

DEPRAG

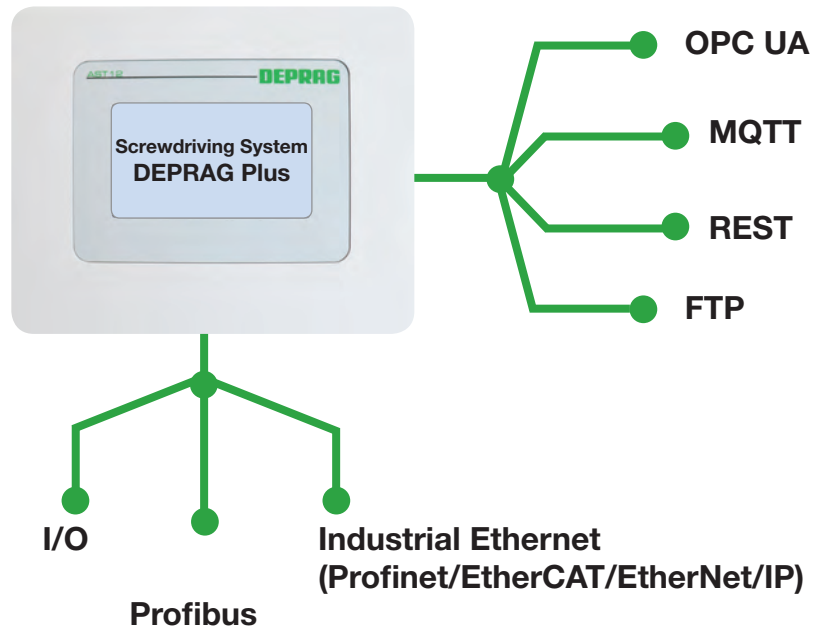
machines unlimited

SCREWDRIVING SYSTEM DEPRAG Plus



+ CONNECTIVITY

Interfaces



DEPRAG Cockpit

Maintain an overview of your screwdriving systems with the DEPRAG Cockpit. The software enables supervision and analysis of assembly tasks (condition monitoring) and provides analysis tools for continuous process optimization, recognition of trends and predictive maintenance. The DEPRAG Cockpit can even be used to supervise and analyse screwdriving systems from other manufacturers.



DEPRAG Cockpit

As part of the screwdriving system DEPRAG Plus you also receive in the DEPRAG Cockpit Basic **your central user interface** in responsive design

- for parameterisation

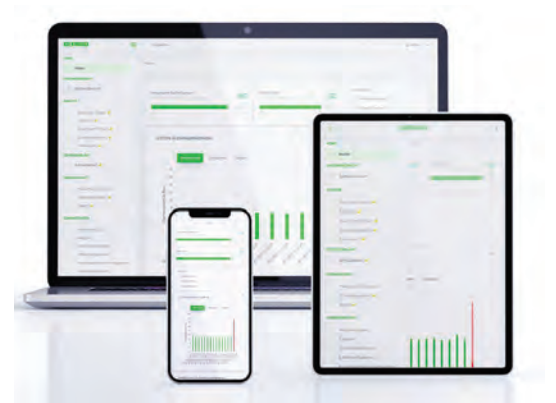
- administration of global settings
- creation and organisation of screwdriving programs
- activation of additional features under DEPRAG Apps
- creation of back-ups and logic functions

- for visualisation

- processing data acquisition for single user

- for documentation

- automatic processing data acquisition of end values and screwdriving curves



Organizer

Organize screwdriving programs > create program groups:

- Simple structuring of screwdriving programs according to component version or product
- Fast change of screwdriving programs for different product versions > saves assembly time
- Easy retrieval of screwdriving programs relating to a specific product

Back-up function

Convenient back-up of system settings, screwdriving parameters, screwdriving results and screwdriving curves

We now have the software packages Professional and Advanced available to augment the software package Cockpit Basic.

Further information can be found in our catalog D3900 Software solutions and updates.

WLAN Client

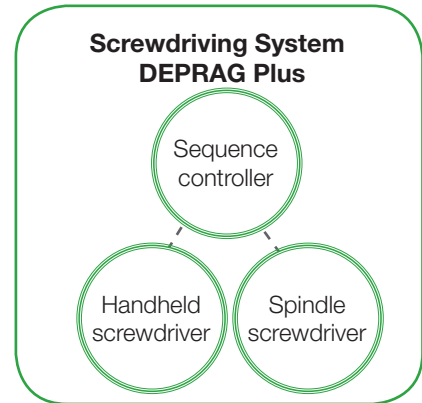
- Wireless connection
- Perfect in restricted areas
- External wireless parameterization
- Secure connection > https



+ FLEXIBILITY

Screwdriving System DEPRAG Plus – ONE system for DEPRAG handheld and spindle screwdrivers

- Extremely versatile for changing assembly requirements
- Reduces training needs
- Intuitive operator guidance with the DEPRAG Cockpit



DEPRAG Apps

Software solutions

- DEPRAG Cockpit Advanced and Professional
- DEPRAG Graph Viewer
- DEPRAG Data eXchange
- DEPRAG Operator Guidance
- Visualisation of the process
- Safety & Change tracking
- DEPRAG Universal Robots Link
- TIA Link
- TwinCAT Link
- Process Control
- Allen-Bradley Link

Industry 4.0 interfaces

- OPC UA, MQTT, REST, FTP

Fieldbus interfaces

- EtherNet/IP, EtherCAT, Profinet, Profibus

Screwdriving procedures

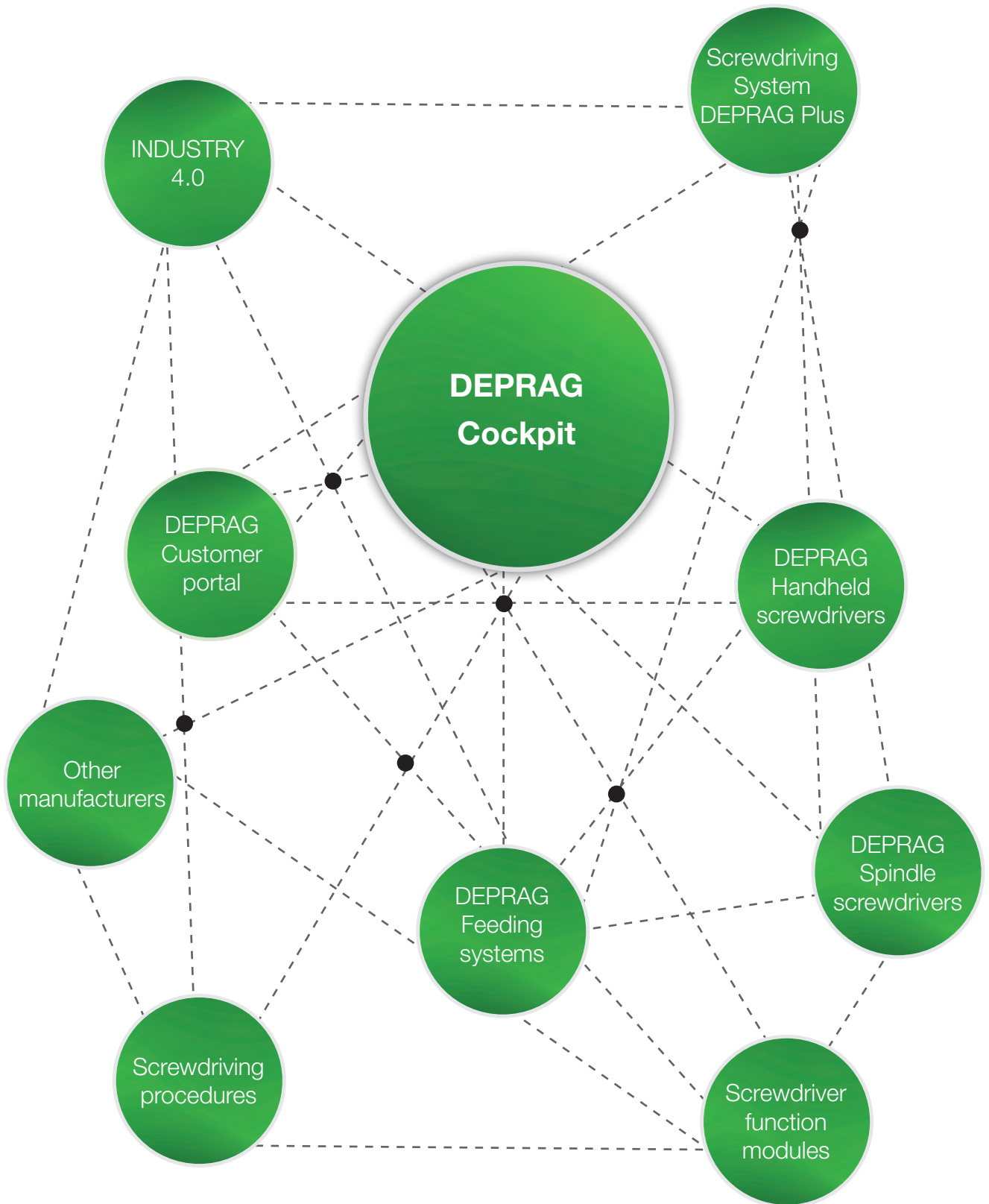
- Torque controlled
- Angle controlled
- Clamp Force Control (seating point detection)
- Friction procedure (friction dependent torque assembly)

