



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.

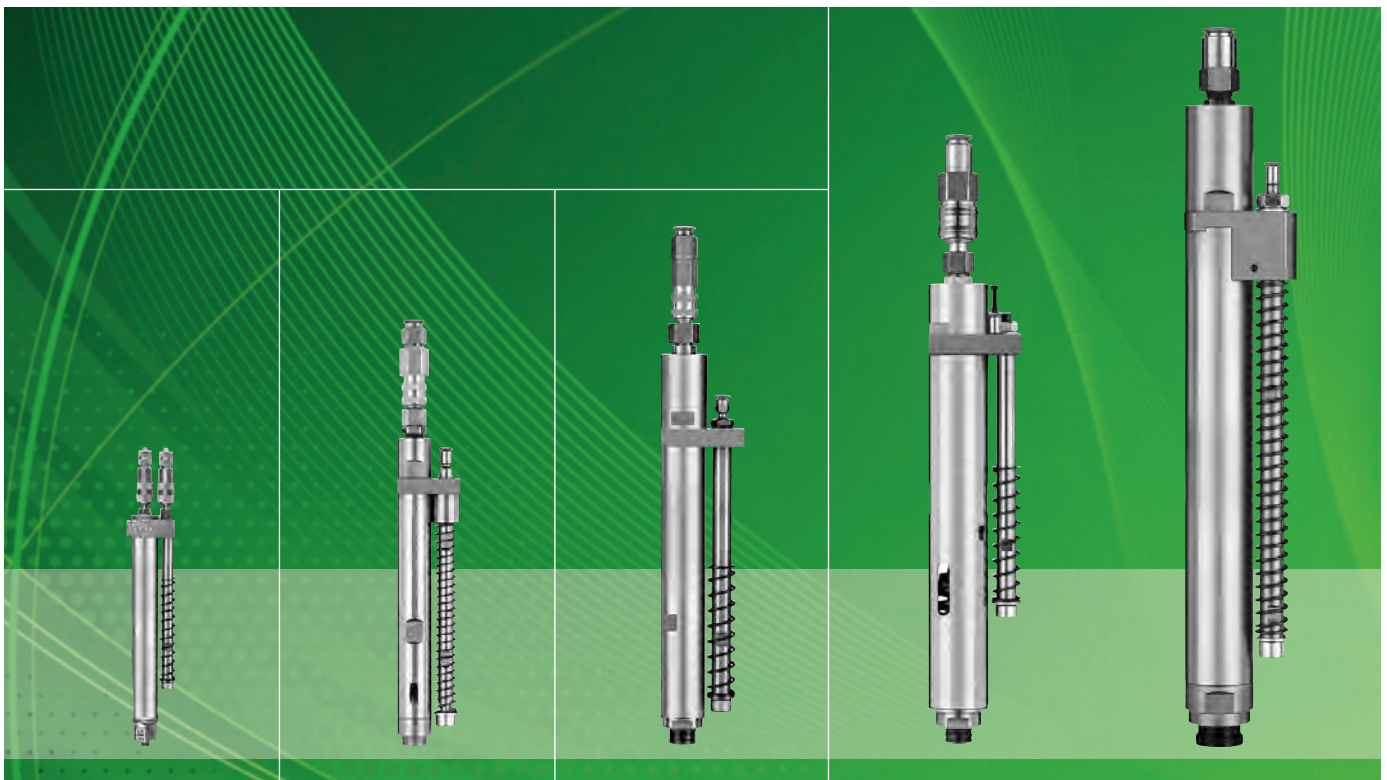
When used under the correct conditions DEPRAG pneumatic screwdrivers with shut-

off clutch conform with a Cmk value of $\geq 1,67$ with $\pm 10\%$ tolerance in relation to 6 Sigma according to ISO 5393. In other words a Cmk 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 motor size 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.



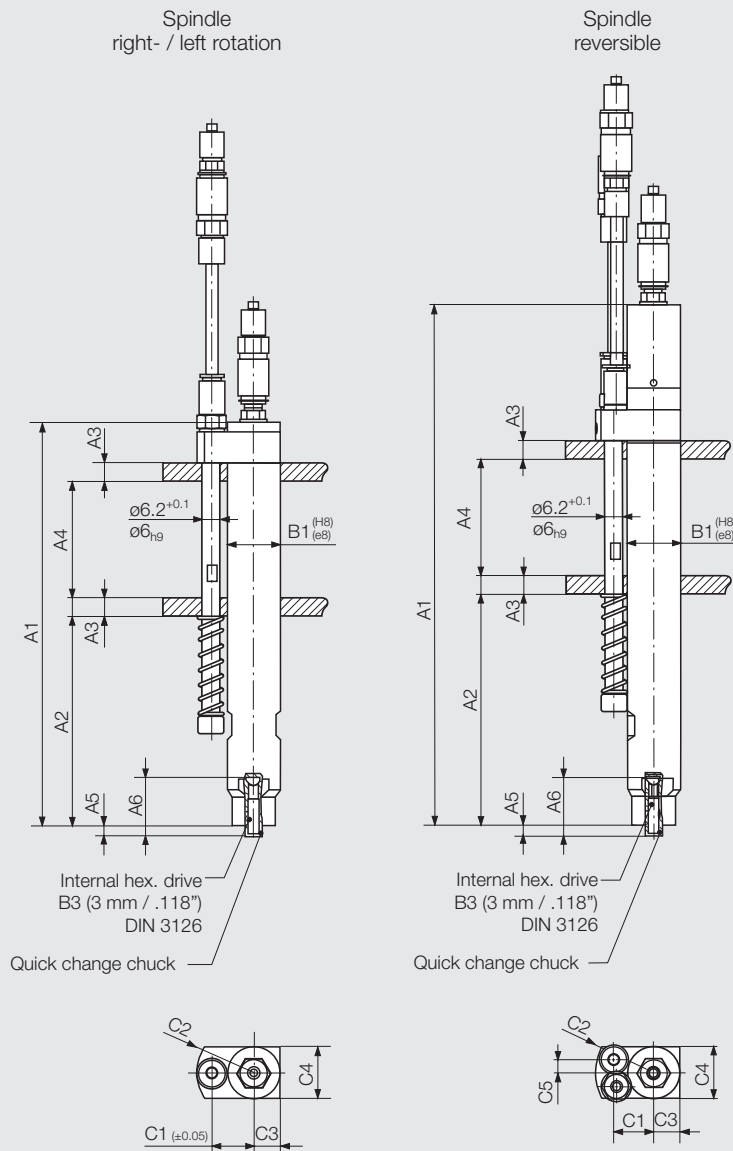
TECHNICAL DATA

| Screwdriver Style | | | Motor Size 0 | | | |
|---|---------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--|
| Spindle right rotation, right shut-off Push To Start | Type Part 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 Part 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 Part 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 Part 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 Part 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 Part no. | 345-308-31 UL 374100 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 Part 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 Part 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.



