally designed to react flexibly to complex screwdriving tasks, new fasteners and varying assembly requirements.

> Precise parameter control

- force
- speed
- position

Fast approach	Gentle engagement	Assembly at low force	Final tightening at high force	Integrated depth sensor	Fast withdrawal

> Process reliability

Avoid applying unnecessary stress to your component by optimally adjusting force and speed in your screwdriving application. A gentle engagement process will extend the life of your bit.

> Improved cycle time

Flexible positioning of the bit enables different processing steps to be combined with one another. This can improve the cycle time and increase the productivity of your application.

> One system – many screwdriving directions

Whether downwards or upwards, horizontally or at a particular angle – the E-SFM can do the job without losing the fastener position.

> Integrated depth sensor

The E-SFM can be flexibly programmed and is therefore suitable for various screw heights.
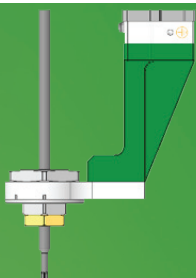
> Suitable for lightweight robots

Due to its low weight, the E-SFM is ideal for use in applications in conjunction with lightweight robots.
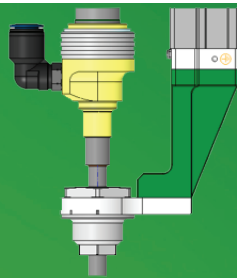
> E-SFM manager

Simple parameterisation software in responsive design.
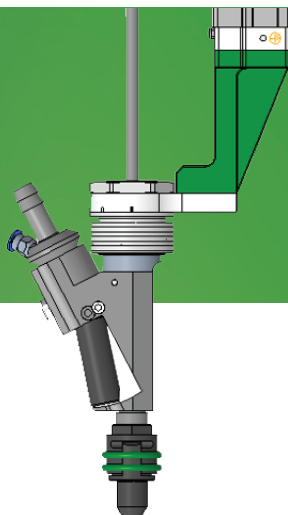
Versions

Without feeding

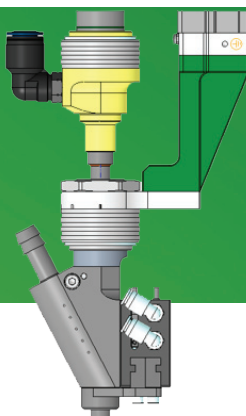- if the fastener is pre-positioned

With Pick-and-Place

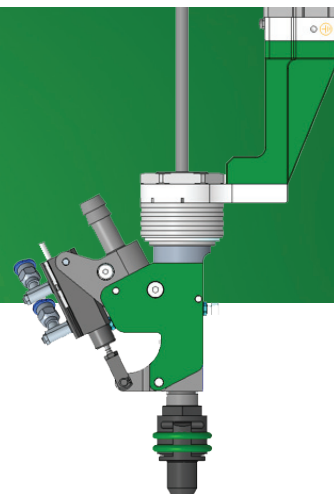- if the fastener is fed using pick-and-place or via hose and precisely positioned using vacuum tube

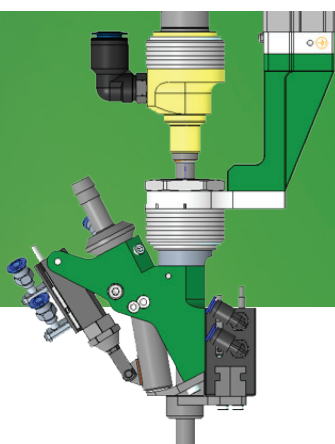## With feeding

- tiltable mouthpiece

With feeding

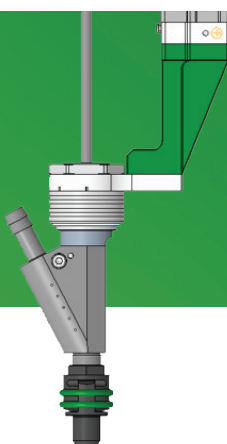- mouthpiece with active nosepiece jaws (MAS)

