



Screwdriving technology

Automation

Air motors

Air tools

DEPRAG

**Screwdriver Spindles
pneumatic**

MICROMAT / MINIMAT Control Screwdrivers

**The basic solution for almost all screwdriving tasks
straight design - torque from 0.02 - 180 Nm / 0.2 to 1594 in.lbs**

- **top precision shut-off clutch**
- **for small spaces**
- **long-life, robust**

The particular strength of a MICROMAT / MINIMAT control screwdriver in straight design is that it can carry out screw assemblies with torque ranges of 0.02 Nm to 180 Nm. In these ranges you can not only assemble screws but also adjust them.

The ergonomic MICROMAT / MINIMAT screwdriver is extremely durable due to its extraordinary processing quality and design for heavy industrial use.

The MICROMAT / MINIMAT clutch works with the tried and tested principle of a mechanical disengagement and shut-off clutch. This extremely accurate shut-off clutch allows torque precision of $< \pm 3\%$ standard deviation, which is maintained for millions of assemblies.

When used under the correct conditions DEPRAG pneumatic screwdrivers with shut-

off clutch conform with a C_{mk} value of ≥ 1.67 with $\pm 10\%$ tolerance in relation to 6 Sigma according to ISO 5393. In other words a C_{mk} value of 1.67 means that there is a failure rate of 0.6 per million screw assemblies.

The MICROMAT / MINIMAT spindles can be easily integrated and are extremely small. Control Screwdrivers are available in right rotation, left rotation or reversible, with push to start or remote start option. These tools can be used without lubrication: This should however only be done in specific applications. Using a tool without lubrication will decrease its lifespan.

The 5 available motor sizes with a minimum of 3 gear variations each, and the possibility to combine motorsize 2 and 3 drivers with off-set-/or reduction gearings off different gear ratio to minimize the center distance or to increase the torque value, fulfill a wide spectrum of requirements in regards to torque and speed.



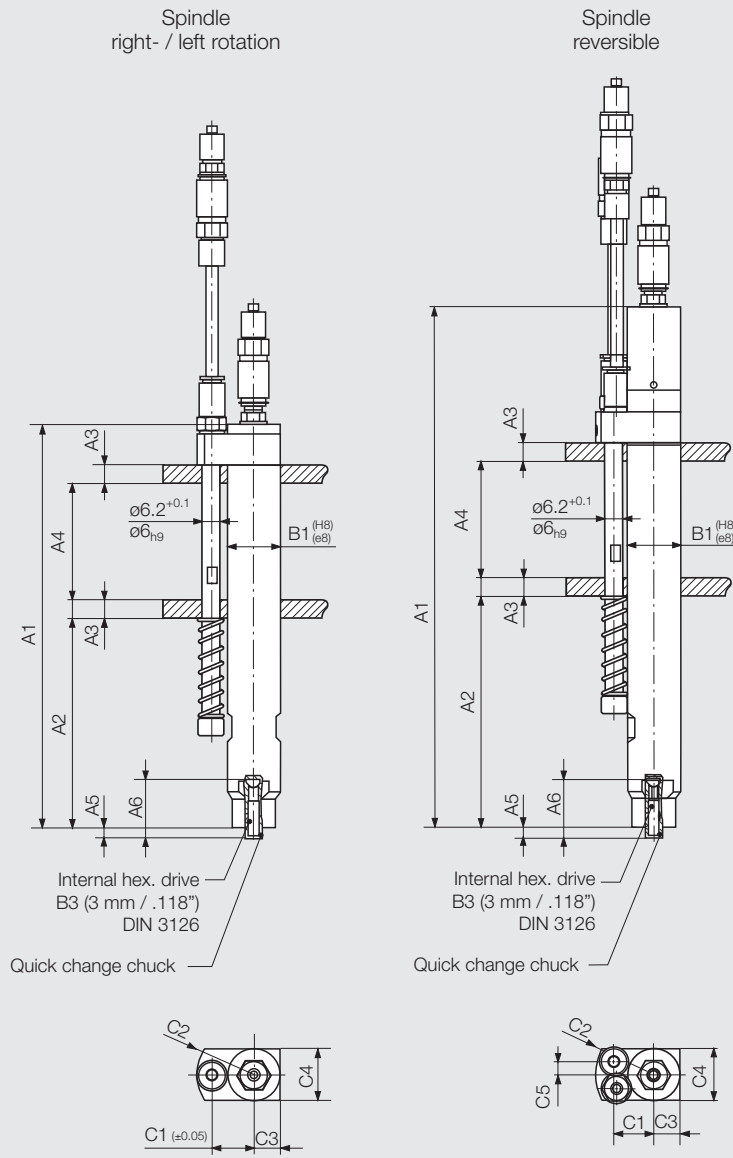
TECHNICAL DATA

Screwdriver Style			Motor Size 0			
Spindle right rotation, right shut-off Push To Start	type order no.		345-308-31 339271 A	345-408-31 345765 A	345-708-31 385138 A	345-508-31 339271 B
Spindle left rotation, left shut-off Push To Start	type order no.		345-308-31 L 341357 A	345-408-31 L 341357 E	345-708-31 L 385165 A	345-508-31 L 341357 B
Spindle right rotation, right shut-off Remote Start	type order no.		345-300-31 339275 A	345-400-31 339275 G	345-700-31 385166 A	345-500-31 339275 B
Spindle left rotation, left shut-off Remote Start	type order no.		345-300-31 L 346058 A	345-400-31 L 346058 C	345-700-31 L 385167 A	345-500-31 L 346058 B
torque min.	Ncm / in.oz		2 / 3	2 / 3	2 / 3	2 / 3
soft pull-up max.	Ncm / in.oz		50 / 70	55 / 78	70 / 97	70 / 97
hard pull-up max.	Ncm / in.oz		60 / 83	55 / 78	70 / 97	70 / 97
speed, idling	rpm		1600	1100	650	350
air consumption	m ³ /min / cfm		0.1 / 3.5	0.1 / 3.5	0.1 / 3.5	0.1 / 3.5
weight	kg / lbs		0.18 / 0.40	0.18 / 0.40	0.19 / 0.42	0.19 / 0.42
push to start pressure	N / lbs		11 / 2.4	11 / 2.4	11 / 2.4	11 / 2.4
pressure at max. screwdriver stroke	N / lbs		20 / 4.4	20 / 4.4	20 / 4.4	20 / 4.4
hose I.D. for air supply	mm / in.		3 / 1/8	3 / 1/8	3 / 1/8	3 / 1/8
hose I.D. for function control	mm / in.		3 / 1/8	3 / 1/8	3 / 1/8	3 / 1/8
internal hex. drive DIN 3126			B3 (3mm/.118")	B3 (3mm/.118")	B3 (3mm/.118")	B3 (3mm/.118")
suitable tool inserts and connecting components with a drive as per DIN 3126			A3 (3mm/.118")	A3 (3mm/.118")	A3 (3mm/.118")	A3 (3mm/.118")
Spindle reversible, right shut-off, Push To Start for right rotation reverse by Remote Start	type order no.		345-308-31 U 374098 A	345-408-31 U 374098 B	345-708-31 U 385168 A	345-508-31 U 374098 C
Spindle reversible, left shut-off, Push To Start for left rotation reverse by Remote Start	type order no.		345-308-31 UL 37 41 00 A	345-408-31 UL 374100 B	345-708-31 UL 385169 A	345-508-31 UL 374100 C
Spindle reversible, right shut-off, Remote Start in drive direction and in reverse	type order no.		345-300-31 U 374099 A	345-400-31 U 374099 B	345-700-31 U 385170 A	345-500-31 U 374099 C
Spindle reversible, left shut-off, Remote Start in drive direction and in reverse	type order no.		345-300-31 UL 374101 A	345-400-31 UL 374101 B	345-700-31 UL 385171 A	345-500-31 UL 374101 C
torque min.	Ncm / in.oz		2 / 3	2 / 3	2 / 3	2 / 3
soft pull-up max.	Ncm / in.oz		40 / 57	50 / 70	70 / 97	70 / 97
hard pull-up max.	Ncm / in.oz		50 / 70	50 / 70	70 / 97	70 / 97
speed, idling	rpm		1300	950	480	300
air consumption	m ³ /min / cfm		0.1 / 3.5	0.1 / 3.5	0.1 / 3.5	0.1 / 3.5
weight	kg / lbs		0.23 / 0.51	0.23 / 0.51	0.24 / 0.53	0.24 / 0.53
push to start pressure	N / lbs		11 / 2.4	11 / 2.4	11 / 2.4	11 / 2.4
pressure at max. screwdriver stroke	N / lbs		20 / 4.4	20 / 4.4	20 / 4.4	20 / 4.4
hose I.D. for air supply	mm / in.		3 / 1/8	3 / 1/8	3 / 1/8	3 / 1/8
hose I.D. for function control	mm / in.		3 / 1/8	3 / 1/8	3 / 1/8	3 / 1/8
internal hex. drive DIN 3126			B3 (3mm/.118")	B3 (3mm/.118")	B3 (3mm/.118")	B3 (3mm/.118")
suitable tool inserts and connecting components with a drive as per DIN 3126			A3 (3mm/.118")	A3 (3mm/.118")	A3 (3mm/.118")	A3 (3mm/.118")

Performance data relate to an air pressure of 6.3 bar (90 PSI)

Please find suitable accessories on page 20.

Please also find suitable tool inserts in our brochure D 3320 E.



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Motor Size 0															
type				Dimensions (mm)											
Spindle right- / left rotation				A1	A2	A3	A4	A5	A6	B1	C1	C2	C3	C4	C5
345-308-31	345-308-31 L	345-300-31	345-300-31 L	132	69	6	38	3.5 (0.8)	19	17	13.5	18	8.5	17	-
345-408-31	345-408-31 L	345-400-31	345-400-31 L												
345-508-31	345-508-31 L	345-500-31	345-500-31 L	138	75	6	38	3.5 (0.8)	19	17	13.5	18	8.5	17	-
345-708-31	345-708-31 L	345-700-31	345-700-31 L												
Spindle reversible															
345-308-31 U	345-308-31 UL	345-300-31 U	345-300-31 UL	163.5	69	6	38	3.5 (0.8)	19	17	12.9	19	8.5	17	4.1
345-408-31 U	345-408-31 UL	345-400-31 U	345-400-31 UL												
345-508-31 U	345-508-31 UL	345-500-31 U	345-500-31 UL	169.5	75	6	38	3.5 (0.8)	19	17	12.9	19	8.5	17	4.1
345-708-31 U	345-708-31 UL	345-700-31 U	345-700-31 UL												

