



Screwdriving technology

Automation

Air motors

Air tools

DEPRAG

**Handheld Screwdriver
pneumatic**

MICROMAT/MINIMAT ESD Screwdriver

straight design – torque ranges between 0.02 – 12 Nm

- **robust**
- **uninfluenceably accurate**
- **ergonomic**
- **durable**
- **quiet**

The supplied conductive pressure hose allows a simple, direct and grounded connection, without the need for an additional cable-connection.

ESD screwdrivers are especially designed for the operation in electrostatic exposed areas, and where an ESD-safe assembly is required (specifications according to EN 100 015).

Between the air-hose for the tool and the main air-outlet an insulating connector can be installed to discharge electrostatic load.

The extraordinary constructive quality of the slender MICROMAT/MINIMAT screwdriver and the capability to be used in a heavy industrial environment, assures extreme high up-times.

The MICROMAT/MINIMAT achieves its high torque-accuracy through the proven principle of the DEPRAG disengagement- and shut-off clutch. This special clutch design enables our screwdrivers to reach extreme high torque accuracy, in many cases below $\pm 3\%$ of the standard deviation, which is kept constant over several million of cycles.

DEPRAG pneumatic screwdrivers with a shut-off clutch operated at suitable surrounding conditions achieve a Cmk value of ≥ 1.67 with a tolerance requirement of $\pm 10\%$ in relation to 6 Sigma according to ISO 5393. A Cmk value of 1.67 means that there is a failure rate of only 0.6 per one million screw assemblies.

The ergonomic design of the housing allows a fatigue-proof operation at continued use.



TECHNICAL DATA

| MICROMAT - straight version | | Motor Size 0 | | | |
|--|---------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|
| Screwdriver reversible, right shut-off Push-To-Start | Type Part no. | 345-308 U ESD 376846 A | 345-408 U ESD 376846 B | 345-708 U ESD 385164 A | 345-508 U ESD 376846 C |
| Screws | up to | M 3 | M 3 | M 3 | M 3 |
| Torque min. | Ncm / in.oz | 2 / 2.84 | 2 / 2.84 | 2 / 2.84 | 2 / 2.84 |
| soft pull-up max. | Ncm / in.oz | 40 / 56.8 | 50 / 71 | 70 / 99.4 | 70 / 99.4 |
| hard pull-up max. | Ncm / in.oz | 50 / 71 | 50 / 71 | 70 / 99.4 | 70 / 99.4 |
| 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 |
| Main body dia. | mm / in. | 17 / 11/16 | 17 / 11/16 | 17 / 11/16 | 17 / 11/16 |
| Length | mm / in. | 167 / 6 ⁹ / ₁₆ | 167 / 6 ⁹ / ₁₆ | 173 / 6 ¹³ / ₁₆ | 173 / 6 ¹³ / ₁₆ |
| Weight | kg / lbs | 0.17 / 0.38 | 0.17 / 0.38 | 0.18 / 0.40 | 0.18 / 0.40 |
| Noise level | dB (A) | 65 | 65 | 65 | 65 |
| Air hose dia. | mm / in. | 4 / 5/32 | 4 / 5/32 | 4 / 5/32 | 4 / 5/32 |
| Connector thread for air-hose | | M 5 | M 5 | M 5 | M 5 |
| Hose dia. for screw suction | mm / in. | 3 / 1/8 | 3 / 1/8 | 3 / 1/8 | 3 / 1/8 |
| Internal hex. drive DIN ISO 1173 | | B3 (3 mm/.118") | B3 (3 mm/.118") | B3 (3 mm/.118") | B3 (3 mm/.118") |
| Suitable tool inserts and connecting components with a drive as per DIN ISO 1173 | | A3 (3 mm/.118") | A3 (3 mm/.118") | A3 (3 mm/.118") | A3 (3 mm/.118") |
| Quick change chuck, mounted | | yes | yes | yes | yes |

