

## MINIMAT-E Screwdriver Spindles

The electric screwdriver with mechanical shut-off clutch.

Torque range from 0.1 - 4.8 Nm

- robust, long life cycle
  - highest shut-off accuracy
- brushless electric drive
  - highest process reliability
- lowest maintenance requirements

The MINIMAT-E screwdriver operates using the well-established principle of the mechanical MINIMAT shut-off clutch. Using the shut-off clutch guarantees torque accuracy of 3% standard deviation, irrespective of the screw joint. The high precision shut-off clutch guarantees a high screw assembly quality with low maintenance requirements over a cycle of a million screw assemblies.

The strength of the MINIMAT-E spindle screwdriver lies in the screw assembly torque range of 0.1 Nm to 4.8 Nm. High speeds of 650 up to 2000 rpm secure short cycle times.



## MINIMAT-E SCREWDRIVER SPINDLE

### Working Principle

The MINIMAT-E screwdriver operates using the well-established principle of the mechanical MINIMAT shut-off clutch. Using the shut-off clutch guarantees torque accuracy of 3% standard deviation, irrespective of the screw joint.

However, in many cases even better accuracy can be achieved so that under certain conditions a machine capability index of  $\geq 1.67$  can be attained even with a tolerance requirement of  $\pm 10\%$ .

This means that the error rate is less than 0.6 per million screw assemblies. For further enhancement of the processing reliability the screw-in depth and screwdriver shut-off can additionally be monitored.

Depending on application case very short cycle times can be achieved as this screwdriver runs at maximum speed right up to the shut-off point of the clutch. Whereas in order to reach the stated accuracy other controlled screwdrivers are subject to a speed reduction before shut-off.

The screwdriver is designed for tough industrial use with high quality, robust system components guaranteeing reliability and a long life-span.

The maintenance free brushless EC drive provides outstanding dynamics and high maximum torque which is ideal for screw tightening.

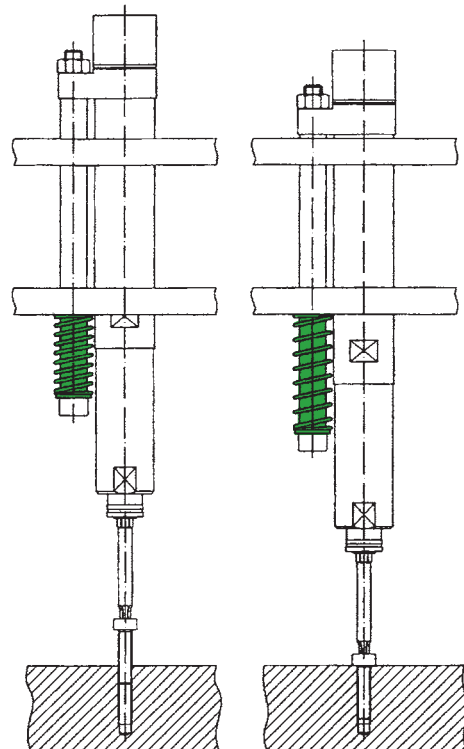
The screwdriver is available with push-to-start or remote start PLC signal.

