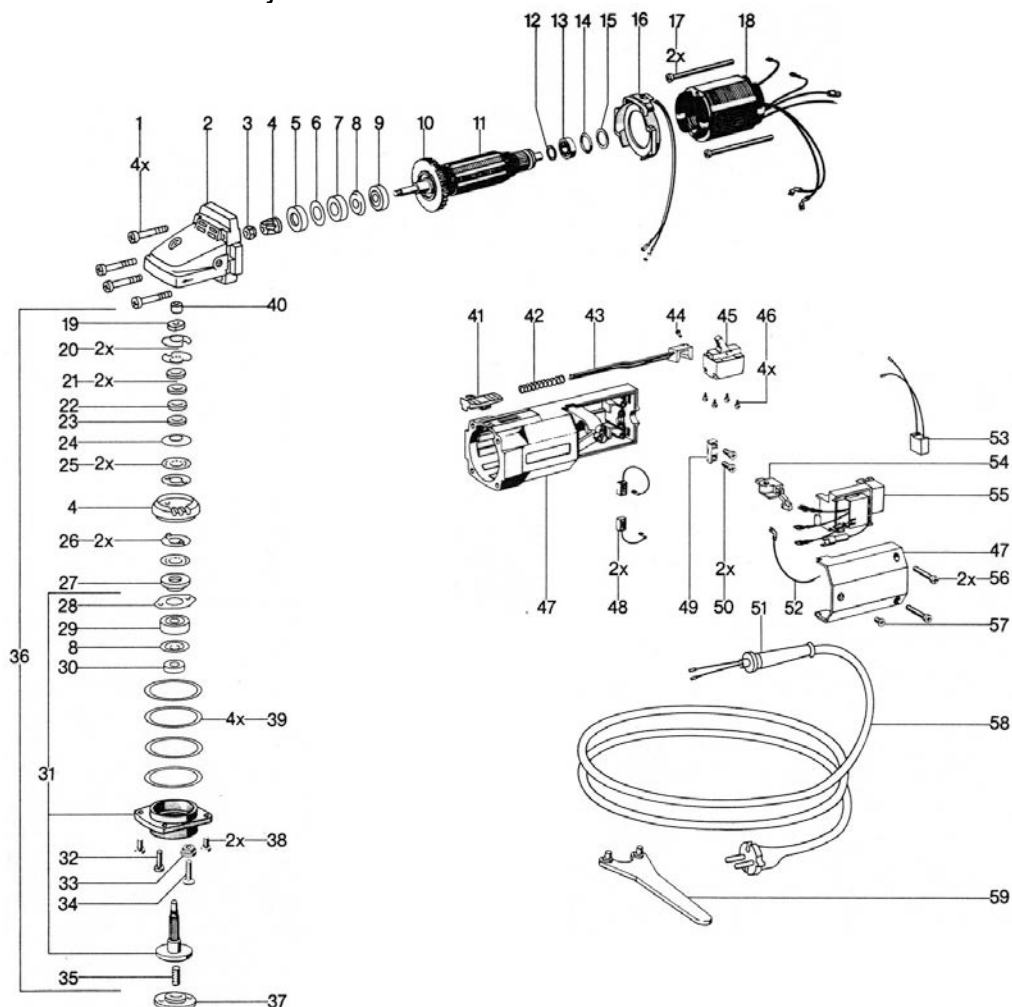




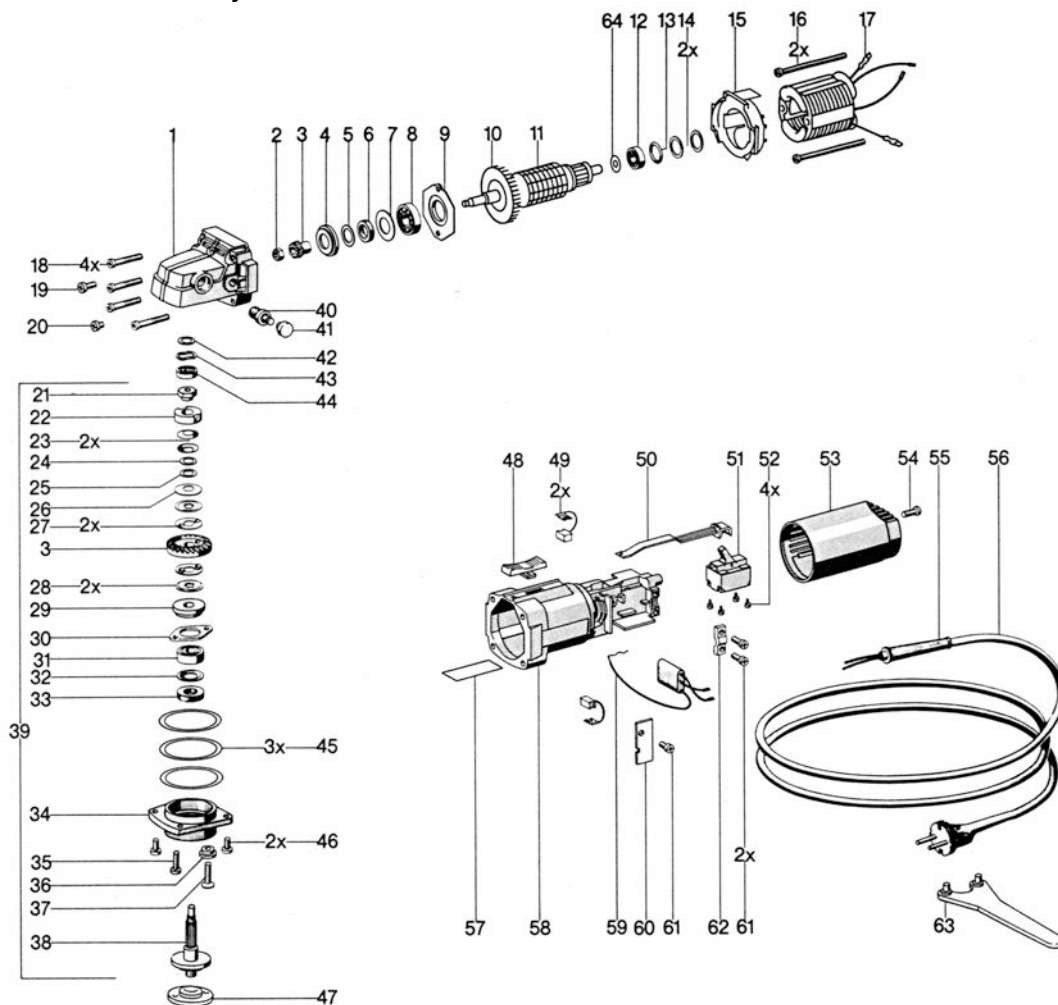
Electric motor 11150 – Biscuit joiner



Pos.	Description	Art. No.
2	Gear box case	31 3501
4	Ring gear with pinion	31 3705
9	Groove ball bearing 6200 ZZ, 30 x 10 x 9	31 3210
11	Rotor complete, without ball bearing 220-230 V	31 3701
13	Groove ball bearing 627 ZZ, 22 x 7 x 7	31 3212
16	Air guiding disc special	31 3405
18	Field coil 220-230 V	31 3702
31	Flange with spindle	31 3707
36	Safety coupling	31 3508
41	Switch slider special	31 3549
43	Switch rod	31 3148
45	Switch 220 - 230 V	31 3700
47	Motor casing	31 3704
51	Cable protection	31 3555
53	Condenser	31 3511
54	Inductor	31 3135
55	Electronic units 220 - 230 V	31 3703
58	Cable with plug CH	31 3720
59	Face spanner	27 1951