| MINIMAT - straight version | | Motor Size 1 | | | |
|--|---------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|
| Screwdriver reversible, right shut-off Push-To-Start | Type Part no. | 347-218 U ESD 403345 A | 347-318 U ESD 403345 B | 347-518 U ESD 403345 C | 347-618 U ESD 403345 D |
| Screws | up to | M 3 | M 3 | M 3 | M 3 |
| Torque min. | Nm / in.lbs | 0.3 / 2.7 | 0.3 / 2.7 | 0.2 / 1.8 | 0.2 / 1.8 |
| soft pull-up max. | Nm / in.lbs | 1 / 8.85 | 1.4 / 12.4 | 2 / 17.7 | 2 / 17.7 |
| hard pull-up max. | Nm / in.lbs | 1 / 8.85 | 1.4 / 12.4 | 2 / 17.7 | 2 / 17.7 |
| 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 |
| Main body dia. | mm / in. | 28 / 1 1/8 | 28 / 1 1/8 | 28 / 1 1/8 | 28 / 1 1/8 |
| Length | mm / in. | 190 / 7 1/2 | 190 / 7 1/2 | 190 / 7 1/2 | 198 / 7 ⁵¹ / ₆₄ |
| Weight | kg / lbs | 0.4 / 0.9 | 0.4 / 0.9 | 0.4 / 0.9 | 0.43 / 0.95 |
| Noise level | dB (A) | 62 | 62 | 62 | 62 |
| Air hose dia. | mm / in. | 5 / 3/16 | 5 / 3/16 | 5 / 3/16 | 5 / 3/16 |
| Connector thread for air-hose | | 1/8" | 1/8" | 1/8" | 1/8" |
| Hose dia. for screw suction | mm / in. | 3 / 1/8 | 3 / 1/8 | 3 / 1/8 | 3 / 1/8 |
| Internal hex. drive DIN ISO 1173 | | 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 ISO 1173 | | E6.3 (1/4") | E6.3 (1/4") | E6.3 (1/4") | E6.3 (1/4") |
| Quick change chuck, mounted | | yes | yes | yes | yes |

| MINIMAT - straight version | | Motor Size 2 | | | |
|--|---------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Screwdriver reversible, right shut-off Push-To-Start | Type Part no. | 347-228 U ESD 392476 A | 347-328 U ESD 392476 B | 347-428 U ESD 392476 D | 347-528 U ESD 392476 C |
| Screws | up to | M 4 | M 4 | M 4 | M 5 |
| Torque min. | Nm / in.lbs | 0.5 / 4.4 | 0.4 / 3.5 | 0.4 / 3.5 | 0.3 / 2.7 |
| soft pull-up max. | Nm / in.lbs | 1.3 / 11.5 | 2.4 / 21.2 | 3.5 / 31 | 5 / 44.3 |
| hard pull-up max. | Nm / in.lbs | 1.8 / 15.9 | 2.8 / 24.8 | 4 / 35.4 | 5 / 44.3 |
| Speed, idling | rpm | 3000 | 1100 | 750 | 500 |
| Air consumption | m ³ /min / cfm | 0.3 / 11 | 0.3 / 11 | 0.3 / 11 | 0.3 / 11 |
| Main body dia. | mm / in. | 33 / 1 ⁵ / ₁₆ | 33 / 1 ⁵ / ₁₆ | 33 / 1 ⁵ / ₁₆ | 33 / 1 ⁵ / ₁₆ |
| Length | mm / in. | 223 / 8 ²⁵ / ₃₂ | 223 / 8 ²⁵ / ₃₂ | 223 / 8 ²⁵ / ₃₂ | 223 / 8 ²⁵ / ₃₂ |
| Weight | kg / lbs | 0.68 / 1.5 | 0.69 / 1.5 | 0.69 / 1.5 | 0.69 / 1.5 |
| Noise level | dB (A) | 67 | 67 | 67 | 67 |
| Air hose dia. | mm / in. | 6.5 / 1/4 | 6.5 / 1/4 | 6.5 / 1/4 | 6.5 / 1/4 |
| Connector thread for air-hose | | 1/8" | 1/8" | 1/8" | 1/8" |
| Internal hex. drive DIN ISO 1173 | | 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 ISO 1173 | | E6.3 (1/4") | E6.3 (1/4") | E6.3 (1/4") | E6.3 (1/4") |
| Quick change chuck, mounted | | yes | yes | yes | yes |

