

Assembly and torque measuring technology





The many advantages of MANNESMANN DEMAG impact wrenches:

- Excellent power / weight ratios and very small reaction forces
- Easy and non-tiring to use
- Comfortable to service thanks to their two-part housing
- High power production with an economical air consumption
- For robust use in all branches of industry
- Can be used over a wide range thanks to adjustable impact strength
- Exhaust air through the handle

Hammer mechanism options:

- 1 TWIN hammer mechanism allows two strikes per round on both sides of the drive spindle
- 2 The three jaw system strikes both jaws of the drive spindle simultaneously for an outstanding high power
- 3 One jaw hammer mechanism strike once on one side of the drive spindle for a very powerful impulse

Impact wrenches

Guideline values for torques and pretensioning forces according to DIN 13

Screw quality according to DIN 267

Size	screw width internal mm	screw width external mm	3.6 torque Nm	4.6 torque Nm	4.8 torque Nm	5.6 torque Nm	5.8 torque Nm	6.9 torque Nm	8.8 torque Nm	10.9 torque Nm	12.9 torque Nm
M 4	3	7	0.85	1.10	1.50	1.40	1.90	2.30	2.90	4.10	4.90
M 5	4	9	1.70	2.20	3.00	2.80	3.70	4.50	6.00	8.50	10.00
M 6	5	10	2.90	3.90	5.10	4.80	6.40	7.70	10.00	14.00	17.00
M 8	6	13	7.00	9.30	12.00	12.00	16.00	19.00	25.00	35.00	41.00
M 10	8	17	14.00	19.00	25.00	23.00	31.00	37.00	49.00	69.00	83.00
M 12	10	19	24.00	32.00	43.00	40.00	54.00	65.00	86.00	120.00	145.00
M 14	12	22	39.00	51.00	68.00	64.00	86.00	105.00	135.00	190.00	230.00
M 16	14	24	59.00	79.00	105.00	98.00	130.00	155.00	210.00	295.00	355.00
M 18	14	27	81.00	110.00	145.00	135.00	180.00	215.00	290.00	405.00	485.00
M 20	17	30	115.00	155.00	205.00	190.00	255.00	305.00	410.00	580.00	690.00
M 22	17	32	155.00	205.00	275.00	260.00	345.00	415.00	550.00	780.00	930.00
M 24	19	36	200.00	265.00	350.00	330.00	440.00	530.00	710.00	1 000	1 200
M 27	19	41	295.00	390.00	520.00	490.00	650.00	780.00	1 050	1 500	1 800
M 30	22	46	395.00	530.00	710.00	660.00	880.00	1 050	1 450	2 000	2 400
M 33	24	50	540.00	720.00	960.00	900.00	1 200	1 450	1 900	2 700	3 250
M 36	27	55	690.00	920.00	1 250	1 150	1 550	1 850	2 450	3 450	4 150
M 39	27	60	920.00	1 200	1 600	1 500	2 000	2 400	3 200	4 500	5 400
M 42	32	65	1 100	1 500	1 950	1 850	2 450	2 950	3 950	5 550	6 650
M 45	32	70	1 400	1 850	2 450	2 300	3 100	3 700	4 950	6 950	8 350
M 48	36	75	1 700	2 250	3 000	2 800	3 750	4 450	5 950	8 400	10 100
M 52	36	80	2 150	2 900	3 850	3 600	4 800	5 750	7 650	10 800	12 900
M 56	—	85	2 700	3 600	4 800	4 500	5 950	7 150	9 550	13 400	16 100
M 60	—	90	3 350	4 450	5 950	5 550	7 400	8 900	11 900	16 700	20 000
M 64	—	95	4 000	5 350	7 150	6 700	8 950	10 700	14 300	20 100	24 100
M 68	—	100	4 850	6 500	8 650	8 100	10 800	13 000	17 300	24 300	29 100

The table shows an overview of necessary torques for screws and nuts of all grades.



Impact wrenches

- Type E 10 PS3 with quick-change chuck
- Type E 25 P: long lifetime because the strike mechanism is permanently greased by an oil bath
- Type E 26 P with vibration 2.5 m/s^2



E 10 P3



E 10 PS3



E 16 P3



E 24 P3

Technical data

Type		E 10 P3	E 10 PS3	E 16 P3	E 18 P3	E 24 P3	E 25 P	E 26 P
Order No.		29501-56-5	29501-57-5	03954-77-4	29915-32-5	29908-31-5	29946-37-6	29946-38-6
For screws up to	mm	M 6 – M 12	M 6 – M 12	M 6 – M 18	M 8 – M 18	M 14 – M 24	M 14 – M 24	M 14 – M 24
Torque max.	Nm	140	80	350	400	950	1 500	1 500
Driv. square end		3/8"	1/4" SWF	1/2"	1/2"	3/4"	3/4"	3/4"
Length	mm	155	165	180	185	214	189	203
Throttle stages		4	4	4	4	4	—	—
Air consumption	m ³ /min	0.28	0.28	0.40	0.68	0.77	0.95	0.95
Weight	kg	1.20	1.25	2.35	2.40	4.15	5.68	6.20
Number of blows	p. min.	2 600	2 600	1 500	1 100	1 000	830	900
Free speed	rpm	10 000	10 000	8 000	6 800	5 300	4 800	4 800
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 3/8" i	G 1/2" i	G 1/2" i
Hose I. D.	mm	10	10	10	10	10	13	13
Noise level	dB(A)	72	72	72	85	85	87	91
Hammer mechanism		jaw hammer mechanism	jaw hammer mechanism	jaw hammer mechanism	TWIN hammer mechanism	three jaw hammer mechanism	TWIN hammer mechanism	three jaw hammer mechanism

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories supplied

E 10 – E 18	Clamp, impact grease, oil bottle
E 24 – E 56	Thread socket, impact grease, oil bottle

Accessories

Swivel joint

1/4" × 1/4" internal / external	60001-60-6
3/8" × 3/8" internal / external	60001-61-6
1/2" × 1/2" internal / external	60001-62-6



Impact wrench with swivel joint



E 30 P



E 36 P1



E 40 F



E 40 P

Technical data

Type		E 30 P	E 33 P	E 36 P1	E 40 F	E 40 P
Order No.		03050-07-4	29946-39-6	29927-80-6	03204-07-4	60010-92-6
For screws up to	mm	M 16 – M 26	M 18 – M 33	M 18 – M 40	M 18 – M 40	M 18 – M 45
Torque max.	Nm	1 800	2 500	3 000	3 185	3 700
Driv. square end		1"	1"	1"	1"	1"
Length	mm	191	203	224	293	240
Throttle stages		—	—	—	—	—
Air consumption	m ³ /min	0.95	1.10	1.35	1.20	1.35
Weight	kg	6.48	7.27	9.35	10.80	10.85
Number of blows	p. min.	850	780	780	750	755
Free speed	rpm	4 500	4 300	3 100	3 200	3 000
Connection		G 3/8" i	G 1/2" i	G 1/2" i	G 1/2" i	G 1/2" i
Hose I. D.	mm	13	13	13	13	13
Noise level	dB(A)	89	92	90	90	90
Hammer mechanism		three jaw hammer mechanism	three jaw hammer mechanism	three jaw hammer mechanism	three jaw hammer mechanism	three jaw hammer mechanism

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



Accessories

For Types E 33 – 56

Throttle control 1/2" i	03024-47-4
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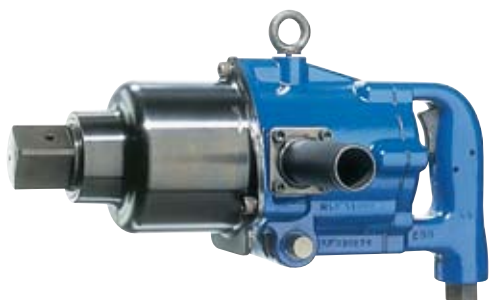
For Type E 30

Throttle control 3/8" i	60010-93-6
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Extended drive spindle E 33 P (150 mm)

Impact wrenches



E 56 F



A 71

Technical data

Type		E 56 F	A 71	A 81
Order No.		032 045 74	45700-01-6	45800-01-6
For screws up to	mm	M 24 – M 55	M 30 – M 80	M 50 – M 110
Torque max.	Nm	5 200	8 000	24 000
Driv. square end		1 1/2"	1 1/2"	2 1/2"
Length	mm	355	448	535
Throttle stages		—	—	—
Air consumption	m ³ /min	1.60	2.80	5.50
Weight	kg	15.50	32.00	67.00
Number of blows	p. min.	650	515	400
Free speed	rpm	3 200	2 300	2 100
Connection		G 1/2" i	G 3/4" i	G 1" i
Hose I. D.	mm	16	19	25
Noise level	dB(A)	90	104	104
Hammer mechanism		three jaw hammer mechanism	three jaw hammer mechanism	three jaw hammer mechanism