Electric motor 6114 – Biscuit joiner

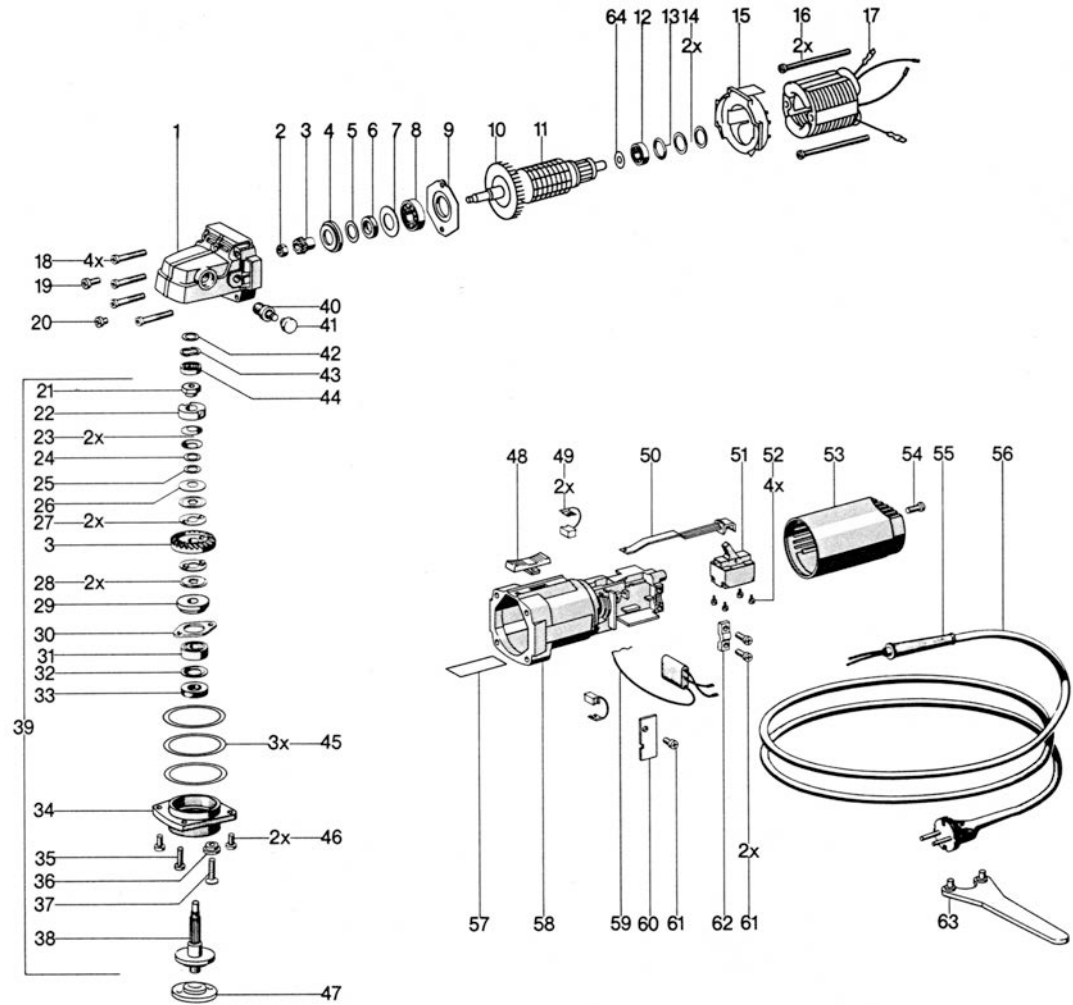


Pos.	Description	Art. No.
1	Gear box case	31 3310
3	Ring gear with pinion	31 3315
4	Distance ring	31 3317
6	Felt ring	31 3318
8	Groove ball bearing 6200-2 Z, C3 DIN 625	31 3210
9	Thrust bearing cap	31 3320
11	Rotor complete, without bearing 220 V	31 3558
12	Groove ball bearing 627-2 Z, C3 DIN 625	31 3212
15	Air guid disc	31 3503
17	Field coil 120 V	31 3521
	Field coil 230 V	31 3506
	Field coil 240 V	no more available 31 3531
21	Hexagon nut	31 3312
22	Engage piece	31 3313
23	Disc spring	31 3164
26	Disc spring	31 3163
27	Friction disk	31 3162
28	Friction disk	31 3161
30	Thrust bearing cap	31 3322
31	Groove ball bearing 6000-2RS, C2 DIN 625	31 3211
39	Flange with spindle and safety clutch	31 3552
40	Spindle stop	31 3316
41	Push button	31 3311
44	Groove ball bearing 626-2 Z, C	31 3213
47	Flange nut	31 3118
48, 50	Switch slider, Switch bar and spring	31 3557