Dimensions in brackets: For screwdrivers with remote start

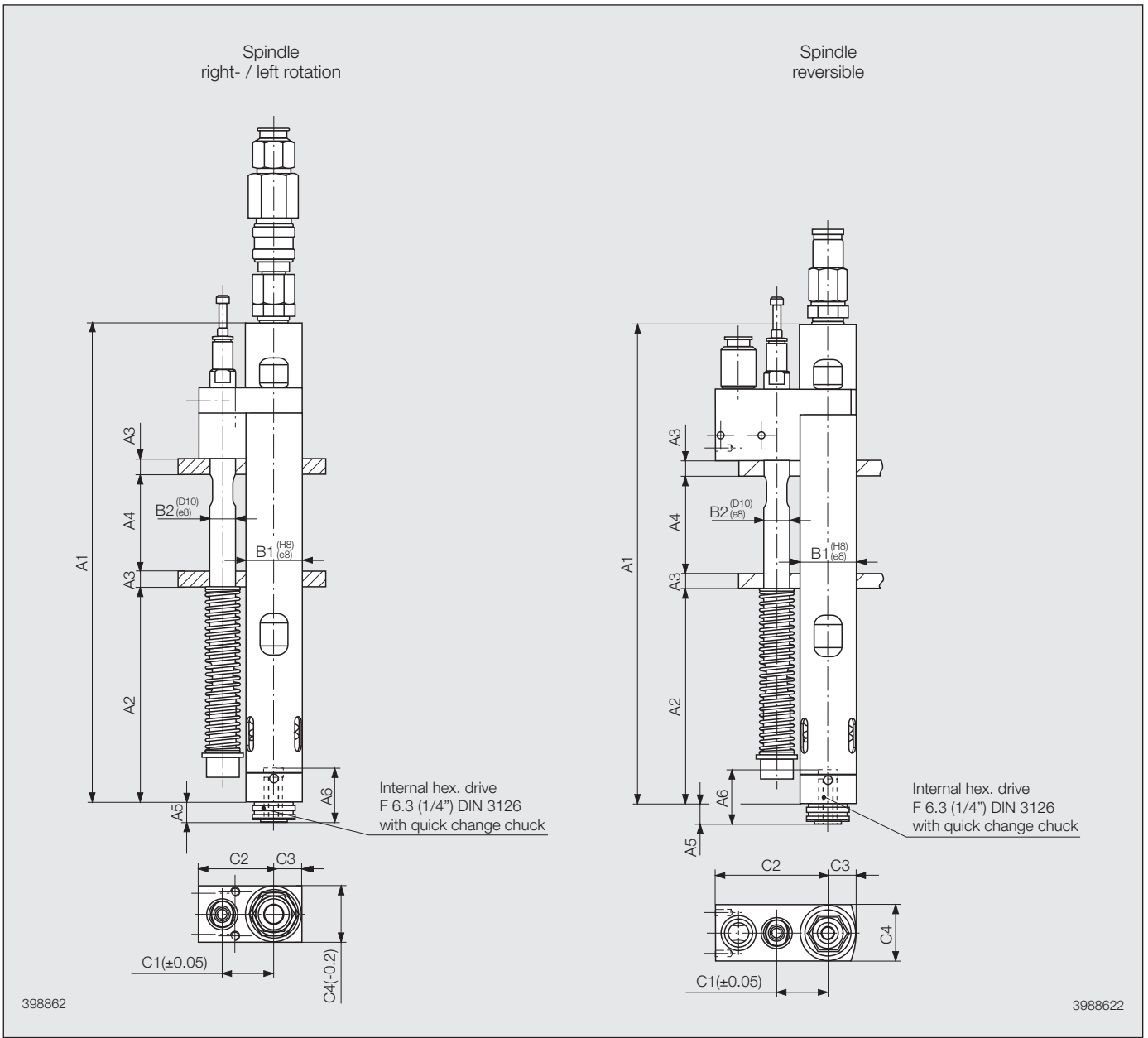
TECHNICAL DATA

Screwdriver Style		Motor Size 1			
Spindle right rotation, right shut-off Push To Start	type order no.	347-218-31 397066 A	347-318-31 397066 B	347-518-31 397066 C	347-618-31 397066 D
Spindle left rotation, left shut-off Push To Start	type order no.	347-218-31 L 397074 A	347-318-31 L 397074 B	347-518-31 L 397074 C	347-618-31 L 397074 D
Spindle right rotation, right shut-off Remote Start	type order no.	347-210-31 397068 A	347-310-31 397068 B	347-510-31 397068 C	347-610-31 397068 D
Spindle left rotation, left shut-off Remote Start	type order no.	347-210-31 L 397078 A	347-310-31 L 397078 B	347-510-31 L 397078 C	347-610-31 L 397078 D
torque min.	Nm / in.lbs	0.3 / 3	0.3 / 3	0.2 / 2	0.2 / 2
torque max.	Nm / in.lbs	1 / 9	1.4 / 12	2 / 18	2 / 18
speed, idling	rpm	1900	1300	900	600
air consumption	m ³ /min / cfm	0.23 / 8	0.23 / 8	0.23 / 8	0.23 / 8
weight	kg / lbs	0.5 / 1.1	0.5 / 1.1	0.5 / 1.1	0.55 / 1.2
push to start pressure	N / lbs	12 / 2.6	12 / 2.6	12 / 2.6	12 / 2.6
pressure at max. screwdriver stroke	N / lbs	60 / 13	60 / 13	60 / 13	60 / 13
hose I.D. for air supply	mm / in.	5.5 / ⁷ / ₃₂	5.5 / ⁷ / ₃₂	5.5 / ⁷ / ₃₂	5.5 / ⁷ / ₃₂
hose I.D. for function control	mm / in.	4 / ⁵ / ₃₂	4 / ⁵ / ₃₂	4 / ⁵ / ₃₂	4 / ⁵ / ₃₂
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")
Spindle reversible, right shut-off, Push To Start for right rotation reverse by Remote Start	type order no.	347-218-31 U 397067 A	347-318-31 U 397067 B	347-518-31 U 397067 C	347-618-31 U 397067 D
Spindle reversible, left shut-off, Push To Start for left rotation reverse by Remote Start	type order no.	347-218-31 UL 397075 A	347-318-31 UL 397075 B	347-518-31 UL 397075 C	347-618-31 UL 397075 D
Spindle reversible, right shut-off, Remote Start in drive direction and in reverse	type order no.	347-210-31 U 397069 A	347-310-31 U 397069 B	347-510-31 U 397069 C	347-610-31 U 397069 D
Spindle reversible, left shut-off, Remote Start in drive direction and in reverse	type order no.	347-210-31 UL 397079 A	347-310-31 UL 397079 B	347-510-31 UL 397079 C	347-610-31 UL 397079 D
torque min.	Nm / in.lbs	0.3 / 3	0.3 / 3	0.2 / 2	0.2 / 2
torque max.	Nm / in.lbs	1 / 9	1.4 / 12	2 / 18	2 / 18
speed, idling	rpm	1900	1300	900	600
air consumption	m ³ /min / cfm	0.23 / 8	0.23 / 8	0.23 / 8	0.23 / 8
weight	kg / lbs	0.6 / 1.3	0.6 / 1.3	0.6 / 1.3	0.65 / 1.4
push to start pressure	N / lbs	12 / 2.6	12 / 2.6	12 / 2.6	12 / 2.6
pressure at max. screwdriver stroke	N / lbs	60 / 13	60 / 13	60 / 13	60 / 13
hose I.D. for air supply	mm / in.	5.5 / ⁷ / ₃₂	5.5 / ⁷ / ₃₂	5.5 / ⁷ / ₃₂	5.5 / ⁷ / ₃₂
hose I.D. for function control	mm / in.	4 / ⁵ / ₃₂	4 / ⁵ / ₃₂	4 / ⁵ / ₃₂	4 / ⁵ / ₃₂
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")

Performance data relate to an air pressure of 6.3 bar (90 PSI)

Please find suitable accessories on page 20.

Please also find suitable tool inserts in our brochure D 3320 E.



Motor Size 1																
type				Dimensions (mm)												
				A1	A2	A3	A4	A5	A6	B1	B2	C1	C2	C3	C4	
Spindle right- / left rotation																
347-218-31	347-218-31 L	347-210-31	347-210-31 L	187.9	84.4	6	38	7.6 (5.9)	21	22	10	20	29	11	22	
347-318-31	347-318-31 L	347-310-31	347-310-31 L													
347-518-31	347-518-31 L	347-510-31	347-510-31 L													
347-618-31	347-618-31 L	347-610-31	347-610-31 L													
Spindle reversible																
347-218-31 U	347-218-31 UL	347-210-31 U	347-210-31 UL	187.9	84.4	6	38	7.6 (5.9)	21	22	10	20	44	11	22	
347-318-31 U	347-318-31 UL	347-310-31 U	347-310-31 UL													
347-518-31 U	347-518-31 UL	347-510-31 U	347-510-31 UL													
347-618-31 U	347-618-31 UL	347-610-31 U	347-610-31 UL													