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



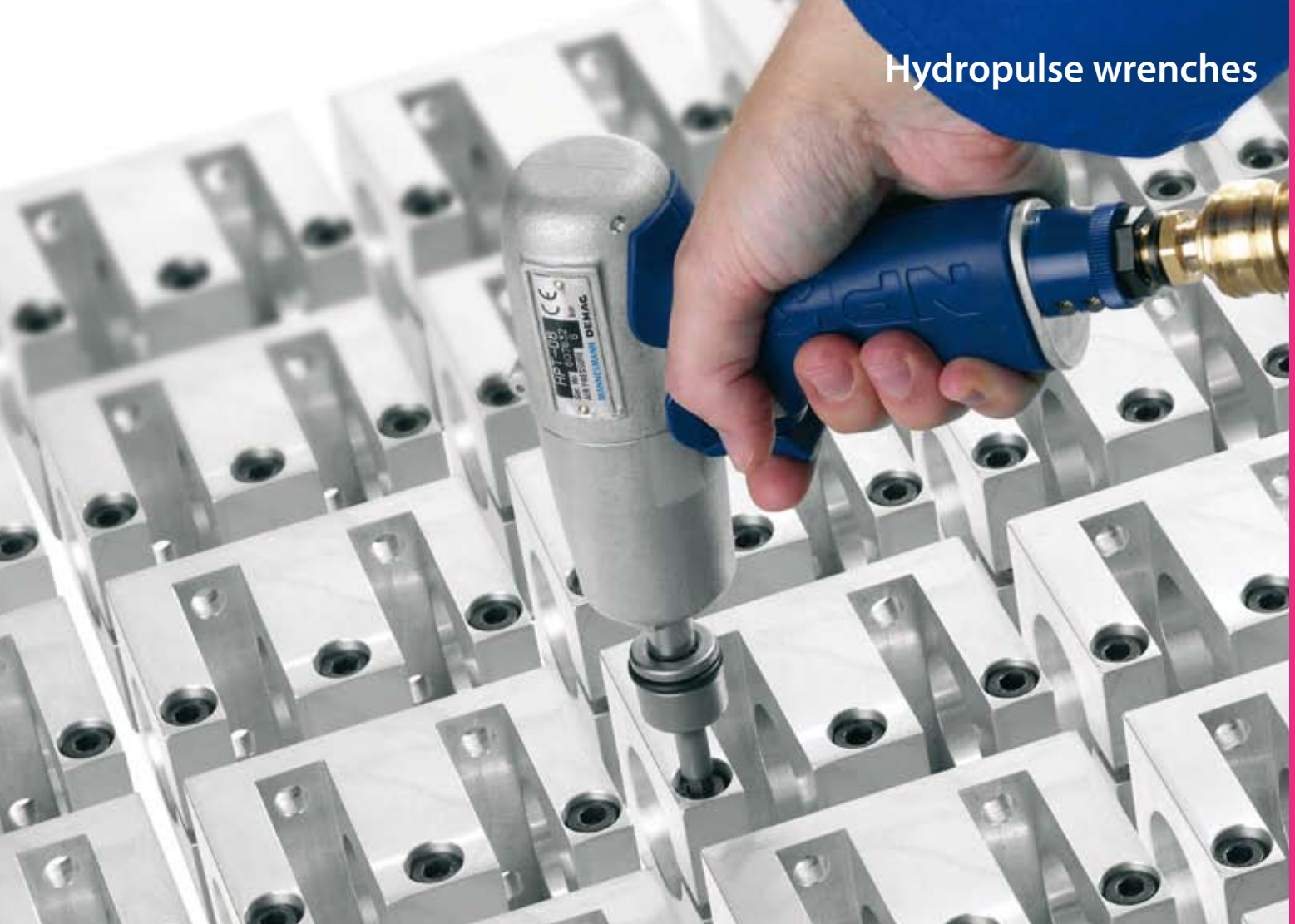
Impact wrench with holster

Holster

for impact and hydropulse wrenches

- Universal and protective
- Tool is always within reach
- Tidy working area

Für E 10 – E 18, HPT, ULT 60012-17-6



Hydropulse wrenches are used when high product quality is demanded. MANNESMANN DEMAG hydropulse wrenches guarantee:

- High torque repetition accuracy
- Easy setting of the torque desired
- Long service life – up to six times the tool life compared to conventional impact wrenches
- Handiness thanks to the optimum position of the centre of gravity as well as the ergonomically designed handle
- No reaction forces
- Low vibration and noise levels
- Very high cut-off accuracy

Recommended torque range

The data on the following pages are approximate values, the actual torque depends on the fastening conditions, accessories being used and the operating pressure.

Hydropulse wrenches HPT

With switch-off



HPT

Light-weight with high accuracy

The new hydropulse wrenches are the right solutions for small dimensions, where torque between 7 and 50 Nm is needed. The innovative double vane impulse unit procures an increased torque accuracy for hard and soft joints.

- Rubber handle
- New ergonomical design
- No colour coating
- Exhaust air in every direction possible
- Double chamber motor with 25% more power
- Low noise level
- Non-lubricated working

Technical data

Type		HPT 06	HPT 08	HPT 05 A	HPT 06 A	HPT 07 A
Order No.		29939-41-6	29939-42-6	29939-45-6	29939-43-6	29939-44-6
Switch-off		no	no	yes	yes	yes
For screws up to	mm	M 6	M 8	M 5	M 6	M 6-8
Recommended torque range hard connection	min.-max.	22-37	35-50	15-22	20-30	28-40
Recommended torque range soft connection	min.-max.	19-34	30-45	7-12	10-20	18-30
Driv. square end		3/8"	3/8"	3/8"	3/8"	3/8"
Length	mm	146	153	165	171	171
Air consumption	m ³ /min	0.30	0.30	0.35	0.35	0.35
Weight	kg	0.85	0.89	1.00	1.10	1.10
Free speed	rpm	6 500	6 500	6 000	6 000	6 000
Connection		NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i
Hose I. D.	mm	6	6	6	6	6
Noise level	dB(A)	85	85	85	85	85
Accessories supplied		Thread socket, 2 allen keys				

Power and free speed at 6 bar operating pressure.



Quick-change chuck



Impulse wrench oil



Swivel joint

Quick-change chuck with spindle guide

Drive 3/8" Power take-off 1/4"	937 64 05
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Impulse wrench oil

1 litre	0950 05 50
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Accessories

Swivel joint	600 016 06
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Hydropulse wrenches ULT

With switch-off

Light-weight with high accuracy

The new hydropulse wrenches are the right solutions for small dimensions, where torque between 7 and 50 Nm is needed. The innovative double vane impulse unit procures an increased torque accuracy for hard and soft joints.

- Rubber handle
- New ergonomical design
- No colour coating
- Rubber housing protection cap
- Exhaust air in every direction (360 °) possible
- 9 vane double chamber motor
- Low noise level
- Non-lubricated working



ULT 50

Technical data

Type		ULT 50 D	ULT 50	ULT 60 D	ULT 60	ULT 70
Order No.		60012-18-6	60012-19-6	60012-20-6	60012-21-6	60012-22-6
Switch-off		yes	yes	yes	yes	yes
For screws up to	mm	M 6	M 6	M 8	M 8	M 8 – 10
Torque range	Nm	7 – 15,5	7 – 15,5	15 – 32	15 – 32	30 – 55
Driv. square end		1/4" SWF	3/8"	1/4" SWF	3/8"	3/8"
Length	mm	163	160	175	172	178
Air consumption	m ³ /min	0.25	0.25	0.35	0.35	0.40
Weight	kg	0.92	0.92	0.95	0.95	1.05
Free speed	rpm	4 400	4 400	6 700	6 700	6 000
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Hose I. D.	mm	6	6	9	9	9
Noise level	dB(A)	78	78	80	80	80
Accessories supplied		Thread socket, 2 allen keys				

Power and free speed at 6 bar operating pressure.