Software updates

- Update service and safety package
- one-time
- annual licence

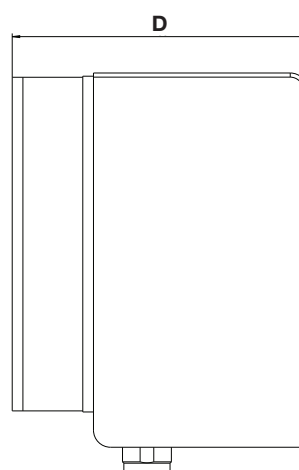
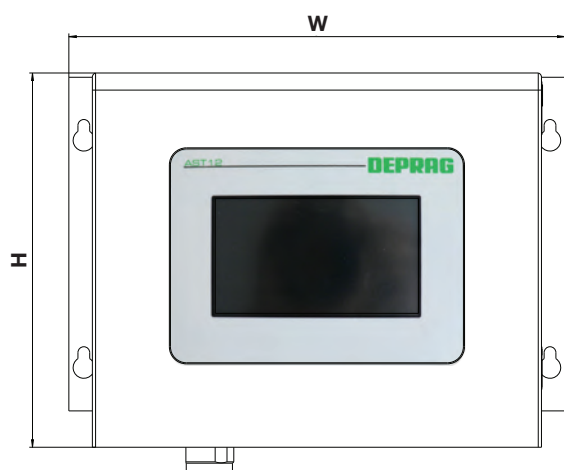


Fit for the future ...
with the DEPRAG Cockpit Platform



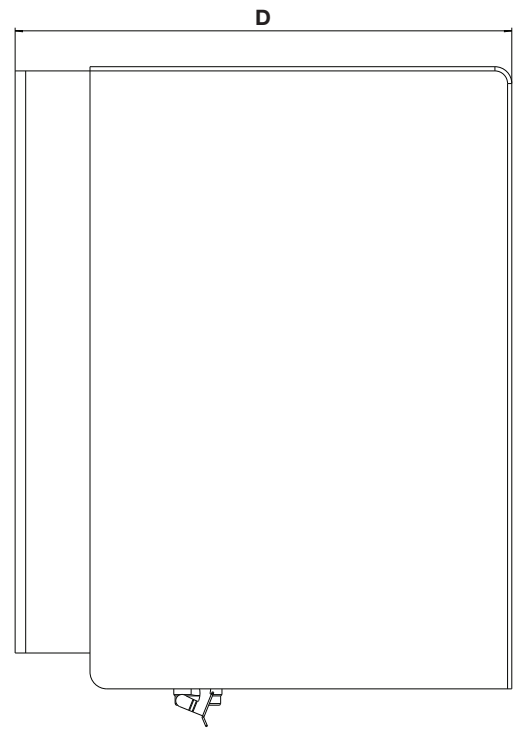
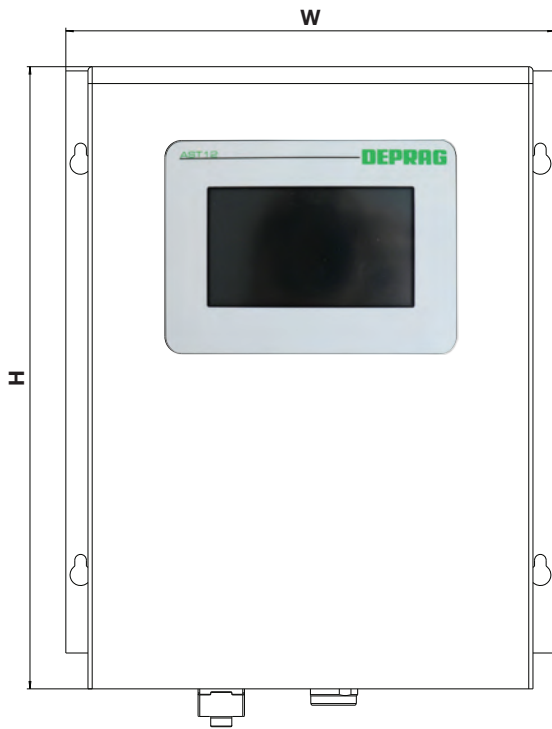
TECHNICAL DATA SEQUENCE CONTROLLER

Type Part no.	AST12-1 115001A	AST12-1 PB 115001B	AST12-1 IE 115001C
Software DEPRAG Cockpit Basic is already pre-installed			
Max. number of programs saved	1000		
Max. number of screwdriving curves saved (graphic data)	1000		
Max. number of screwdriving results saved	last 7 days complete (> 80.000 in 24h)		
Interfaces	EA = inputs/outputs	EA = inputs/outputs PB = Profibus	EA = inputs/outputs IE = Profinet/EtherCAT/EtherNet/IP
Display	Graphic display with touch feature (capacitive)		
Industry 4.0 interfaces	REST OPC UA MQTT FTP		
Power connection	V / Hz	85-264 / 50-60	
Protection class		IP40	
Dimensions (W x H x D)	mm/in.	232 x 175 x 138 / 9.05 x 6.8 x 5.38	
Weight	kg/lbs	3.8 / 8.36	
Required accessories:			
Power cable EU US UK Brazil China	Part no.	833790 833791 833792 207388 832927	
Optional accessories:			
Base stand	Part no.	120234A	
WLAN Client	Part no.	146766	
Part sensor capacitive	Part no.	354841G	
Scanner	Part no.	914783A	
Connection cable AST12 to scanner	Part no.	128136A	