to be continued



Electric motor
6114 – Biscuit joiner

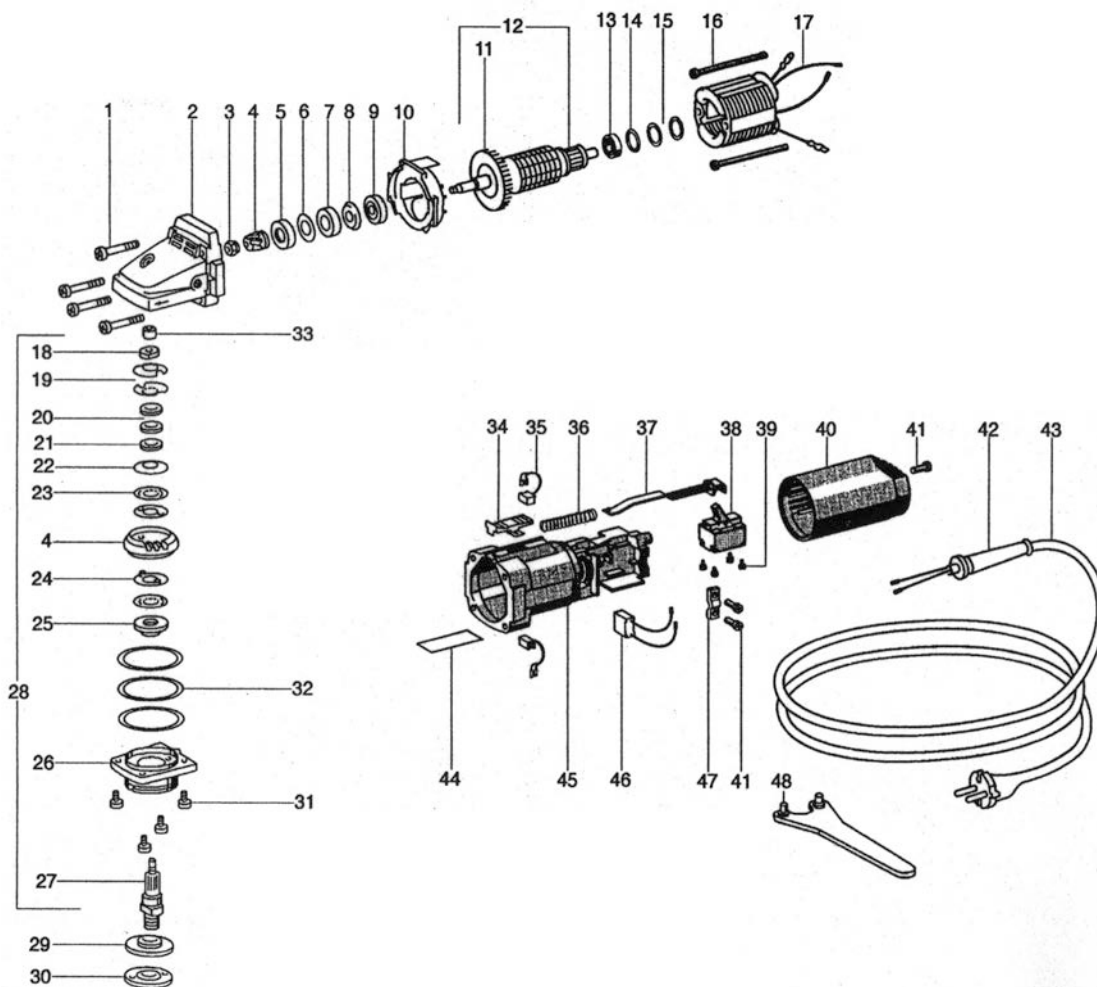


Pos.	Description	Art. No.
49	Carbon brush 120 V	31 3522
	Carbon brush 220 / 240 V	31 3512
51	Switch	31 3700
53	Motor cap	31 3116
55	Cable protection 115 / 220 / 240 V	31 3555
56	Cable with plug 120 V	31 3523
	Cable with plug 230 V	31 3117
	Cable with plug 240 V	31 3533
58	Motor case	31 3556
59	Condenser 220/240 V	31 3114
63	Face spanner 30 / 4 mm	27 1951

Year of manufacture until 1996, spare parts while stock lasts!