Type		ULT 90	ULT 100	ULT 130	ULT 150
Order No.		60012-23-6	60012-24-6	60012-26-6	60012-27-6
Switch-off		yes	yes	yes	yes
For screws up to	mm	M 10 – 12	M 12	M 14	M 16
Torque range	Nm	50 – 85	70 – 130	110 – 150	140 – 210
Driv. square end		1/2"	1/2"	1/2"	3/4"
Length	mm	190	197	215	238
Air consumption	m ³ /min	0.53	0.55	0.73	0.70
Weight	kg	1.45	1.70	2.30	2.80
Free speed	rpm	5 700	5 200	4 000	3 700
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Hose I. D.	mm	9	13	13	13
Noise level	dB(A)	82	82	82	82

Accessories supplied

Thread socket, allen key for torque setting

Power and free speed at 6 bar operating pressure.

Hydropulse wrenches H

Without switch-off

- With rubber handle
- High torque accuracy
- Easy reversing
- Non-lubricated double chamber motor



H 50/1

Technical data

Type		H 30/1	H 40/1	H 50/1	H 60/1	H 70/1	H 80/1
Order No.		29908-42-6	29908-43-6	29908-44-6	29908-45-6	29908-46-6	29908-47-6
Switch-off		no	no	no	no	no	no
For screws up to	mm	M 10	M 10	M 12	M 14	M 14	M 16
Recom. torque range	min.-max.	44 – 64	60 – 90	70 – 110	90 – 135	118 – 167	129 – 210
Recom. torque range	min.-max.	40 – 60	55 – 85	65 – 100	85 – 125	100 – 155	115 – 200
Driv. square end		3/8"	3/8"	1/2"	1/2"	1/2"	3/4"
Length	mm	172	174	192	195	218	240
Air consumption	m ³ /min	0.45	0.50	0.55	0.60	0.80	0.90
Weight	kg	1.06	1.30	1.90	2.30	2.80	3.60
Free speed	rpm	6 500	6 200	5 300	4 500	3 500	3 000
Connection		NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i
Hose I. D.	mm	10	10	10	10	10	13
Noise level	dB(A)	83	83	83	83	83	93
Accessories supplied		Thread socket, 2 allen keys					

Power and free speed at 6 bar operating pressure.



Quick-change chuck



Impulse wrench oil



Swivel joint

Quick-change chuck with spindle guide

Drive 3/8" Power take-off 1/4"	937 64 05
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Impulse wrench oil

1 Liter	0950 05 50
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Accessories

Swivel joint	600 016 06
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- 90° pivoting, 360° turning
- For all air tools
- More flexibility at work
- Simple and flexible tightening
- hose and tool can be positioned in an optimal way

Swivel joint Variacor® The perfect partner for screw drivers



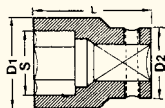
Impact wrenches and hydropulse wrenches

Accessories

- Spindle controlled inserts, extensions and quick change couplings available upon request
- Minimized torque loss
- Low vibration, less wear
- Perfect for impulse tools

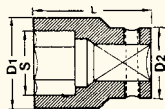
High-performance box spanner inserts

3/8" (square) □



Thread	SW mm	D1 mm	D2 mm	L mm max.	Order No.
M 4	8	13.8	19	34	9 376 195
M 6	10	16.4	19	34	9 376 197
M 8	13	20.2	19	34	9 376 199
M 8	14	21.5	22	34	9 376 200
M 10	17	25.4	22	34	9 376 201
M 12	19	27.9	22	34	9 376 202

1/2" (square) □

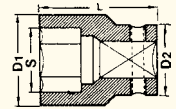


Thread	SW mm	D1 mm	D2 mm	L max. mm	Order No.	L max. mm	Order No.
M 6	10	17.6	25	40	9 376 204	85	9 376 215
M 7	11	18.9	25	40	9 376 205	85	9 376 216
M 8	13	21.4	25	40	9 376 206	85	9 376 217
M 8	14	22.7	25	40	9 376 207	85	9 376 218
M 10	17	26.6	30	40	9 376 208	85	9 376 219
M 12	19	29.1	30	40	9 376 209	85	9 376 220
M 14	22	32.9	30	40	9 376 210	85	9 376 221
M 16	24	35.4	30	45	9 376 211	85	9 376 222
M 18	27	39.3	30	50	9 376 212	85	9 376 223
M 20	30	43.0	30	50	9 376 213	—	—

High-performance box spanner inserts

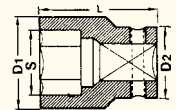
3/4" (square) □

Thread	SW mm	D1 mm	D2 mm	L max. mm	Order No.	L max. mm	Order No.
M 10	17	30.0	44	50	9 376 231	—	—
M 12	19	32.5	44	50	9 376 232	—	—
M 14	22	36.5	44	50	9 376 233	100	9 376 241
M 16	24	38.9	44	50	9 376 234	100	9 376 242
M 18	27	42.5	44	50	9 376 235	100	9 376 243
M 20	30	46.5	44	53	9 376 236	100	9 376 244
M 22	32	48.8	44	53	9 376 237	100	9 376 245
M 24	36	53.8	44	55	9 376 238	100	9 376 246
M 27	41	60.0	44	57	9 376 239	100	9 376 247
M 30	46	66.5	44	62	9 376 240	100	9 376 248



1" (square) □

Thread	SW mm	D1 mm	D2 mm	L max. mm	Order No.	L max. mm	Order No.
M 14	22	39.0	54	57	9 376 458	108	9 376 459
M 16	24	41.5	54	57	9 376 249	108	9 376 259
M 18	27	45.5	54	57	9 376 250	108	9 376 260
M 20	30	49.0	54	62	9 376 251	108	9 376 261
M 22	32	51.5	54	62	9 376 252	108	9 376 262
M 24	36	56.5	54	62	9 376 253	108	9 376 263
M 27	41	62.8	54	66	9 376 254	108	9 376 264
M 30	46	69.0	54	70	9 376 255	108	9 376 265
M 33	50	74.0	54	70	9 376 256	108	9 376 266
M 36	55	80.5	54	75	9 376 257	108	9 376 267
M 39	60	86.5	54	75	9 376 258	108	9 376 268

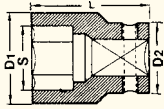


Impact wrenches and hydropulse wrenches

Accessories

High-performance box spanner inserts

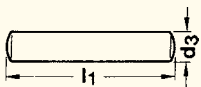
1 1/2" (square) 



Thread	SW mm	D1 mm	D2 mm	L max. mm	Order No.	L max. mm	Order No.
M 27	41	68	86	80	9 376 269	120	9 376 282
M 30	46	74	86	84	9 376 270	133	9 376 283
M 33	50	79	86	87	9 376 271	146	9 376 284
M 36	55	85	86	90	9 376 272	146	9 376 285
M 39	60	91	86	90	9 376 273	146	9 376 286
M 42	65	95	86	95	9 376 274	153	9 376 287
M 45	70	103	86	100	9 376 275	153	9 376 288
M 48	75	108	86	105	9 376 276	165	9 376 289
M 52	80	115	86	110	9 376 277	172	9 376 290
M 56	85	122	86	110	9 376 278	172	9 376 291
M 60	90	128	86	112	9 376 279	178	9 376 292
M 64	95	135	86	112	9 376 280	184	9 376 293
M 68	100	140	86	115	9 376 281	190	9 376 294
M 72	105	146	86	120	9 376 344	195	9 376 346
M 76	110	153	86	128	9 376 345	203	9 376 347

Replacement locking pins

For high-performance box-spanners, extensions,
holders and adapters



Driv. square end	D2 ∅ mm	Locking pin d3 × l1	Order No.
3/8"	19 – 20	2.5 × 14	9 315 149
3/8"	22	2.5 × 16	9 315 491
1/2"	24 – 26	3.0 × 20	9 315 165
1/2"	30	3.0 × 24	9 315 166
3/4"	44	4.0 × 36	9 315 182
3/4"	54	5.0 × 45	9 375 203
1"	54	5.0 × 45	9 315 203
1 1/2"	86	6.0 × 75	9 315 224
1 1/2"	127	6.0 × 110	9 315 498
2 1/2"	170	10.0 × 150	9 315 250

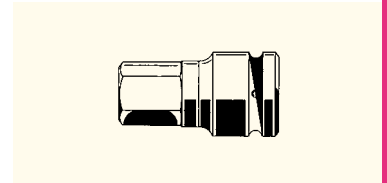
Spanner for socket head screws

3/8" (outer square) ○

SW mm	D2 mm	L mm	Order No.
M 6 / 5	22	50	9 376 500
M 8 / 6	22	50	9 376 501
M 10 / 8	22	50	9 376 502
M 12 / 10	22	50	9 376 503
M 14 / 12	22	50	9 376 504
M 16 / 14	22	50	9 376 505

