

SENSOMAT The Screwdriver with regulated clutch function

straight design - seating torque from 0.3 - 5 Nm (3 - 44 in.lbs)

pistol grip design - seating torque from 0.3 - 5 Nm (3 - 44 in.lbs)

- **Thread forming with maximum motor power**
- **Seating torque less than driving torque**
- **Thread forming instead of thread damaging**
- **ergonomic**
- **robust**

Our pneumatic handheld screwdrivers SENSOMAT with mechanical clutch function are particularly suitable for applications such as:

- Sheet metal assemblies
- Wood assemblies
- Self-tapping through bolts

The SENSOMAT has been specially designed for screw joints where the screw-driving torque (forming torque) is close to or even higher than the shut-off torque due to high friction during assembly.

In this way for example thread forming or thread cutting screws can be reliably processed with this screwdriver which is equipped with a mechanical clutch lock – there is no chance of damaging the screw by over-tightening.



ADVANTAGES

The SENSOMAT control screwdriver tightens the screw with full motor torque. Just before the base of the screw head is seated, the shut-off clutch is released and the screwdriver switches off exactly at the pre-set torque. The screw is completely screwed in without damaging the screw connection.

The SENSOMAT, a further development of the well-known MINIMAT screwdrivers achieves high torque accuracy and low 3% standard deviation with the help of the highly accurate shut-off clutch. When used under the correct conditions DEPRAG pneumatic screwdrivers with shut-off clutch conform with a Cmk value of ≥ 1.67 with a tolerance requirement of $\pm 10\%$ 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.

TECHNICAL DATA

SENSOMAT - straight design

Screwdriver Style		Motor Size 1				Motor Size 2			Motor Size 3	
Driver reversible, right shut-off, Push-To-Start	Type	347S-218U	347S-318U	347S-518U	347S-618U	347S-328U	347S-428U	347S-528U	346S-238U	346S-738U
	Part no.	405158A	405158B	405158C	405158D	386542B	386542D	386542C	409114B	409114C
Screws	up to	M3	M3	M3	M3	M4	M4	M5	M5	M5
Seating-Torque, minimum	Nm / in.lbs	0.3 / 3	0.4 / 4	0.4 / 4	0.4 / 4	0.4 / 4	0.4 / 4	0.3 / 3	0.5 / 5	0.4 / 4
Seating-Torque, maximum	Nm / in.lbs	1 / 9	1.4 / 12	2 / 18	2 / 18	2.8 / 25	3.5 / 31	5 / 44	4.5 / 40	5 / 44
Driving-Torque, maximum	Nm / in.lbs	1.1 / 10	1.6 / 14	2.2 / 19	2.2 / 19	3.1 / 27	3.9 / 36	5.5 / 49	5 / 44	7 / 62
Speed, idling	rpm	1900	1300	900	600	1100	750	500	2300	1200
Air consumption	m ³ /min / cfm	0.23 / 8	0.23 / 8	0.23 / 8	0.23 / 8	0.3 / 11	0.3 / 11	0.3 / 11	0.4 / 14	0.4 / 14
Main body dia.	mm / in.	28 / 1 ¹ / ₈	28 / 1 ¹ / ₈	28 / 1 ¹ / ₈	28 / 1 ¹ / ₈	33 / 1 ⁵ / ₁₆	33 / 1 ⁵ / ₁₆	33 / 1 ⁵ / ₁₆	44 / 1 ³ / ₄	44 / 1 ³ / ₄
Length	mm / in.	218 / 8 ¹⁹ / ₃₂	218 / 8 ¹⁹ / ₃₂	218 / 8 ¹⁹ / ₃₂	218 / 8 ¹⁹ / ₃₂	250 / 9 ⁷ / ₈	250 / 9 ⁷ / ₈	250 / 9 ⁷ / ₈	274 / 10 ³ / ₄	290 / 11 ⁷ / ₁₆
Weight	kg / lbs	0.52 / 1.1	0.52 / 1.1	0.52 / 1.1	0.52 / 1.1	0.76 / 1.7	0.76 / 1.7	0.76 / 1.7	1.41 / 3.1	1.48 / 3.2
Noise level	dB (A)	62	62	62	62	67	67	67	74	74
Air hose dia.	mm / in.	6 / 1/4	6 / 1/4	6 / 1/4	6 / 1/4	6 / 1/4	6 / 1/4	6 / 1/4	6 / 1/4	6 / 1/4
Drive hex. female DIN ISO 1173		1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Quick change chuck, mounted		yes	yes	yes	yes	yes	yes	yes	yes	yes