414878

| Motor Size 0 | | | | Dimensions (mm) | | | | | | | | | | | |
|------------------------------|---------------|--------------|---------------|-----------------|----|----|----|-----------|----|----|------|----|-----|----|-----|
| | | | | A1 | A2 | A3 | A4 | A5 | A6 | B1 | C1 | C2 | C3 | C4 | C5 |
| Spindle right-/left rotation | | | | | | | | | | | | | | | |
| 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

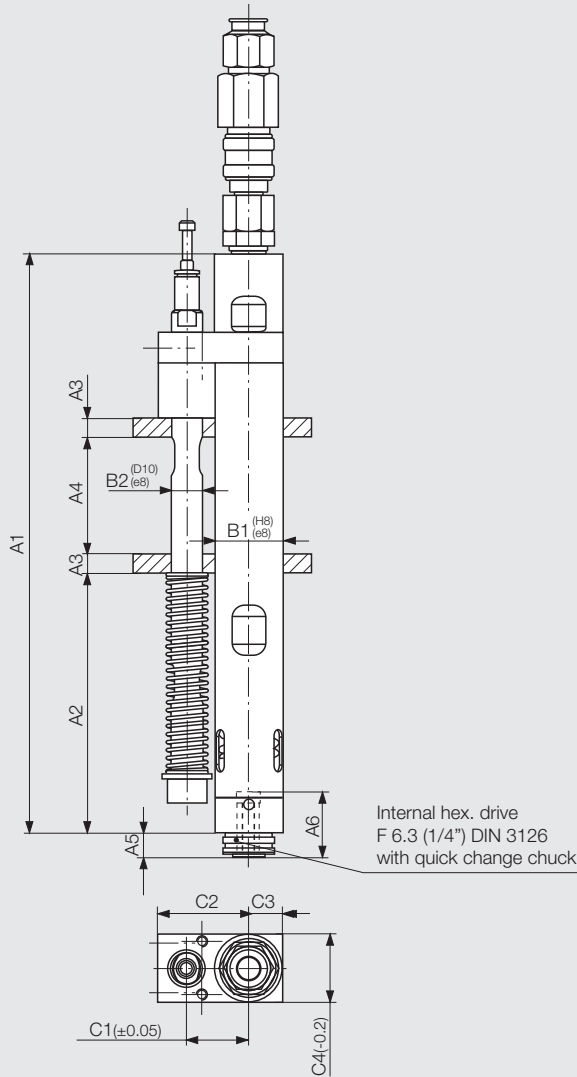
| Screwdriver Style | | Motor Size 1 | | | |
|---|---------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Spindle right rotation, right shut-off Push To Start | Type Part no. | 347-218-31 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 Part 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 Part 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 Part 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 Part 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 Part 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 Part 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 Part 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.

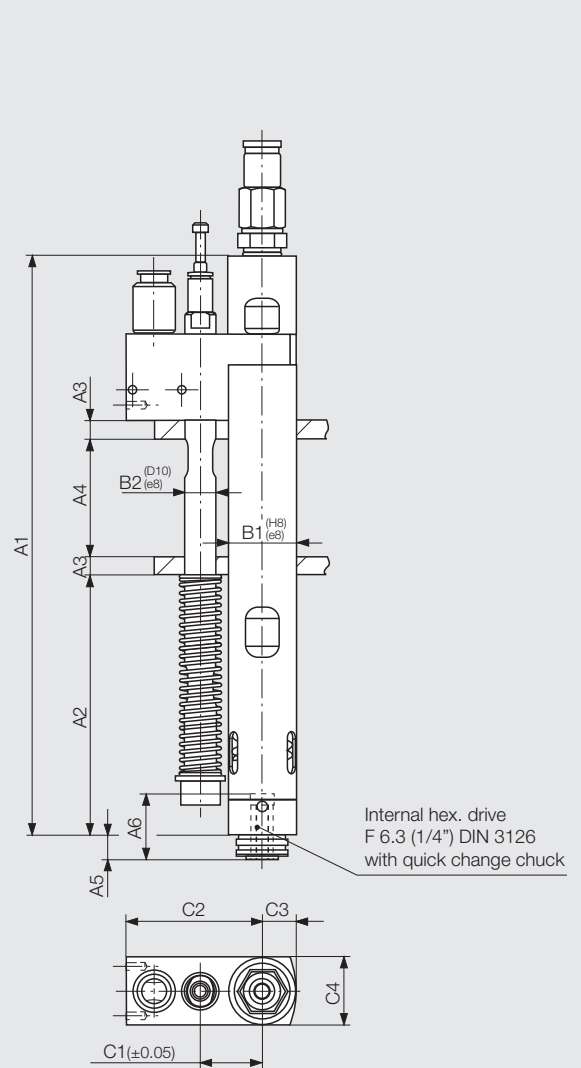
Please also find suitable tool inserts in our brochure D 3320 E.

Spindle
right- / left rotation



398862

Spindle
reversible



3988622

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 | | | | | | | | | | | | | |
| 347-318-31 | 347-318-31 L | 347-310-31 | 347-310-31 L | 187.9 | 84.4 | 6 | 38 | 7.6 (5.9) | 21 | 22 | 10 | 20 | 29 | 11 | 22 | |
| 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 | | | | | | | | | | | | | |
| 347-318-31 U | 347-318-31 UL | 347-310-31 U | 347-310-31 UL | 187.9 | 84.4 | 6 | 38 | 7.6 (5.9) | 21 | 22 | 10 | 20 | 44 | 11 | 22 | |
| 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