1/2" (outer square) ○

SW mm	D2 mm	L mm	Order No.
M 6 / 5	30	50	9 376 506
M 8 / 6	30	50	9 376 507
M 10 / 8	30	50	9 376 508
M 12 / 10	30	50	9 376 509
M 14 / 12	30	50	9 376 510
M 16 / 14	30	50	9 376 511
M 22 / 17	30	55	9 376 528



3/4" (outer square) ○

SW mm	D2 mm	L mm	Order No.
M 22 / 17	44	62	9 376 512
M 24 / 19	44	62	9 376 513
M 30 / 22	44	62	9 376 514
M 33 / 24	44	62	9 376 515
M 36 / 27	44	62	9 376 516
M 42 / 32	44	62	9 376 518

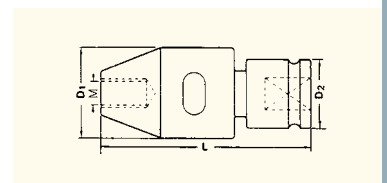
Stud bolt chuck

3/8" (square) ○

Thread	D1 mm	D2 mm	L max. mm	Order No.
M 6	34	22	72	030 248 74
M 8	34	22	72	030 250 74
M 10	34	22	72	030 251 74

1/2" (square) ○

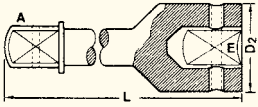
Thread	D1 mm	D2 mm	L max. mm	Order No.
M 10	34	30	84	030 259 74
M 12	34	30	84	030 260 74
M 14	45	30	102	030 261 74
M 16	45	30	102	030 262 74



Impact wrenches and hydropulse wrenches

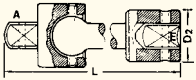
Accessories

Extensions



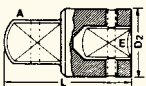
External square A	Intern. square E	D2 mm	L mm	Order No.
3/8"	3/8"	19	75	9 376 383
3/8"	3/8"	19	150	9 376 384
1/2"	1/2"	25	125	9 376 385
3/4"	3/4"	44	175	9 376 387
3/4"	3/4"	44	250	9 376 388
3/4"	3/4"	44	330	9 376 389
1"	1"	54	175	9 376 390
1"	1"	54	330	9 376 391
1 1/2"	1 1/2"	86	250	9 369 218

Universal joints



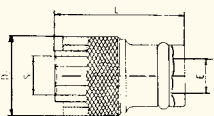
External square A	Intern. square E	D2 mm	L mm	Order No.
3/8"	3/8"	20	55	9 376 379
1/2"	1/2"	26	75	9 376 380
3/4"	3/4"	44	85	9 376 381
1"	1"	54	125	9 376 382

Connectors



External square A	Intern. square E	D2 mm	L mm	Order No.
1/2"	3/8"	22	45	9 369 227
1/2"	3/4"	44	70	9 369 226
3/4"	1"	54	70	9 369 225
1"	1 1/2"	86	115	9 369 224
1 1/2"	2 1/2"	127	145	9 369 229

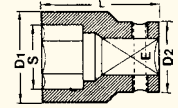
Quick-change chuck



Intern. hexagon S	Intern. square E	D2 mm	L mm	Order No.
7/16"	3/8"	28	46	9 376 404
7/16"	1/2"	30	55	9 376 402

Bit holder

Intern. hexagon S	Intern. square E	D2 mm	L mm	Order No.
7/16"	3/8"	22	32	9 369 173
7/16"	1/2"	24	37	9 369 174



Bits, 11mm, 7/16"

Thread	Size S	SW mm	Blade mm	Length L mm	Order No.
Hexagon socket screws ○					
M 5	—	4	—	55	9 376 296
M 6	—	5	—	55	9 376 297
M 8	—	6	—	55	9 376 298
M 10	—	8	—	55	9 376 299
M 12	—	10	—	55	9 376 300
M 14	—	12	—	55	9 376 301
M 16	—	14	—	55	9 376 302





MANNESMANN DEMAG screwdrivers are suitable for all fields of application, both for individual jobs and for series production. Constant product improvements have led to the high standard of quality of present-day rotary screwdrivers: with automatic cut-off and friction clutch, in straight, angle or pistol grip versions.

- Very high switch-off accuracy, due to the automatic clutch, with variations of 5 % of the rated value under ideal conditions
- Quick-change chuck
- Quick and easy torque adjustment from the outside
- Low noise and vibration values
- Push start for straight screwdrivers
- Ergonomically designed handle for operator-friendly use and safe operation without fatigue
- No oil required
- With automatic shut-off screwdrivers with full torque range in reverse direction for screw opening capability
- Cost-saving and easy to service due to long-life motors and clutches
- Dry running motors

- Easy torque setting
- Ergonomic handle
- Variable use, but mainly for self cutting screws
- Comfortable reverse button

With lever start on request.

Screwdrivers

Pistol grip and straight design

With slip clutch

1.5 – 10.0 Nm



A 8-450 URPS



A 8-500 URS

Technical data

Type		A 6-900 URPS	A 8-450 URPS	A 6-1 000 URS	A 8-500 URS
Order No.		60011-39-6	60008-42-6	60011-40-6	60011-49-6
Start		pressure start	pressure start	push start	push start
Free speed	rpm	900	450	1 000	500
For screws up to		M 6	M 8	M 6	M 8
Reversible		yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range	Nm	1.5 – 8.0	1.5 – 10.0	1.5 – 8.0	1.5 – 10.0
Noise level	dB(A)	78	78	77	77
Air consumption	l / sec	9.0	9.0	9.0	9.0
Weight without hose	kg	0.98	0.98	0.82	0.82
Ø machine	mm	36	36	40	40
Machine length	mm	224	224	226	226
Hose I. D.	mm	8	8	8	8
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied					wrench, support

Power and free speed at 6 bar operating pressure.

Torque springs

A6-900 URPS	white, Ø 2.5 mm, 1.5 – 6.0 Nm, installed red, Ø 3.5 mm, 4 – 8 Nm, included
A6-1000 URS	white, Ø 2.5 mm, 1.5 – 6.0 Nm, installed Farbe Rot, Ø 3.5 mm, 4 – 8 Nm, included
A8-450 URPS	white, Ø 2.5 mm, 1.5 – 6.5 Nm, installed red, Ø 3.5 mm, 3.5 – 10.0 Nm, included
A8-500 URS	white, Ø 2.5 mm, 1.5 – 6.5 Nm, installed red, Ø 3.5 mm, 3.5 – 10.0 Nm, included

Screwdrivers

Straight design with automatic clutch

0.4 – 5.0 Nm

- Reverse push button
- Quick change coupling
- Easy external torque setting
- Ergonomic anti-slip softgrip
- Non-lubricated use applicable



1



2

Technical data

Type	A 4-902 UAS	A 4-902 UAS H	A 4-552 UAS	A 4-552 UAS H	
Order No.	29949-18-6	60010-91-6	60008-24-6	60001-17-6	
Illustration	1	2	1	2	
Start	push start	lever start	push start	lever start	
Free speed	rpm	950	950	650	650
For screws up to	M 4	M 4	M 4	M 4	
Reversible	yes	yes	yes	yes	
Drive	F 1/4"	F 1/4"	F 1/4"	F 1/4"	
Torque range	Nm	0.4 – 4.5	0.4 – 4.5	0.4 – 5.0	0.4 – 5.0
Noise level	dB(A)	73	73	73	73
Air consumption	l/ sec	5.5	5.5	5.5	5.5
Weight without hose	kg	0,59	0,60	0,59	0,60
Ø machine	mm	38	38	38	38
Machine length	mm	230	228	230	228
Hose I. D.	mm	6	6	6	6
Connection	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	
Accessories supplied	wrench, support				

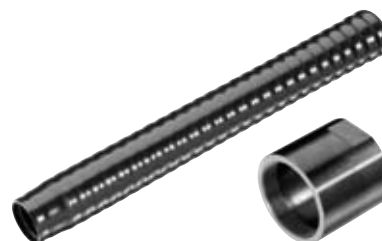
Power and free speed at 6 bar operating pressure.