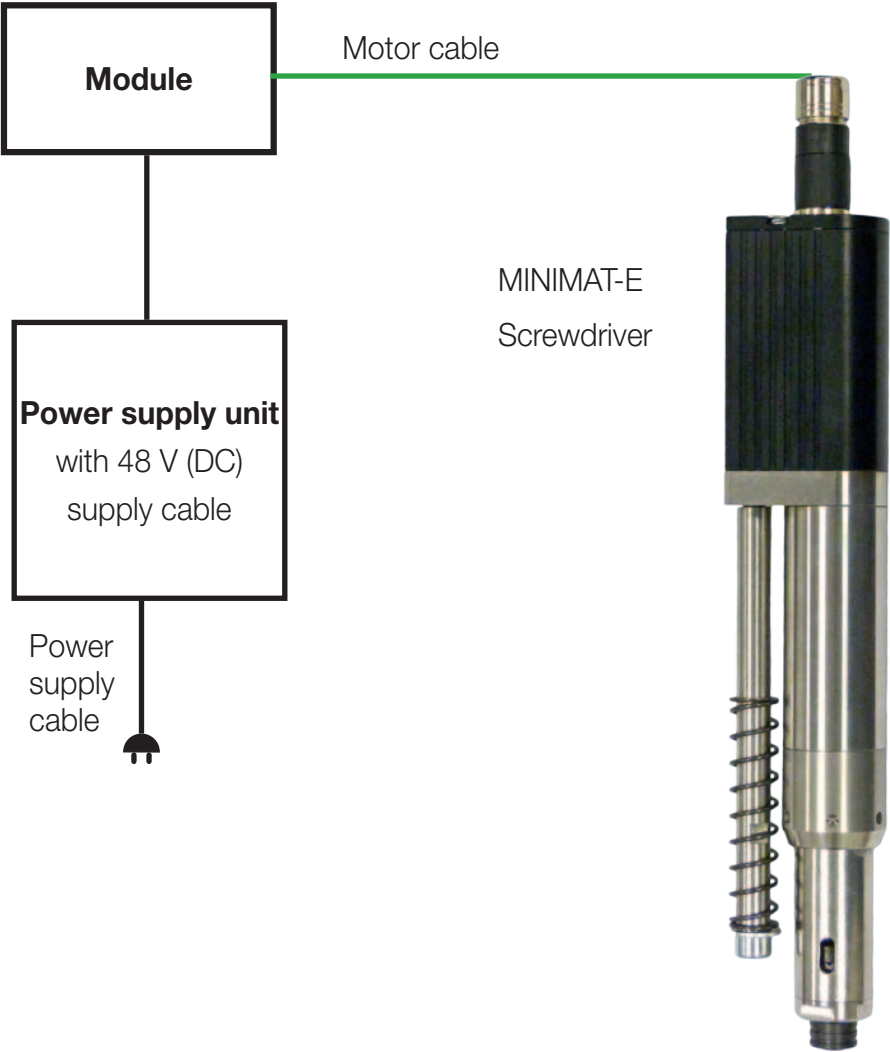
The options for inserting tools and additional components such as guide sleeves or vacuum connections are designed in the same way as the DEPRAG MINIMAT pneumatic screwdriver motor size 2 so that identical accessories may be used.

### Axial spring loaded suspension

Due to the axial movement of the entire screwdriver in the screwdriver fixture a spring loaded drive element is not required.

Therefore low-priced standard inserting tools can be used.





# TECHNICAL DATA MINIMAT-E SCREWDRIVER, STATIONARY, STRAIGHT SPINDLE FORM

<b>Spindle, remote start</b>		<b>Type</b>	<b>342EF27-0006-200</b>	<b>342EF27-0006-100</b>	<b>342EF27-0006-65</b>	<b>342EF27-0012-100</b>	<b>342EF27-0012-65</b>
right rotation, right shut-off	Part no.		308000A	308000B	308000C	308001A	308001B
Torque min.	Nm/in.lbs		0.1/0.885			0.55/4.87	
Torque max.	Nm/in.lbs		0.6/5.31			1.2/10.62	
Speed	rpm		2000	1000	650	1000	650
Diameter	mm/in.		27/1.05	27/1.05	27/1.05	27/1.05	27/1.05
Length	mm/in.		271/10.57	271/10.57	271/10.57	287/11.2	287/11.2
Weight	kg/lbs		1	1	1	1	1
Noise level	dB (A)		68	68	68	68	68
Line voltage (DC)	V		48	48	48	48	48
Spindle output			4 mm half moon	4 mm half moon	4 mm half moon	-	-
Suitable inserting tools and connection parts with inserting end			4 mm half moon	4 mm half moon	4 mm half moon	-	-
Internal hex. drive DIN ISO 1173						F6.3 (1/4")	F6.3 (1/4")
Suitable inserting tools and connection parts with inserting end DIN ISO 1173			-	-	-	E6.3 (1/4")	E6.3 (1/4")