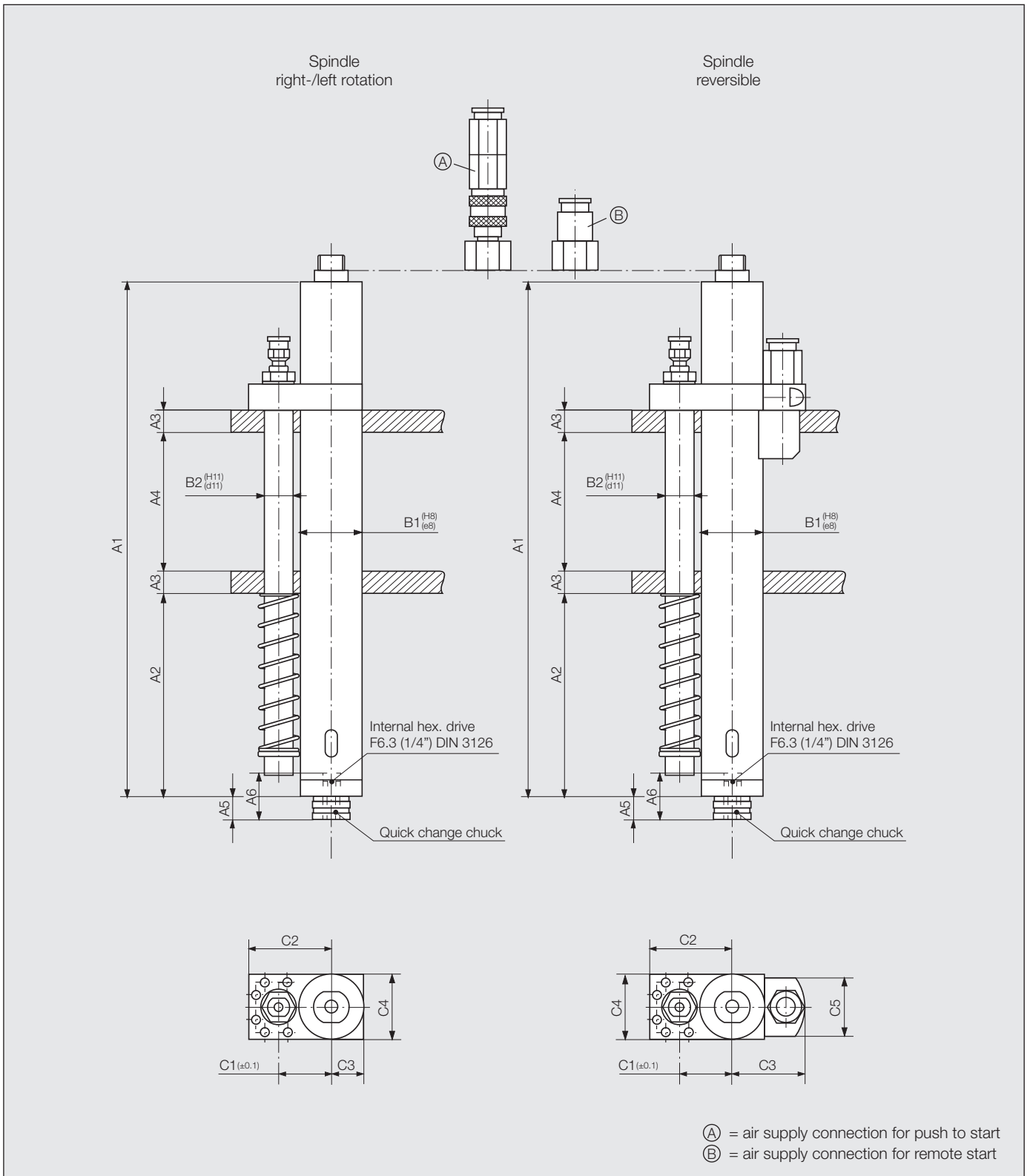
TECHNICAL DATA

| Screwdriver Style | | | Motor Size 2 | | |
|---|---------------------------|--|--|--|--|
| Spindle right rotation, right shut-off Push To Start | Type Part 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 Part 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 Part 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 Part 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 Part 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 Part 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 Part 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 Part 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 | | | | Dimensions (mm) | | | | | | | | | | | | |
|------------------------------|---------------|--------------|---------------|-----------------|----|----|----|----|----|----|----|----|----|----|----|----|
| Type | | | | A1 | A2 | A3 | A4 | A5 | A6 | B1 | B2 | C1 | C2 | C3 | C4 | C5 |
| Spindle right-/left rotation | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | |
| 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 Part 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 Part 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 Part 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 Part 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 Part 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 Part 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 Part 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 Part 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") |

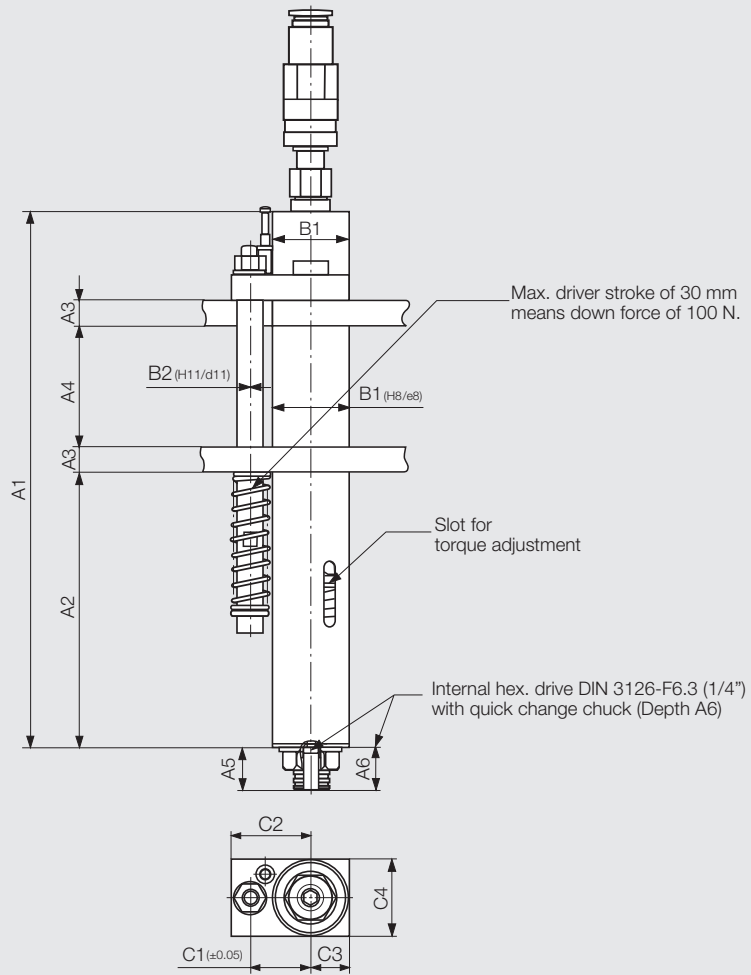
Performance data relate to an air pressure of 6.3 bar (90 PSI)

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

| Motor Size 3 | | | | | | | | | | | | | | | |
|------------------------------|---------------|--------------|---------------|-----------------|-----|----|----|------|----|----|----|----|----|----|----|
| Type | | | | Dimensions (mm) | | | | | | | | | | | |
| | | | | 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 | | | | | | | | | | | | |
| Spindle reversible | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |

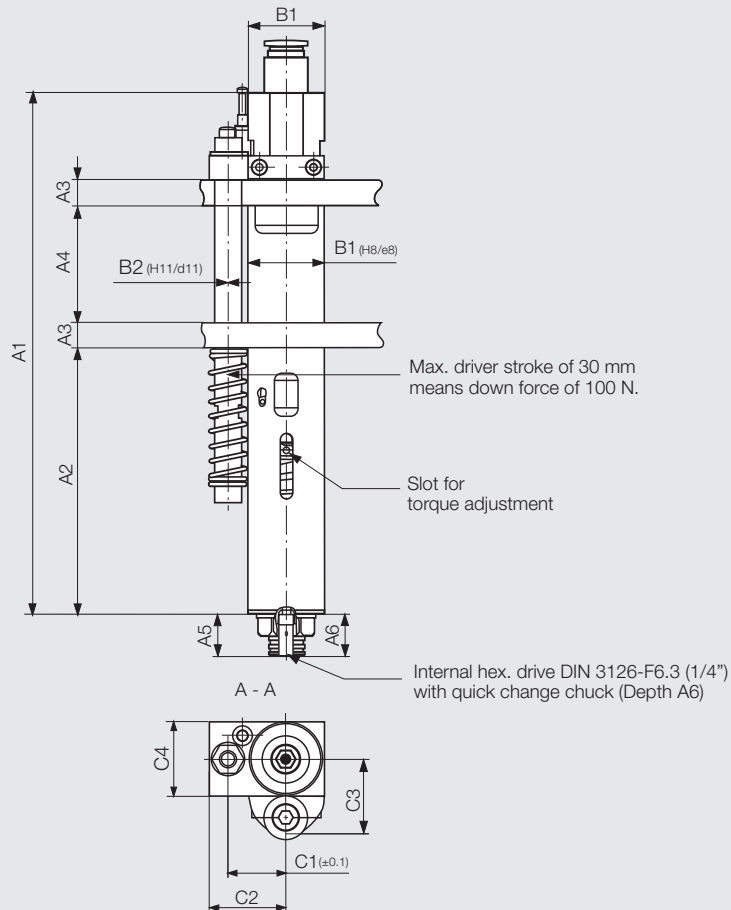
| Motor Size 3 | | | | | | | | | | | | | | | |
|------------------------------|---------------|--------------|---------------|-----------------|-----|----|----|------|----|----|----|----|----|----|----|
| Type | | | | Dimensions (mm) | | | | | | | | | | | |
| | | | | A1 | A2 | A3 | A4 | A5 | A6 | B1 | 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 | | | | | | | | | | | | |
| Spindle reversible | | | | | | | | | | | | | | | |
| 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 Part 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 Part 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") |

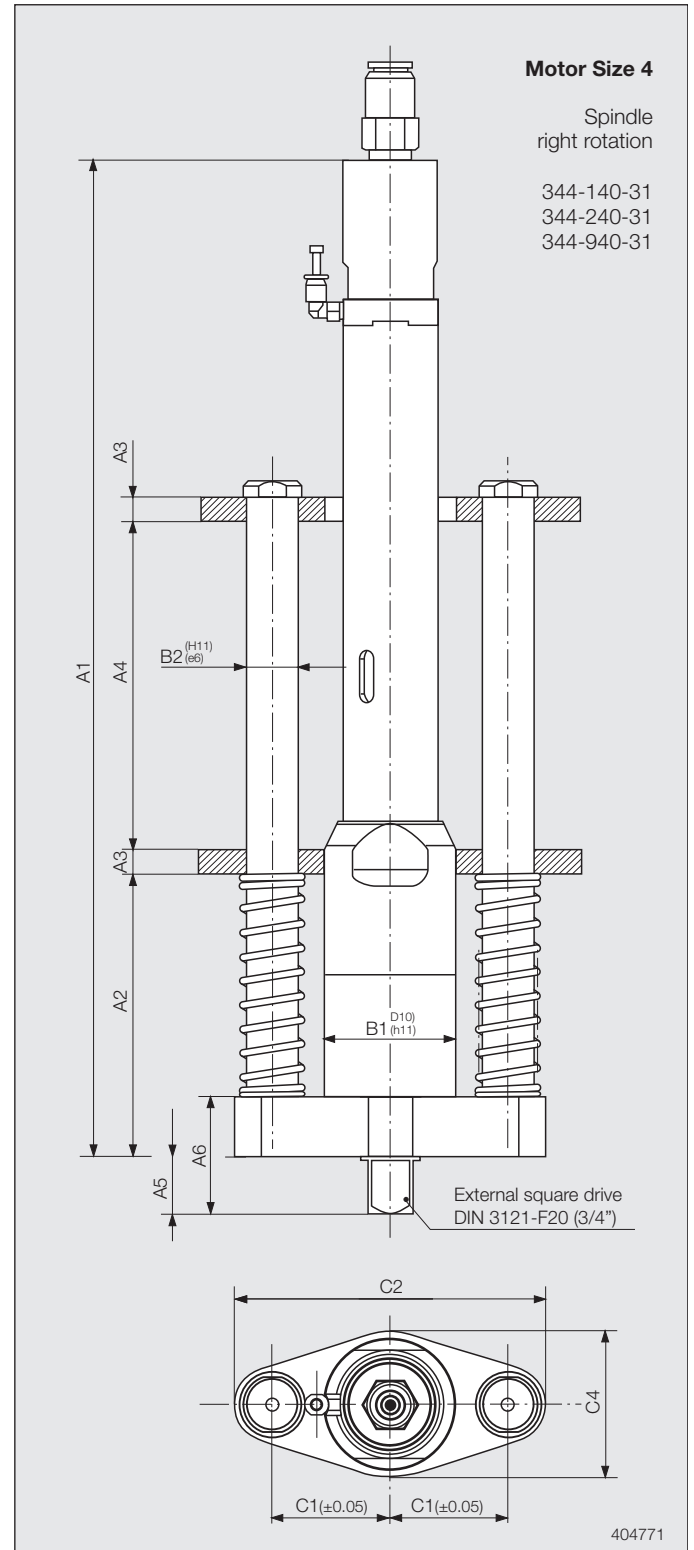
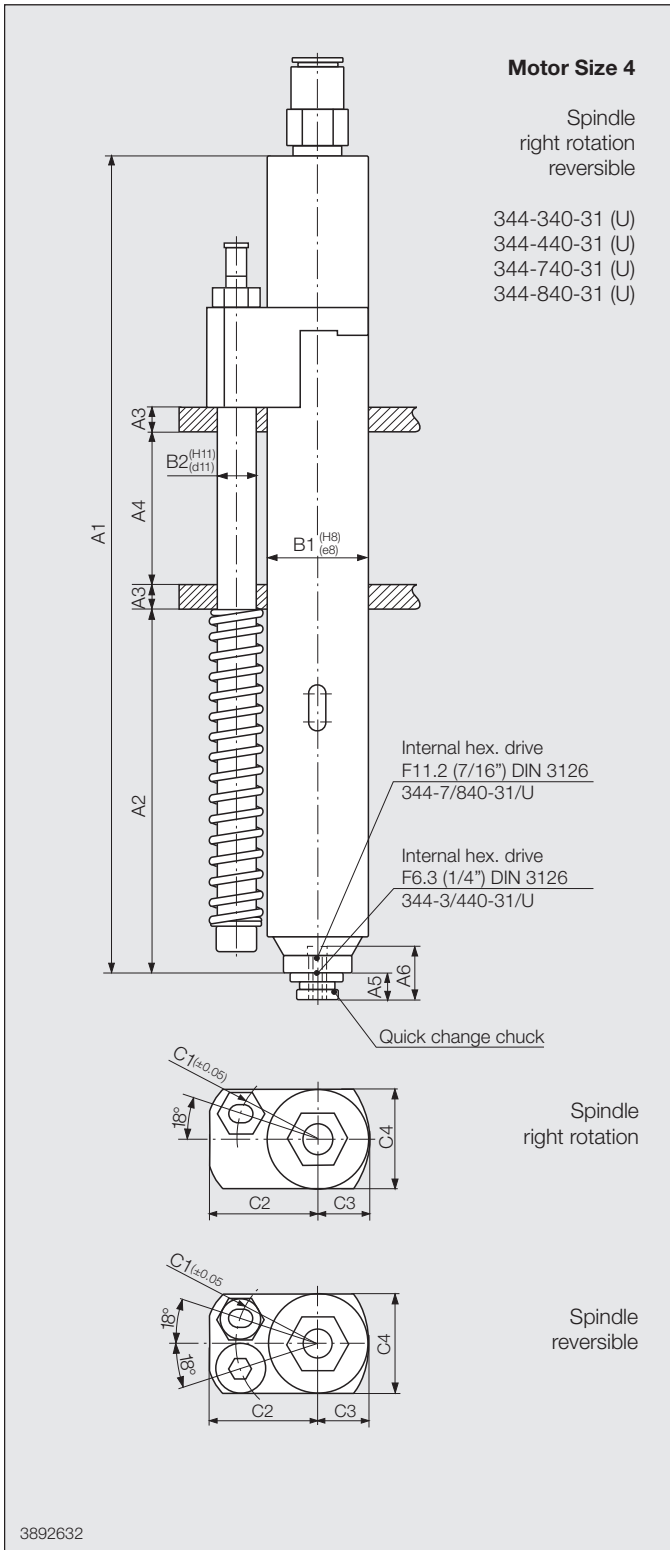
Performance data relate to an air pressure of 6.3 bar (90 PSI)