Dimensions in brackets: For screwdrivers with remote start

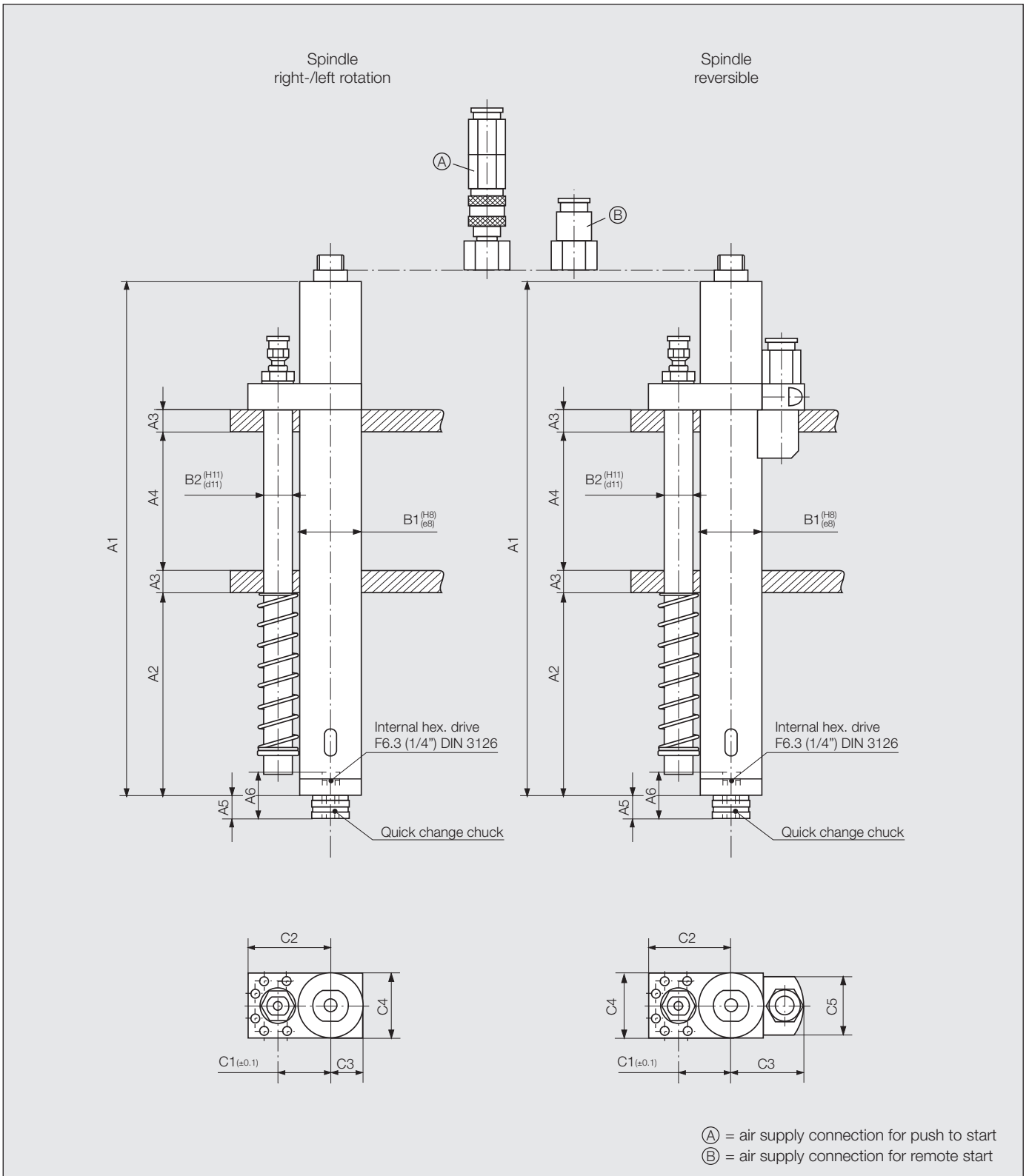
TECHNICAL DATA

Screwdriver Style			Motor Size 2		
Spindle right rotation, right shut-off Push To Start	type order no.	347-228-31 386369 A	347-328-31 386369 B	347-528-31 386369 C	
Spindle left rotation, left shut-off Push To Start	type order no.	347-228-31 L 386370 A	347-328-31 L 386370 B	347-528-31 L 386370 C	
Spindle right rotation, right shut-off Remote Start	type order no.	347-220-31 386371 A	347-320-31 386371 B	347-520-31 386371 C	
Spindle left rotation, left shut-off Remote Start	type order no.	347-220-31 L 386372 A	347-320-31 L 386372 B	347-520-31 L 386372 C	
torque min.	Nm / in.lbs	0.5 / 5	0.4 / 4	0.3 / 3	
soft pull-up max.	Nm / in.lbs	1.6 / 14	3 / 27	5 / 44	
hard pull-up max.	Nm / in.lbs	2.2 / 19	3.5 / 31	5 / 44	
speed, idling	rpm	4000	1550	680	
air consumption	m ³ /min / cfm	0.3 / 11	0.3 / 11	0.3 / 11	
weight	kg / lbs	0.89 / 1.9	0.89 / 1.9	0.89 / 1.9	
push to start pressure	N / lbs	24 / 5.4	24 / 5.4	24 / 5.4	
pressure at max. screwdriver stroke	N / lbs	100 / 22	100 / 22	100 / 22	
hose for air supply (O.D. / I.D.)	mm (in.)	8 / 5.5 (.314 / 7/32)	8 / 5.5 (.314 / 7/32)	8 / 5.5 (.314 / 7/32)	
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm (in.)	4 / 2.5 (.157 / 3/32)	4 / 2.5 (.157 / 3/32)	4 / 2.5 (.157 / 3/32)	
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	
Spindle reversible, right shut-off, Push To Start for right rotation reverse by Remote Start	type order no.	347-228-31 U 386373 A	347-328-31 U 386373 B	347-528-31 U 386373 C	
Spindle reversible, left shut-off, Push To Start for left rotation reverse by Remote Start	type order no.	347-228-31 UL 386374 A	347-328-31 UL 386374 B	347-528-31 UL 386374 C	
Spindle reversible, right shut-off, Remote Start in drive direction and in reverse	type order no.	347-220-31 U 386375 A	347-320-31 U 386375 B	347-520-31 U 386375 C	
Spindle reversible, left shut-off, Remote Start in drive direction and in reverse	type order no.	347-220-31 UL 386376 A	347-320-31 UL 386376 B	347-520-31 UL 386376 C	
torque min.	Nm / in.lbs	0.5 / 5	0.4 / 4	0.3 / 3	
soft pull-up max.	Nm / in.lbs	1.3 / 11	2.6 / 23	4.5 / 40	
hard pull-up max.	Nm / in.lbs	2 / 18	3 / 26	4.5 / 40	
speed, idling	rpm	3100	1150	520	
air consumption	m ³ /min / cfm	0.3 / 11	0.3 / 11	0.3 / 11	
weight	kg / lbs	0.91 / 2	0.91 / 2	0.91 / 2	
push to start pressure	N / lbs	24 / 5.4	24 / 5.4	24 / 5.4	
pressure at max. screwdriver stroke	N / lbs	100 / 22	100 / 22	100 / 22	
hose for air supply (O.D. / I.D.)	mm (in.)	8 / 5.5 (.314 / 7/32)	8 / 5.5 (.314 / 7/32)	8 / 5.5 (.314 / 7/32)	
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm (in.)	4 / 2.5 (.157 / 3/32)	4 / 2.5 (.157 / 3/32)	4 / 2.5 (.157 / 3/32)	
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	

Performance data relate to an air pressure of 6.3 bar (90 PSI)

Please find suitable accessories on page 20.

Please also find suitable tool inserts in our brochure D 3320 E.



Motor Size 2																
type				Dimensions (mm)												
Spindle right-/left rotation				A1	A2	A3	A4	A5	A6	B1	B2	C1	C2	C3	C4	C5
347-228-31	347-228-31 L	347-220-31	347-220-31 L													
347-328-31	347-328-31 L	347-320-31	347-320-31 L	222	87	10	60	11	21	27	12	23	36	14	28	-
347-528-31	347-528-31 L	347-520-31	347-520-31 L													
Spindle reversible				A1	A2	A3	A4	A5	A6	B1	B2	C1	C2	C3	C4	C5
347-228-31 U	347-228-31 UL	347-220-31 U	347-220-31 UL													
347-328-31 U	347-328-31 UL	347-320-31 U	347-320-31 UL	222	87	10	60	11	21	27	12	23	36	32	28	25
347-528-31 U	347-528-31 UL	347-520-31 U	347-520-31 UL													

TECHNICAL DATA

Screwdriver Style			Motor Size 3			
Spindle right rotation, right shut-off Push To Start	type order no.		346-238-31 406109 B	346-738-31 406109 C	346-338-31 406109 D	346-438-31 406109 E
Spindle left rotation, left shut-off Push To Start	type order no.		346-238-31 L 406446 B	346-738-31 L 406446 C	346-338-31 L 406446 D	346-438-31 L 406446 E
Spindle right rotation, right shut-off Remote Start	type order no.		346-230-31 406482 B	346-730-31 406482 C	346-330-31 406482 D	346-430-31 406482 E
Spindle left rotation, left shut-off Remote Start	type order no.		346-230-31 L 406484 B	346-730-31 L 406484 C	346-330-31 L 406484 D	346-430-31 L 406484 E
torque min.	Nm / in.lbs		2 / 18	2 / 18	2 / 18	2 / 18
soft pull-up max.	Nm / in.lbs		5 / 44	8 / 71	14 / 123	20 / 177
hard pull-up max.	Nm / in.lbs		6 / 53	9 / 80	14 / 123	20 / 177
speed, idling	rpm		2500	1400	800	400
air consumption	m ³ /min / cfm		0.45 / 16	0.45 / 16	0.45 / 16	0.45 / 16
weight	kg / lbs		1.5 / 3.3	1.6 / 3.5	1.6 / 3.5	1.6 / 3.5
push to start pressure	N / lbs		38 / 8.4	38 / 8.4	38 / 8.4	38 / 8.4
pressure at max. screwdriver stroke	N / lbs		100 / 22	100 / 22	100 / 22	100 / 22
hose for air supply (O.D. / I.D.)	mm / in.		12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm / in.		4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
internal hex. drive DIN 3126			F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")
suitable tool inserts and connecting components with a drive as per DIN 3126			E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")
Spindle reversible, right shut-off, Push To Start for right rotation reverse by Remote Start	type order no.		346-238-31 U 406223 B	346-738-31 U 406223 C	346-338-31 U 406223 D	346-438-31 U 406223 E
Spindle reversible, left shut-off, Push To Start for left rotation reverse by Remote Start	type order no.		346-238-31 UL 406469 B	346-738-31 UL 406469 C	346-338-31 UL 406469 D	346-438-31 UL 406469 E
Spindle reversible, right shut-off, Remote Start in drive direction and in reverse	type order no.		346-230-31 U 406282 B	346-730-31 U 406282 C	346-330-31 U 406282 D	346-430-31 U 406282 E
Spindle reversible, left shut-off, Remote Start in drive direction and in reverse	type order no.		346-230-31 UL 406475 B	346-730-31 UL 406475 C	346-330-31 UL 406475 D	346-430-31 UL 406475 E
torque min.	Nm / in.lbs		2 / 18	2 / 18	2 / 18	2 / 18
soft pull-up max.	Nm / in.lbs		4.5 / 40	7 / 62	12 / 106	20 / 177
hard pull-up max.	Nm / in.lbs		5.5 / 49	8 / 71	12 / 106	20 / 177
speed, idling	rpm		2300	1200	650	320
air consumption	m ³ /min / cfm		0.45 / 16	0.45 / 16	0.45 / 16	0.45 / 16
weight	kg / lbs		1.7 / 3.7	1.8 / 4.8	1.8 / 4.0	1.8 / 4.0
push to start pressure	N / lbs		38 / 8.4	38 / 8.4	38 / 8.4	38 / 8.4
pressure at max. screwdriver stroke	N / lbs		100 / 22	100 / 22	100 / 22	100 / 22
hose for air supply (O.D. / I.D.)	mm / in.		12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm / in.		4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
internal hex. drive DIN 3126			F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")
suitable tool inserts and connecting components with a drive as per DIN 3126			E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")

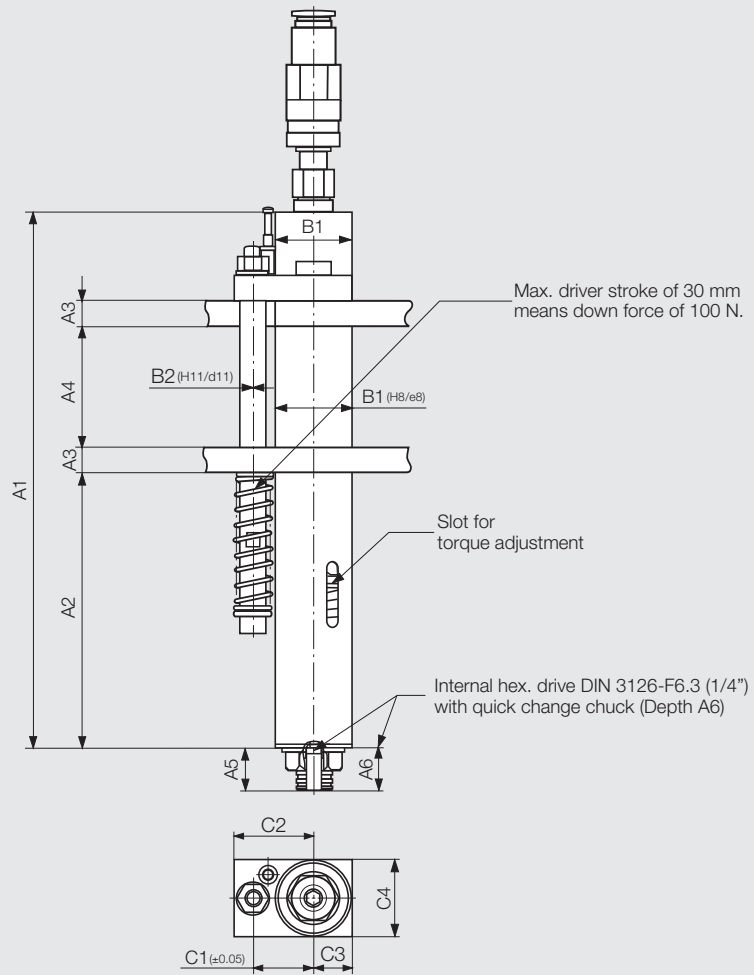
Performance data relate to an air pressure of 6.3 bar (90 PSI)

Please also find suitable tool inserts in our brochure D 3320 E. Please find suitable accessories on page 20.

Motor size 3				Dimensions (mm)											
type				A1	A2	A3	A4	A5	A6	B1	B2	C1	C2	C3	C4
Spindle right- / left rotation															
346-238-31	346-238-31 L	346-230-31	346-230-31 L	249.5	128	10	60	20.5	21	36	12	28	37	18	36
346-738-31	346-738-31 L	346-730-31	346-730-31 L												
Schrauber umsteuerbar															
346-238-31 U	346-238-31 UL	346-230-31 U	346-230-31 UL	250	128	10	60	20.5	21	36	12	28	37	36	36
346-738-31 U	346-738-31 UL	346-730-31 U	346-730-31 UL												

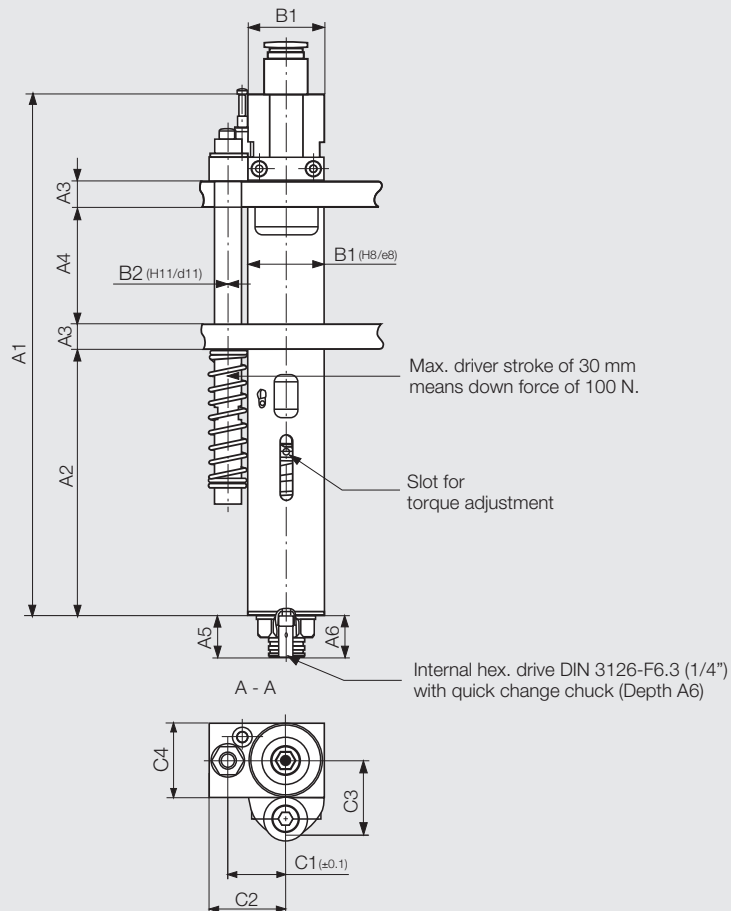
Motor size 3				Dimensions (mm)											
type				A1	A2	A3	A4	A5	A6	B1	B2	C1	C2	C3	C4
Spindle right- / left rotation															
346-338-31	346-338-31 L	346-330-31	346-330-31 L	249.5	128	10	60	20.5	21	36	12	28	37	18	36
346-438-31	346-438-31 L	346-430-31	346-430-31 L												
Schrauber umsteuerbar															
346-338-31 U	346-338-31 UL	346-330-31 U	346-330-31 UL	250	128	10	60	20.5	21	36	12	28	37	36	36
346-438-31 U	346-438-31 UL	346-430-31 U	346-430-31 UL												