With feeding

- swivel mouthpiece

With feeding
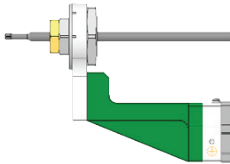
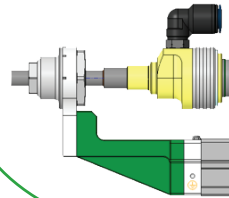- mouthpiece with active nosepiece jaws swivel (MASS)
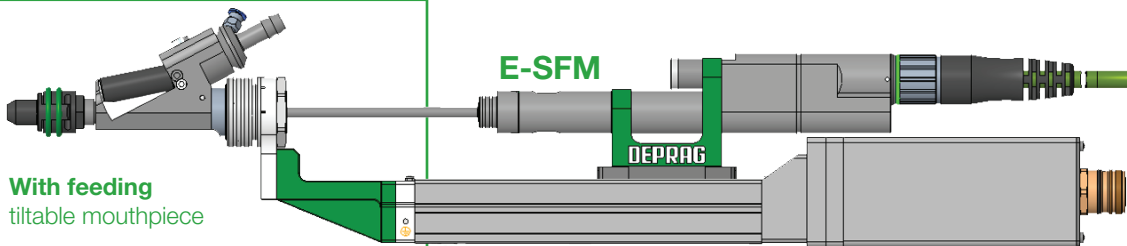
With feeding
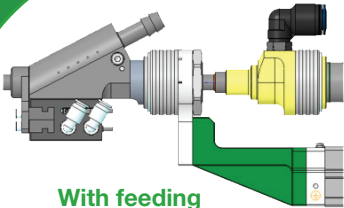
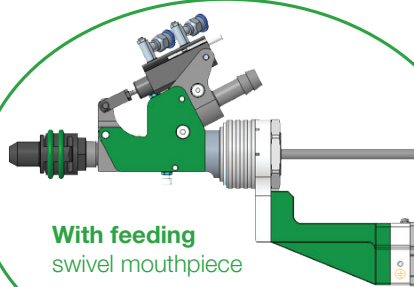- rigid mouthpiece

Versions

Without feeding

Pick-and-Place

E-SFM

With feeding
tiltable mouthpiece
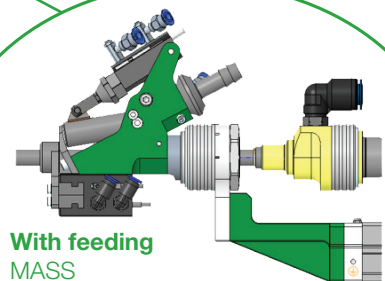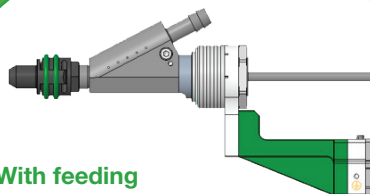
With feeding
MAS

With feeding
swivel mouthpiece

With feeding
MASS

With feeding
rigid mouthpiece

Overview

Switch cabinet

Power supply

„Safe stop" module (optionally)

E-controller

Sequence controller

Motor cable

Screwdriver

E-SFM

Feeder

USB

Software E-SFM Manager

SPS (DPU210)
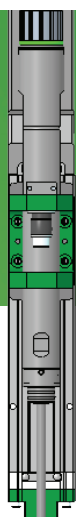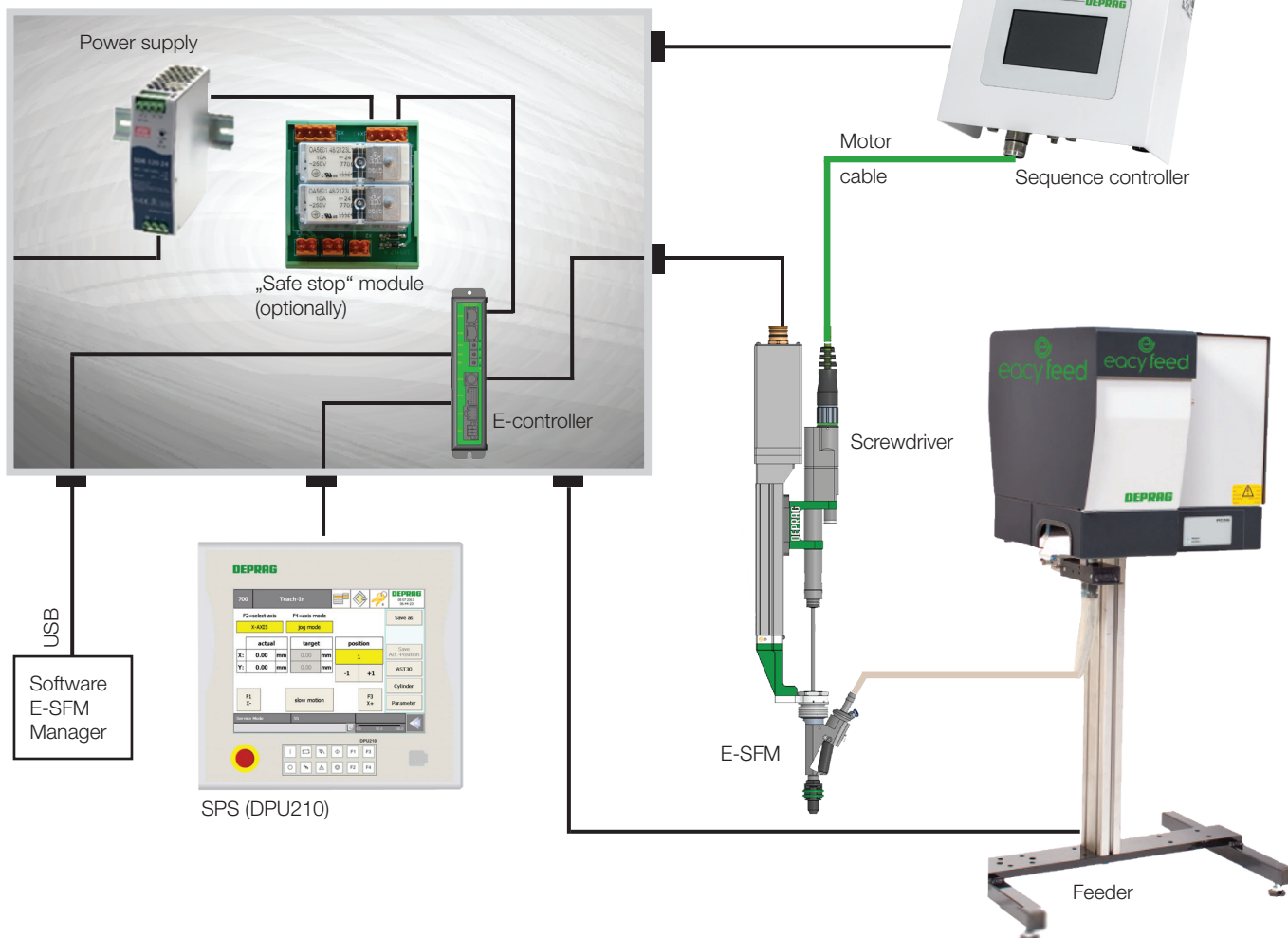
Motor attachment axial