Electric motor 6114 C – Biscuit joiner

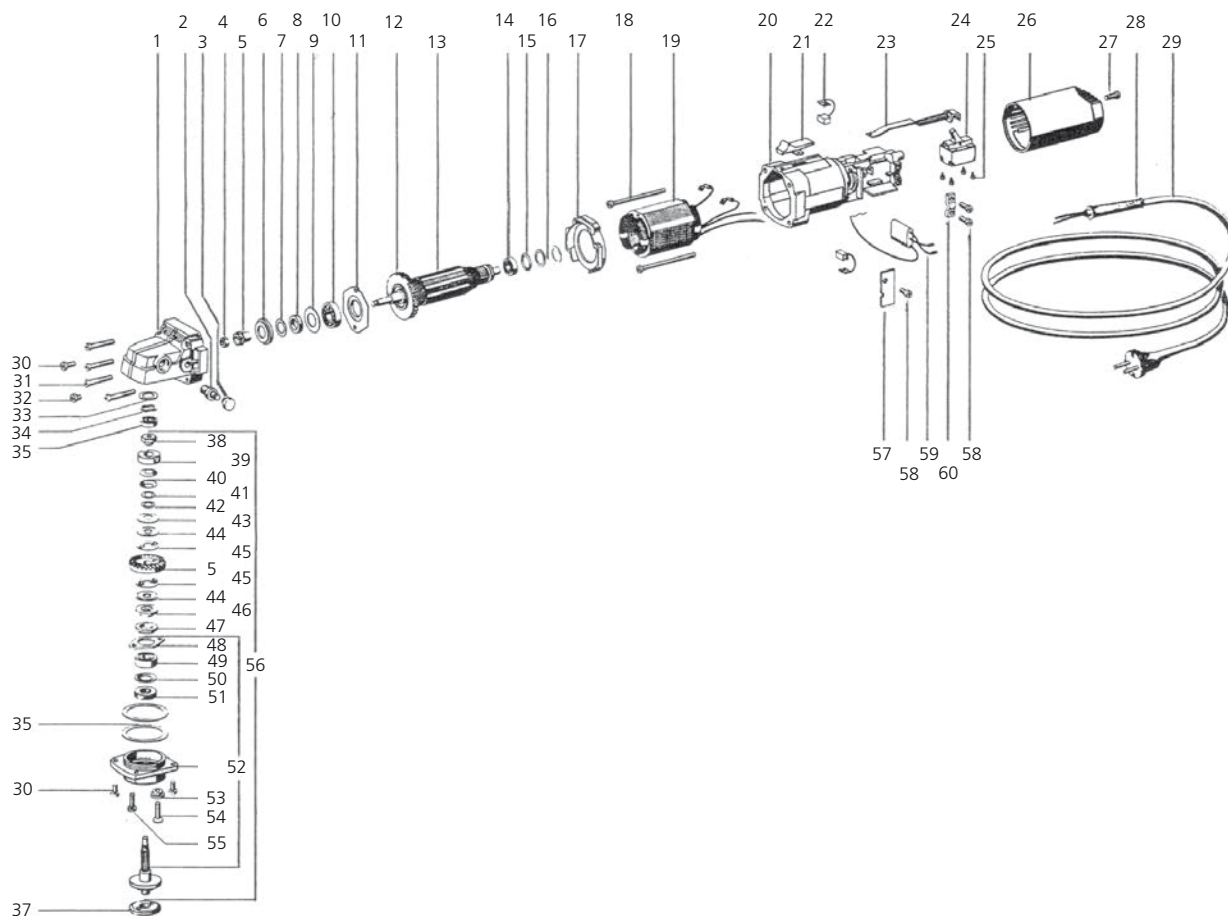


Pos.	Description	Art. No.
2	Motor gear box	31 3576
4	Ring gear with pinion	31 3502
9	Groove ball bearing 6200 ZZ, 30 x 10 x 9	31 3210
10	Air guiding disc	31 3303
12	Rotor, 230 V	31 3505
13	Groove ball bearing 627 ZZ, 22 x 7 x 7	31 3212
17	Field coil 120 V	31 3521
	Field coil 240 V	no more available 31 3531
	Field coil 230 V	31 3506
28	Flange with spindle	31 3574
29	Centric flange	31 3572
30	Clamping nut	31 3570
34, 36, 37	Switch slider, switch bar and spring	31 3557
35	Carbon brush 230 V	31 3512
38	Switch	31 3700
40	Motor cap red	31 3509
42	Cable protection	31 3555
43	Cable with plug	31 3117
45	Motor casing red	31 3510
46	Condenser	31 3511

Year of manufacture until 1998, spare parts while stock lasts!



