

Dear DEPRAG Representative,

Please find enclosed the new catalog D3496en, which features our new MINIMAT-EC-Servo Screwdriver- handheld. . You can also download additional copies directly from our webpage at:

<http://www.depragusa.com/files/catalogs/D3496en.pdf>

## **NEW: EC-Servo Manual Screwdriver with Sequence Controller AST5-S**

We are proud to announce that we have now also a new EC-Servo Screwdriving System for the manual use available. The new DEPRAG EC-Servo Screwdriver 325EGA22-xx is used in conjunction with the AST5-S Controller. The complete system comprises of EC-Servo manual screwdriver, AST5-S Controller and a power cable. The EC-Servo screwdriver with highly dynamic drive technology combined with the AST5-S series screwdriver controller offers maximum flexibility and process control. The integrated torque and angle measurement system enables precise control of the screw assembly process and guarantees the highest accuracy and reliable documentation of important process parameters. Through the combination of different screwdriving strategies with flexible tightening parameters, multi-step screw run-down sequences can be realized in one assembly cycle.

### **DEPRAG EC-SERVO SCREWDRIVER – flexible for the highest standards**

The DEPRAG EC-Servo screwdrivers allow free programming of the screw tightening process. Within the power range of the selected tool, the torque value, speed, stand-by and direction of rotation can be adjusted individually to the assembly requirement. Outstanding features of handheld EC-Servo screwdrivers are their highest torque precision and the large range of control functions – perfect conditions for process security and control on highest level. The electric motors provide low maintenance operation. They are ideally suited for the tightening of screws due to their outstanding dynamics and an achievement of high peak torque values. The integrated torque transducer as well as angle measurement, allows precise control of multistage screwdriving processes and documentation of the resulting values.

With these screwdrivers a torque accuracy of < 1% standard deviation and a Cmk value of  $\geq 1.67$  at a tolerance of  $\pm 5\%$  is possible. In other words, a Cmk value of 1.67 means there is an error rate of just 0.6 errors per one million assemblies.

The operation of the screwdriver requires a programmable sequence controller AST5-S with integrated amplifier. The sequence controller offers standard screwdriving programs for tightening screws to a specific torque value respectively loosening at a specific angle value.

### **DEPRAG sequence controller AST5-S – compact size for torque up to 2 Nm**

- highest precision for lowest torque ranges
- small size for confined spaces
- color touch screen with 4.3" TFT display
- torque control/angle monitoring
- angle control/torque monitoring
- friction-torque testing and friction-controlled fastening to torque
- 100 freely programmable sequence programs

The DEPRAG sequence controller AST5-S is the ideal controller for manual screw assemblies in combination with the tried and tested DEPRAG EC-Servo screwdrivers of the MINIMAT-EC-Servo (size 22) series within a torque range of 0.01 Nm – 2.0 Nm.

**Operator friendly:** The sequence controller already includes standard screwdriving programs for tightening to torque and loosening to angle. Parameters can be directly altered to suit screwdriving tasks using the touch screen. The AST5-S allows free programming of your manual screwdriving sequences for hand-held screwdriving tools. If required, further screwdriving programs can quickly and easily be set-up using the existing standard program.

**High number of programs:** Use the color TFT touch screen for fast access to the 100 programmable user programs.

**Based on web browser:** To set parameters and access additional control functions, simply use any common web browser or the integrated key pad. Additional software is not required.

**Small size:** Due to its small size the controller is particularly suitable for use in manual work stations where there are confined spaces.

**Storage, documentation and evaluation:** The AST5-S records the screwdriving results for the last 7 production days. Additional features include the graphic display of screwdriving graphs, integrated PLC functions and comprehensive analysis options. A software update service is optionally available. Also available are comprehensive software packages for screw joint analysis, documentation and process data collection.



Technical data:

**MINIMAT-EC-Servo Screwdriver handheld, Straight handle design, size 22**

Screwdriver	Type	325EGA22-00005	325EGA22-00012	325EGA22-00025	325EGA22-00050	325EGA22-00080
Push-to-start	Part no.	104400A	104400B	104400C	104400D	104400E
Torque min.	Nm / in.lbs	0.01 / 0.09	0.03 / 0.27	0.05 / 0.45	0.1 / 0.9	0.16 / 1.42
Torque max. *)	Nm / in.lbs	0.05 / 0.45	0.12 / 1.06	0.25 / 2.21	0.5 / 4.42	0.8 / 7.08
Speed min.	rpm	120	120	100	80	60
Speed max. *)	rpm	1500	1500	2000	1600	1200
Diameter	mm / in.	30.5 / 1.2	30.5 / 1.2	30.5 / 1.2	30.5 / 1.2	30.5 / 1.2
Length	mm / in.	230.5 / 9	230.5 / 9	230.5 / 9	230.5 / 9	230.5 / 9
Weight	kg / lbs.	0.6 / 1.32	0.6 / 1.32	0.6 / 1.32	0.6 / 1.32	0.6 / 1.32
Noise level	dB (A)	60	60	60	60	60
Line voltage (DC)	V	24	24	24	24	24
Internal hex drive DIN ISO 1173		B3 (3mm)	B3 (3mm)	B3 (3mm)	B3 (3mm)	B3 (3mm)
Suitable inserting tools and connection parts with inserting end DIN ISO 1173		A3 (3mm)	A3 (3mm)	A3 (3mm)	A3 (3mm)	A3 (3mm)

**Optional equipment:**

Spring sleeve cpl., without screw suction	Part no.	403280K
Spring sleeve cpl., with screw suction	Part no.	403280L
Screwdriver adapter	Part no.	4008331W
Support ring	Part no.	389775C

Screwdriver	Type	325EGA22-00120	325EGA22-00200
Push-to-start	Part no.	104400F	104400G
Torque min.	Nm / in.lbs	0.24 / 2.12	0.4 / 3.54
Torque max. *)	Nm / in.lbs	1.2 / 10.6	2.0 / 17.7
Speed min.	rpm	50	30
Speed max. *)	rpm	900	550
Diameter	mm / in.	30.5 / 1.2	30.5 / 1.2
Length	mm / in.	229.5 / 8.95	229.5 / 8.95
Weight	kg / lbs.	0.6 / 1.32	0.6 / 1.32
Noise level	dB (A)	60	60
Line voltage (DC)	V	24	24
Internal hex drive DIN ISO 1173		F6.3 (¼")	F6.3 (¼")
Suitable inserting tools and connection parts with inserting end DIN ISO 1173		E6.3 (¼")	E6.3 (¼")

**Optional equipment:**

Spring sleeve cpl., without screw suction	Part no.	364672A
Spring sleeve cpl., with screw suction	Part no.	364672C
Screwdriver adapter	Part no.	4008331W
Support ring	Part no.	389775C

The motor cable, 2.5-meters long, is solidly connected to the screwdriver

**SEQUENCE CONTROLLER AST5-S**

Sequence controller	Type	AST5-S
with integrated performance electronics	Part no.	104449A
Power connection (AC)	V / Hz	100 - 240 / 50 / 60
Power input	VA	150
Display		TFT-colour display 4.3"
24V input/output interface		-
Ethernet		yes
Number of connectable screwdriver		1
Dimensions (W x H x D)	mm / in.	162 x 143 x 65 / 6 3/8 x 5 5/8 x 2 9/16
Weight	kg / lbs	1.5 / 3.3
Power supply unit	Part no.	2041061 (included in delivery)

For further details, please refer to the brochure.

Availability: Ready for sale now