## Required accessories

<b>Motor cable (2m/6.56ft.)</b>	<b>Type</b>	<b>KS4-2m</b>	<b>KS4-2m</b>	<b>KS4-2m</b>	<b>KS4-2m</b>	<b>KS4-2m</b>
	Part no.	151515A	151515A	151515A	151515A	151515A
<b>Alternative motor cable (5m/16.4ft.)</b>	<b>Type</b>	<b>KS4-5m</b>	<b>KS4-5m</b>	<b>KS4-5m</b>	<b>KS4-5m</b>	<b>KS4-5m</b>
	Part no.	151515B	151515B	151515B	151515B	151515B
<b>Power unit</b>	<b>Type</b>	<b>NG18</b>	<b>NG18</b>	<b>NG18</b>	<b>NG18</b>	<b>NG18</b>
	Part no.	101067	101067	101067	101067	101067
Source (AC)	V/Hz	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60
Output (DC)	V	48	48	48	48	48
Dimensions L x W x H	mm/in.	170x85x42 / 6.6 x 3.3 x 1.6				
Weight	kg/lbs	0.85 / 1.87	0.85 / 1.87	0.85 / 1.87	0.85 / 1.87	0.85 / 1.87
<b>Power cable EU</b>	<b>Type</b>	<b>KN-C13/EU</b>	<b>KN-C13/EU</b>	<b>KN-C13/EU</b>	<b>KN-C13/EU</b>	<b>KN-C13/EU</b>
	Part no.	833790 (2m)	833790 (2m)	833790 (2m)	833790 (2m)	833790 (2m)
alternative:						
<b>Power cable US</b>	<b>Type</b>	<b>KN-C13/US</b>	<b>KN-C13/US</b>	<b>KN-C13/US</b>	<b>KN-C13/US</b>	<b>KN-C13/US</b>
	Part no.	833791 (2m)	833791 (2m)	833791 (2m)	833791 (2m)	833791 (2m)
<b>Power cable UK</b>	<b>Type</b>	<b>KN-C13/UK</b>	<b>KN-C13/UK</b>	<b>KN-C13/UK</b>	<b>KN-C13/UK</b>	<b>KN-C13/UK</b>
	Part no.	833792 (2m)	833792 (2m)	833792 (2m)	833792 (2m)	833792 (2m)
<b>Power cable Brazil</b>	<b>Type</b>	<b>KN-C13/BR</b>	<b>KN-C13/BR</b>	<b>KN-C13/BR</b>	<b>KN-C13/BR</b>	<b>KN-C13/BR</b>
	Part no.	207388 (1.8m)	207388 (1.8m)	207388 (1.8m)	207388 (1.8m)	207388 (1.8m)
<b>Power cable China</b>	<b>Type</b>	<b>KN-C13/CN</b>	<b>KN-C13/CN</b>	<b>KN-C13/CN</b>	<b>KN-C13/CN</b>	<b>KN-C13/CN</b>
	Part no.	832927(2.5m)	832927(2.5m)	832927(2.5m)	832927(2.5m)	832927(2.5m)
<b>Module</b>	Part no.	100901A	function: supply of the signals - screwdriver running, - screwdriver start and reverse			