Electric motor 6115 – Biscuit joiner

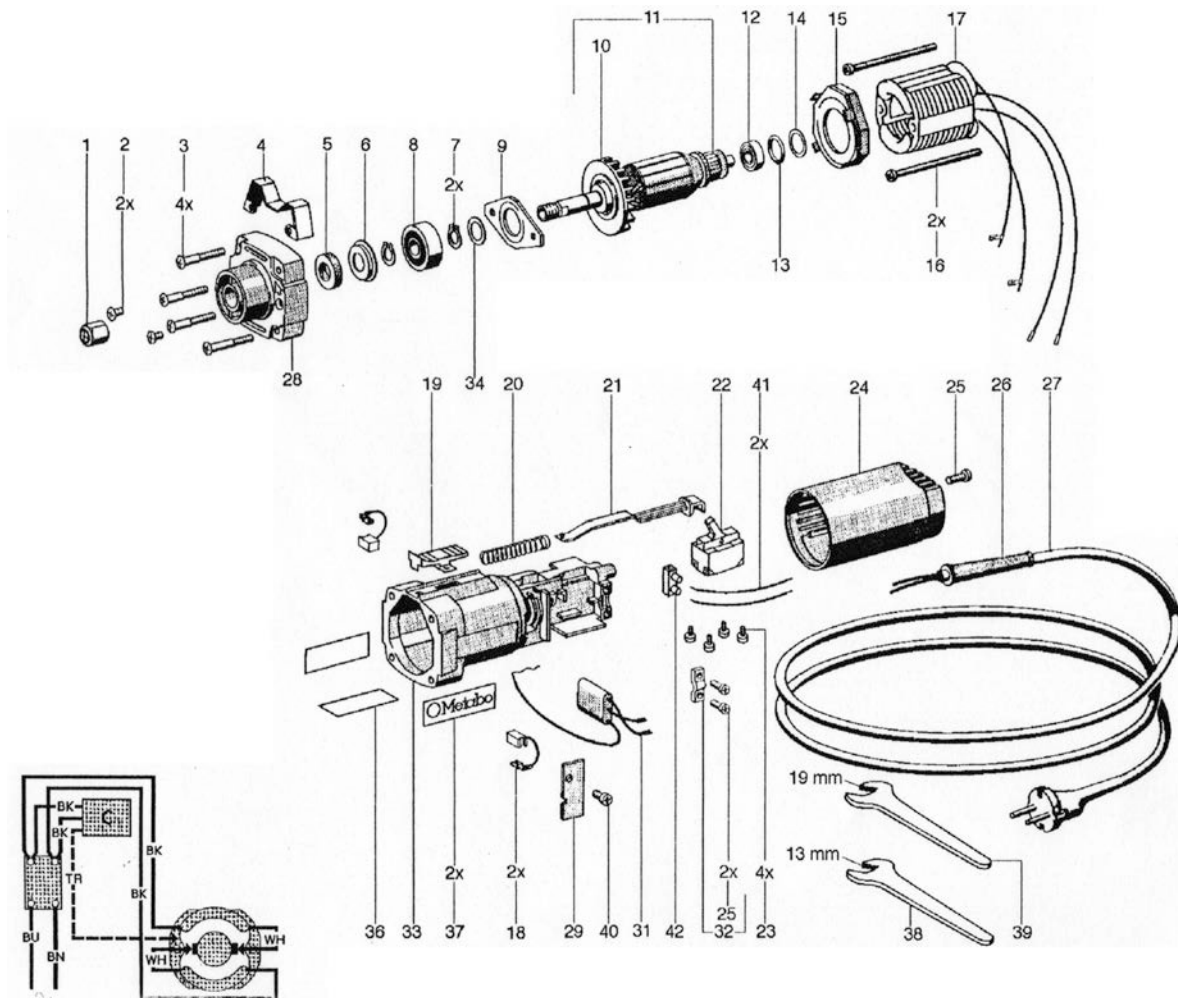


Pos.	Description	Art. No.
1	Gear box case	31 3310
3	Push button	31 3311
5	Ring gear with pinion	31 3315
8	Felt ring	31 3318
10	Groove ball bearing 6200-2 Z	31 3210
11	Thrust bearing cap	31 3320
12	Ventilator	31 3321
14	Groove ball bearing 627 Z	31 3212
17	Air guid disc	31 3303
19	Field coil, 230 V	31 3302
20	Motor case with carbon brush holder	31 3305
21, 23	Switch slider, switch bar	31 3557
22	Carbon brushes	31 3304
24	Switch	31 3700
28	Calbe protection	31 3555
29	Cable with plug	31 5010
35	Groove ball bearing 626	31 3213
37	Flange	31 3118
38	Nut	31 3312
39	Engage piece	31 3313
40	Disc spring 2x	31 3164
43	Disc spring	31 3163
44	Friction disc 2x	31 3161
45	Friction disc 2x	31 3162
48	Thrust bearing cap	31 3322
49	Groove ball bearing 6000-2	31 3211
52	Flange with spindle	31 3314
59	Condenser	31 3114