Spindle
type 346-...
 right- / left rotation



4071301

Spindle
type 346-...
 reversible



4072521

TECHNICAL DATA

Screwdriver Style		Motor Size 4			
Spindle right rotation, right shut-off Remote Start	type order no.	344-340-31 389730 A	344-440-31 389730 B	344-740-31 389730 C	344-840-31 389730 D
torque min.	Nm / in.lbs	4 / 35.4	4 / 35.4	16 / 142	16 / 142
torque max.	Nm / in.lbs	8 / 71	10 / 88	34 / 300	45 / 398
speed, idling	rpm	2800	2100	640	450
air consumption	m ³ /min / cfm	1.1 / 39	1.1 / 39	1.1 / 39	1.1 / 39
weight	kg / lbs	2.5 / 5.5	2.5 / 5.5	2.65 / 5.8	2.65 / 5.8
pressure at max. screwdriver stroke	N / lbs	140 / 31.4	140 / 31.4	140 / 31.4	140 / 31.4
max. admissible pressure	N / lbs	1000 / 224	1000 / 224	1000 / 224	1000 / 224
hose for air supply (O.D. / I.D.)	mm (in.)	12 / 8 (.472 / ⁵ / ₁₆)	12 / 8 (.472 / ⁵ / ₁₆)	12 / 8 (.472 / ⁵ / ₁₆)	12 / 8 (.472 / ⁵ / ₁₆)
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm (in.)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F11.2 (7/16")	F11.2 (7/16")
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E11.2 (7/16")	E11.2 (7/16")
Spindle reversible, right shut-off, Remote Start in drive direction and in reverse	type order no.	344-340-31 U 384210 A	344-440-31 U 384210 B	344-740-31 U 384210 C	344-840-31 U 384210 D
torque min.	Nm / in.lbs	3.5 / 31	3.5 / 31	14 / 124	14 / 124
torque max.	Nm / in.lbs	6.5 / 57.5	8 / 70.8	32 / 283	38 / 336
speed, idling	rpm	2400	1700	500	360
air consumption	m ³ /min / cfm	1.1 / 39	1.1 / 39	1.1 / 39	1.1 / 39
weight	kg / lbs	2.5 / 5.5	2.5 / 5.5	2.65 / 5.8	2.65 / 5.8
pressure at max. screwdriver stroke	N / lbs	140 / 31.4	140 / 31.4	140 / 31.4	140 / 31.4
max. admissible pressure	N / lbs	1000 / 224	1000 / 224	1000 / 224	1000 / 224
hose for air supply (O.D. / I.D.)	mm (in.)	12 / 8 (.472 / ⁵ / ₁₆)	12 / 8 (.472 / ⁵ / ₁₆)	12 / 8 (.472 / ⁵ / ₁₆)	12 / 8 (.472 / ⁵ / ₁₆)
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm (in.)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F11.2 (7/16")	F11.2 (7/16")
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E11.2 (7/16")	E11.2 (7/16")

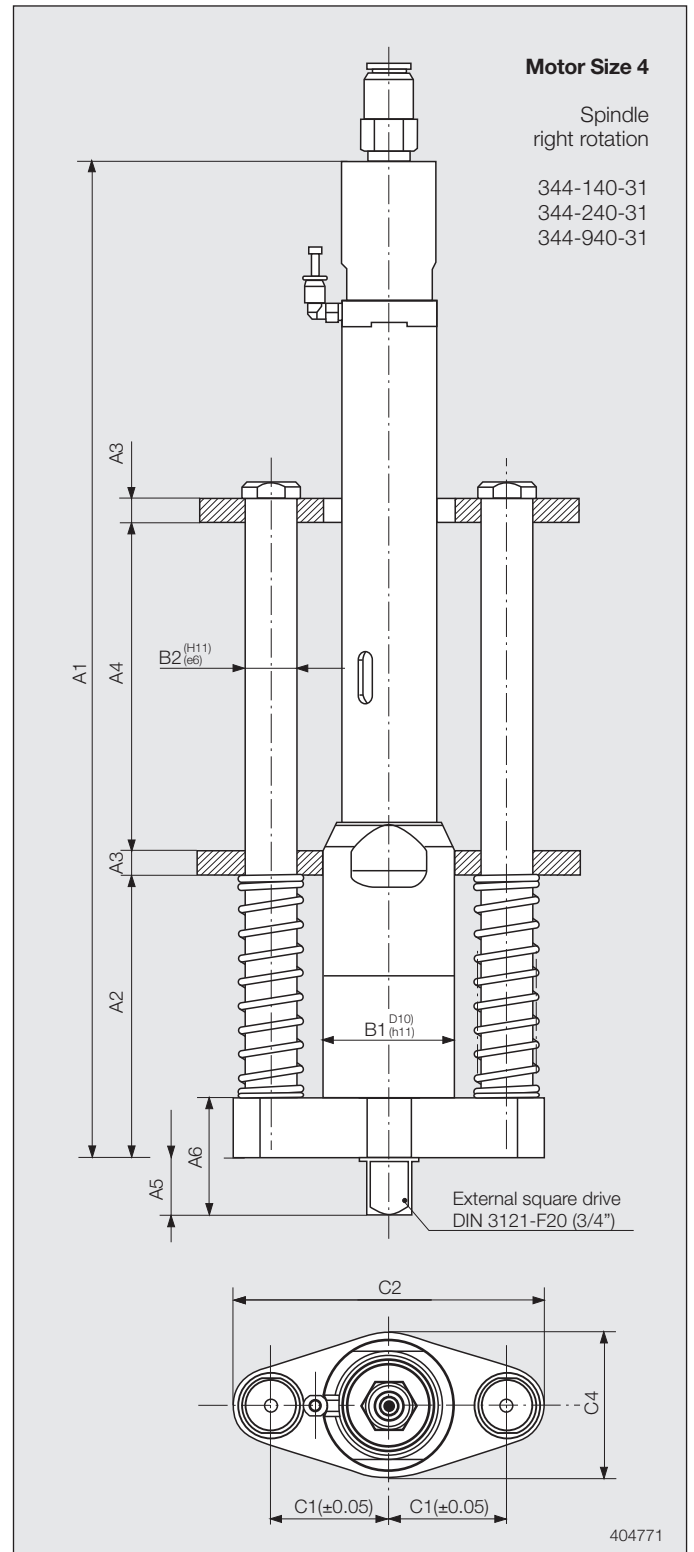
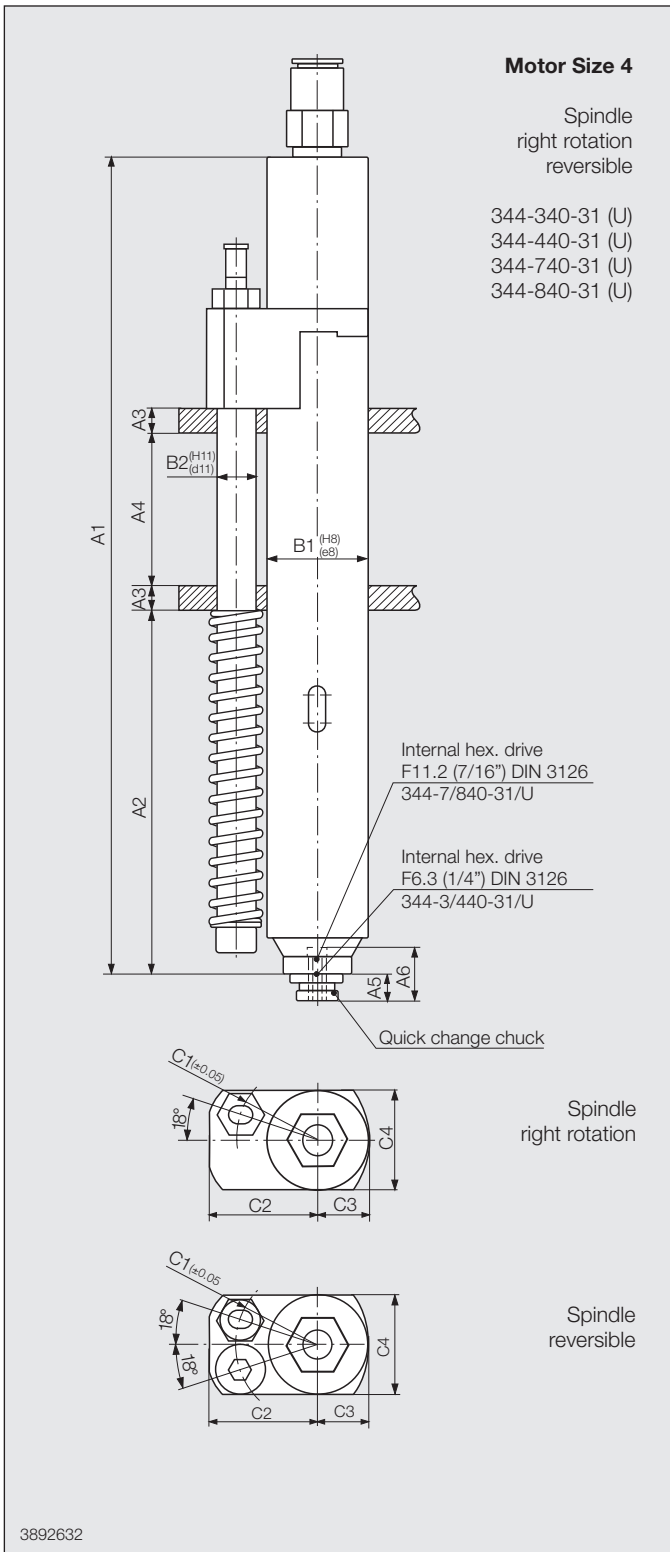
Performance data relate to an air pressure of 6.3 bar (90 PSI)

Screwdriver Style		Motor Size 4		
Spindle right rotation, right shut-off Remote Start	type order no.	344-940-31 404623 B	344-140-31 404623 C	344-240-31 404623 D
torque min.	Nm / in.lbs	40 / 352	40 / 352	40 / 352
torque max.	Nm / in.lbs	85 / 751	130 / 1151	180 / 1594
speed, idling	rpm	250	160	115
air consumption	m ³ /min / cfm	1.1 / 39	1.1 / 39	1.1 / 39
weight	kg / lbs	6 / 13.2	6 / 13.2	6 / 13.2
pressure at max. screwdriver stroke	N / lbs	480 / 108	480 / 108	480 / 108
max. admissible pressure	N / lbs	1000 / 224	1000 / 224	1000 / 224
hose for air supply (O.D. / I.D.)	mm / in.	12 / 8 (.472 / ⁵ / ₁₆)	12 / 8 (.472 / ⁵ / ₁₆)	12 / 8 (.472 / ⁵ / ₁₆)
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm / in.	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
external square drive DIN 3121		F20 (3/4")	F20 (3/4")	F20 (3/4")
suitable tool inserts and connecting components with a drive as per DIN 3121		H20 (3/4")	H20 (3/4")	H20 (3/4")

Performance data relate to an air pressure of 6.3 bar (90 PSI)

Please find suitable accessories on page 20.

Please also find suitable tool inserts in our brochure D 3320 E.