| Screwdriver Style | | Motor Size 4 | | |
|---|---------------------------|--|--|--|
| Spindle right rotation, right shut-off Remote Start | Type Part 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 Spindle right rotation | Type Spindle reversible | A1 | A2 | A3 | A4 | A5 | A6 | B1 | B2 | C1 | C2 | C3 | C4 |
| 344-340-31 | 344-340-31 U | 322.5 | 143.5 | 10 | 60 | 10.5 | 21 | 40 | 15 | 32 | 43 | 20.5 | 39.5 |
| 344-440-31 | 344-440-31 U | | | | | | | | | | | | |
| 344-740-31 | 344-740-31 U | | | | | | | | | | | | |
| 344-840-31 | 344-840-31 U | 352 | 173 | 10 | 60 | 13.2 | 30 | 40 | 15 | 32 | 43 | 20.5 | 39.5 |
| 344-140-31 | | 423.9 | 120 | 10 | 140 | 24.7 | 49.7 | 56 | 22 | 50 | 132 | - | 62 |
| 344-240-31 | | | | | | | | | | | | | |
| 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 Part 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 Part 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 Part 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 Part no. | | 347-220-31 V 388945 A | 347-320-31 V 388945 B | 347-520-31 V 388945 C |
| Off-Set Gear^{1) 2)} | Part 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 Part 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 Part 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 Part 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 Part no. | | 347-220-31 UV 388949 A | 347-320-31 UV 388949 B | 347-520-31 UV 388949 C |
| Off-Set Gear^{1) 2)} | Part 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 | 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.

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 Part 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 Part 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 Part 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 Part no. | | 346-730-31 V 407281 C | 346-330-31 V 407281 D | 346-430-31 V 407281 E |
| Off-Set Gear^{1) 2)} | Part 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.) (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 Part 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 Part 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 Part 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 Part no. | | 346-730-31 UV 407286 C | 346-330-31 UV 407286 D | 346-430-31 UV 407286 E |
| Off-Set Gear^{1) 2)} | Part 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.) (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)

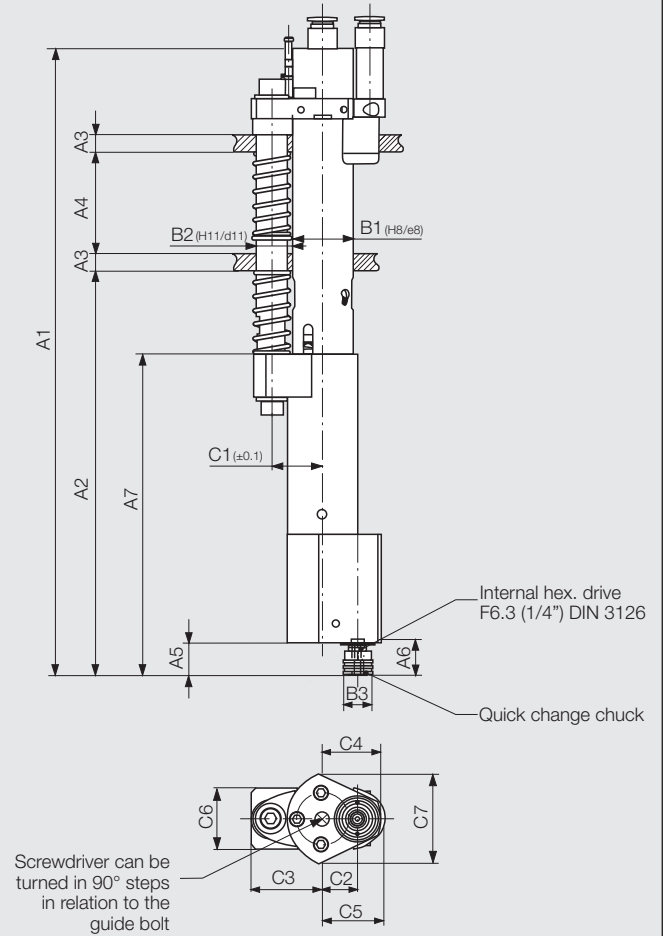
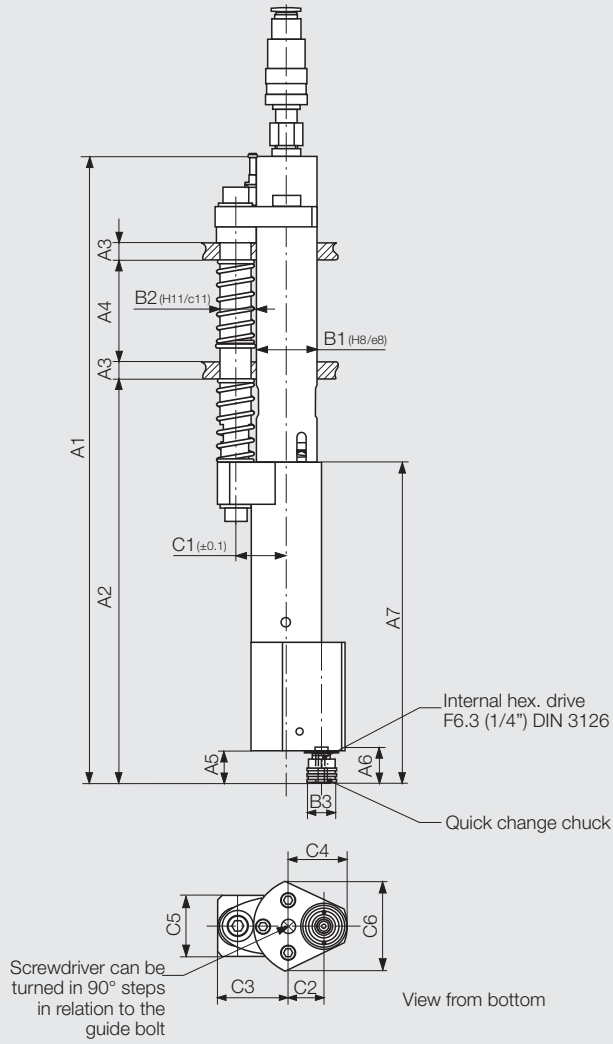
¹⁾ off-set gear as optional equipment

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.