TECHNICAL DATA SEQUENCE CONTROLLER

Type	AST12-2	AST12-2 PB	AST12-2 IE
Part no.	115002A	115002B	115002C
Type	AST12-3	AST12-3 PB	AST12-3 IE
Part no.	115003A	115003B	115003C
Software DEPRAG Cockpit Basic is already pre-installed			
Max. number of programs saved	1000		
Max. number of screwdriving curves saved (graphic data)	1000		
Max. number of screwdriving results saved	last 7 days complete (> 80.000 in 24h)		
Interfaces	EA = inputs/outputs	EA = inputs/outputs PB = Profibus	EA = inputs/outputs IE = Profinet/EtherCAT/EtherNet/IP
Display	Graphic display with touch feature (capacitive)		
Industry 4.0 interfaces	REST OPC UA MQTT FTP		
Power connection	V / Hz	100-240 / 50-60	
Protection class		IP54	
Dimensions (W x H x D)	mm/in.	232 x 295 x 235.5 / 9.05 x 11.6 x 9.27	
Weight AST12-2 AST12-3	kg/lbs	9.3/20.46 11.3/24.86	
Required accessories:			
Power cable EU US China Brazil	Part no.	385443A 385443B 385443C 385443D	
Optional accessories:			
Scanner	Part no.	914783A	
Connection cable AST12 to scanner	Part no.	128136A	
Base stand	Part no.	300085A	
WLAN Client	Part no.	146766	
Part sensor capacitive	Part no.	354841G	




TECHNICAL DATA HANDHELD SCREWDRIVER, straight design, size 22

MINIMAT-EC Handheld screwdriver Straight design, push-to-start		Type Part no.	321EGA22-00005 503031A	321EGA22-00012 503031B	321EGA22-00025 503031C	321EGA22-00050 503031D	321EGA22-00080 503031E
MINIMAT-EC Handheld screwdriver Straight design, lever start		Type Part no.	321EGT22-00005 503032A	321EGT22-00012 503032B	321EGT22-00025 503032C	321EGT22-00050 503032D	321EGT22-00080 503032E
MINIMAT-EC Handheld screwdriver In combination with feeder		Type Part no.	- -	- -	321EGZ22-00025 503033C	321EGZ22-00050 503033D	321EGZ22-00080 503033E
Torque accuracy			2 % standard deviation				
Torque range from to	Nm	0.01 - 0.05	0.03 - 0.12	0.05 - 0.25	0.1 - 0.5	0.16 - 0.8	
	in.lbs	0.09 - 0.44	0.27 - 1.06	0.44 - 2.2	0.89 - 4.43	1.42 - 7.08	
Speed range from to	rpm	120 - 1500	120 - 1500	100 - 2000	80 - 1600	60 - 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.	223 / 8.7	223 / 8.7	223 / 8.7	223 / 8.7	223 / 8.7	
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	
Drive with quick change chuck Connection parts with inserting end		4 mm half moon	4 mm half moon	4 mm half moon	4 mm half moon	4 mm half moon	
Used with sequence controller		AST12-1 AST12-1 PB AST12-1 IE					
Optional accessories:							
Spring sleeve cpl., without suction			4032802A *)				
Spring sleeve cpl., with suction			4032802B *)				
Support ring			389775C *)				
Motor cable extension			see page 19				

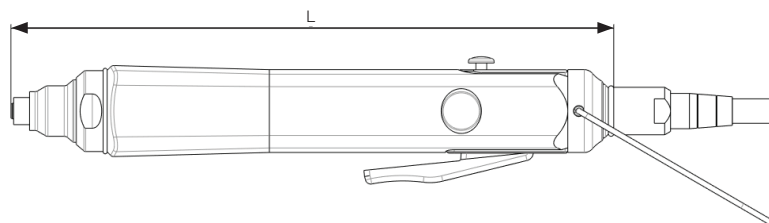
*) not suitable for screwdriver in combination with feeder

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


MINIMAT-EC Handheld screwdriver Straight design, push-to-start		Type Part no.	321EGA22-00120 503031F	321EGA22-00200 503031G
MINIMAT-EC Handheld screwdriver Straight design, lever start		Type Part no.	321EGT22-00120 503032F	321EGT22-00200 503032G
MINIMAT-EC Handheld screwdriver In combination with feeder		Type Part no.	321EGZ22-00120 503033F	321EGZ22-00200 503033G
Torque accuracy			2 % standard deviation	
Torque range from to	Nm/in.lbs	0.18 - 1.2 / 1.6 - 10.6	0.4 - 2 / 3.5 - 17.7	
	rpm	50 - 900	30 - 550	
Diameter	mm/in.	30.5 / 1.2	30.5 / 1.2	
Length	mm/in.	215 / 8.4	215 / 8.4	
Weight	kg/lbs	0.6 / 1.32	0.6 / 1.32	
Noise level	dB (A)	60	60	
Internal hex drive with quick change chuck DIN ISO 1173 Connection parts with inserting end DIN ISO 1173		F6.3 (¼") E6.3 (¼")	F6.3 (¼") E6.3 (¼")	
Used with sequence controller		AST12-1 AST12-1 PB AST12-1 IE		
Optional accessories:				
Spring sleeve cpl., without suction			364672A *)	
Spring sleeve cpl., with suction			364672C *)	
Support ring			389775C *)	
Motor cable extension			see page 19	

*) not suitable for screwdriver in combination with feeder

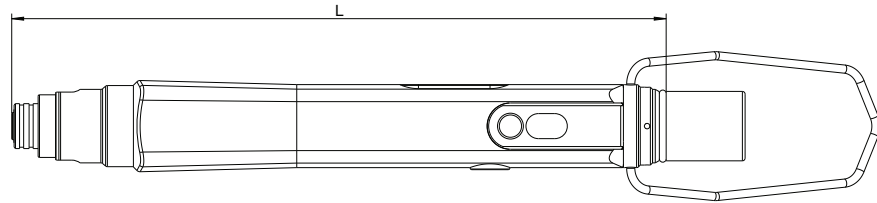
The motor cable, 2.5-meters long, is solidly connected to the screwdriver




TECHNICAL DATA HANDHELD SCREWDRIVER, straight design, size 27

							High Performance
	MINIMAT-EC Handheld screwdriver Straight design, push-to-start	Type Part no.	321EGA27-0010 503042A	321EGA27-0018 503042B	321EGA27-0024 503042C	321EGA27-0042 503042D	321EGA27-0042-HP 503042E
	MINIMAT-EC Handheld screwdriver Straight design, lever start	Type Part no.	321EGT27-0010 503043A	321EGT27-0018 503043B	321EGT27-0024 503043C	321EGT27-0042 503043D	321EGT27-0042-HP 503043E
	MINIMAT-EC Handheld screwdriver In combination with feeder	Type Part no.	- -	321EGZ27-0018 503044B	321EGZ27-0024 503044C	321EGZ27-0042 503044D	321EGZ27-0042-HP 503044E
Torque accuracy		2 % standard deviation					
Torque range from to	Nm/in.lbs	0.15-1/1.33-8.85	0.4-1.8/3.54-15.9	0.4-2.4/3.54-21.2	0.7-4.2/6.2-37.2	0.7-4.2/6.2-37.2	
Speed range from to	rpm	50 - 1000	100 - 1000	50 - 700	40 - 400	40 - 750	
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.	238 / 9.3	238 / 9.3	238 / 9.3	251 / 9.8	238 / 9.3	
Weight	kg/lbs	0.58 / 1.3	0.58 / 1.3	0.58 / 1.3	0.63 / 1.4	0.58 / 1.3	
Noise level	dB (A)	60	60	60	60	60	
Internal hex drive with quick change chuck DIN ISO 1173		F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	
Connection parts with inserting end DIN ISO 1173		E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	
Used with sequence controller		AST12-1 AST12-1 PB AST12-1 IE				AST12-2 AST12-2 PB AST12-2 IE	
Required accessories:							
Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E					
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E					
Optional accessories:							
Spring sleeve cpl., without suction		364672A *)					
Spring sleeve cpl., with suction		364672C *)					
Support ring		389775C *)					