## Optional equipment

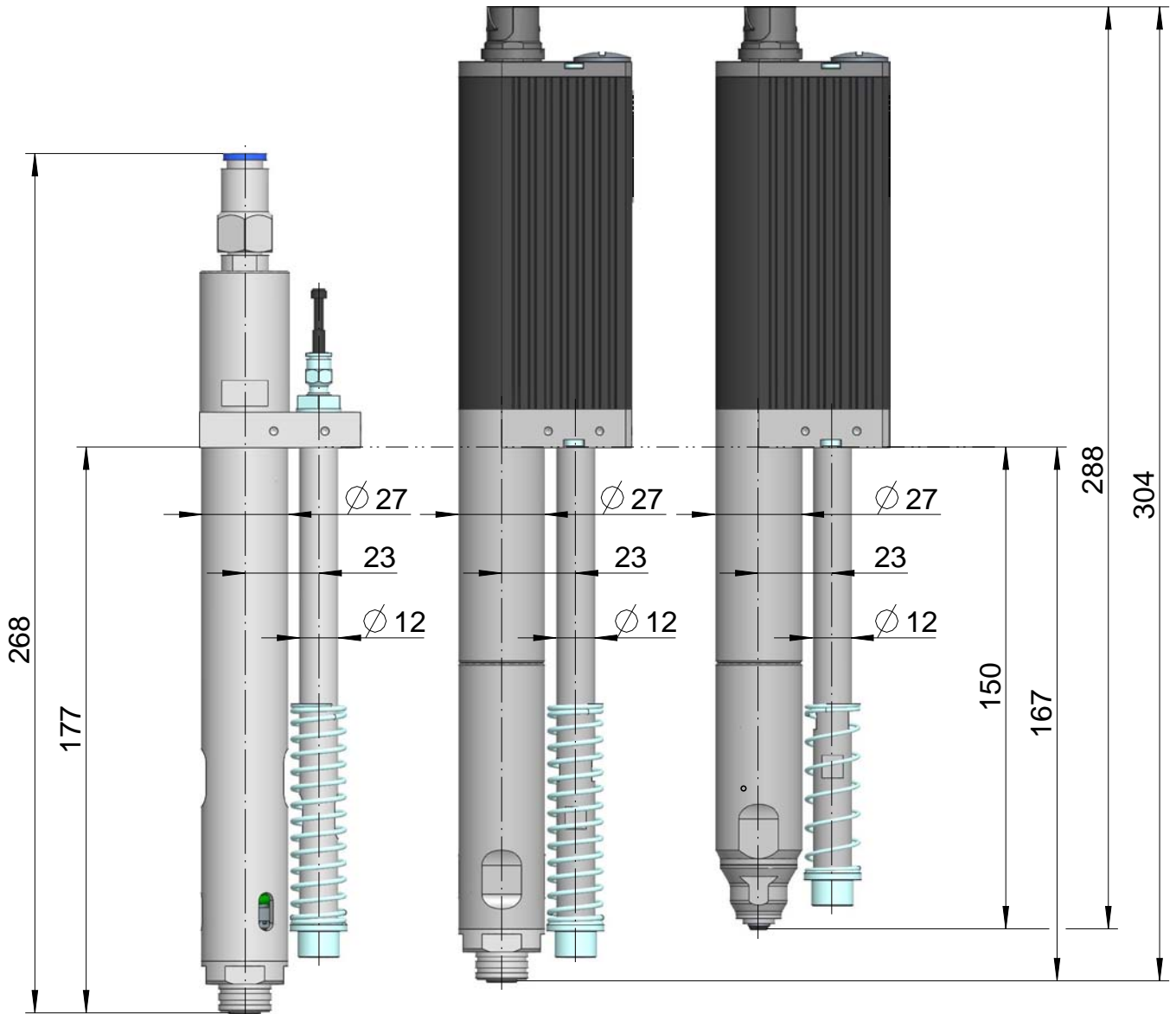
Spring sleeve cpl.	Part no.	4032801B	364672A
Spring sleeve cpl., with vacuum connection (in connection with finder, see leaflet: Inserting tools D3320E)	Part no.	4032801B	364672C

## The MINIMAT-E screwdriver spindle in comparison to the pneumatic screwdriver of the DEPRAG series MINIMAT, motor size 2

**MINIMAT**  
pneumatic  
screwdriver spindle,  
motor size 2

**MINIMAT-E**  
electric screwdriver spindle  
with mechanical shut-off  
clutch  
**Spindle output:**  
Internal hex. drive  
DIN 1173, F6.3 (1/4")