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 Part no. | 346-338-31 406109 D | 346-438-31 406109 E |
| Spindle left rotation, left shut-off Push To Start | Type Part no. | 346-338-31 L 406446 D | 346-438-31 L 406446 E |
| Spindle right rotation, right shut-off Remote Start | Type Part no. | 346-330-31 406482 D | 346-430-31 406482 E |
| Spindle left rotation, left shut-off Remote Start | Type Part no. | 346-330-31 L 406484 D | 346-430-31 L 406484 E |
| Reduction Gear¹⁾ | Part 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 Part 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 Part 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 Part 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 Part no. | 346-330-31 UL 406475 D | 346-430-31 UL 406475 E |
| Reduction Gear¹⁾ | Part 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") |

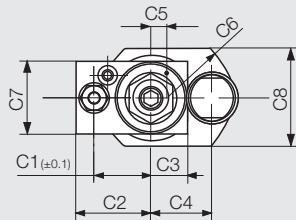
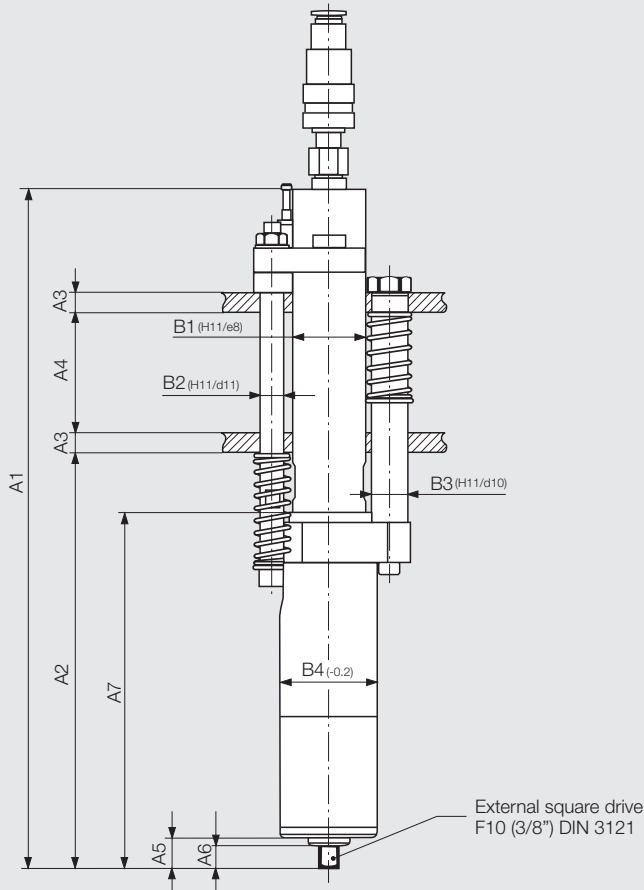
Performance data relate to an air pressure of 6.3 bar (90 PSI)

¹⁾ reduction gear as optional equipment

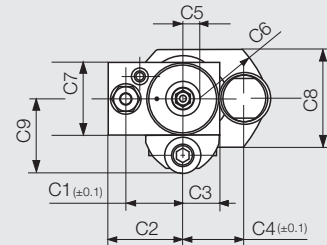
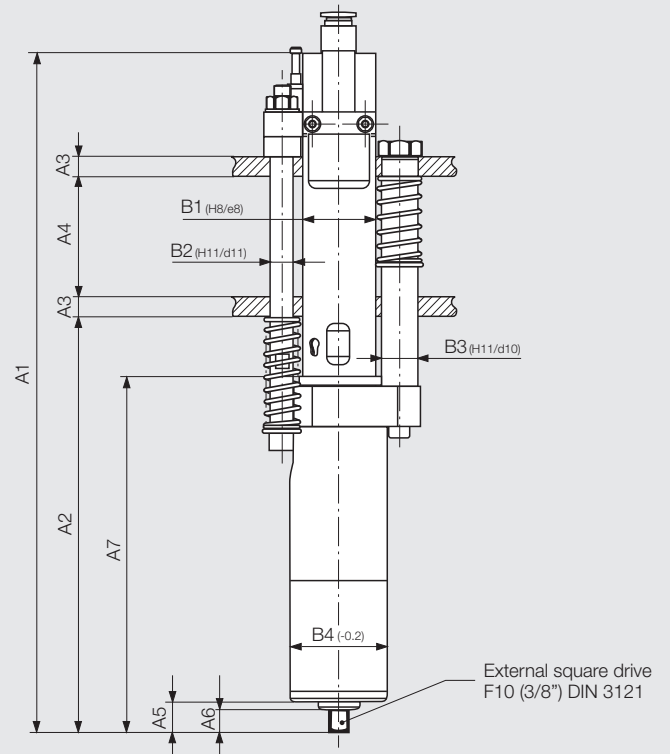
Please find suitable accessories on page 20.

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 Part 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 Part 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 Part 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 Part no. | 346-330-31 L 406484 D | 346-430-31 L 406484 E | 346-430-31 L 406484 E |
| Reduction Gear¹⁾ | Part 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.) (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 | 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 Part 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 Part 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 Part 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 Part no. | 346-330-31 UL 406475 D | 346-430-31 UL 406475 E | 346-430-31 UL 406475 E |
| Reduction Gear¹⁾ | Part 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.) (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 | 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") |

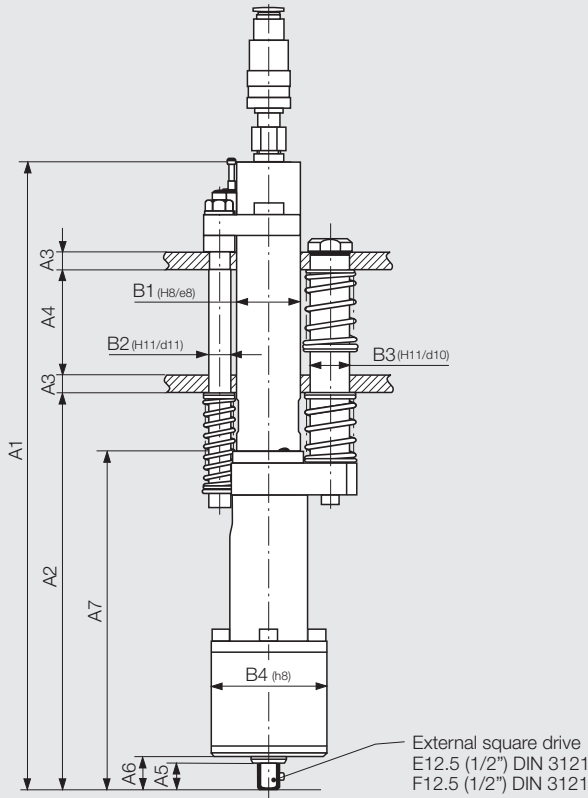
Performance data relate to an air pressure of 6.3 bar (90 PSI)