Torque springs

A4-902 UAS	Grey, Ø 3.2 mm, 0.8 – 4.5 Nm, installed
A4-902 UAS H	Black, Ø 2.2 mm, 0.4 – 1.3 Nm, included
A4-552 UAS	Grey, Ø 3.2 mm, 0.8 – 5.0 Nm, installed
A4-552 UAS H	Black, Ø 2.2 mm, 0.4 – 1.3 Nm, included

Accessories

Exhaust hose for types A4	29501-35-6
Cylindric housing for use with tool support	600 091 96



Screwdrivers

Straight design with automatic clutch

0.4 – 12.0 Nm



3

Technical data

Type		A 5-1350 UAS	A 6-1000 UAS	A 8-850 UAS	A 8-400 UAS
Order No.		60014-83-6	60014-82-6	60014-84-6	60014-81-6
Illustration		—	—	—	3
Start		push start	push start	push start	push start
Free speed	rpm	1 350	1 000	850	400
For screws up to		M 5	M 6	M 6	M 8
Reversible		yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range	Nm	0.4 – 5.0	3.5 – 8.0	3.5 – 9.5	3.5 – 12.0
Noise level	dB(A)	75	75	75	75
Air consumption	l/sec	6	6	6	6
Weight without hose	kg	0.80	0.90	0.90	0.90
Ø machine	mm	40	40	40	40
Machine length	mm	235	255	255	255
Hose I. D.	mm	8	8	8	8
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrench, support			

Power and free speed at 6 bar operating pressure.

Torque springs

A5-1350 UAS	
	Grey, Ø 3.2 mm, 1.0 – 5.0 Nm, installed Black, Ø 2.2 mm, 0.4 – 1.3 Nm, included

Screwdrivers

Pistol grip with automatic clutch

0.4 – 24.0 Nm



A 5-653 UAPS

- Automatic shut-off
- Quick-change chuck
- Automatic start with button
- Low noise level thanks to integrated silencing
- Ergonomic handle
- Trigger start
- Non-lubricated
- Hand grip in middle position available

Technical data

Type		A 5-653 UAPS	A 5-1300 UAPS	A 6-1000 UAPS	A 8-400 UAPS	A10-450 UAPS
Order No.		60008-21-6	60010-80-6	60010-79-6	60010-81-6	29501-23-6
Start		trigger start	trigger start	trigger start	trigger start	trigger start
Free start	rpm	650	1300	1000	400	450
For screws up to		M 5	M 5	M 6	M 8	M 10
Reversible		yes	yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range	Nm	0.6 – 5.0	0.4 – 5.0	3.5 – 8.0	3.5 – 12.0	7.0 – 24.0
Noise level	dB(A)	71	73	73	73	77
Air consumption	l/sec	6.0	7.0	7.0	7.0	10.0
Weight without hose	kg	0.72	0.87	0.97	0.97	1.75
Ø machine	mm	37	38	38	38	46
Machine length	mm	209	190	210	210	265
Hose I.D.	mm	6	6	6	6	6
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrenches for setting the torque				

Power and free speed at 6 bar operating pressure.

Torque springs

A 5-653 UAPS	Grey, Ø 3.2 mm, 0.8 – 5.0 Nm, installed Black, Ø 2.2 mm, 0.4 – 1.2 Nm, included
A 5-1300 UAPS	Grey, Ø 3.2 mm, 1.0 – 5.0 Nm, installed Black, Ø 1.2 mm, 0.4 – 1.3 Nm, included



A 8-400 UAPS



A 10-450 UAPS

- Easy and quick setting of the torque on the outside
- Reversible
- Small design of the angle heads
- Rugged, tried and tested design
- Long lifetime
- Low noise level
- High repeating accuracy
- Signal tone at the end of the cycle
- Even torque with hard and soft connections
- Non-lubricated

Winkelschrauber

Safety lever start with automatic clutch

0.8 – 60 Nm



AW 4-950 UA



AW 10-352 UA

Technical data

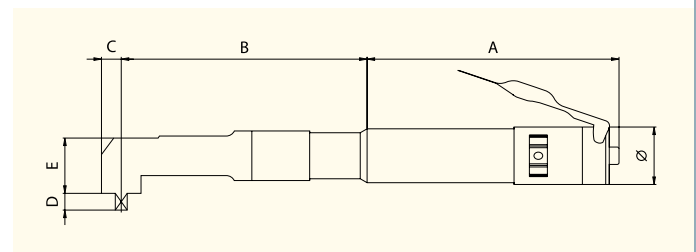
Type		AW 4-950 UA	AW 4-650 UA	AW 8-602 UA	AW 10-352 UA	AW 10-400 UA	AW 12-301 UA
Order No.		60010-96-6	60010-95-6	29939-31-6	29939-35-6	29900-34-6	29900-35-6
Start		lever start	lever start	lever start	lever start	lever start	lever start
Free start	rpm	950	650	600	350	400	300
For screws up to		M 4	M 4	M 8	M 10	M 10	M 12
Reversible		yes	yes	yes	yes	yes	yes
Drive		1/4"	1/4"	3/8"	3/8"	3/8"	1/2"
Torque range	Nm	0.8 – 4.0	0.8 – 5.0	3.0 – 14.0	11.5 – 26.0	18.0 – 40.0	29.0 – 60.0
Noise level	dB(A)	73	73	77	77	77	77
Air consumption	l/sec	5.5	5.5	10	10	13	13
Weight without hose	kg	0.70	0.70	1.40	1.45	2.05	2.30
Ø machine	mm	32	32	40	40	40	40
Machine length	mm	276	276	334	331	419	438
Hose l. D.	mm	5	5	8	8	10	10
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrenches for setting the torque					

Power and free speed at 6 bar operating pressure.

Types AW 4-950 UA, AW 4-650 UA and AW 10-352 UA with allen screw C 6.3 – 1/4" allen screw available.

Dimensions | mm

Type	Ø × L	A	B	C	D	E
AW 4-...	32 × 276	157	109	100	8.5	20.0
AW 8-602 UA	40 × 334	195	125	140	12.0	34.5
AW 10-352 UA	40 × 331	180	137	140	12.0	34.5
AW 10-400 UA	40 × 419	240	163	160	16.0	40.0
AW 12-301 UA	40 × 438	240	178	200	16.5	45.5



Suspension device

AW 8-602 UA, AW 10-352 UA	29946-57-6
AW 10-400 UA, AW 12-301 UA	29946-66-6



Ratchet screwdrivers

Compact design, 6 – 120 Nm

- Small design for the use in difficult to access areas
- Isolating soft grip
- Reversible for clockwise and anti-clockwise rotation
- MDR 2100 with speed regulation
- Exhaust air outlet and thread connection with 360° rotation capacity



MDR 2100



MDR 2101

Technical data

Type		MDR 2100	MDR 2101	MDR 2102	MDR 2103
Order No.		82400-10-2	82400-20-2	82400-30-2	82400-40-2
Driv. square end		1/4"	3/8"	1/2"	1/2"
Free speed	rpm	220	180	180	180
For screws up to		M 10	M 10	M 10	M 10
Working torque	Nm	6 – 33	13 – 120	13 – 120	13 – 120
Torque max.	Nm	55	160	160	160
Noise level	dB(A)	82	84	84	84
Air consumption	l/sec	4.7	10.8	10.8	10.8
Weight	kg	0.6	1.3	1.3	1.3
Length (total)	mm	200	270	270	270
Hose I.D.	mm	8 (5/16")	10 (3/8")	10 (3/8")	10 (3/8")
Connection		NPT 1/4"	NPT 1/4"	NPT 1/4"	NPT 1/4"
Vibration	m/s ²	3.5	3.3	3.7	3.7

Power and free speed at 6 bar operating pressure.