Motor Size 4		Dimensions (mm)											
type	type												
Spindle	Spindle												
right rotation	reversible	A1	A2	A3	A4	A5	A6	B1	B2	C1	C2	C3	C4
344-340-31	344-340-31U	322.5	143.5	10	60	10.5	21	40	15	32	43	20.5	39.5
344-440-31	344-440-31U												
344-740-31	344-740-31U												
344-840-31	344-840-31U	352	173	10	60	13.2	30	40	15	32	43	20.5	39.5
344-140-31													
344-240-31		423.9	120	10	140	24.7	49.7	56	22	50	132	-	62
344-940-31													

TECHNICAL DATA

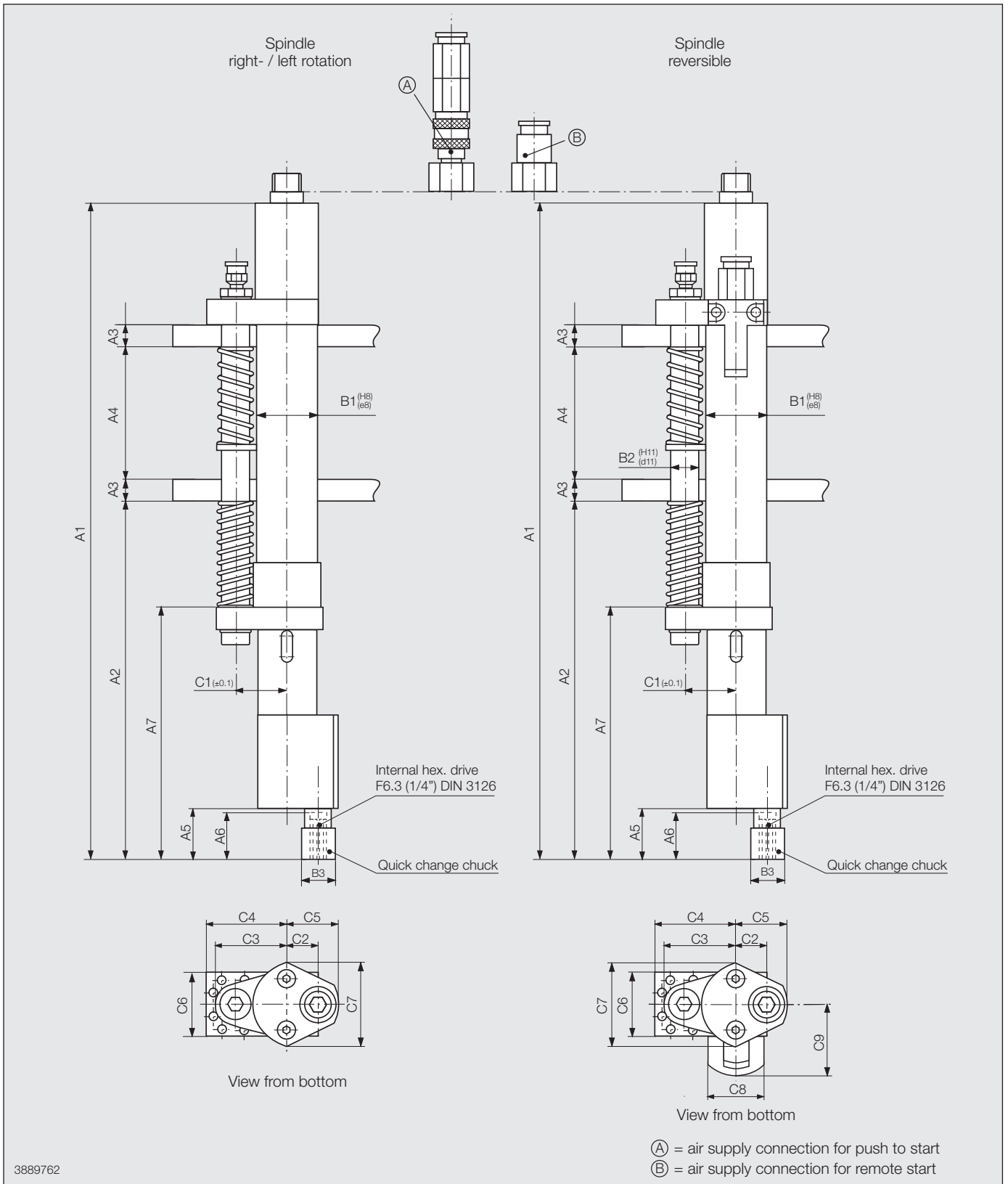
Screwdriver Style		Motor Size 2 only in connection with off-set gear (to minimize the center distance)		
Spindle left rotation, left shut-off Spindle in connection with off-set gear right rotation, right shut-off Push To Start	type order no.	347-228-31 LV 388645 A	347-328-31 LV 388645 B	347-528-31 LV 388645 C
Spindle right rotation, right shut-off Spindle in connection with off-set gear left rotation, left shut-off Push To Start	type order no.	347-228-31 V 388944 A	347-328-31 V 388944 B	347-528-31 V 388944 C
Spindle left rotation, left shut-off Spindle in connection with off-set gear right rotation, right shut-off Remote Start	type order no.	347-220-31 LV 388646 A	347-320-31 LV 388646 B	347-520-31 LV 388646 C
Spindle right rotation, right shut-off Spindle in connection with off-set gear left rotation, left shut-off Remote Start	type order no.	347-220-31 V 388945 A	347-320-31 V 388945 B	347-520-31 V 388945 C
Off-Set Gear 1) 2)	order no.	388649 A	388649 A	388649 A
Gear ratio		i = 0.85	i = 0.85	i = 0.85
torque min.	Nm / in.lbs	0.5 / 5	0.4 / 4	0.3 / 3
soft pull-up max.	Nm / in.lbs	1.5 / 13	2.8 / 25	4.7 / 42
hard pull-up max.	Nm / in.lbs	2 / 18	3.3 / 29	4.7 / 42
speed, idling	rpm	4200	1700	750
air consumption	m ³ /min / cfm	0.3 / 11	0.3 / 11	0.3 / 11
weight	kg / lbs	1.34 / 2.9	1.34 / 2.9	1.34 / 2.9
push to start pressure	N / lbs	46 / 10	46 / 10	46 / 10
pressure at max. screwdriver stroke	N / lbs	150 / 33	150 / 33	150 / 33
hose for air supply (O.D. / I.D.)	mm (in.)	8 / 5.5 (.314 / ⁷ / ₃₂)	8 / 5.5 (.314 / ⁷ / ₃₂)	8 / 5.5 (.314 / ⁷ / ₃₂)
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm (in.)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")
Spindle reversible, left shut-off Spindle in connection with off-set gear reversible, right shut-off Push To Start for right rotation reverse by Remote Start	type order no.	347-228-31 ULV 388946 A	347-328-31 ULV 388946 B	347-528-31 ULV 388946 C
Spindle reversible, right shut-off Spindle in connection with off-set gear reversible, left shut-off Push To Start for left rotation reverse by Remote Start	type order no.	347-228-31 UV 388947 A	347-328-31 UV 388947 B	347-528-31 UV 388947 C
Spindle reversible, left shut-off Spindle in connection with off-set gear reversible, right shut-off Remote Start in drive direction and in reverse	type order no.	347-220-31 ULV 388948 A	347-320-31 ULV 388948 B	347-520-31 ULV 388948 C
Spindle reversible, right shut-off Spindle in connection with off-set gear reversible, left shut-off Remote Start in drive direction and in reverse	type order no.	347-220-31 UV 388949 A	347-320-31 UV 388949 B	347-520-31 UV 388949 C
Off-Set Gear 1) 2)	order no.	388649 A	388649 A	388649 A
Gear ratio		i = 0.85	i = 0.85	i = 0.85
torque min.	Nm / in.lbs	0.5 / 5	0.4 / 4	0.3 / 3
soft pull-up max.	Nm / in.lbs	1.2 / 11	2.5 / 22	4.5 / 40
hard pull-up max.	Nm / in.lbs	2 / 18	3 / 26	4.5 / 40
speed, idling	rpm	3400	1280	580
air consumption	m ³ /min / cfm	0.3 / 11	0.3 / 11	0.3 / 11
weight	kg / lbs	1.36 / 3	1.36 / 3	1.36 / 3
push to start pressure	N / lbs	46 / 10	46 / 10	46 / 10
pressure at max. screwdriver stroke	N / lbs	150 / 33	150 / 33	150 / 33
hose for air supply (O.D. / I.D.)	mm (in.)	8 / 5.5 (.314 / ⁷ / ₃₂)	8 / 5.5 (.314 / ⁷ / ₃₂)	8 / 5.5 (.314 / ⁷ / ₃₂)
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm (in.)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")

Performance data relate to an air pressure of 6.3 bar (90 PSI)

1) off-set gear as optional equipment

2) Screwdrivers with off-set gearing for restricted area (for sockets and bits without finders only)

Please also find suitable tool inserts in our brochure D 3320 E. Please find suitable accessories on page 20.



3889762

Motor Size 2 with off-set gear 388649 A				Dimensions (mm)																		
				A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	C1	C2	C3	C4	C5	C6	C7	C8	C9
Spindle right-/left rotation																						
347-228-31 LV	347-228-31 V	347-220-31 LV	347-220-31 V																			
347-328-31 LV	347-328-31 V	347-320-31 LV	347-320-31 V	297	162	10	60	23	21	114	27	12	15	23	14	32	36	23	28	37	-	-
347-528-31 LV	347-528-31 V	347-520-31 LV	347-520-31 V																			
Spindle reversible																						
347-228-31 ULV	347-228-31 UV	347-220-31 ULV	347-220-31 UV																			
347-328-31 ULV	347-328-31 UV	347-320-31 ULV	347-320-31 UV	297	162	10	60	23	21	114	27	12	15	23	14	32	36	23	28	37	25	32
347-528-31 ULV	347-528-31 UV	347-520-31 ULV	347-520-31 UV																			

TECHNICAL DATA

Screwdriver Style		Motor Size 3 only in connection with off-set gear (to minimize the center distance)		
Spindle left rotation, left shut-off Spindle in connection with off-set gear right rotation, right shut-off Push To Start	type order no.	346-738-31 LV 401068 C	346-338-31 LV 401068 D	346-438-31 LV 401068 E
Spindle right rotation, right shut-off Spindle in connection with off-set gear left rotation, left shut-off Push To Start	type order no.	346-738-31 V 407279 C	346-338-31 V 407279 D	346-438-31 V 407279 E
Spindle left rotation, left shut-off Spindle in connection with off-set gear right rotation, right shut-off Remote Start	type order no.	346-730-31 LV 407280 C	346-330-31 LV 407280 D	346-430-31 LV 407280 E
Spindle right rotation, right shut-off Spindle in connection with off-set gear left rotation, left shut-off Remote Start	type order no.	346-730-31 V 407281 C	346-330-31 V 407281 D	346-430-31 V 407281 E
Off-Set Gear 1) 2)	order no.	401236 B	401236 B	401236 B
Gear ratio		i = 1.3	i = 1.3	i = 1.3
torque min.	Nm / in.lbs	2.6 / 23	2.6 / 23	2.6 / 23
soft pull-up max.	Nm / in.lbs	9 / 80	15 / 132	24 / 212
hard pull-up max.	Nm / in.lbs	9 / 80	15 / 132	24 / 212
speed, idling	rpm	1050	600	300
air consumption	m ³ /min / cfm	0.45 / 16	0.45 / 16	0.45 / 16
weight	kg / lbs	3 / 6.6	3 / 6.6	3 / 6.6
push to start pressure	N / lbs	64 / 14.3	64 / 14.3	64 / 14.3
pressure at max. screwdriver stroke	N / lbs	130 / 29.1	130 / 29.1	130 / 29.1
hose for air supply (O.D. / I.D.)	mm (in.)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)
hose for function control (O.D. / I.D.)	mm (in.)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
(O.D. tolerances of connection hoses according to Cetop RP 54 P)				
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")
Spindle reversible, left shut-off Spindle in connection with off-set gear reversible, right shut-off Push To Start for right rotation reverse by Remote Start	type order no.	346-738-31 ULV 407283 C	346-338-31 ULV 407283 D	346-438-31 ULV 407283 E
Spindle reversible, right shut-off Spindle in connection with off-set gear reversible, left shut-off Push To Start for left rotation reverse by Remote Start	type order no.	346-738-31 UV 407284 C	346-338-31 UV 407284 D	346-438-31 UV 407284 E
Spindle reversible, left shut-off Spindle in connection with off-set gear reversible, right shut-off Remote Start in drive direction and in reverse	type order no.	346-730-31 ULV 407285 C	346-330-31 ULV 407285 D	346-430-31 ULV 407285 E
Spindle reversible, right shut-off Spindle in connection with off-set gear reversible, left shut-off Remote Start in drive direction and in reverse	type order no.	346-730-31 UV 407286 C	346-330-31 UV 407286 D	346-430-31 UV 407286 E
Off-Set Gear 1) 2)	order no.	401236 B	401236 B	401236 B
Gear ratio		i = 1.3	i = 1.3	i = 1.3
torque min.	Nm / in.lbs	2.6 / 23	2.6 / 23	2.6 / 23
soft pull-up max.	Nm / in.lbs	8 / 71	13 / 115	22 / 195
hard pull-up max.	Nm / in.lbs	8 / 71	13 / 115	22 / 195
speed, idling	rpm	900	500	250
air consumption	m ³ /min / cfm	0.45 / 16	0.45 / 16	0.45 / 16
weight	kg / lbs	3.2 / 7	3.2 / 7	3.2 / 7
push to start pressure	N / lbs	64 / 14.3	64 / 14.3	64 / 14.3
pressure at max. screwdriver stroke	N / lbs	130 / 29.1	130 / 29.1	130 / 29.1
hose for air supply (O.D. / I.D.)	mm (in.)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)
hose for function control (O.D. / I.D.)	mm (in.)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
(O.D. tolerances of connection hoses according to Cetop RP 54 P)				
internal hex. drive DIN 3126		F6.3 (1/4")	F6.3 (1/4")	F6.3 (1/4")
suitable tool inserts and connecting components with a drive as per DIN 3126		E6.3 (1/4")	E6.3 (1/4")	E6.3 (1/4")