	Face spanner 30/4 mm	27 1951
	Carbon brushes	31 3304

Year of manufacture until 1988, spare parts while stock lasts!



Electric motor 6139 – Biscuit joiner

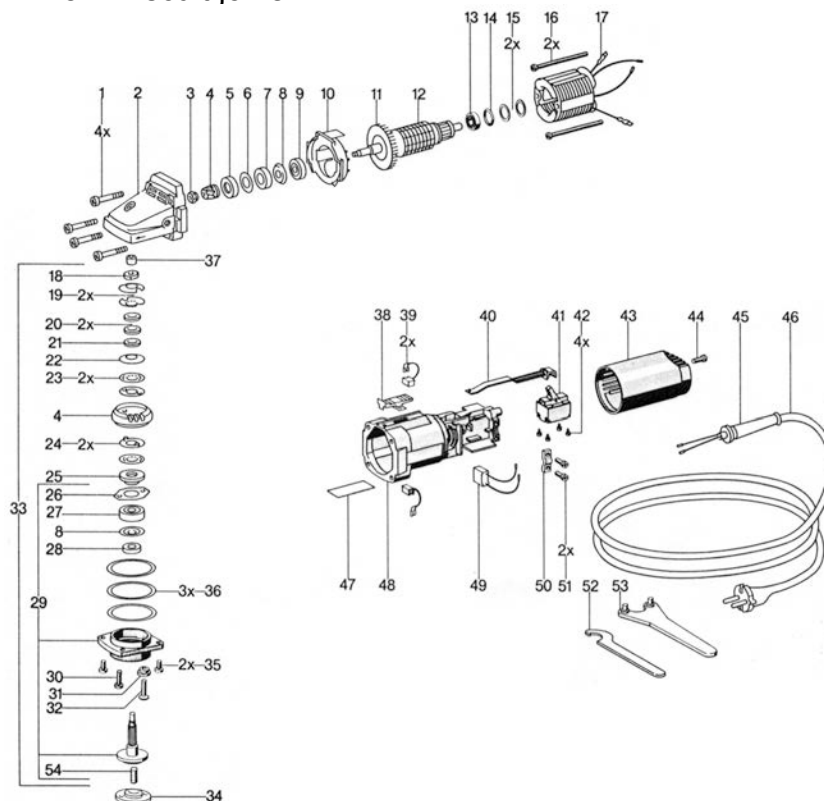


Pos.	Description	Art. No.
1	Collet chuck 8 mm with nut	31 3820
	Collet chuck 6 mm with nut	31 3821
8	Groove ball bearing 6202 ZZ	31 3216
9	Bearing cap	31 3802
10	Ventilator	31 3803
11	Rotor	31 3801
12	Groove ball bearing	31 3212
17	Field coil	no more available 31 3531
18	Carbon brushes	31 3304
19, 20, 21	Switch slider, switch rod and spring	31 3557
21	Switch rod	31 3554
22	Switch	31 3700
24	Motor cap red	31 3509
26	Cable protection	31 3555
27	Cable with plug 230 V	31 5010
28	Spindle head	31 3810
31	Condenser	31 3114
33	Motor casing	31 3510
38	Fork wrench 13 mm	27 1973
39	Fork wrench 19 mm	27 1979

Year of manufacture until 1994, spare parts while stock lasts!