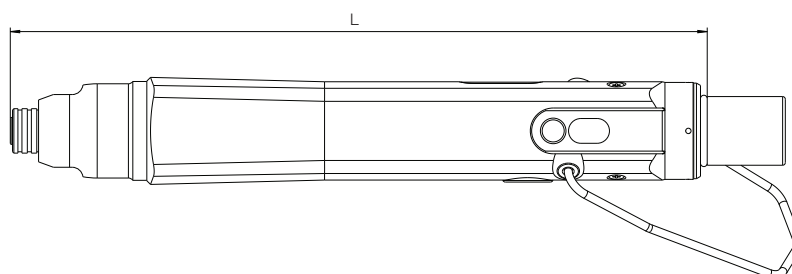
*) not suitable for screwdriver in combination with feeder




TECHNICAL DATA HANDHELD SCREWDRIVER, straight design, size 36

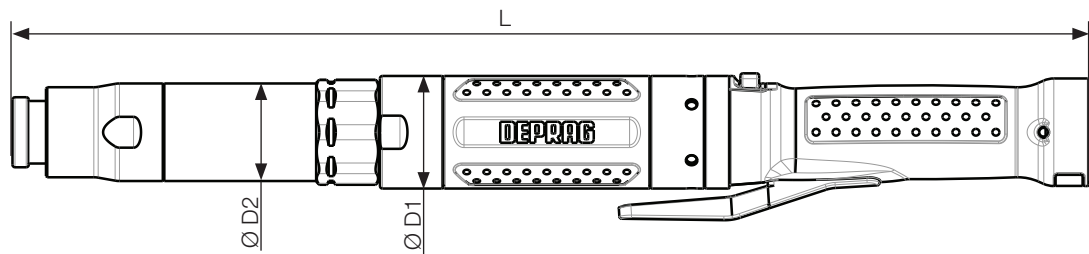
MINIMAT-EC Handheld screwdriver Straight design, push-to-start		Type Part no.	321EGA36-0040 503061A	321EGA36-0060 503061B	321EGA36-0090 503061C	321EGA36-0120 503061D	321EGA36-0180 503061E	321EGA36-0250 503061F
MINIMAT-EC Handheld screwdriver Straight design, lever start		Type Part no.	321EGT36-0040 503062A	321EGT36-0060 503062B	321EGT36-0090 503062C	321EGT36-0120 503062D	321EGT36-0180 503062E	321EGT36-0250 503062F
MINIMAT-EC Handheld screwdriver In combination with feeder		Type Part no.	321EGZ36-0040 503069A	321EGZ36-0060 503069B	321EGZ36-0090 503069C	321EGZ36-0120 503069D	321EGZ36-0180 503069E	- -
Torque accuracy			2 % standard deviation					
Torque range from to	Nm in.lbs	0.8 - 4 7.08 - 35.4	1 - 6 8.85 - 53.1	2 - 9 17.7 - 79.65	2 - 12 17.7 - 106.2	3 - 18 26.55 - 159.3	5 - 25 44.25 - 221.25	
Speed range from to	rpm	100 - 1000	70 - 740	50 - 540	35 - 380	25 - 280	20 - 220	
Diameter	mm/in.	36.5/1.42	36.5/1.42	36.5/1.42	36.5/1.42	36.5/1.42	36.5/1.42	
Length	mm/in.	259/10.1	259/10.1	259/10.1	259/10.1	259/10.1	259/10.1	
Weight	kg/lbs	0.84/1.85	0.84/1.85	0.84/1.85	0.84/1.85	0.89/1.96	0.89/1.96	
Noise level	dB (A)	62	62	62	62	62	62	
Internal hex drive with quick change chuck DIN ISO 1173		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	
Connection parts with inserting end DIN ISO 1173		E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	
Used with sequence controller		AST12-2 AST12-2 PB AST12-2 IE						
Required accessories: Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E						
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E						
Optional accessories: Spring sleeve cpl., without suction Spring sleeve cpl., with suction Support ring		364672A *) 364672C *) 389775C *)						

*) not suitable for screwdriver in combination with feeder




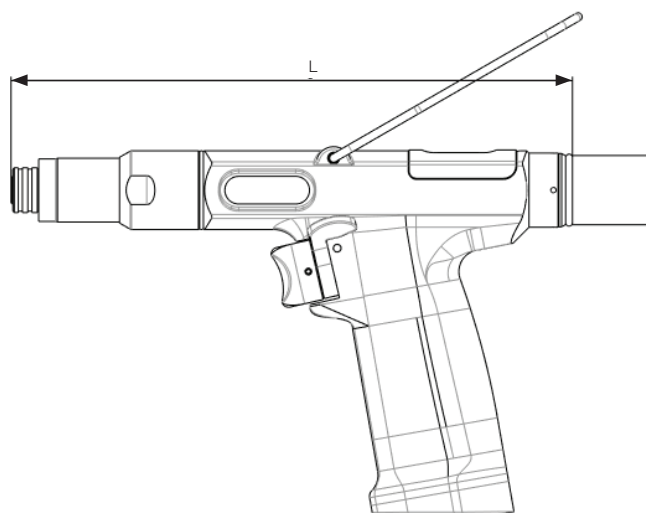
TECHNICAL DATA HANDHELD SCREWDRIVER, straight design, size 36

MINIMAT-EC Handheld screwdriver Straight design, push-to-start		Type Part no.	322EGA36-0120 504011A	322EGA36-0200 504011B	322EGA36-0320 504011C	322EGA36-0500 504011D
MINIMAT-EC Handheld screwdriver Straight design, lever start		Type Part no.	322EGT36-0120 504012A	322EGT36-0200 504012B	322EGT36-0320 504012C	322EGT36-0500 504012D
Torque accuracy			2 % standard deviation			
Torque range from to	Nm in.lbs	2.4 - 12 21.24 - 106.2	4 - 20 35.4 - 177	6.4 - 32 56.64 - 283.2	10 - 50 88.5 - 442.5	
Speed range from to	rpm	50 - 1000	35 - 700	25 - 450	20 - 290	
Diameter D1/D2	mm in.	45/39 1.75/1.52	45/39 1.75/1.52	45/39 1.75/1.52	45/39 1.75/1.52	
Length	mm/in.	400/15.6	400/15.6	430/16.77	430/16.77	
Weight	kg/lbs	1.7 / 3.7	1.7 / 3.7	1.9 / 4.2	1.9 / 4.2	
Noise level	dB (A)	62	62	62	62	
Internal hex drive with quick change chuck DIN ISO 1173		F6.3 (¼")	F6.3 (¼")	F11.2 (7/16")	F11.2 (7/16")	
Connection parts with inserting end DIN ISO 1173		E6.3 (¼")	E6.3 (¼")	E11.2 (7/16")	E11.2 (7/16")	
Used with sequence controller		AST12-3 AST12-3 PB AST12-3 IE				
Required accessories: Motor cable straight design Length 2.5m 5m 8m 12m		125496A 125496B 125496C 125496D				
Optional accessories: Spring sleeve cpl.. without suction Spring sleeve cpl.. with suction Support ring Hanging bracket		364672A 364672C 134139A 3275961				