MDR 2102



MDR 2103

- For use in one or multi spindle linear screw units or automatic assembly lines
- Low noise level
- Push start version upon request
- Tightening control via air pressure signal possible
- Highest reliability
- Rotation clockwise
- Non-lubricated
- Also reversible with quick change chuck and telescope front end

Built-in screw drivers

With automatic switch-off

Clockwise



MCZE 4A

Technical data

Type		MCZE 4A	MCZE 5A	MCSE 8A	MCSE 10A	MCY 11A
Order No.		29946-58-6	29946-59-6	29946-60-6	29946-61-6	29946-62-6
Start		direct start	direct start	direct start	direct start	direct start
Free speed	rpm	900	550	1 000	500	550
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range	Nm	0.6 – 3.8	0.6 – 5.0	2.5 – 8.0	2.5 – 10.0	7.0 – 24.0
Noise level	dB(A)	72	72	77	77	76
Air consumption	l/sec	7	7	9	9	10
Weight without hose	kg	0.70	0.70	0.98	0.98	1.50
Hose I. D.	mm	6	6	8	8	8
Connection		G 1/8" i	G 1/8" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrenches for setting the torque				

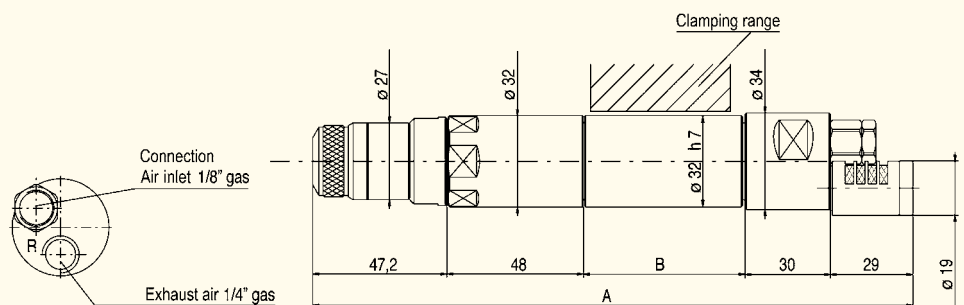
Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Torque springs

MCZE 4A	gold, 1.6 – 3.8 Nm, installed brown, 0.7 – 2.9 Nm, included	MCSE 8A	blue, 2.5 – 8.0 Nm, installed
MCZE 5A	neutral, 1.7 – 5.0 Nm, installed brown, 0.7 – 3.3 Nm, included	MCSE 10A	neutral, 2.5 – 10.0 Nm, installed
		MCY 11A	violet, 7.0 – 24.0 Nm, installed

Dimensions of models MCZE (mm)

Dimensions (mm)	A	B
MCZE	251.6	70



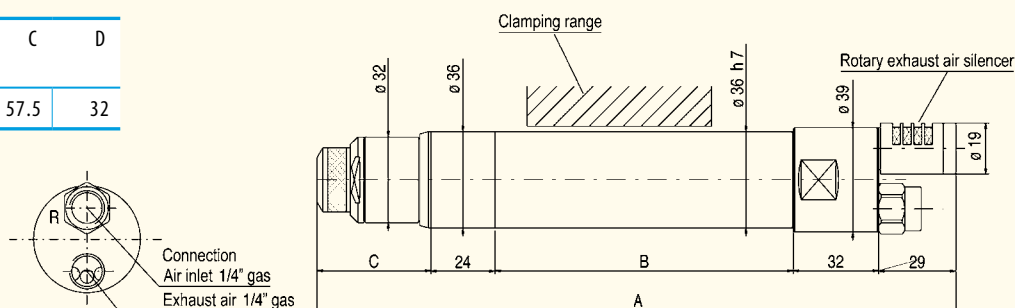
Compressed air fitted screwdrivers

With automatic switch-off

Clockwise

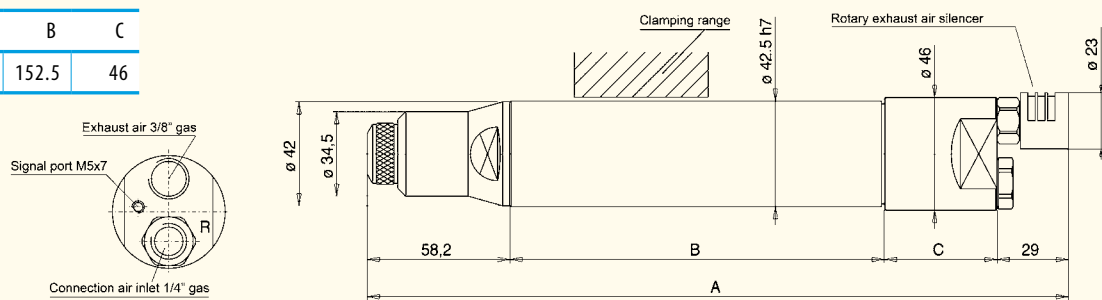
Dimensions of models MCSE (mm)

Dimensions (mm)	A	B	C	D
MCSE	266	111.5	57.5	32

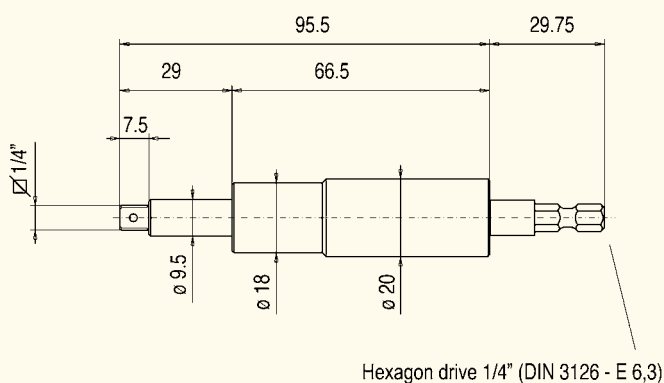


Dimensions of models MCY (mm)

Prop. (mm)	A	B	C
MCY	315.5	152.5	46



Telescope front end | 1/4" (square)



Telescope front ends make easier to arrange the screws and reduce the axial load on the mechanical parts of the motor. Whenever several screws shall be tightened simultaneously the telescope front end compensates the start height differences between the screws.

A built-in guiding sleeve ensures a permanent alignment of the telescope front end.

The telescope front end is combined with the components named above. A specific adaptor must be attached if required. The spring tension force of the telescope front end in the final position will be approx. 3.5 kg.

The ideal tool for industrial manufacturing within sensitive ranges: more mobility, better quiet running and for use in clean rooms.

Brushless electrical screwdrivers

Straight design, without clutch

- ESD design as standard
- Torque and speed to be adjusted infinitely variable
- Softstart setting
- Ergonomic housing for the perfect grip
- Reversible
- Low noise level
- Low frequent service
- Seperate control unit
- Aavailable also with clutch
- Angle head can be attached



BRL 07 AS

Technical data

Type		BRL 07 AS	BRL 10 AS	BRL 16 AS
Order No.		60011-45-6	60011-46-6	60011-47-6
Start		lever start	lever start	lever start
Free speed	rpm	1 000	650	450
For screws up to		M 3	M 3	M 4
Reversible		yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"
Torque range hard	Nm	0.10 – 0.70	0.25 – 1.00	0.10 – 1.60
Weight	kg	0.35	0.35	0.35
Ø machine	mm	33	33	33
Machine length	mm	205	205	205
Voltage	V/DC	36	36	36
Accessories supplied		1 torque spring, cable 2.5 m long		

Control unit for BRL

Type	EDU 1 BR	
Order No.	60011-48-6	
Input voltage	V/AC Hz	90 – 260 50/60
Output voltage	V/DC	36
Weight	kg	0.95
Dimensions	mm	135 × 180 × 65
Torque range setting		L 0 – 30%, H 20 – 100%
Power cable length	m	2.0



Control unit

Electrical screwdrivers

Straight version

The ideal tool for industrial manufacturing within sensitive ranges: more mobility, better quiet running and for use in clean rooms.



FAB 10 RE/FR

- ESD design as standard
- Torque and speed to be adjusted infinitely variable
- Softstart setting
- Ergonomic housing for the perfect grip
- Reversible
- Low noise level
- Low frequent service
- Seperate control unit
- Automatic clutch $\pm 3\%$
- Angle head can be attached

Technical data

Type		FAB 10 RE/FR	FAB 12 RE/FR	FAB 12 PS/FR	FAB 18 RE/FR	FAB 18 PS/FR
Order No.		29946-44-6	29946-45-6	29946-46-6	29946-47-6	29946-48-6
Start		lever start	lever start	push start	lever start	push start
Free speed	rpm	1 000	1 000	1 000	650	650
For screws up to		M 3	M 3	M 3	M 4	M 4
Reversible		yes	yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range hard	Nm	0.05 – 0.80	0.20 – 1.20	0.20 – 1.20	0.30 – 1.80	0,30 – 1.80
Weight	kg	0.48	0.48	0.48	0.48	0.48
Ø machine	mm	33	33	33	33	33
Machine length	mm	220	220	220	220	220
Voltage	V/DC	30	30	30	30	30
Accessories supplied		1 torque spring, cable 2.5 m long				

Control unit for FAB and RAF (Push and lever start, pistol design)

Type	EDU 1 FR	
Order No.	29946-49-6	
Input voltage	V/AC Hz	90 – 260 50/60
Output voltage	V/DC	18 – 27
Weight	kg	0.60
Dimensions	mm	138 × 118 × 67
With softstart setting	sec	0 – 2
With speed control		infinitely variable 60 – 100 % of the speed stated
Power cable length	m	2.0



Control unit

The ideal tool for industrial manufacturing within sensitive ranges: more mobility, better quiet running and for use in clean rooms.