SENSOMAT - pistol grip design

Screwdriver Style		Motor Size 2			Motor Size 3	
Driver reversible, right shut-off						
Trigger start	Type	347S-327U	347S-427U	347S-527U	345S-237U	345S-737U
Lower air-inlet	Part no.	391486B	391486D	391486C	392773A	392773B
Driver reversible, right shut-off						
Trigger start	Type	347S-327OU	347S-427OU	347S-527OU	-	-
Upper air-inlet	Part no.	391490B	391490D	391490C	-	-
Screws	up to	M4	M4	M5	M5	M5
Seating-Torque, minimum	Nm / in.lbs	0.4 / 4	0.4 / 4	0.3 / 3	0.5 / 5	0.4 / 4
Seating-Torque, maximum	Nm / in.lbs	3 / 26	3.5 / 31	5 / 44	4.5 / 40	5 / 44
Driving-Torque, maximum	Nm / in.lbs	3.3 / 29	3.9 / 34	5.5 / 49	5 / 44	7 / 62
Speed, idling	rpm	1100	750	500	2300	1200
Air consumption	m ³ /min / cfm	0.3 / 11	0.3 / 11	0.3 / 11	0.4 / 14	0.4 / 14
Distance from spindle centre to side	mm / in.	14.5 / 9/16	14.5 / 9/16	14.5 / 9/16	22 / 7/8	22 / 7/8
Length	mm / in.	240 / 9 7/16	240 / 9 7/16	240 / 9 7/16	244 / 9 5/8	260 / 10 1/4
Weight	kg / lbs	0.82 / 1.8	0.82 / 1.8	0.82 / 1.8	1.5 / 3.3	1.6 / 3.5
Noise level	dB (A)	69	69	69	66	66
Air hose dia.	mm / in.	6 / 1/4	6 / 1/4	6 / 1/4	6 / 1/4	6 / 1/4
Drive hex. female DIN ISO 1173		1/4"	1/4"	1/4"	1/4"	1/4"
Quick change chuck, mounted		yes	yes	yes	yes	yes

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

Included in delivery:

Hose coupling with nozzle and nipple · Torque adjustment tool · Assortment of clutch springs

TECHNICAL DATA

SENSOMAT - straight design - in combination with feeder

Screwdriver Style		Motor Size 2		
		347SZ-328	347SZ-428	347SZ-528
Driver in combination with feeder	Type Part no.	391130B	391130C	391130D
Screws	up to	M4	M4	M5
Seating-Torque, minimum	Nm / in.lbs	0.4 / 4	0.4 / 4	0.3 / 3
Seating-Torque, maximum	Nm / in.lbs	3.2 / 28.3	4 / 35.4	5 / 44
Driving-Torque, maximum	Nm / in.lbs	3.5 / 31	4.5 / 39.8	5.5 / 49
Speed, idling	rpm	1550	1000	680
Air consumption	m ³ /min / cfm	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
Length	mm / in.	234 / 9 ⁷ / ₃₂	234 / 9 ⁷ / ₃₂	234 / 9 ⁷ / ₃₂
Weight	kg / lbs	0.74 / 1.6	0.74 / 1.6	0.74 / 1.6
Noise level	dB (A)	70	70	70
Air hose dia.	mm / in.	6 / 1/4	6 / 1/4	6 / 1/4
Drive hex. female DIN ISO 1173		1/4"	1/4"	1/4"
Quick change chuck, mounted		yes	yes	yes

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

ACCESSORIES

Required Accessories

Suitable for screwdriver		straight design	straight design/ pistol grip design	straight design/ pistol grip design
		Motor size 1	Motor size 2	Motor size 3
For combination bit and sensor sleeve				
Finder	Part no.	339982	339982	339982
Counter nut	Part no.	339983	339983	339983
For screw suction (bit and sensor sleeve)				
Spring sleeve	Part no.	401613A	401613B	-
For combination bit holder (magnetic), bit and sensor sleeve				
Finder	Part no.	343981	343981	343981
Counter nut	Part no.	343982	343982	343982
		Sensor sleeve and bits see leaflet: Accessories D3320E, page 14 and 15.		

Optional Equipment

Suitable for screwdriver		straight design			pistol grip design	
		Motor size 1	Motor size 2	Motor size 3	Motor size 2	Motor size 3
Exhaust hose (1m/3.3ft.)	Part no.	402957D	389653A	328842	-	-
Exhaust hose (0.75m/2.5ft.) with air hose (2m/6.6ft.)	Part no.	-	-	-	-	330628A
Support ring	Part no.	-	389775A	-	-	-
Support ring for driver in combination with feeder	Part no.	-	394598	-	-	-
Adjustment bushing (for torque adjustment without sensor sleeve)	Part no.	461319	461319	461319	461319	461319



It is necessary to use a torque support (e.g. stand, handgrip) for maximum torque: over 4 Nm for straight design and over 10 Nm for pistol grip design. Suitable torque supports can be found in our brochure D3345E.