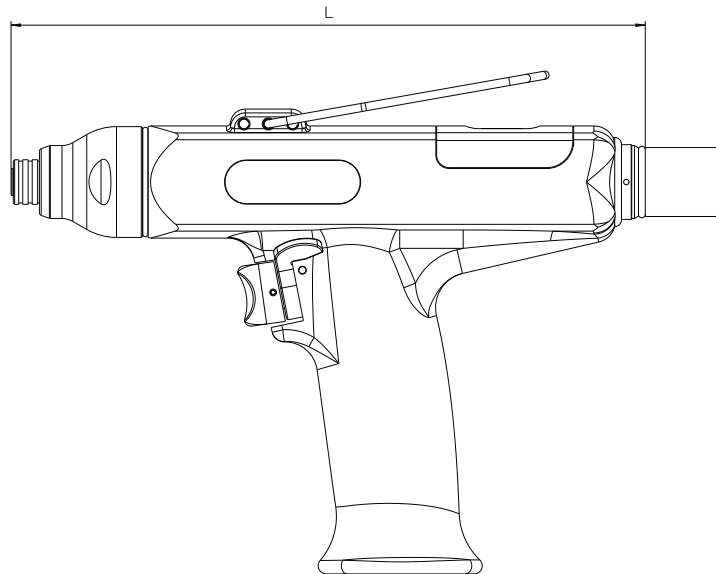
TECHNICAL DATA HANDHELD SCREWDRIVER, pistol grip, size 27

MINIMAT®-EC Handheld screwdriver Pistol grip, trigger-start	 Type Part no.	321EPT27-0010	321EPT27-0024	321EPT27-0042	High Performance	High Performance
		503045A	503045B	503045C	321EPT27-0042-HP 503045D	321EPT27-0080-HP 503045E
Torque accuracy		2 % standard deviation				
Torque range from to	Nm in.lbs	0.15 - 1 1.33 - 8.85	0.4 - 2.4 3.5 - 21.2	0.7 - 4.2 6.2 - 37.2	0.7 - 4.2 6.2 - 37.2	1.5 - 8 13.28 - 70.8
Speed range from to	rpm	50 - 1000	50 - 700	40 - 400	40 - 750	30 - 450
Diameter	mm/in.	29 / 1.13	29 / 1.13	29 / 1.13	29 / 1.13	29 / 1.13
Length	mm/in.	207 / 8.1	207 / 8.1	220 / 8.6	207 / 8.1	220 / 8.6
Weight	kg/lbs	0.54 / 1.3	0.54 / 1.3	0.58 / 1.3	0.64 / 1.41	0.73 / 1.61
Noise level	dB (A)	60	60	60	60	60
Internal hex drive with quick change chuck DIN ISO 1173		F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")
Connection parts with inserting end DIN ISO 1173		E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")
Used with sequence controller		AST12-1 AST12-1 PB AST12-1 IE			AST12-2 AST12-2 PB AST12-2 IE	
Required accessories:						
Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E				
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E				
Optional accessories:						
Spring sleeve cpl., without suction		364672A				
Spring sleeve cpl., with suction		364672C				








TECHNICAL DATA HANDHELD SCREWDRIVER, pistol grip, size 36

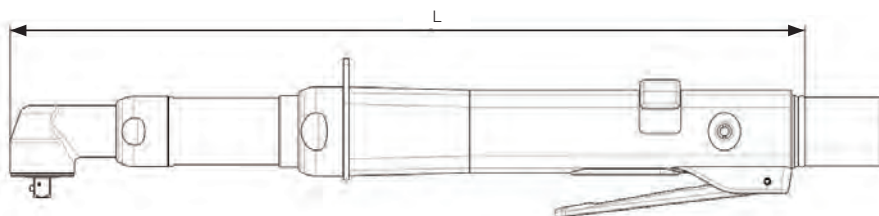
MINIMAT®-EC Handheld screwdriver Pistol grip, trigger-start	 Type Part no.	321EPT36-0040 503063A	321EPT36-0060 503063B	321EPT36-0120 503063C	321EPT36-0180 503063D
Torque accuracy		2 % standard deviation			
Torque range from to	Nm in.lbs	0.8 - 4 7.08 - 35.4	1 - 6 8.85 - 53.1	2 - 12 17.7 - 106.2	3 - 18 26.55 - 159.3
Speed range from to	rpm	100 - 1000	70 - 740	35 - 380	25 - 280
Diameter	mm/in.	41 / 1.6	41 / 1.6	41 / 1.6	41 / 1.6
Length	mm/in.	235 / 9.2	235 / 9.2	235 / 9.2	235 / 9.2
Weight	kg/lbs	1 / 2.2	1 / 2.2	1 / 2.2	1.05 / 2.31
Noise level	dB (A)	62	62	62	62
Internal hex drive with quick change chuck DIN ISO 1173		F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")
Connection parts with inserting end DIN ISO 1173		E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")
Used with sequence controller		AST12-2 AST12-2 PB AST12-2 IE			
Required accessories: Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E			
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E			
Optional accessories: Spring sleeve cpl., without suction Spring sleeve cpl., with suction		364672A 364672C			



TECHNICAL DATA HANDHELD SCREWDRIVER, angle head, size 27

MINIMAT-EC Handheld screwdriver Angle head, lever start External square drive DIN 3121 Connection parts with inserting end DIN 3121 Internal square drive		Type Part no.	321EWT27-0022-E6 503046A	321EWT27-0035-E6 503046B	321EWT27-0060-E6 503046C	
MINIMAT-EC Handheld screwdriver Angle head, lever start External square drive DIN 3121 Connection parts with inserting end DIN 3121 Internal square drive		Type Part no.	321EWT27-0022-E10 503047A	321EWT27-0035-E10 503047B	321EWT27-0060-E10 503047C	
MINIMAT-EC Handheld screwdriver Angle head, lever start Internal hex drive DIN ISO 1173 with quick change chuck Connection parts with inserting end DIN ISO 1173 External hex drive		Type Part no.	321EWT27-0022-F6 503048A	321EWT27-0035-F6 503048B	321EWT27-0060-F6 503048C	High Performance 321EWT27-0060-HP-F6 503048D
MINIMAT-EC Handheld screwdriver Angle head, lever start Internal hex drive DIN ISO 1173 for bits Connection parts with inserting end DIN ISO 1173 External hex drive		Type Part no.	321EWT27-0022-D6 503049A	321EWT27-0035-D6 503049B	321EWT27-0060-D6 503049C	
MINIMAT-EC Handheld screwdriver Angle head, lever start Internal hex drive DIN ISO 1173 for bits with magnet Connection parts with inserting end DIN ISO 1173 External hex drive		Type Part no.	321EWT27-0022-DM6 503050A	321EWT27-0035-DM6 503050B	321EWT27-0060-DM6 503050C	

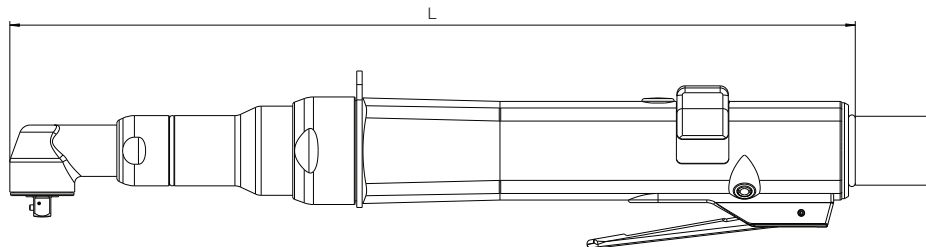
Torque accuracy		2 % standard deviation			
Torque range from to	Nm/in.lbs	0.4 - 2.2 / 3.5 - 19.5	0.7 - 3.5 / 6.2 - 31	1 - 6 / 8.85 - 53.1	1 - 6 / 8.85 - 53.1
Speed range from to	rpm	80 - 800	50 - 500	30 - 300	50 - 550
Diameter	mm/in.	30.5 / 1.2	30.5 / 1.2	30.5 / 1.2	30.5 / 1.2
Length	mm/in.	296 / 11.5	296 / 11.5	309 / 12.05	296 / 11.5
Weight	kg/lbs	0.75 / 1.65	0.75 / 1.65	0.8 / 1.76	0.8 / 1.76
Noise level	dB (A)	60	60	60	60
Used with sequence controller		AST12-1 AST12-1 PB AST12-1 IE			AST12-2 AST12-2 PB AST12-2 IE
Required accessories: Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E			
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E			