¹⁾ reduction gear as optional equipment

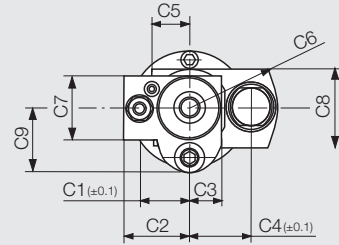
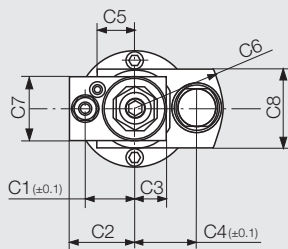
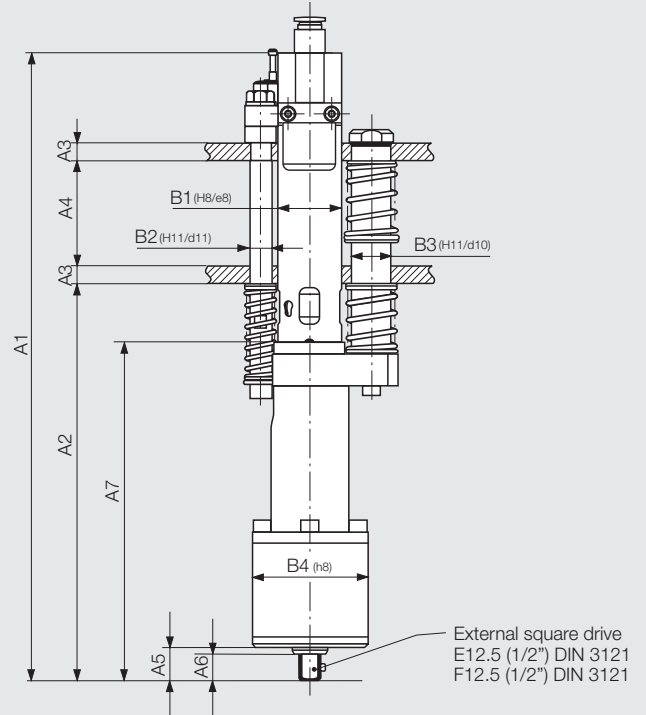
Please find suitable accessories on page 20.

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

| Type | | | | Dimensions (mm) | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---------------|--------------|---------------|-----------------|-----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| | | | | 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

| Type | | | | Dimensions (mm) | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---------------|--------------|---------------|-----------------|-----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| | | | | 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 | |

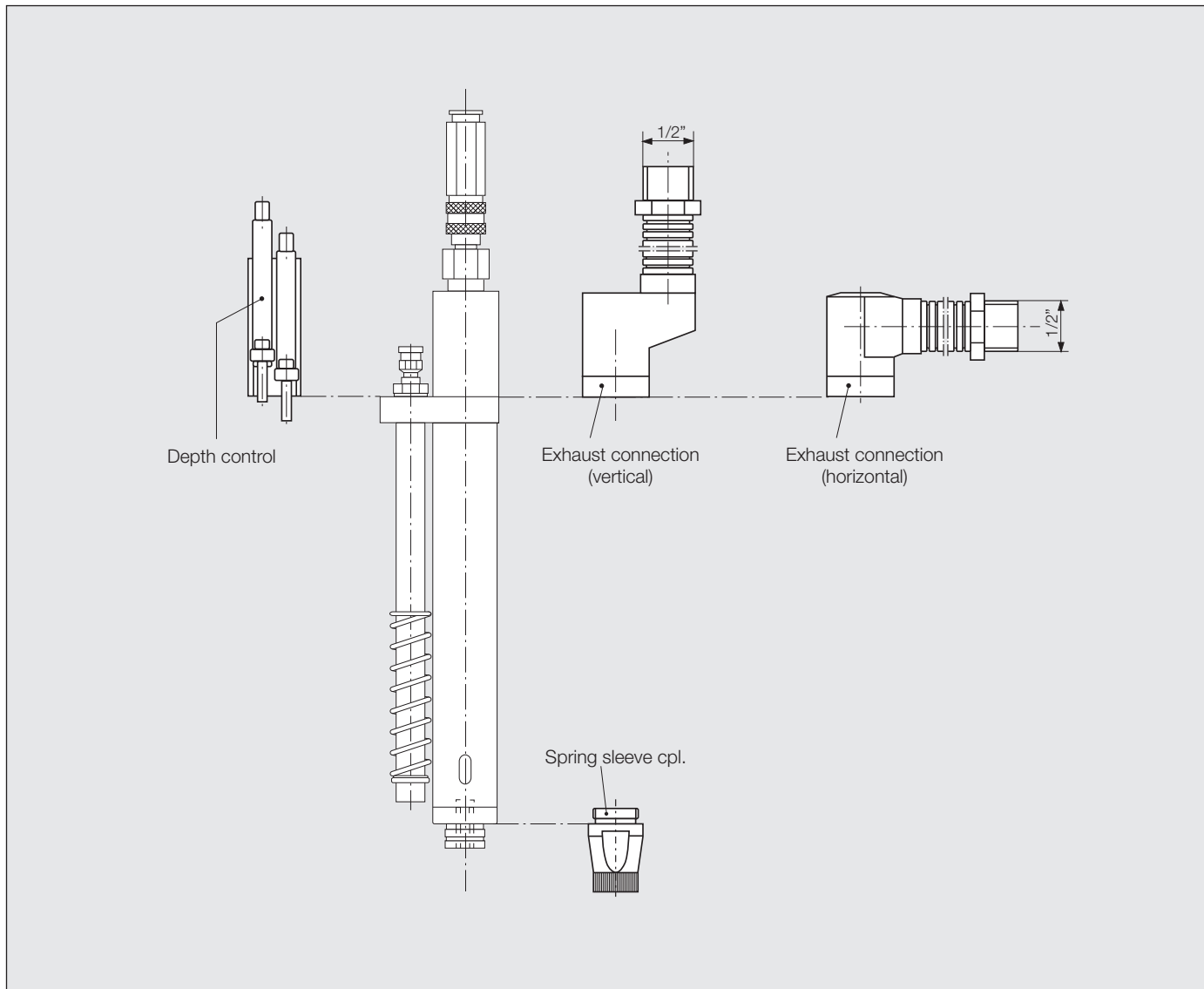
ACCESSORIES

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

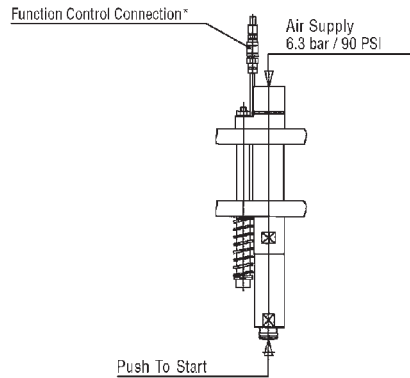
¹⁾ for corresponding exhaust filter/silencer (see leaflet D 3340 E)