**MINIMAT-E**  
electric screwdriver spindle  
with mechanical shut-off  
clutch  
**Spindle output:**  
4 mm half moon



# TECHNICAL DATA MINIMAT-E SCREWDRIVER, STATIONARY, STRAIGHT SPINDLE FORM

<b>Spindle, push to start</b> right rotation, right shut-off	<b>Type</b> Part no.	<b>342EA36-0009-200</b> 304001A	<b>342EA36-0009-100</b> 304001B	<b>342EA36-0009-65</b> 304001C	<b>342EA36-0018-200</b> 304004A	<b>342EA36-0018-100</b> 304004B	<b>342EA36-0018-65</b> 304004C
<b>Spindle, remote start</b> right rotation, right shut-off	<b>Type</b> Part no.	<b>342EF36-0009-200</b> 305001A	<b>342EF36-0009-100</b> 305001B	<b>342EF36-0009-65</b> 305001C	<b>342EF36-0018-200</b> 305004A	<b>342EF36-0018-100</b> 305004B	<b>342EF36-0018-65</b> 305004C
Torque min.	Nm/in.lbs	0.4 / 3.5			0.5 / 4.4	0.4 / 3.5	0.4 / 3.5
Torque max.	Nm/in.lbs	0.9 / 8			1.8 / 16		
Speed	rpm	2000	1000	650	2000	1000	650
Diameter	mm/in.	36 / 1.4	36 / 1.4	36 / 1.4	36 / 1.4	36 / 1.4	36 / 1.4
Length	mm/in.	283 / 11	283 / 11	283 / 11	283 / 11	283 / 11	283 / 11
Weight	kg/lbs	1 / 2.2	1 / 2.2	1 / 2.2	1 / 2.2	1 / 2.2	1 / 2.2
Noise level	dB (A)	68	68	68	68	68	68
Line voltage (DC)	V	48	48	48	48	48	48
Internal hex. drive 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")
Suitable inserting tools and 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")
<b>Spindle, push to start</b> right rotation, right shut-off	<b>Type</b> Part no.	<b>342EA36-0024-100</b> 304002A	<b>342EA36-0024-65</b> 304002B	<b>342EA36-0036-65</b> 304003A	<b>342EA36-0048-100</b> 304005A	<b>342EA36-0048-65</b> 304005B	
<b>Spindle, remote start</b> right rotation, right shut-off	<b>Type</b> Part no.	<b>342EF36-0024-100</b> 305002A	<b>342EF36-0024-65</b> 305002B	<b>342EF36-0036-65</b> 305003A	<b>342EF36-0048-100</b> 305005A	<b>342EF36-0048-65</b> 305005B	
Torque min.	Nm/in.lbs	0.4 / 3.5		0.5 / 4.4	0.4 / 3.5	0.4 / 3.5	
Torque max.	Nm/in.lbs	2.4 / 21.24		3.6 / 31.86	4.8 / 42.48		
Speed	rpm	1000	650	650	1000	650	
Diameter	mm/in.	36 / 1.4	36 / 1.4	36 / 1.4	36 / 1.4	36 / 1.4	
Length	mm/in.	283	283	283	283	283	
Weight	kg/lbs	1 / 2.2	1 / 2.2	1 / 2.2	1 / 2.2	1 / 2.2	
Noise level	dB (A)	68	68	68	68	68	
Line voltage (DC)	V	48	48	48	48	48	
Internal hex. drive DIN ISO 1173		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	
Suitable inserting tools and 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")	