TECHNICAL DATA HANDHELD SCREWDRIVER, angle head, size 36

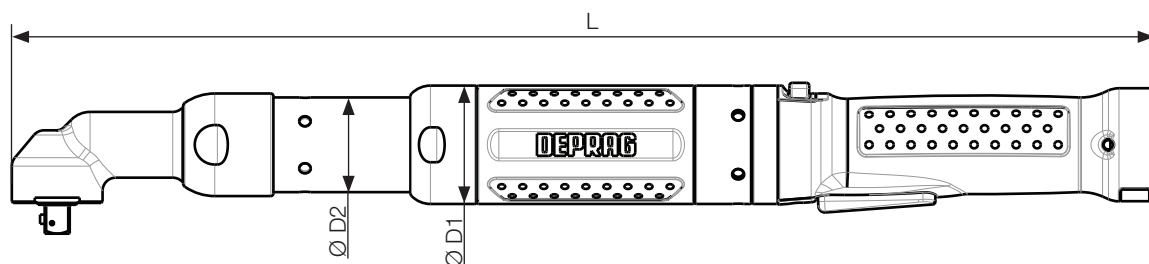
MINIMAT-EC Handheld screwdriver Angle head, lever start		Type Part no.	321EWT36-0060-E6 503064A	321EWT36-0120-E6 503064B	-	-
External square drive DIN 3121			E6.3 (1/4")	E6.3 (1/4")	-	-
Connection parts with inserting end DIN 3121			G6.3 (1/4")	G6.3 (1/4")	-	-
Internal square drive						
MINIMAT-EC Handheld screwdriver Angle head, lever start		Type Part no.	321EWT36-0060-E10 503065A	321EWT36-0120-E10 503065B	321EWT36-0180-E10 503065C	321EWT36-0250-E10 503065D
External square drive DIN 3121			E10 (3/8")	E10 (3/8")	E10 (3/8")	E10 (3/8")
Connection parts with inserting end DIN 3121			G10 (3/8")	G10 (3/8")	G10 (3/8")	G10 (3/8")
Internal square drive						
MINIMAT-EC Handheld screwdriver Angle head, lever start		Type Part no.	321EWT36-0060-F6 503066A	321EWT36-0120-F6 503066B	-	-
Internal hex drive DIN ISO 1173 with quick change chuck			F6.3 (1/4")	F6.3 (1/4")	-	-
Connection parts with inserting end DIN ISO 1173			E6.3 (1/4")	E6.3 (1/4")	-	-
External hex drive						
MINIMAT-EC Handheld screwdriver Angle head, lever start		Type Part no.	321EWT36-0060-D6 503067A	321EWT36-0120-D6 503067B	-	-
Internal hex drive DIN ISO 1173 for bits			D6.3 (1/4")	D6.3 (1/4")	-	-
Connection parts with inserting end DIN ISO 1173			C6.3 (1/4")	C6.3 (1/4")	-	-
External hex drive						
MINIMAT-EC Handheld screwdriver Angle head, lever start		Type Part no.	321EWT36-0060-DM6 503068A	321EWT36-0120-DM6 503068B	-	-
Internal hex drive DIN ISO 1173 for bits with magnet			D6.3 (1/4")	D6.3 (1/4")	-	-
Connection parts with inserting end DIN ISO 1173			C6.3 (1/4")	C6.3 (1/4")	-	-
External hex drive						

Torque accuracy		2 % standard deviation			
Torque range from to	Nm/in.lbs	1 - 6 / 8.85 - 53.1	2 - 12 / 17.7 - 106.2	3 - 18 / 26.55 - 159.3	5 - 25 / 44.25 - 221.25
Speed range from to	rpm	75 - 750	40 - 400	20 - 240	15 - 180
Diameter	mm/in.	40 / 1.56	40 / 1.56	40 / 1.56	40 / 1.56
Length	mm/in.	313 / 1.2	313 / 12.2	321 / 12.52	321 / 12.52
Weight	kg/lbs	1.1 / 2.42	1.1 / 2.42	1.2 / 2.64	1.2 / 2.64
Noise level	dB (A)	62	62	62	62
Used with sequence controller		AST12-2 AST12-2 PB AST12-2 IE			
Required accessories:					
Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E			
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E			



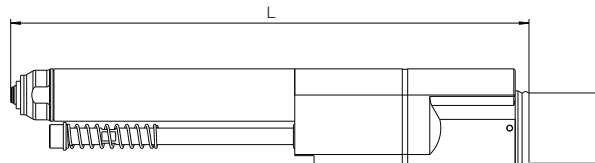
TECHNICAL DATA HANDHELD SCREWDRIVER, angle head, size 36

MINIMAT-EC Handheld screwdriver Angle head, lever start		Type Part no.	322EWT36-0200-E10 504014A	322EWT36-0300-E10 504014B	322EWT36-0500-E12,5 504014C	322EWT36-0700-E12,5 504014D
External square drive DIN 3121			E10 ($\frac{3}{8}$ "	E10 ($\frac{3}{8}$ "	E12,5 ($\frac{1}{2}$ "	E12,5 ($\frac{1}{2}$ "
Connection parts with inserting end DIN 3121 Internal square drive			G10 ($\frac{3}{8}$ "	G10 ($\frac{3}{8}$ "	G12,5 ($\frac{1}{2}$ "	G12,5 ($\frac{1}{2}$ "
Torque accuracy			2 % standard deviation			
Torque range from to	Nm/in.lbs		6-20 / 53.1-177	10-30 / 88.5-265.5	15-50 / 132.75-442.5	20-70 / 177-619.5
Speed range from to	rpm		40 - 700	30 - 450	20 - 280	20 - 170
Diameter D1/D2	mm		45/36	45/36	45/36	45/36
	in.		1.75/1.4	1.75/1.4	1.75/1.4	1.75/1.4
Length	mm/in.		435 / 16.97	435 / 16.97	453.5 / 17.69	453.5 / 17.69
Weight	kg/lbs		1.7 / 3.7	1.7 / 3.7	1.9 / 4.2	1.9 / 4.2
Noise level	dB (A)		62	62	62	62
Used with sequence controller	AST12-3 AST12-3 PB AST12-3 IE					
Required accessories: Motor cable straight design Length 2.5m 5m 8m 12m	125497A 125497B 125497C 125497D					
Optional accessories:						
Hanging bracket	3275961					
Suspension	134241A					