Electric motor 7115 – Biscuit joiner

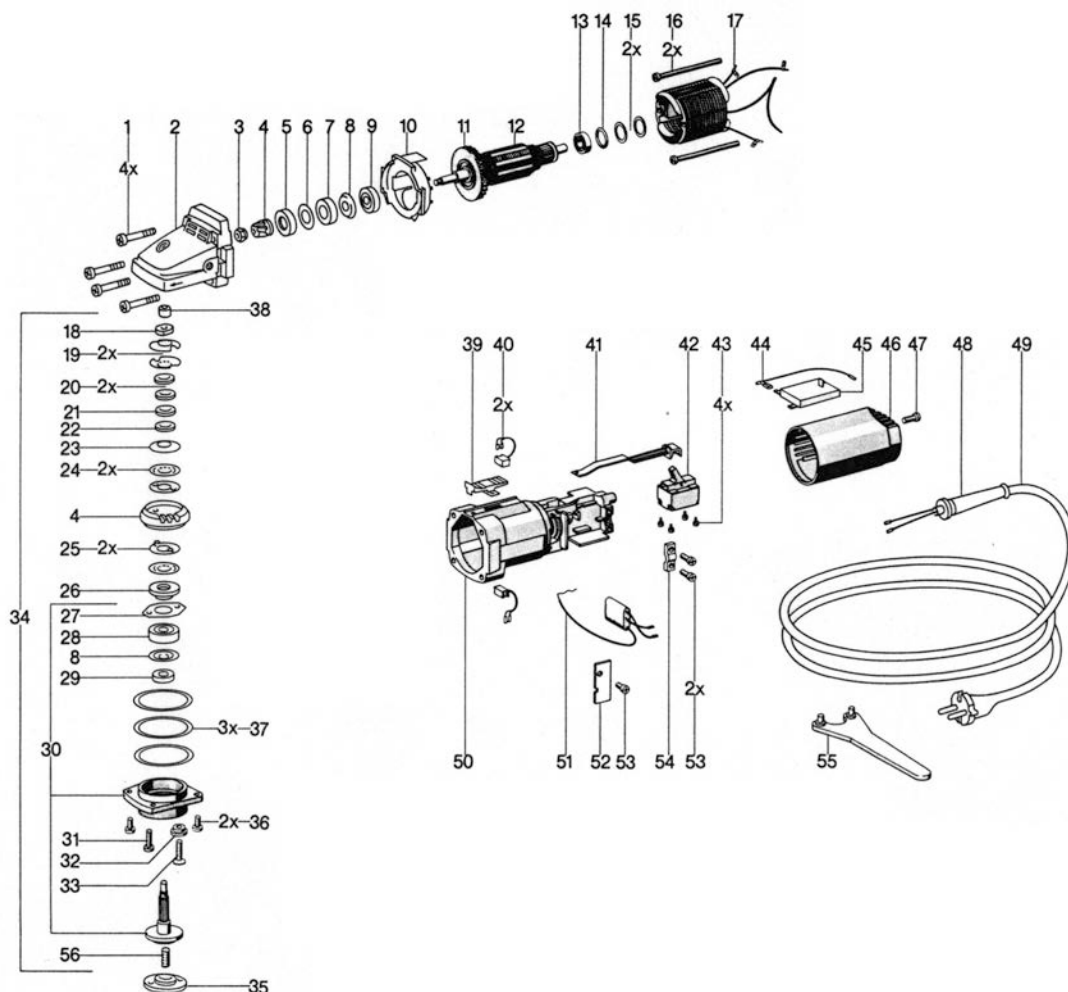


Pos.	Description	Art. No.
2	Gear box case	31 3501
4	Ring gear with pinion	31 3502
9	Groove ball bearing 6000-2Z, C3 DIN 625	31 3211
10	Air guiding disc	31 3503
11	Ventilator	31 3504
12	Rotor complete, without groove ball bearing 230 V	31 3505
	Rotor complete, without groove ball bearing 120 V	31 3520
	Rotor complete, without groove ball bearing 240 V	31 3530
13	Groove ball bearing 627-2Z, C3 DIN 625	31 3212
17	Field coil 230 V	31 3506
	Field coil 120 V	31 3521
	Field coil 240 V	no more available 31 3531
22	Ring gear	31 3163
23	Friction disk for safety clutch	31 3161
24	Friction disk for safety clutch	31 3162
26	Bearing cap	31 3322
27	Groove ball bearing 6000-2Z, C2 DIN 625	31 3211
29	Flange with spindle	31 3507
33	Safety coupling	31 3508
34	Flange	31 3118
37	Needle bush	31 3220
38, 40	Switch slider, switch rod and spring	31 3557
39	Carbon brush 230 V / 240 V	31 3512
	Carbon brush 120 V	31 3522
41	Switch	31 3700
43	Motor cap	31 3509
45	Cable protection 230 V	31 3555
	Cable protection 120 / 240 V	31 3555
46	Cable with plug 230 V	31 3117
	Cable with plug 120 V	31 3523
	Cable with plug 240 V	31 3533
48	Motor casing	31 3510
49	Condenser	31 3511
53	Face spanner 30 / 4 mm	27 1951

Year of manufacture until 1998, spare parts while stock lasts!