- ESD design as standard
- Torque and speed to be adjusted infinitely variable
- Softstart setting
- Ergonomic housing for the perfect grip
- Reversible
- Low noise level
- Low frequent service
- Seperate control unit
- Automatic clutch $\pm 3\%$
- Angle head can be attached

Electrical screwdrivers Straight design



RAF 32 NS/FR

Technical data

Type		RAF 32 NS/FR 29946-40-6	RAF 32 PS/FR 29946-41-6	RAF 38 NS/FR 29946-42-6	RAF 38 PS/FR 29946-43-6
Order No.		29946-40-6	29946-41-6	29946-42-6	29946-43-6
Start		lever start	push start	lever start	push start
Free speed	rpm	1 000	1 000	650	650
For screws up to		M 4	M 4	M 4	M 4
Reversible		yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range hard	Nm	0.7 – 3.2	0.7 – 3.2	0.9 – 3.8	0.9 – 3.8
Weight	kg	0.65	0.65	0.65	0.65
Ø machine	mm	39	39	39	39
Machine length	mm	225	225	225	225
Voltage	V/DC	30	30	30	30
Accessories supplied		1 torque spring, cable 2.5 m long			



RAF 32 NS/FR with control unit

Nut clammer



MS 50-45

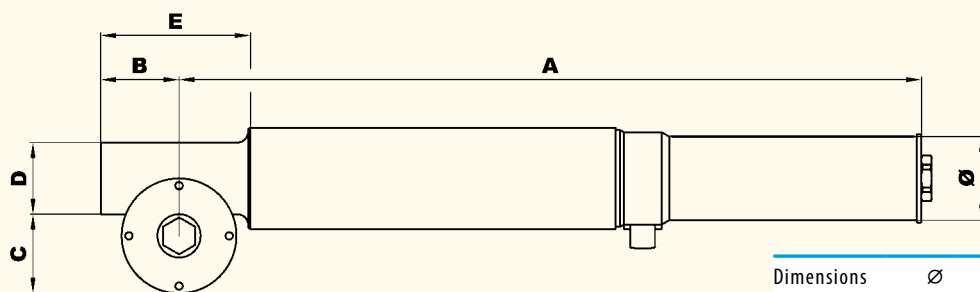
- For tightening and loosening screw connections
- Reliable, robust, for tough applications
- Rugged design
- Long lifetime
- Adjustment of sledges in machine tools
- Reversible by simply using the upper (clockwise) or lower (anti-clockwise) hexagon

Technical data

Type		MS 50-45	MS 90-125
Order No.		29501-58-6	29946-56-6
Valve		push button	push button
Free speed	rpm	450	125
For screws up to		M 10	M 12
Torque range max.	Nm	50	90
Driv. square end	mm	F 12	F 12
Length	mm	373	373
Smallest axle distance	mm	34	34
Air consumption	l/sec	13	13
Weight	kg	2.20	2.35
Noise level	dB(A)	77	77
Hose I. D.	mm	10	10
Connection	G	1/4" i	1/4" i

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Dimensions



Dimensions (mm)	Ø	A	B	C	D	E
MS	38	337,3	35,6	35,9	32,6	68

Accessories

Connector, hexagon 12 mm, square 1/2"	29501-54-3
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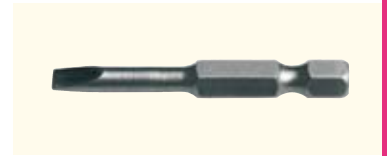
Insert tools

External hexagon 1/4" (DIN 3126)

Bits

Slotted

Thread	Bit width mm	Bit thickness mm	Length mm	Order No.
M 2	3.0	0.5	50	9 376 112
M 2.5	4.0	0.5	50	9 376 114
M 2.6	4.5	0.6	50	9 376 115
M 3	5.0	0.8	50	9 376 116
M 4	6.0	1.0	50	9 376 118
M 4	7.0	1.0	50	9 376 119
M 5	8.0	1.2	50	9 376 120
M 6	9.0	1.6	50	9 376 121



Pozidriv | Philips

Thread	Wood screws	Size	Length mm	Pozidriv Order No.	Philips Order No.
M 2 – M 3	2.0 – 3.0	1	50	9 376 461	9 376 125
M 3.5 – M 5	3.5 – 5.0	2	50	9 376 462	9 376 126
M 6	5.5 – 7.0	3	50	9 376 463	9 376 127
M 8 – M 10	8.0	4	50	9 376 464	9 376 128



Hexagon (DIN 7426)

Thread	Bit width mm	Length mm	Order No.
M 3	2.5	50	9 376 129
M 4	3.0	50	9 376 130
M 5	4.0	50	9 376 131
M 6	5.0	50	9 376 132
M 8	6.0	50	9 376 133
M 10	8.0	50	9 376 134
M 12	10.0	50	9 376 135



Torx

Size S	Length L mm	Order No.
T 10	50	9 376 480
T 15	50	9 376 481
T 20	50	9 376 482
T 25	50	9 376 483
T 30	50	9 376 484
T 40	50	9 376 485

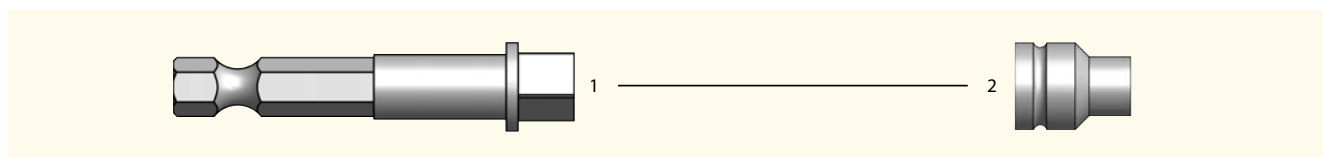
Bits also available in
70, 76, 102, 127 und 152 mm.



Insert tools

External hexagon 1/4" (DIN 3126)

Socket and holder



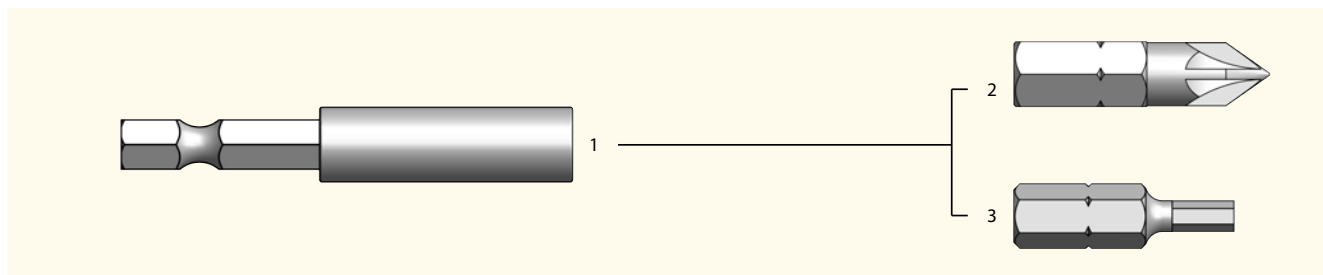
1 Holder for bits

Drive	Driven side	Length mm	Order No.
1/4"	1/4"	100	9 376 453
1/4"	1/4"	50	9 376 136
1/4"	3/8"	100	9 376 454
1/4"	3/8"	50	9 376 137

2 For holder with 1/4" square

Thread	Schlüsselweite mm	Length mm	Order No.
M 6	10.0	25	9 376 339
M 7	11.0	25	9 376 340
M 8	13.0	25	9 376 341

Holder with and without magnet, bits



1 Holder for bits

Driven side	Length mm	Order No.
1/4"	57	9 376 447
1/4"	75	* 9 376 448

* with permanent magnet

2 Pozidriv | Philips

Thread	Wood screws	Size	Length mm	Pozidriv Order No.	Philips Order No.
M 2.5 – M 3	2.0 – 3.0	1	25	9 376 396	9 376 109
M 3.5 – M 5	3.5 – 5.0	2	25	9 376 397	9 376 110
M 6	5.5 – 7.0	3	25	9 376 398	—

3 Hexagon

Thread	Bit width mm	Length mm	Order No.
M 4	3.0	25	9 376 141
M 5	4.0	25	9 376 142
M 6	5.0	25	9 376 143
M 8	6.0	25	9 376 144
M 10	8.0	25	9 376 145
M 12	10.0	25	9 376 146

Linear tool stand for ergonomic workplace design

- Tool stand can be rotated through 360°
- Linear ball bearings for easy running
- No torque is transferred back into the worker's wrist
- Fast tool change

Handling technology Linear stands and parallel arms



Parallel arm



Linear stand

Technical data

Type		Linear stand 1	Linear stand 2	Linear stand 3	Parallel arm*
Order No.		29808-61-5	29808-62-5	29808-63-5	29946-69-6
Height	mm	1 130	1 130	1 130	580
Vertical stroke max.	mm	440	440	440	430
Working radius min. – max.	mm	220 – 600	220 – 600	220 – 600	850
Torque range max.	Nm	25	25	25	25
Weight	kg	2	4	4	2
Bearing load spring balancer max.	kg	2	4	4	—
∅ tool holder	mm	26 – 38	26 – 38	35 – 50	28 – 48

* Weight compensation and adjustment through pneumatic cylinders and pressure reducer.