## Required accessories

<b>Motor cable (2m/6.56ft.)</b>	<b>Type</b> Part no.	<b>KS4-2m</b> 151515A	<b>KS4-2m</b> 151515A	<b>KS4-2m</b> 151515A	<b>KS4-2m</b> 151515A	<b>KS4-2m</b> 151515A	<b>KS4-2m</b> 151515A
<b>Alternative motor cable (5m/16.4ft.)</b>	<b>Type</b> Part no.	<b>KS4-5m</b> 151515B	<b>KS4-5m</b> 151515B	<b>KS4-5m</b> 151515B	<b>KS4-5m</b> 151515B	<b>KS4-5m</b> 151515B	<b>KS4-5m</b> 151515B
<b>Alternative motor cable (8m/26.24ft.)</b>	<b>Type</b> Part no.	<b>KS4-8m</b> 151515C	<b>KS4-8m</b> 151515C	<b>KS4-8m</b> 151515C	<b>KS4-8m</b> 151515C	<b>KS4-8m</b> 151515C	<b>KS4-8m</b> 151515C
<b>Power unit</b>	<b>Type</b> Part no.	<b>NG18</b> 101067	<b>NG18</b> 101067	<b>NG18</b> 101067	<b>NG20</b> 101069	<b>NG20</b> 101069	<b>NG20</b> 101069
Source (AC)	V/Hz	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60
Output (DC)	V	48	48	48	48	48	48
Dimensions L x W x H	mm/in.	170x85x42 / 6.6 x 3.3 x 1.6			210x100x52 / 8.2 x 3.9 x 2		
Weight	kg/lbs	0.85 / 1.87	0.85 / 1.87	0.85 / 1.87	1.15 / 2.53	1.15 / 2.53	1.15 / 2.53
<b>Power cable EU</b>	<b>Type</b> Part no.	<b>KN-C13/EU</b> 833790 (2m)	<b>KN-C13/EU</b> 833790 (2m)	<b>KN-C13/EU</b> 833790 (2m)	<b>KN-C13/EU</b> 833790 (2m)	<b>KN-C13/EU</b> 833790 (2m)	<b>KN-C13/EU</b> 833790 (2m)
alternative:							
<b>Power cable US</b>	<b>Type</b> Part no.	<b>KN-C13/US</b> 833791 (2m)	<b>KN-C13/US</b> 833791 (2m)	<b>KN-C13/US</b> 833791 (2m)	<b>KN-C13/US</b> 833791 (2m)	<b>KN-C13/US</b> 833791 (2m)	<b>KN-C13/US</b> 833791 (2m)
<b>Power cable UK</b>	<b>Type</b> Part no.	<b>KN-C13/UK</b> 833792 (2m)	<b>KN-C13/UK</b> 833792 (2m)	<b>KN-C13/UK</b> 833792 (2m)	<b>KN-C13/UK</b> 833792 (2m)	<b>KN-C13/UK</b> 833792 (2m)	<b>KN-C13/UK</b> 833792 (2m)
<b>Power cable Brazil</b>	<b>Type</b> Part no.	<b>KN-C13/BR</b> 207388 (1.8m)	<b>KN-C13/BR</b> 207388 (1.8m)	<b>KN-C13/BR</b> 207388 (1.8m)	<b>KN-C13/BR</b> 207388 (1.8m)	<b>KN-C13/BR</b> 207388 (1.8m)	<b>KN-C13/BR</b> 207388 (1.8m)
<b>Power cable China</b>	<b>Type</b> Part no.	<b>KN-C13/CN</b> 832927(2.5m)	<b>KN-C13/CN</b> 832927(2.5m)	<b>KN-C13/CN</b> 832927(2.5m)	<b>KN-C13/CN</b> 832927(2.5m)	<b>KN-C13/CN</b> 832927(2.5m)	<b>KN-C13/CN</b> 832927(2.5m)
<b>Module</b> suitable for spindle with remote start	Part no.	100901A	function: supply of the signals - screwdriver running, - screwdriver start and reverse				
<b>Module</b> suitable for spindle with push to start	Part no.	100901B	function: supply of the signal - screwdriver running				

## Optional equipment

Spring sleeve cpl.	Part no.	364672A
Spring sleeve cpl., with vacuum connection (in connection with finder, see leaflet: Inserting tools D3320E)	Part no.	364672C