Performance data relate to an air pressure of 6.3 bar (90 PSI)

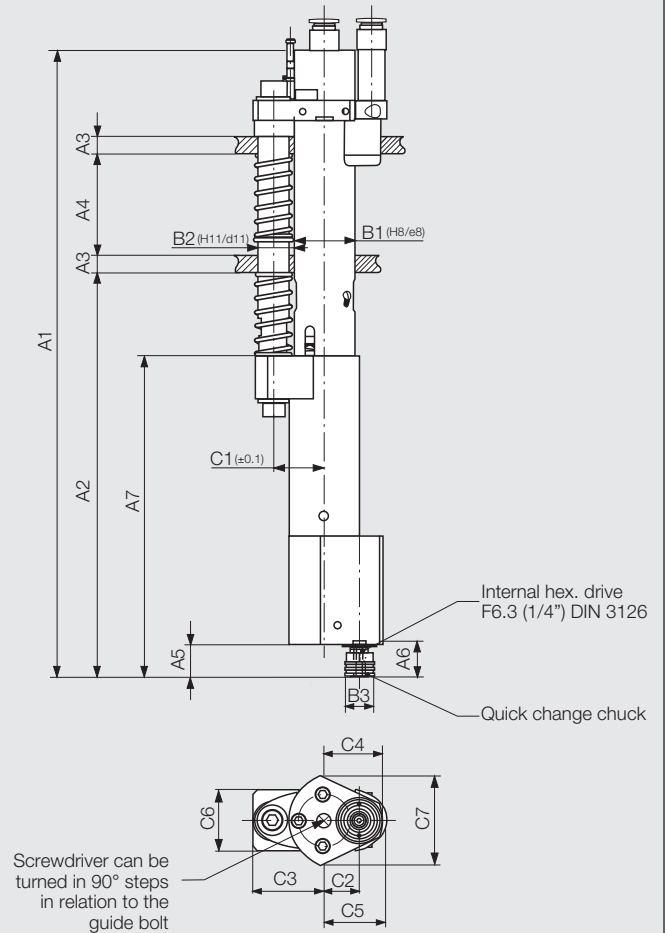
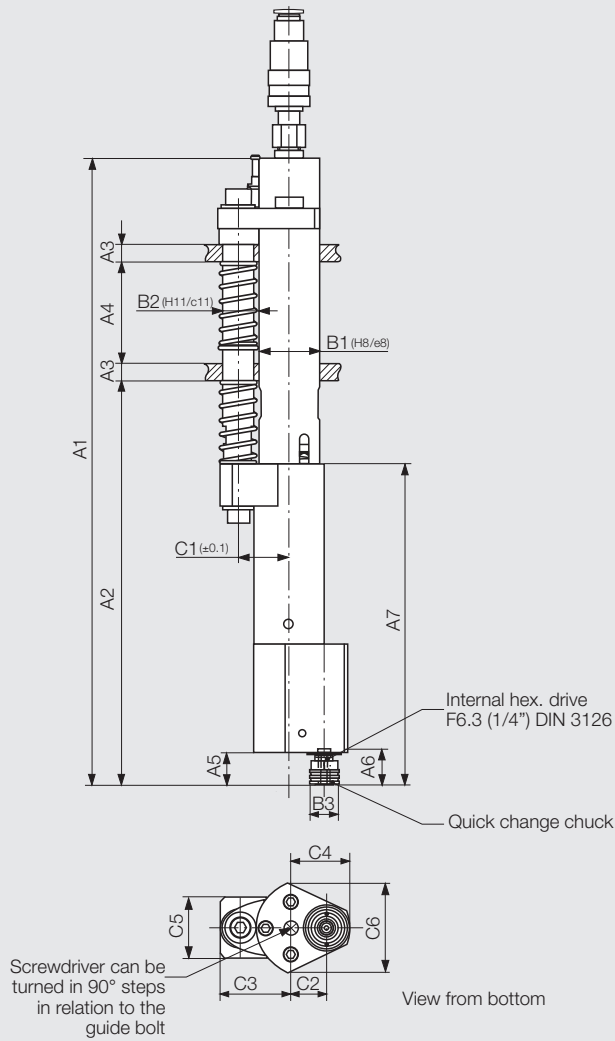
1) off-set gear as optional equipment

2) Screwdrivers with off-set gearing for restricted area (for socket and bits without finder only)

Please also find suitable tool inserts in our brochure D 3320 E. Please find suitable accessories on page 20.

Spindle
right- / left rotation

Spindle
reversible



407195

407195/1

Motor Size 3 with off-set gear 401236 B				Dimensions (mm)																	
type				A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	C1	C2	C3	C4	C5	C6	C7	
Spindle right-/left rotation																					
346-338-31 LV	346-338-31 V	346-330-31 LV	346-330-31 V																		
346-438-31 LV	346-438-31 V	346-430-31 LV	346-430-31 V	369	238	10	60	19	21	189	36	18	16.5	30	20.6	42	34.5	36	52.8	-	
346-738-31 LV	346-738-31 V	346-730-31 LV	346-730-31 V																		
Spindle reversible																					
346-338-31 ULV	346-338-31 UV	346-330-31 ULV	346-330-31 UV																		
346-438-31 ULV	346-438-31 UV	346-430-31 ULV	346-430-31 UV	369	238	10	60	19	21	189	36	18	16.5	30	20.6	42	34.5	36	36	52.8	
346-738-31 ULV	346-738-31 UV	346-730-31 ULV	346-730-31 UV																		

TECHNICAL DATA

Screwdriver Style		Motor Size 3 for reduction gear (to increase torque value)	
Spindle right rotation, right shut-off Push To Start	type order no.	346-338-31 406109 D	346-438-31 406109 E
Spindle left rotation, left shut-off Push To Start	type order no.	346-338-31 L 406446 D	346-438-31 L 406446 E
Spindle right rotation, right shut-off Remote Start	type order no.	346-330-31 406482 D	346-430-31 406482 E
Spindle left rotation, left shut-off Remote Start	type order no.	346-330-31 L 406484 D	346-430-31 L 406484 E
Reduction Gear 1)	order no.	407204 A	407204 A
Gear ratio		i = 4	i = 4
torque min.	Nm / in.lbs	4 / 35	4 / 35
torque max.	Nm / in.lbs	42 / 370	72 / 637
speed, idling	rpm	200	100
air consumption	m ³ /min / cfm	0.45 / 16	0.45 / 16
weight	kg / lbs	3.2 / 7	3.2 / 7
push to start pressure	N / lbs	45 / 9.9	45 / 9.9
pressure at max. screwdriver stroke	N / lbs	120 / 26	120 / 26
hose for air supply (O.D. / I.D.)	mm / in.	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm / in.	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
external square drive DIN 3121		F10 (3/8")	F10 (3/8")
suitable tool inserts and connecting components with a drive as per DIN 3121		H10 (3/8")	H10 (3/8")
Spindle reversible, right shut-off Push To Start for right rotation reverse by Remote Start	type order no.	346-338-31 U 406223 D	346-438-31 U 406223 E
Spindle reversible, left shut-off Push To Start for left rotation reverse by Remote Start	type order no.	346-338-31 UL 406469 D	346-438-31 UL 406469 E
Spindle reversible, right shut-off Remote Start in drive direction and in reverse	type order no.	346-330-31 U 406282 D	346-430-31 U 406282 E
Spindle reversible, left shut-off Remote Start in drive direction and in reverse	type order no.	346-330-31 UL 406475 D	346-430-31 UL 406475 E
Reduction Gear 1)	order no.	407204 A	407204 A
Gear ratio		i = 4	i = 4
torque min.	Nm / in.lbs	4 / 35	4 / 35
torque max.	Nm / in.lbs	35 / 310	58 / 513
speed, idling	rpm	160	80
air consumption	m ³ /min / cfm	0.45 / 16	0.45 / 16
weight	kg / lbs	3.5 / 7.7	3.5 / 7.7
push to start pressure	N / lbs	45 / 9.9	45 / 9.9
pressure at max. screwdriver stroke	N / lbs	120 / 26	120 / 26
hose for air supply (O.D. / I.D.)	mm / in.	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)
hose for function control (O.D. / I.D.) (O.D. tolerances of connection hoses according to Cetop RP 54 P)	mm / in.	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
external square drive DIN 3121		F10 (3/8")	F10 (3/8")
suitable tool inserts and connecting components with a drive as per DIN 3121		H10 (3/8")	H10 (3/8")

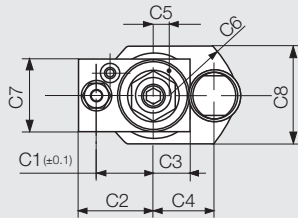
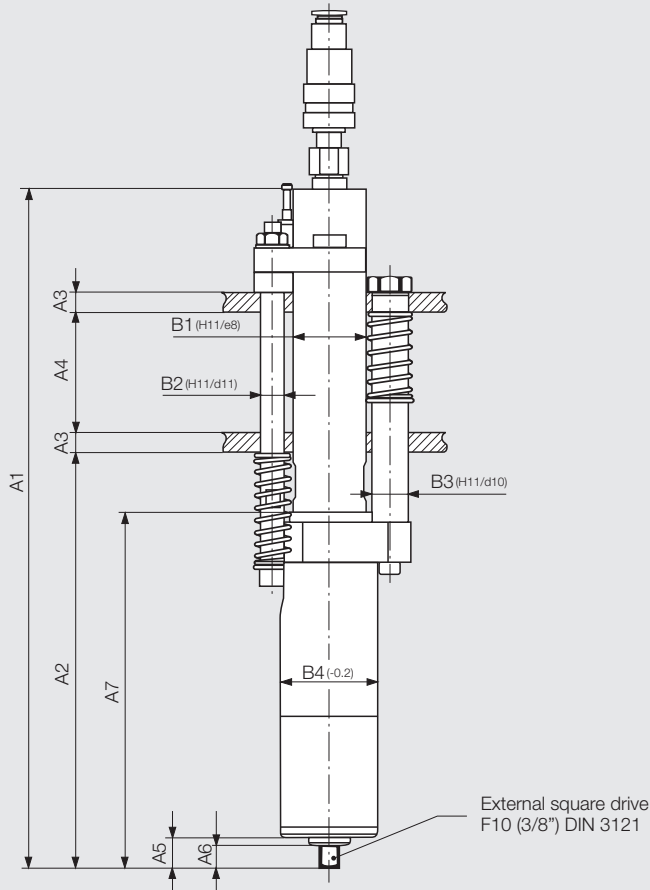
Performance data relate to an air pressure of 6.3 bar (90 PSI)

¹⁾ reduction gear as optional equipment

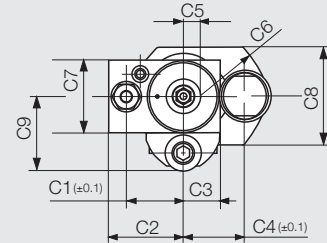
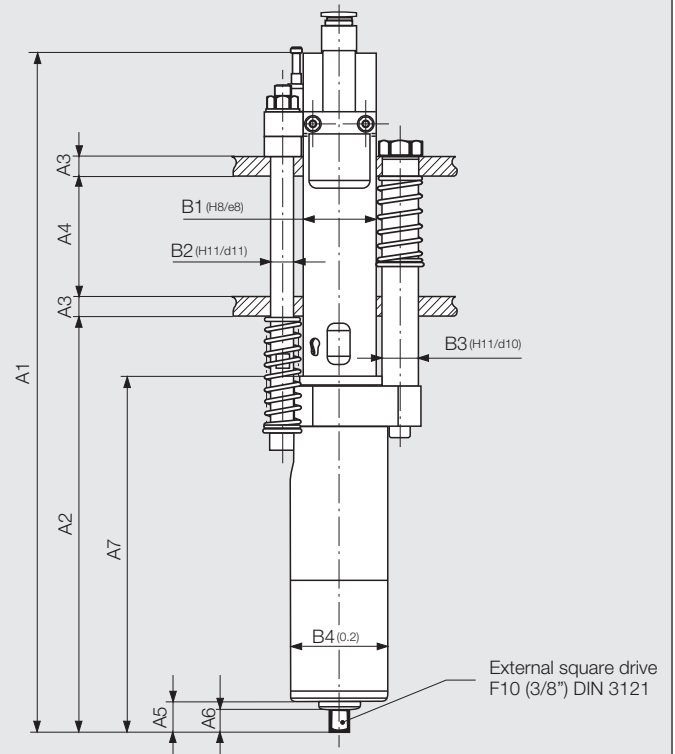
Please find suitable accessories on page 20.