ReadStar II and ReadStar TT



ReadStar II

For the basic torque checking in your production line, which requires no SPC evaluation

- Saves up to 200 measured values
- Automatic transducer recognition
- Visual measuring control display (LED red, green and yellow)
- ReadStar TT with transducer included (1, 4, 12 or 30 Nm) and assembly task simulator
- Special programs for the measurement of pulse screwdrivers, screwdrivers, click wrenches and backlash
- Serial USB adapter available upon request

Technical data

Type		ReadStar II	ReadStar TT	ReadStar TT	ReadStar TT	ReadStar TT
Order No.		29807-82-8	29807-17-8	29807-18-8	29807-15-8	29807-16-8
Adjustable units		Nm, Ncm, kgm, kgcm, ft.lbs, in.lb, oz.inches				
Power supply		2 baby cells (batteries or accumulators), operating time approx. 70 hours, powersafe, operating with charger				
Torque range	Nm	—	0.1 – 1,0	0.4 – 4.0	1.2 – 12.0	3.0 – 30.0
Dimensions W × D × H	mm	166 × 190 × 66	166 × 190 × 75	166 × 190 × 75	166 × 190 × 75	166 × 190 × 75
Weight	kg	0.9	2.3	2.3	2.3	2.3
Screw size, simulator		—	M 4 × 20	M 6 × 25	M 8 × 35	M 10 × 35
Accessories		Manual, batteries				

Calibration: traceable to national standard, UKAS / DKD.

Interfaces: printer- / PC-connection, serial RS 232, 9-pin-sub-D, transducer connection 25-pin-sub-D (only ReadStar II).

Accessories

Power adaptor	29808-41-8
PC / printer cable	29808-42-8



ReadStar TT

Suitable transducers
 rotating *see page 111*
 static *see page 112*

For dynamic torque measurement

- Approved for ongoing use with impulse wrenches
- Patented transfer system for highest accuracy
- Automatic transducer recognition
- Immune to interference
- Robust compact design
- High-resolution angle transducer
- Torque transducer with coiled cable 900 mm, expandable up to 2 500 mm

Rotating transducers TCRA



TCRA 10

Technical data | Torque only

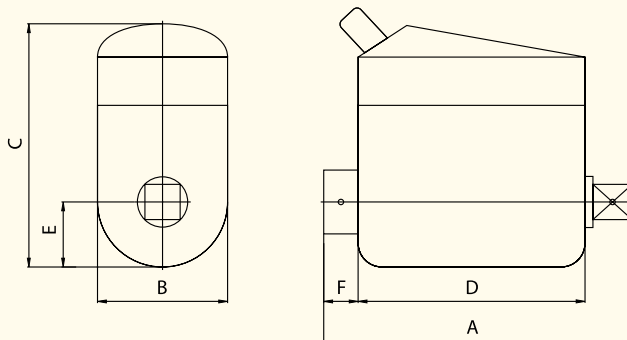
Type		TCRA 2*	TCRA 5*	TCRA 10*	TCRA 20*	TCRA 10/1
Order No.		29807-21-8	29807-22-8	29807-23-8	29807-24-8	29807-25-8
Measuring range min. – max.	Nm	0.2 – 2	0.5 – 5	1 – 10	2 – 20	1 – 10
Drive / power take-off		1/4"	1/4"	1/4"	1/4"	1/4"

Type		TCRA 20/1	TCRA 25	TCRA 75	TCRA 180	TCRA 250
Order No.		29807-26-8	29807-27-8	29807-28-8	29807-29-8	29807-30-8
Measuring range min. – max.	Nm	2 – 20	2.5 – 25	7.5 – 75	18 – 180	25 – 250
Drive / power take-off		1/4"	3/8"	3/8"	1/2"	3/4"

Type		TCRA 500	TCRA 750	TCRA 1400	TCRA 3000
Order No.		29807-31-8	29807-32-8	29807-33-8	29807-34-8
Measuring range min. – max.	Nm	50 – 500	75 – 750	140 – 1 400	300 – 3 000
Drive / power take-off		3/4"	1"	1"	1 1/2"

Calibration: traceable to national standard, UKAS / DKD.

Accuracy: > ± 0.3 % f. s. d. after calibration. Overload capacity: 25 % f. s. d.



Proportions (mm)		A	B	C	D	E	F
*1/4"	hexagon	116.0	30	56.0	56.0	13.0	39
1/4"	square	71.5	30	56.0	56.0	13.0	6
3/8"	square	77.0	30	59.5	56.0	15.0	8
1/2"	square	87.0	42	70.0	58.0	21.0	12
3/4"	square	106.0	52	81.0	60.0	26.0	21
1"	square	125.0	63	91.5	64.5	31.5	29

Suitable display units
ReadStar II *see page 110*

Static transducers TCSA



TCSA 5

For static torque measurement

- Ideal for the measurement of click and torque wrenches
- Approved for ongoing use with impulse wrenches
- Patented transfer system for highest accuracy
- Automatic transducer recognition
- Immune to interference
- Optional with assembly task simulator
- with cable 1 000 mm, without strain

Tightening set to simulate hard and soft joints up to TCSA 1000 available upon request.

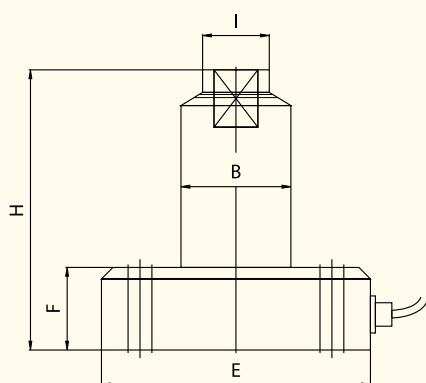
Technical data | Torque only

Type		TCSA 5	TCSA 11	TCSA 28	TCSA 67	TCSA 135
Order No.		29807-61-8	29807-62-8	29807-63-8	29807-64-8	29807-65-8
Measuring range min. – max.	Nm	0.5 – 5	1.1 – 11	2.8 – 28	6.7 – 67	13.5 – 135
Drive		1/4"	1/4"	1/4"	3/8"	3/8"

Type		TCSA 270	TCSA 540	TCSA 1000	TCSA 1600	TCSA 3000
Order No.		29807-66-8	29807-67-8	29807-68-8	29807-70-8	29807-69-8
Measuring range min. – max.	Nm	27 – 270	54 – 540	100 – 1 000	160 – 1 600	300 – 3 000
Drive		1/2"	3/4"	3/4"	1" (außen)	1 1/2" (außen)

Calibration: traceable to national standard, UKAS / DKD.

Accuracy: > ± 0.3 % f. s. d. after calibration. Overload capacity: 40 % f. s. d.



Proport. (mm)	B	E	F	H	I	Order No.
TCSA 5	54	100	25	76.5	16	29807-61-8
TCSA 11	54	100	25	76.5	16	29807-62-8
TCSA 28	54	100	25	76.5	16	29807-63-8
TCSA 67	54	100	25	86.0	24	29807-64-8
TCSA 135	54	100	25	86.0	24	29807-65-8
TCSA 270	54	100	25	95.0	30	29807-66-8
TCSA 540	59	100	25	112.0	44	29807-67-8
TCSA 1000	59	100	25	112.0	44	29807-68-8
TCSA 1600	59	100	25	124.0	53	29807-70-8
TCSA 3000	59	100	25	124.0	53	29807-69-8

Suitable display units
ReadStar II *see page 110*