FUNCTION DESCRIPTION DRIVER START

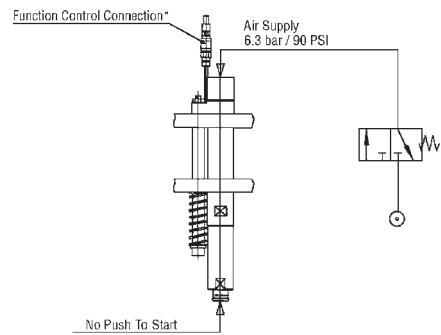
Push To Start

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



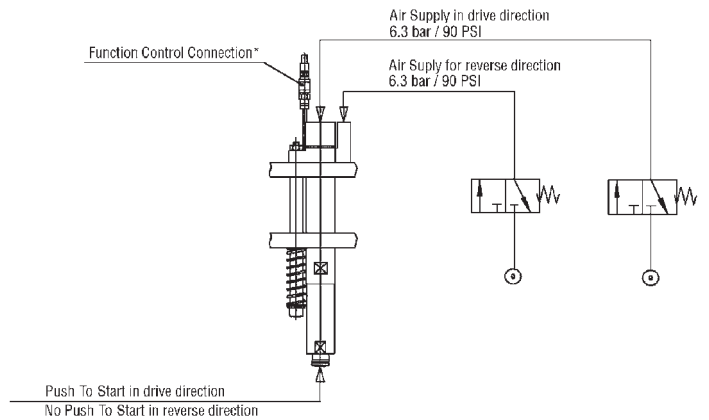
Remote Start (3/2-way valve)

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



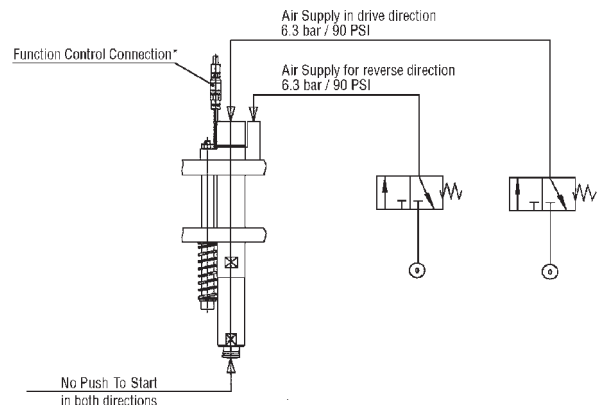
Push To Start in drive direction and reversible by remote port (3/2-way valve)

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



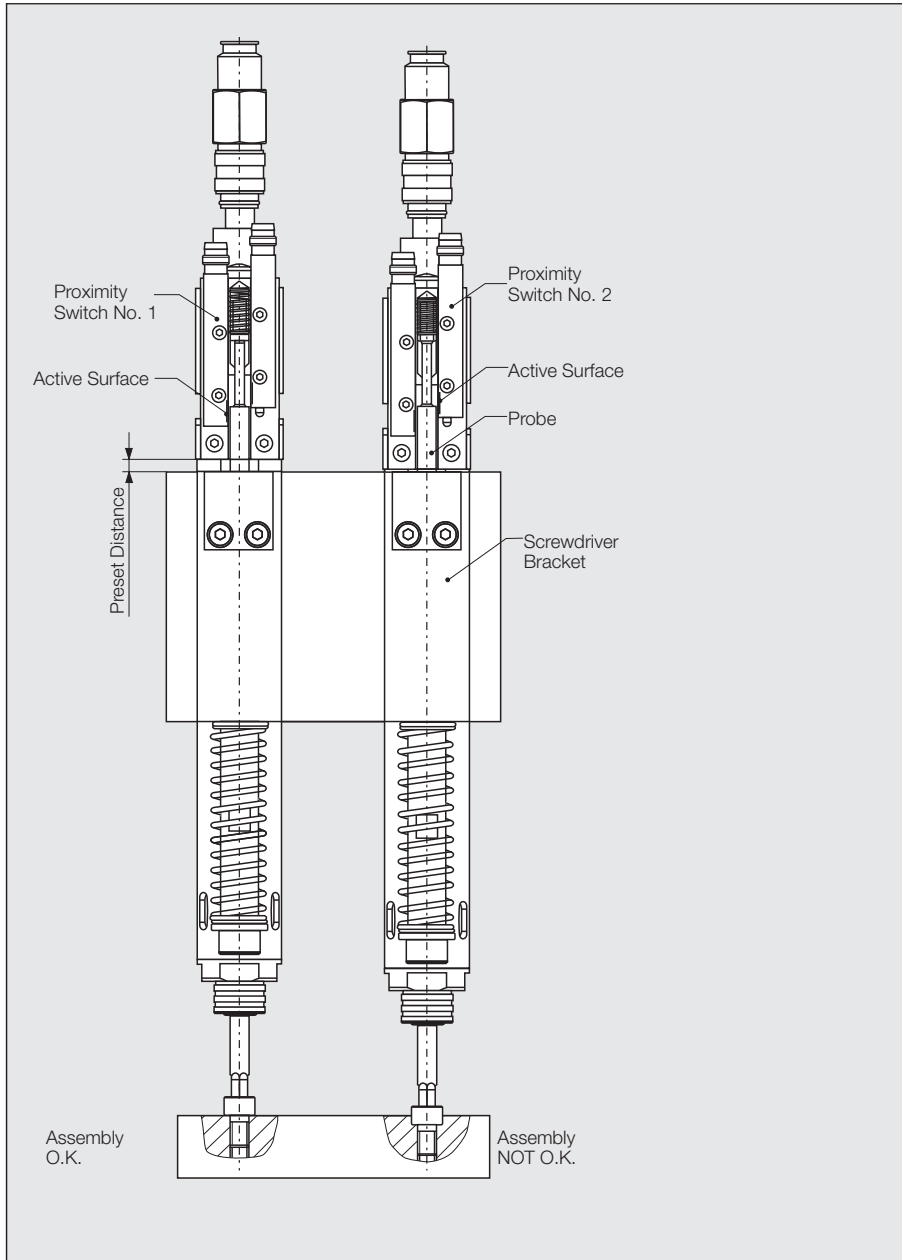
Remote Start (3/2-way valve) in drive direction and in reverse

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

DEPRAG SCHULZ GMBH u. CO.

P.O. Box 1352, D-92203 Amberg, Germany
Carl-Schulz-Platz 1, D-92224 Amberg
Phone (+49) 9621 371-0, Fax (+49) 9621 371-120
www.deprag.com
info@deprag.de

CERTIFIED AS PER DIN EN ISO 9001