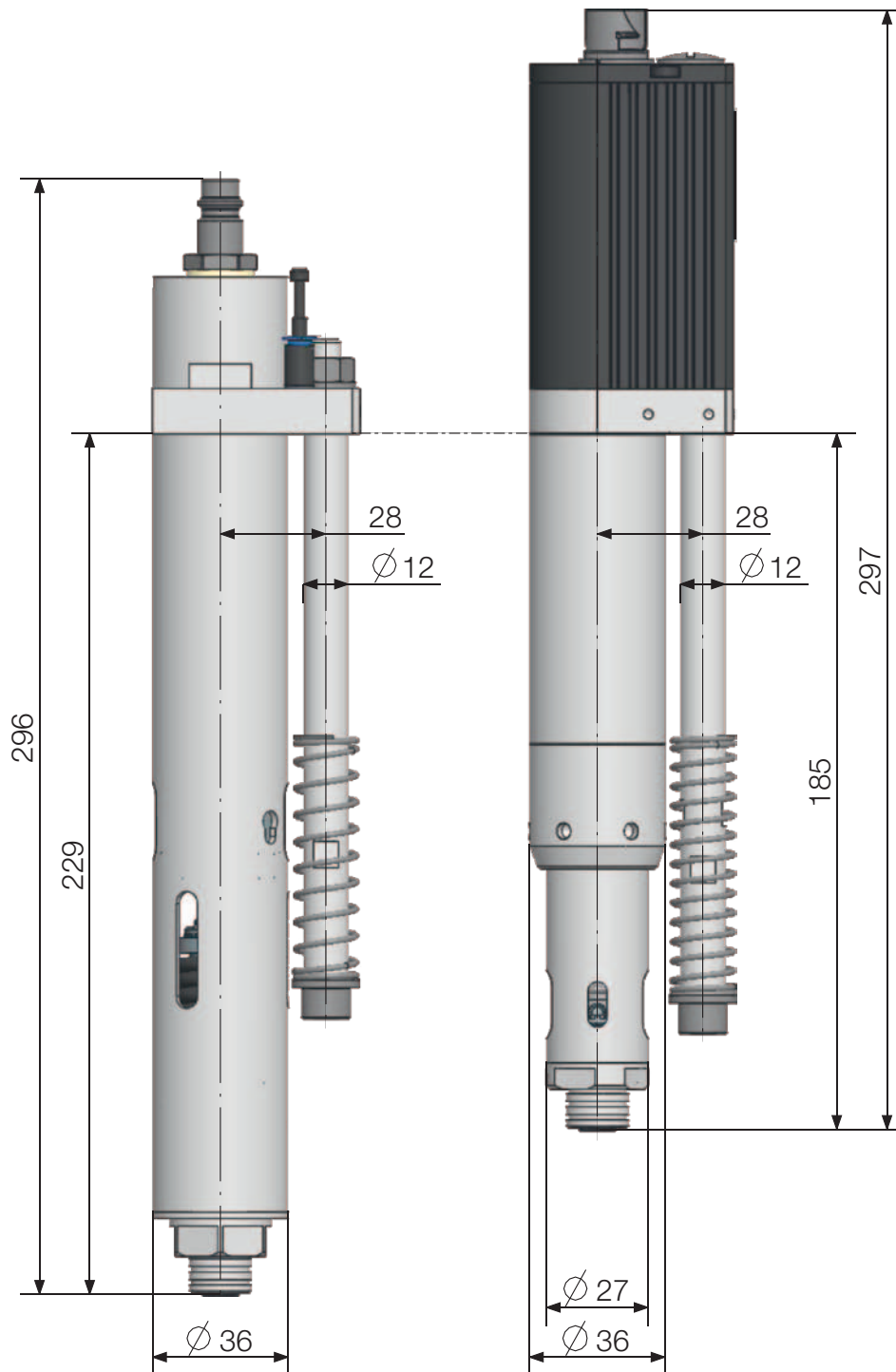
## The MINIMAT-E screwdriver spindle in comparison to the pneumatic screwdriver of the DEPRAG series MINIMAT, motor size 3

### MINIMAT

pneumatic screwdriver spindle,  
motor size 3

### MINIMAT-E

electric screwdriver spindle  
with mechanical shut-off clutch



# DEPRAG

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