TECHNICAL DATA SPINDLE SCREWDRIVER, straight design, size19

MICROMAT-EC Spindle screwdriver Straight design	Type Part no.	321E19-0002 503020A	321E19-0005 503020B	321E19-0008 503020C
Torque accuracy		2 % standard deviation		
Torque range from to	Nm/in.lbs	0.03 - 0.2 / 0.26 - 1.77	0.08 - 0.5 / 0.7 - 4.4	0.15 - 0.8 / 1.33 - 7.1
Speed range from to	rpm	150 - 1500	60 - 1200	100 - 1000
Diameter	mm/in.	19 / 0.74	19 / 0.74	19 / 0.74
Length	mm/in.	188 / 7.33	194 / 7.57	194 / 7.57
Weight	kg/lbs	0.25 / 0.55	0.25 / 0.55	0.25 / 0.55
Noise level	dB (A)	60	60	60
Drive with quick change chuck		4 mm half moon	4 mm half moon	4 mm half moon
Connection parts with inserting end		4 mm half moon	4 mm half moon	4 mm half moon
Used with sequence controller		AST12-1 AST12-1 PB AST12-1 IE		
Required accessories:				
Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E		
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E		
Optional accessories:				
Depth control digital		909052C		
Depth control analog 10 mm		908838C plus amplifier 813712		

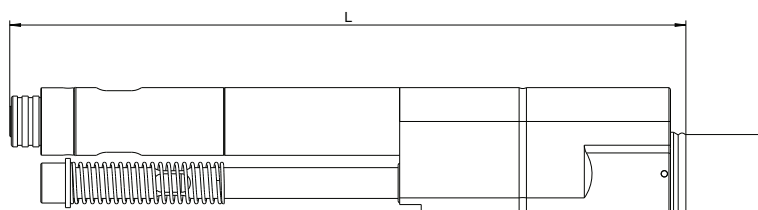


Further information on installation as well as CAD models can be found in the download area on our website www.deprag.com.

TECHNICAL DATA SPINDLE SCREWDRIVER, straight design, size 22 and 27

MINIMAT-EC Spindle screwdriver Straight design	Type Part no.	321E22-00120 503030A	321E22-00200 503030B	321E27-0010 503040A	321E27-0018 503040B	321E27-0024 503040C	321E27-0042 503040D
Torque accuracy		2 % standard deviation					
Torque range from to	Nm/in.lbs	0.18-1.2/1.6-10.6	0.4-2/3.54-17.7	0.15-1/1.33-8.85	0.4-1.8/3.54-15.9	0.4-2.4/3.54-21.2	0.7-4.2/6.2-37.2
Speed range from to	rpm	50 - 900	30 - 550	50 - 1000	100 - 1000	50 - 700	40 - 400
Diameter	mm/in.	22/0.86	22/0.86	27/1.05	27/1.05	27/1.05	27/1.05
Length	mm/in.	220/8.6	220/8.6	237/9.2	237/9.2	237/9.2	249/9.66
Weight	kg/lbs	0.55/1.21	0.55/1.21	0.66/1.45	0.75/1.65	0.75/1.65	0.75/1.65
Noise level	dB (A)	60	60	60	60	60	60
Internal hex drive with quick change chuck DIN ISO 1173		F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")
Connection parts with inserting end DIN ISO 1173		E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")
Used with sequence controller		AST12-1 AST12-1 PB AST12-1 IE					
Required accessories:							
Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E					
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E					
Optional accessories:							
Depth control digital		909052E		909052D			
Depth control analog 10 mm		908838I plus amplifier 813712		908838E plus amplifier 813712			

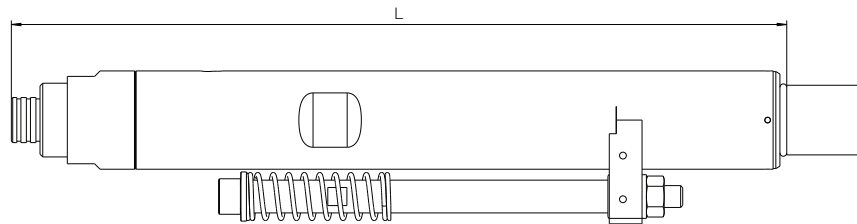
MINIMAT-EC Spindle screwdriver Straight design	Type Part no.	High Performance 321E27-0042-HP 503040E	High Performance 321E27-0080-HP 503040F
Torque accuracy		2 % standard deviation	
Torque range from to	Nm/in.lbs	0.7 - 4.2 / 6.2 - 37.2	1.5 - 8 / 13.28 - 70.8
Speed range from to	rpm	40 - 750	30 - 450
Diameter	mm/in.	27 / 1.05	27 / 1.05
Length	mm/in.	237 / 9.24	251 / 9.79
Weight	kg/lbs	0.75 / 1.65	0.8 / 1.76
Noise level	dB (A)	60	60
Internal hex drive with quick change chuck DIN ISO 1173		F6.3 (¼")	F6.3 (¼")
Connection parts with inserting end DIN ISO 1173		E6.3 (¼")	E6.3 (¼")
Used with sequence controller		AST12-2 AST12-2 PB AST12-2 IE	
Required accessories:			
Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E	
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E	
Optional accessories:			
Depth control digital		909052D	
Depth control analog 10 mm		908838E plus amplifier 813712	



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TECHNICAL DATA SPINDLE SCREWDRIVER, straight design, size 36

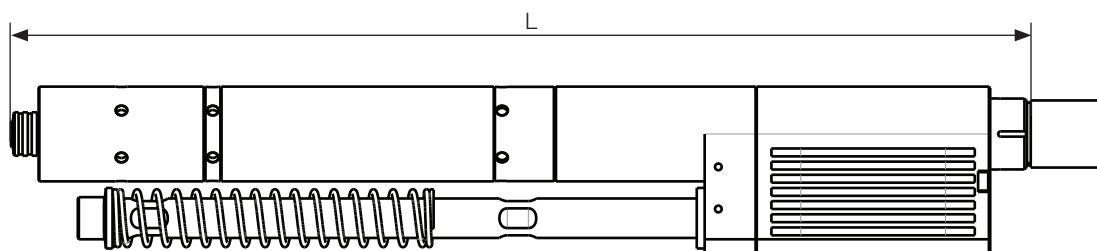
MINIMAT-EC Spindle screwdriver Straight design	Type Part no.	321E36-0040 503060A	321E36-0060 503060B	321E36-0090 503060C	321E36-0120 503060D	321E36-0180 503060E	321E36-0250 503060F
Torque accuracy		2 % standard deviation					
Torque range from to	Nm in.lbs	0.8 - 4 7.08 - 35.4	1 - 6 8.85 - 53.1	2 - 9 17.7 - 79.65	2 - 12 17.7 - 106.2	3 - 18 26.55 - 159.3	5 - 25 44.25 - 221.25
Speed range from to	rpm	100 - 1000	70 - 740	50 - 540	35 - 380	25 - 280	20 - 220
Diameter	mm/in.	36/1.4	36/1.4	36/1.4	36/1.4	36/1.4	36/1.4
Length	mm/in.	284/11.08	284/11.08	284/11.08	284/11.08	284/11.08	284/11.08
Weight	kg/lbs	1.4/3.1	1.4/3.1	1.4/3.1	1.4/3.1	1.4/3.1	1.4/3.1
Noise level	dB (A)	60	60	60	60	60	60
Internal hex drive with quick change chuck DIN ISO 1173		F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")	F6.3 (¼")
Connection parts with inserting end DIN ISO 1173		E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")	E6.3 (¼")
Used with sequence controller		AST12-2 AST12-2 PB AST12-2 IE					
Required accessories: Motor cable straight design Length 2.5m 5m 8m 12m 20m		117352A 117352B 117352C 117352D 117352E					
Motor cable with angle connector Length 2.5m 5m 8m 12m 20m		117353A 117353B 117353C 117353D 117353E					
Optional accessories: Depth control digital Depth control analog 10 mm		9411771 908838D plus amplifiier 813712					



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TECHNICAL DATA SPINDLE SCREWDRIVER, straight design, size 36