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

Included in delivery Air hose ESD-applicable 1.5 m / 4.9 ft. · Torque adjustment tool · Assortment of clutch springs

TECHNICAL DATA

| MINIMAT - straight version | | | Motor Size 2.5 | | |
|--|---------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|
| Screwdriver reversible, right shut-off | Type | 345-7258 U ESD | 345-3258 U ESD | 345-4258 U ESD | |
| Push-To-Start | Part no. | 409631 A | 409631 B | 409631 C | |
| Screws | up to | M 5 | M 6 | M 6 | |
| Torque | min. | Nm / in.lbs | 1 / 8.85 | 1 / 8.85 | |
| soft pull-up | max. | Nm / in.lbs | 5 / 44.3 | 10 / 88.5 | |
| hard pull-up | max. | Nm / in.lbs | 6 / 53.1 | 10 / 88.5 | |
| Speed, idling | rpm | 1100 | 640 | 310 | |
| Air consumption | m ³ /min / cfm | 0.35 / 12 | 0.35 / 12 | 0.35 / 12 | |
| Main body dia. | mm / in. | 40 / 1 ⁹ / ₁₆ | 40 / 1 ⁹ / ₁₆ | 40 / 1 ⁹ / ₁₆ | |
| Length | mm / in. | 245 / 9 ⁵ / ₈ | 245 / 9 ⁵ / ₈ | 245 / 9 ⁵ / ₈ | |
| Weight | kg / lbs | 0.9 / 2 | 0.9 / 2 | 0.9 / 2 | |
| Noise level | dB (A) | 76 | 76 | 76 | |
| Air hose dia. | mm / in. | 6 / 1/4 | 6 / 1/4 | 6 / 1/4 | |
| Connector thread for air-hose | | 1/8" | 1/8" | 1/8" | |
| Internal hex. drive DIN ISO 1173 | | F6.3 (1/4") | F6.3 (1/4") | F6.3 (1/4") | |
| Suitable tool inserts and connecting components with a drive as per DIN ISO 1173 | | E6.3 (1/4") | E6.3 (1/4") | E6.3 (1/4") | |
| Quick change chuck, mounted | | yes | yes | yes | |

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

Included in delivery

Air hose ESD-applicable 1.5 m / 4.9 ft. · Torque adjustment tool · Assortment of clutch springs



It is necessary to use a torque support (e.g. stand, handgrip) for maximum torque: over 4 Nm for straight handle design. Suitable torque supports can be found in our brochure D 3340 E.

OPTIONAL EQUIPMENT

| | | Motor Size 0 | Motor Size 1 | Motor Size 2 | Motor Size 2.5 |
|---|----------|--------------|--------------|--------------|----------------|
| Connection piece (Connector thread 1/4" f / 1/4" m) | Part no. | 378379 A | 378379 A | 378379 A | 378379 A |
| Spiral hose, antistatic | Part no. | - | 346697 P | 346697 P | 346697 P |
| Support ring | Part no. | - | 3870323 | 389775 B | - |
| Spring sleeve cpl. | Part no. | 364670 A | 364672 A | 364672 A | 364680 A |
| Spring sleeve cpl., with vacuum connection (in connection with finder, sea leaflet: Inserting Tools D 3320 E) | Part no. | - | 364672 A | 364672 C | 364680 D |

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



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