Please also find suitable tool inserts in our brochure D 3320 E.

Spindle
right- / left rotation



Spindle
reversible



407405

407405/1

Motor Size 3 with reduction gear 407204 A				Dimensions (mm)																				
type				A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	C1	C2	C3	C4	C5	C6	C7	C8	C9	
Spindle right- / left rotation																								
346-338-31	346-338-31 L	346-330-31	346-330-31 L	336	205	10	60	15	11	176	36	12	18	48	28	37	18	30	8	32	36	48	-	
346-438-31	346-438-31 L	346-430-31	346-430-31 L																					
Spindle reversible																								
346-338-31 U	346-338-31 UL	346-330-31 U	346-330-31 UL	336	205	10	60	15	11	176	36	12	18	48	28	37	18	30	8	32	36	48	36	
346-438-31 U	346-438-31 UL	346-430-31 U	346-430-31 UL																					

TECHNICAL DATA

Screwdriver Style		Motor Size 3 for reduction gear (to increase torque value)		
Spindle right rotation, right shut-off Push To Start	type order no.	346-338-31 406109 D	346-438-31 406109 E	346-438-31 406109 E
Spindle left rotation, left shut-off Push To Start	type order no.	346-338-31 L 406446 D	346-438-31 L 406446 E	346-438-31 L 406446 E
Spindle right rotation, right shut-off Remote Start	type order no.	346-330-31 406482 D	346-430-31 406482 E	346-430-31 406482 E
Spindle left rotation, left shut-off Remote Start	type order no.	346-330-31 L 406484 D	346-430-31 L 406484 E	346-430-31 L 406484 E
Reduction Gear ¹⁾	order no.	3331781 A	3331781 A	3431551 A
Gear ratio		i = 6	i = 6	i = 7
torque min.	Nm / in.lbs	6 / 53	6 / 53	7 / 62
torque max.	Nm / in.lbs	62 / 548	105 / 930	140 / 1240
speed, idling	rpm	130	60	50
air consumption	m ³ /min / cfm	0.45 / 16	0.45 / 16	0.45 / 16
weight	kg / lbs	4.1 / 9	4.1 / 9	4.4 / 10
push to start pressure	N / lbs	45 / 9.9	45 / 9.9	45 / 9.9
pressure at max. screwdriver stroke	N / lbs	160 / 35	160 / 35	160 / 35
hose for air supply (O.D. / I.D.)	mm / in.	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)
hose for function control (O.D. / I.D.)	mm / in.	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
(O.D. tolerances of connection hoses according to Cetop RP 54 P)				
external square drive DIN 3121		E12.5 (1/2")	E12.5 (1/2")	F12.5 (1/2")
suitable tool inserts and connecting components with a drive as per DIN 3121		G12.5 (1/2")	G12.5 (1/2")	H12.5 (1/2")
Spindle reversible, right shut-off Push To Start for right rotation reverse by Remote Start	type order no.	346-338-31 U 406223 D	346-438-31 U 406223 E	346-438-31 U 406223 E
Spindle reversible, left shut-off Push To Start for left rotation reverse by Remote Start	type order no.	346-338-31 UL 406469 D	346-438-31 UL 406469 E	346-438-31 UL 406469 E
Spindle reversible, right shut-off Remote Start in drive direction and in reverse	type order no.	346-330-31 U 406282 D	346-430-31 U 406282 E	346-430-31 U 406282 E
Spindle reversible, left shut-off Remote Start in drive direction and in reverse	type order no.	346-330-31 UL 406475 D	346-430-31 UL 406475 E	346-430-31 UL 406475 E
Reduction Gear ¹⁾	order no.	3331781 A	3331781 A	3431551 A
Gear ratio		i = 6	i = 6	i = 7
torque min.	Nm / in.lbs	6 / 53	6 / 53	7 / 62
torque max.	Nm / in.lbs	52 / 460	88 / 778	110 / 973
speed, idling	rpm	100	50	40
air consumption	m ³ /min / cfm	0.45 / 16	0.45 / 16	0.45 / 16
weight	kg / lbs	4.4 / 9.7	4.4 / 9.7	4.7 / 10.3
push to start pressure	N / lbs	45 / 9.9	45 / 9.9	45 / 9.9
pressure at max. screwdriver stroke	N / lbs	160 / 35	160 / 35	160 / 35
hose for air supply (O.D. / I.D.)	mm / in.	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)	12 / 9 (.472 / ²³ / ₆₄)
hose for function control (O.D. / I.D.)	mm / in.	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)	4 / 2.5 (.157 / ³ / ₃₂)
(O.D. tolerances of connection hoses according to Cetop RP 54 P)				
external square drive DIN 3121		E12.5 (1/2")	E12.5 (1/2")	F12.5 (1/2")
suitable tool inserts and connecting components with a drive as per DIN 3121		G12.5 (1/2")	G12.5 (1/2")	H12.5 (1/2")

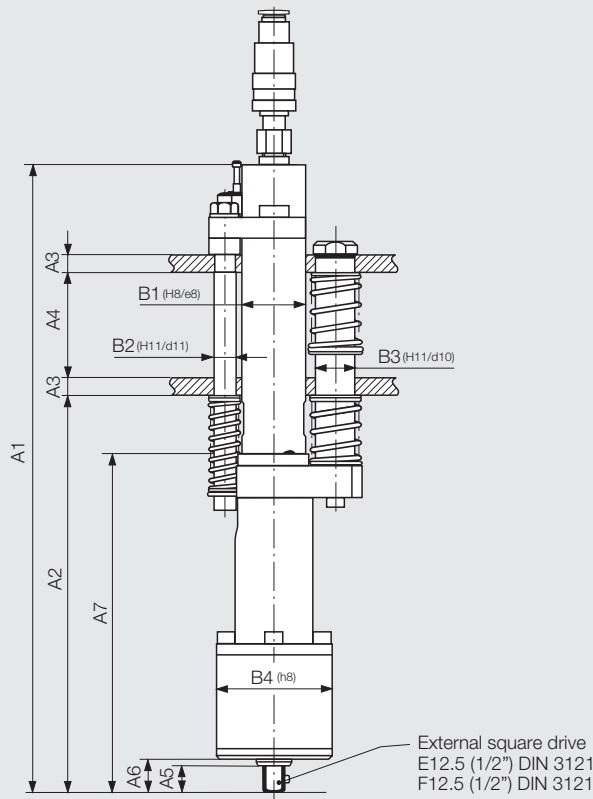
Performance data relate to an air pressure of 6.3 bar (90 PSI)

¹⁾ reduction gear as optional equipment

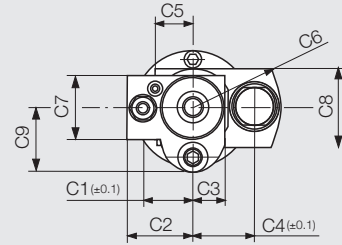
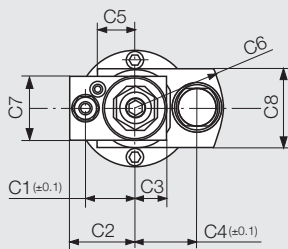
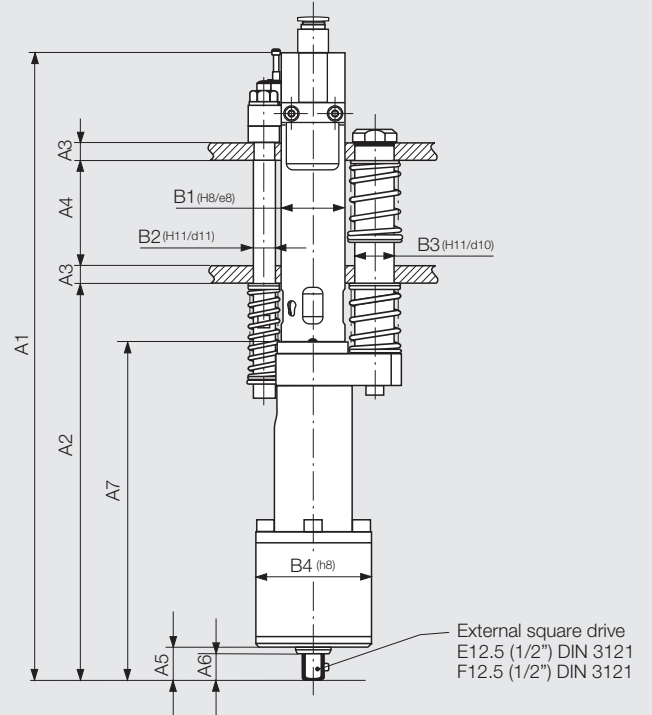
Please find suitable accessories on page 20.

Please also find suitable tool inserts in our brochure D 3320 E.

Spindle
right- / left rotation



Spindle
reversible



407541

407543

Motor Size 3 with reduction gear 3331781 A				Dimensions (mm)																				
type				A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	C1	C2	C3	C4	C5	C6	C7	C8	C9	
Spindle right- / left rotation																								
346-338-31	346-338-31 L	346-330-31	346-330-31 L	357	226	10	60	15	19	193	36	12	22	66	28	37	18	35	21	50	36	45	-	
346-438-31	346-438-31 L	346-430-31	346-430-31 L																					
Spindle reversible																								
346-338-31 U	346-338-31 UL	346-330-31 U	346-330-31 UL	357	226	10	60	15	19	193	36	12	22	66	28	37	18	35	21	50	36	45	36	
346-438-31 U	346-438-31 UL	346-430-31 U	346-430-31 UL																					

Motor Size 3 with reduction gear 3431551 A				Dimensions (mm)																				
type				A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	C1	C2	C3	C4	C5	C6	C7	C8	C9	
Spindle right- / left rotation																								
346-438-31	346-438-31 L	346-430-31	346-430-31 L	357	226	10	60	15	19	193	36	12	22	83	28	37	18	35	21	50	36	45	-	
Spindle reversible																								
346-438-31 U	346-438-31 UL	346-430-31 U	346-430-31 UL	357	226	10	60	15	19	193	36	12	22	83	28	37	18	35	21	50	36	45	36	