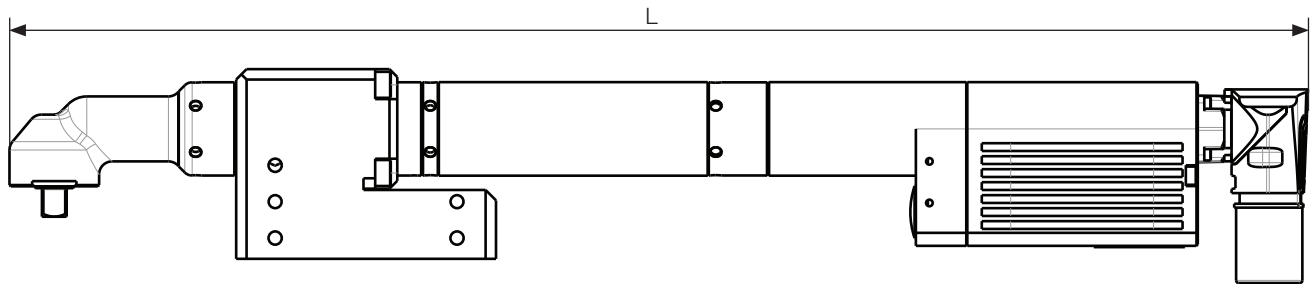
MINIMAT-EC Spindle screwdriver Straight design		Type Part no.	322E36-0120 504010A	322E36-0200 504010B	322E36-0320 504010C	322E36-0500 504010D
Torque accuracy		2 % standard deviation				
Torque range from to	Nm/in.lbs	2.4 - 12 / 21.2-106.2	4 - 20 / 35.4-177	6.4 - 32 / 56.6-283.2	10 - 50 / 88.5 - 442.5	
Speed range from to	rpm	50 - 1000	35 - 700	25 - 450	20 - 290	
Diameter	mm/in.	36/1.4	36/1.4	36/1.4	36/1.4	
Length	mm/in.	387.5 / 15.1	387.5 / 15.1	390 / 15.2	390 / 15.2	
Weight	kg/lbs	2.3 / 5.1	2.3 / 5.1	2.5 / 5.5	2.5 / 5.5	
Noise level	dB (A)	62	62	62	62	
Internal hex drive with quick change chuck DIN ISO 1173		F6.3 (¼")	F6.3 (¼")	F11.2 (7/16")	F11.2 (7/16")	
Connection parts with inserting end DIN ISO 1173		E6.3 (¼")	E6.3 (¼")	E11.2 (7/16")	E11.2 (7/16")	
Used with sequence controller		AST12-3 AST12-3 PB AST12-3 IE				
Required accessories: Motor cable straight design Length 2.5m 5m 8m 12m		125495A 125495B 125495C 125495D				
Optional accessories: Depth control digital Depth control analog 10 mm		9411771 908838D plus amplifier 813712				




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TECHNICAL DATA SPINDLE SCREWDRIVER, angle head, size 36

MINIMAT-EC Spindle screwdriver Angle head, lever start External square drive DIN 3121 Connection parts with inserting end DIN 3121 Internal square drive		Type Part no.	322EW36-0200-F10 504013A F10 (3/8") G10 (3/8")	322EW36-0300-F10 504013B F10 (3/8") G10 (3/8")	322EW36-0500-F12,5 504013C F12,5 (1/2") G12,5 (1/2")	322EW36-0700-F12,5 504013D F12,5 (1/2") G12,5 (1/2")
Torque accuracy			2 % standard deviation			
Torque range from to	Nm/in.lbs	6 - 20 / 53.1-177	10 - 30 / 88.5-265.5	15 - 50 / 132.8-442.5	20 - 70 / 177-619.5	
Speed range from to	rpm	40 - 700	30 - 450	20 - 280	20 - 170	
Diameter	mm/in.	36/1.4	36/1.4	36/1.4	36/1.4	
Length	mm/in.	500 / 19.5	500 / 19.5	500 / 19.5	500 / 19.5	
Weight	kg/lbs	3.8 / 8.4	3.8 / 8.4	4.1 / 9	4.1 / 9	
Noise level	dB (A)	62	62	62	62	
Used with sequence controller		AST12-3 AST12-3 PB AST12-3 IE				
Required accessories: Motor cable straight design Length 2.5m 5m 8m 12m The cable connection can be rotated 330°.		125495A 125495B 125495C 125495D				
Optional accessories: Depth control digital Depth control analog 10 mm		9411771 908838D plus amplifier 813712				



 Further information on installation as well as CAD models can be found in the download area on our website www.deprag.com.

OPTIONALLY AVAILABLE SOFTWARE SOLUTIONS

DEPRAG Cockpit Basic 1 device license	Part no.	145806 (included in delivery of the screwdriving system DEPRAG Plus)
DEPRAG Cockpit Advanced1 1 device license	Part no.	145795
DEPRAG Cockpit Advanced5 5 device licenses	Part no.	145796
DEPRAG Cockpit Advanced10 10 device licenses	Part no.	145797
DEPRAG Cockpit Advanced20 20 device licenses	Part no.	145798
DEPRAG Cockpit Advanced50 50 device licenses	Part no.	145799
DEPRAG Cockpit Professional1 1 device license	Part no.	145440
DEPRAG Cockpit Professional5 5 device licenses	Part no.	142967
DEPRAG Cockpit Professional10 10 device licenses	Part no.	142968
DEPRAG Cockpit Professional20 20 device licenses	Part no.	142978
DEPRAG Cockpit Professional50 50 device licenses	Part no.	142979
Demo version DEPRAG Cockpit Professional Activation code	Part no.	164785
Cockpit Programming Samples	Part no.	166217
DEPRAG Graph Viewer Activation code	Part no.	128901
DEPRAG Data eXchange Activation code	Part no.	132680
TIA Link Activation code	Part no.	135839
TwinCAT Link Activation code	Part no.	140996
Clamp Force Control (seating point detection) Activation code	Part no.	142961
Friction dependent torque screw assembly Activation code	Part no.	142959
Software update one-time Activation code	Part no.	142966
Software update annual license Activation code	Part no.	142965
Visualisation of the process Activation code	Part no.	144248
DEPRAG Operator Guidance Activation code	Part no.	146536
Safety & Change tracking Activation code	Part no.	144251
Industry 4.0 interfaces Activation code	Part no.	142962
DEPRAG Universal Robots Link Activation code	Part no.	164982
Process Control Activation code	Part no.	179966
Process Control (duration 30 days) Activation code	Part no.	179972
Allen-Bradley Link Activation code	Part no.	190928
DEPRAG GraphViewer Cloud Activation code	Part no.	193198

Further details on the software products can be found in our catalog D3900E.

FURTHER OPTIONALLY AVAILABLE ACCESSORIES

Motor cable extension	suitable for series 321EGx22-..
Length 2.5 m	127859A
Length 5.5 m	127859B
Length 9.5 m	127859C

The total length including the motor cable extension must not exceed 12 meters.

Toolbox	Type Part no.	TB 7 398097B
Technical data:		
Tool holders		7
Tool size		up to Ø 24 mm/0.9 in. (AF 19)
Voltage		DC 24 Volt
Amperage		100 mA
Input/output interface		SUB-D 15-pin connector
Start signal		4-pin connector
Dimensions (WxHxD)		225x50x120 mm / 8.8x1.9x4.7 in.
Weight		1.2 kg / 2.6 lbs.
Required: connection cable AST12-TB 7		385451C

Suitable screwdriver adaptors can be found in product catalog D3345E.



DEPRAG

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CERTIFIED AS PER DIN EN ISO 9001