Motor attachment left

Motor attachment right

Technical data

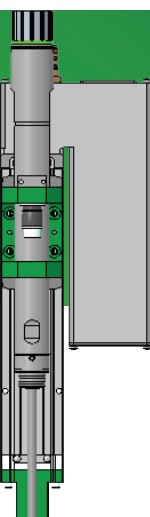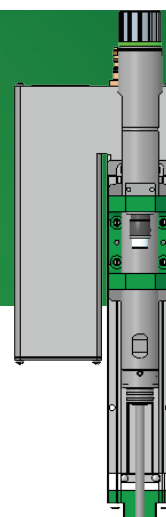| Screwdriver Function Mudule with electronic stroke (E-SFM)		
Screw head-ø max.	mm	14
Torque range	Nm	01 - 18
Shaft-ø max.		M8
Nut max.		M6
Nosepiece length	mm	40/80
Free stroke for vacuum	mm	50/100
Installation position / working direction		any
Linear axis		
Size		16/25
Stroke	mm	100/150/200/250
Motor attachment		axial/left/right
Positioning accuracy	mm	± 0,02
Speed max.	mm/s	700
Pressure force [1] max.	N	45/190
Pressure force [1] min.	N	1% of the max. value
Feed versions		Without feeding
		Pick-and-Place
		With feeding - rigid mouthpiece
		With feeding - tiltable mouthpiece
		With feeding - swivel mouthpiece
		With feeding - mouthpiece with active nosepiece jaws
		With feeding - mouthpiece with active nosepiece jaws swivel

[1] The attainable pressure force is dependent on the installation position / working direction.

Required Accessories

E-Control	E-SFM digital inputs/outputs	Part no.	119007A
E-Control	E-SFM EtherCAT	Part no.	119007B
E-Control	E-SFM Profinet	Part no.	119007C
E-Control	E-SFM EtherNet/IP	Part no.	119007D
E-Control	E-SFM IO-Link	Part no.	119007E
Motor cable	E-SFM length 5m	Part no.	165874
Motor cable	E-SFM length 8m	Part no.	1658741
Motor cable	E-SFM length 12m	Part no.	1658742
Cable	Programming E-Control E-SFM	Part no.	171606
Software	E-SFM Manager *	Part no.	192336

* The E-SFM Manager software is not mandatory for parameter transfer via field bus.

Accessories

Description - Software E-SFM Manager - material no. 192336

The E-SFM Manager is used for parameter adjustment of movement steps (sequences),
as well as to save these on the E-Control.

The software download is available from the myDEPRAG customer portal (my.deprag.com). Registered users can activate the activation code and manage licences in MY ACCOUNT > DEPRAG Apps.

Optionally available software products

Software TIA Link (activation key)	Material no.	135839
Software TwinCAT Link (activation key)	Material no.	140996

Optional component for the installation into a switch cabinet - material no. 105452A

„Safe stop" module

The "Safe stop" module disconnects the power supply to the linear axis.
Power supply for the E-control remains unchanged. Disconnection is implemented with two channels with feedback contacts so that a performance level PL e in accordance with DIN EN ISO 13849-1 with a PFH [1/h] of 4.29E-8 is achieved.

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