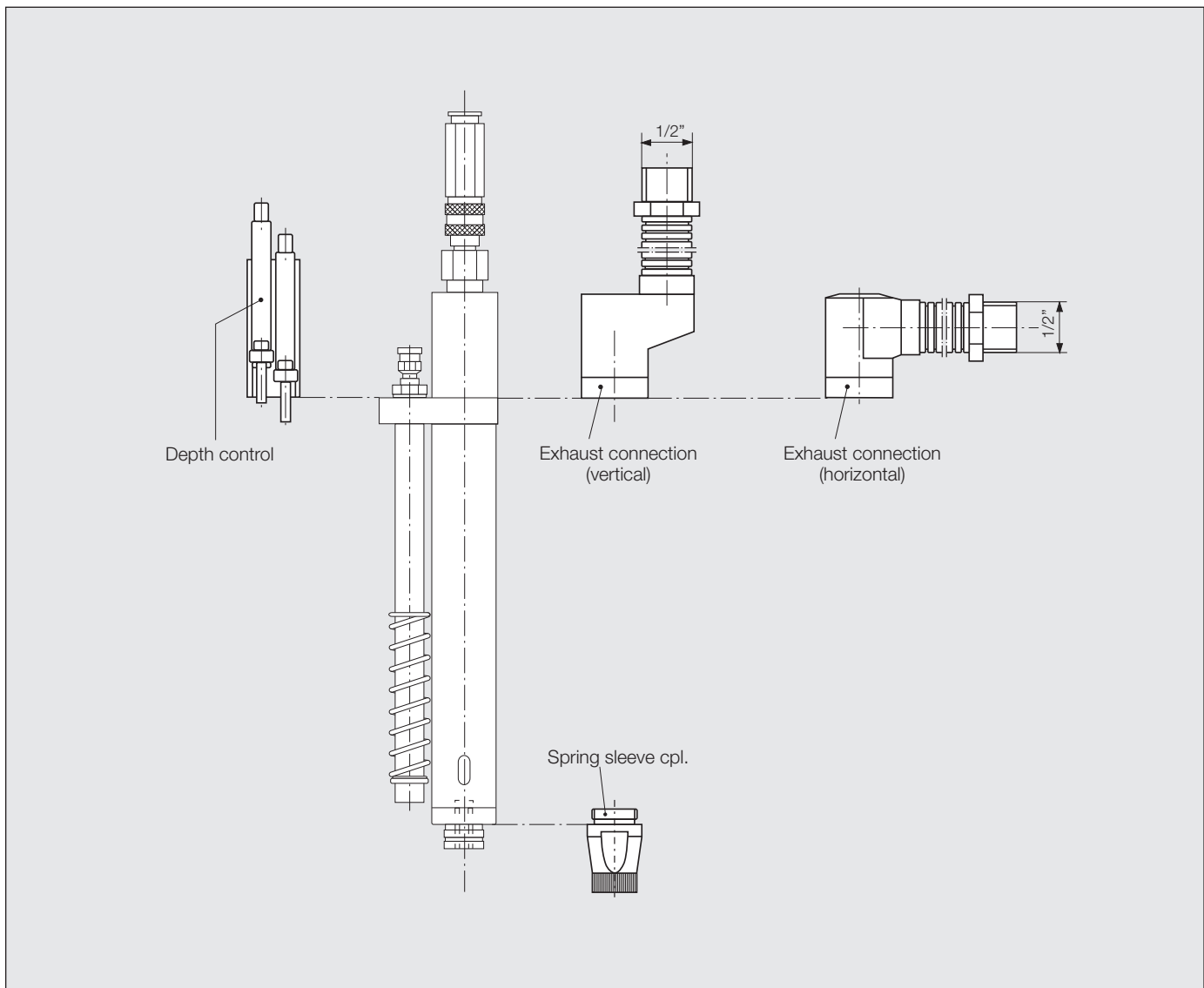
ACCESSORIES

Standard Equipment: Set of Coupler and Connector Plugs · Set of Torque and Adjustment Tools · Set of Clutch Springs

Optional Equipment

		Motor size 0	Motor size 1	Motor size 2	Motor size 3	Motor size 4
Exhaust connection (vertical) ¹⁾ (connection piece with 2 m / 6.6 ft. hose)	order no.	334615 C	386924 G	386924 A	386924 C	351820 R
Exhaust connection (horizontal) ¹⁾ (connection piece with 2 m / 6.6 ft. hose)	order no.	–	386924 H	386924 B	386924 D	351820 U
Depth control (double) incl. 2 cables (with straight plug) 5 m / 16.4 ft.	order no.	on request	on request	on request	on request	on request
Spring sleeve cpl. Spring sleeve cpl., with vacuum connection (in connection with finder, see leaflet: Inserting tools D 3320 E)	order no. order no.	364670 A 364670 C	364671 A 364671 D	364672 A 364672 C	364672 A 364672 C	– –

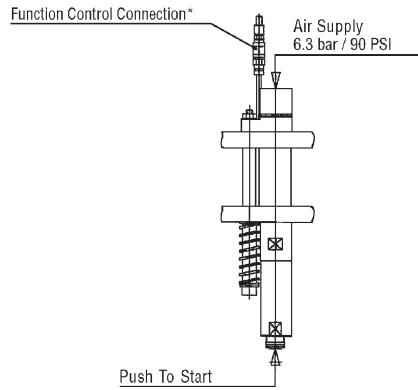
¹⁾ for corresponding exhaust filter/silencer (see leaflet D 3340 E)



FUNCTION DESCRIPTION DRIVER START

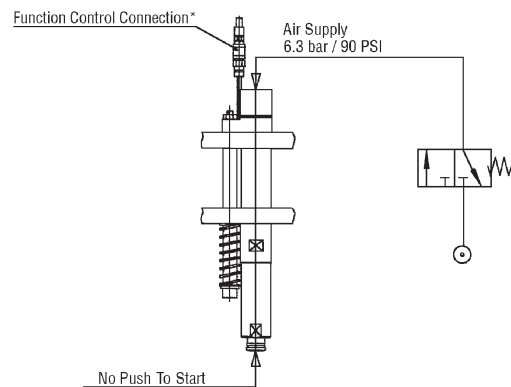
Push To Start

Driver with one way rotation,
right rotation and right shut-off
or
left rotation and left shut-off



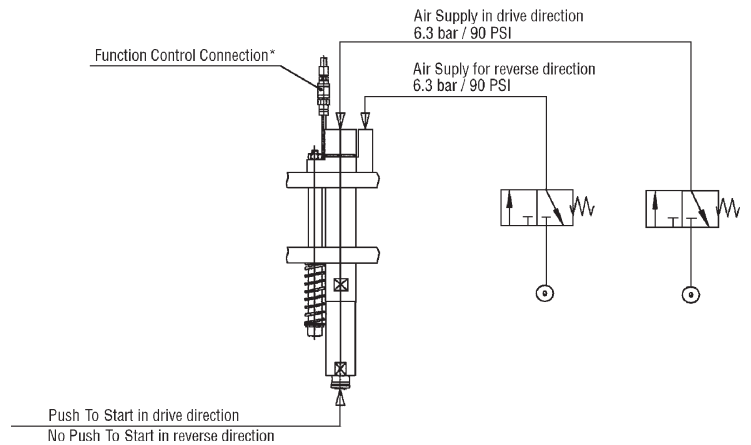
Remote Start (3/2-way valve)

Driver with one way rotation,
right rotation and right shut-off
or
left rotation and left shut-off



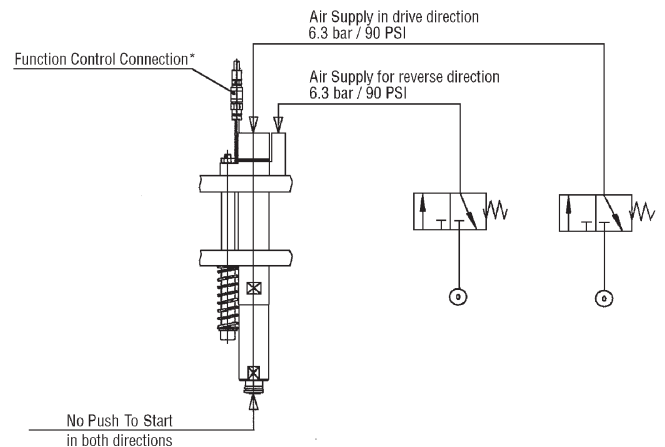
Push To Start in drive direction and reversible by remote port (3/2-way valve)

Driver reversible
Torque adjustable in drive direction
In reverse direction tool drives with
full power



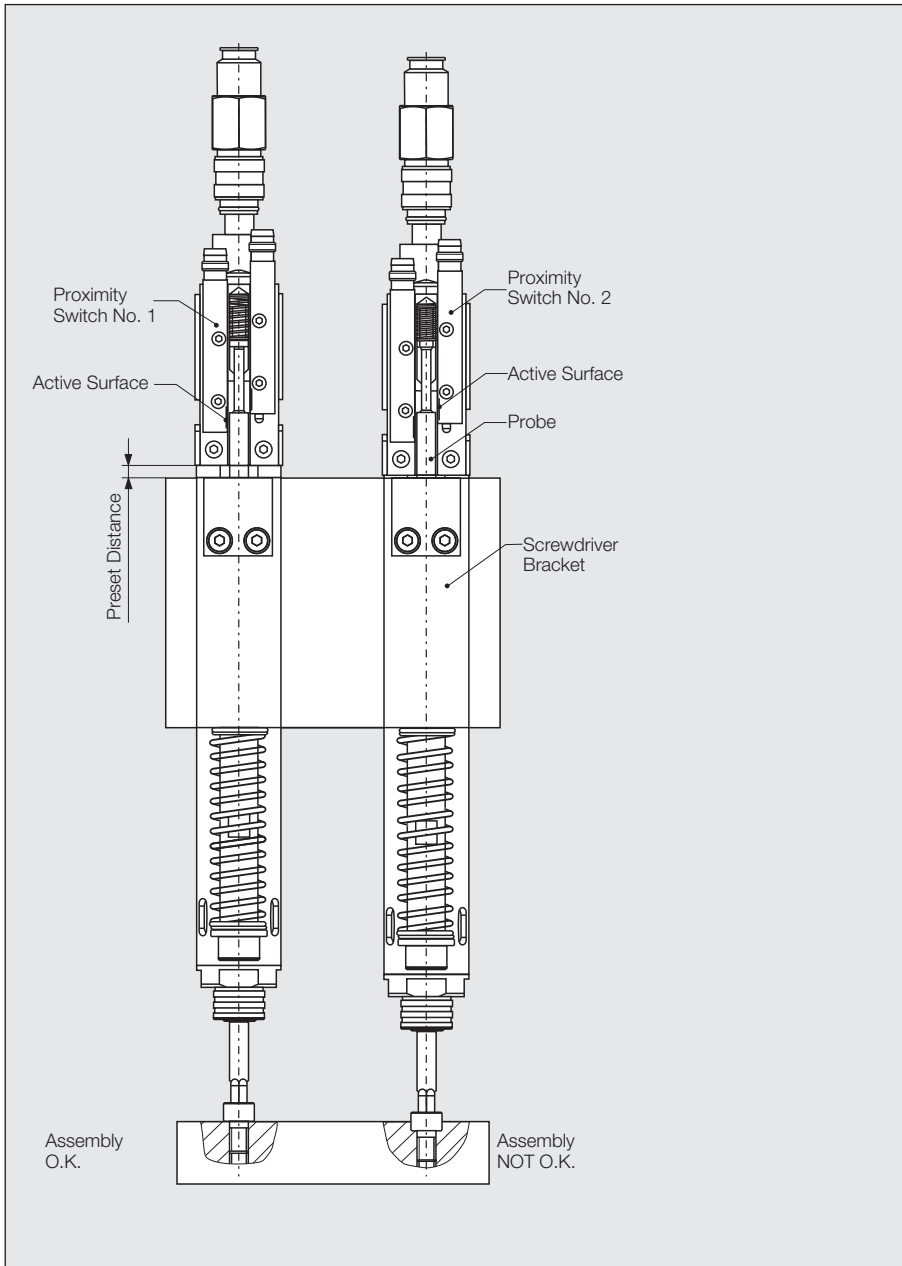
Remote Start (3/2-way valve) in drive direction and in reverse

Driver reversible
Torque adjustable in drive direction
In reverse direction tool drives with
full power



* During drive cycle the Function Control Line is under pressure (approx. 2 bar)

FUNCTION DESCRIPTION - DEPTH CONTROL



After completion of the screw assembly our dual depth control verifies that the screw has reached the preset depth.

Function:

The depth control consists of two proximity switches and a spring-loaded probe.

As soon as the Screwdriver Spindle moves towards the screwdriver bracket, the probe that supports itself on the screwdriver bracket, offsets towards the screwdriver and the proximity switches.

The first proximity switch is activated at a preset distance and gives a signal to the controller, as soon as the screw reaches its required position = depth is O.K.

If the screw depth is not reached, the first proximity switch does not give a signal to the controller. The controller notices the absence of a signal and outputs an error message = depth is NOT O.K.

If the Screwdriver lowers itself further than the preset distance, the second proximity switch gives a signal to the controller assembly is NOT O.K. The controller outputs an error message.

The first signal (O.K.) remains valid.

Reasons for exceeding the preset minimum depth:

- Product to be assembled is missing
- Components have large tolerances (height tolerances are too large)

An important parameter of the depth control is the dimensional accuracy of the parts involved in the assembly process. Such as:

- product to be assembled has to be within specified tolerances (accuracy of the height tolerances)
- screws or washers to be used have to be within specified tolerances.

Current dimensional drawings of our screwdriver spindles are available in the Internet.
Our address: **www.deprag.com**
The drawings are also available as dxf-files for processing with your CAD-system.

DEPRAG

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CERTIFIED AS PER DIN EN ISO 9001