Electric motor 9123 – Biscuit joiner

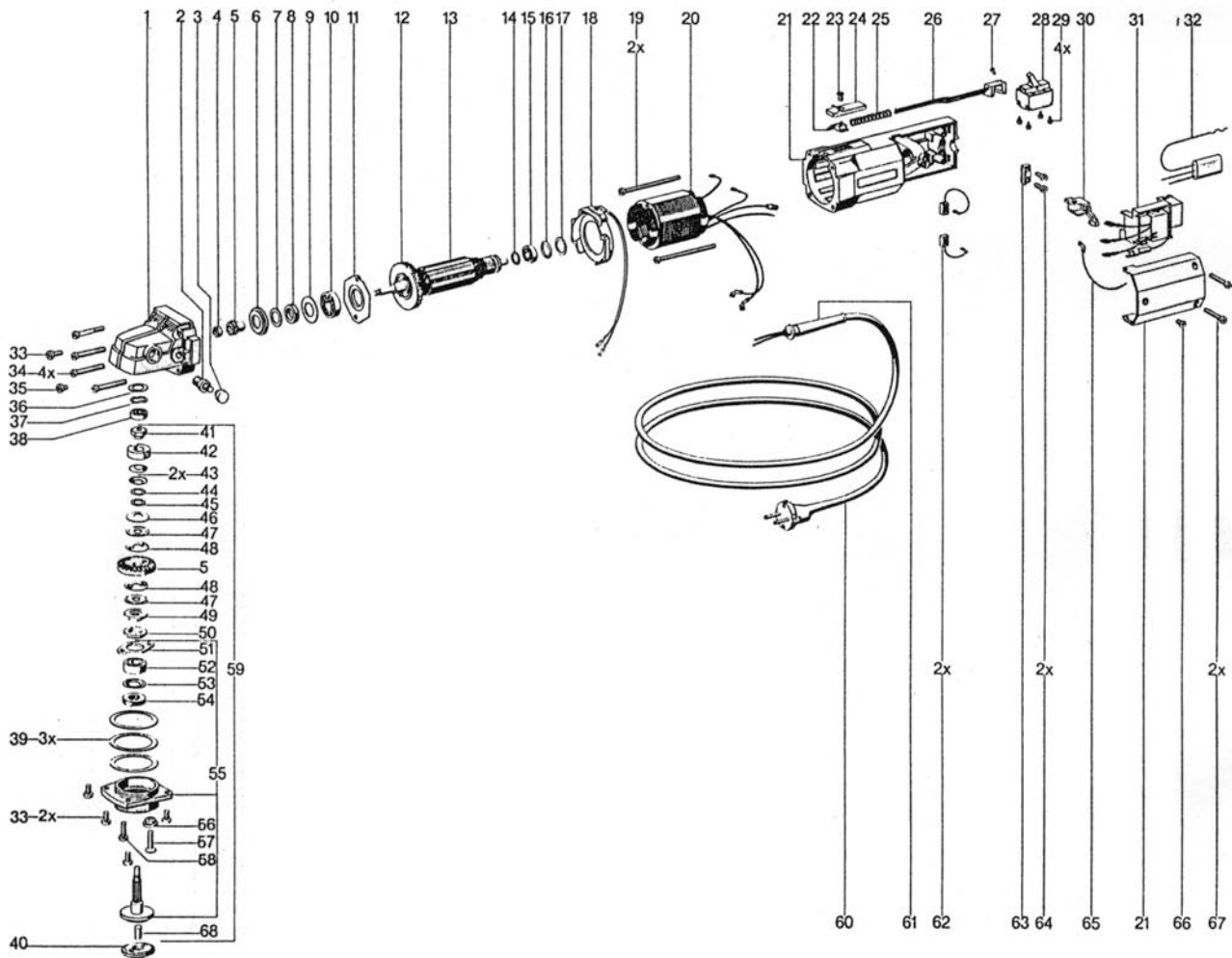


Pos.	Description	Art. No.
2	Gear box case	31 3501
4	Ring gear with pinion	31 3502
9	Groove ball bearing 6000-2 Z, C3 DIN 6625	31 3210
10	Air guiding disc	31 3303
11	Ventilator	31 3601
13	Groove ball bearing 627-2 Z, C3 DIN 625	31 3212
17	Field coil 220 V	31 3603
23	Disc spring	31 3163
24	Friction disk for safety clutch	31 3161
25	Friction disk for safety clutch	31 3162
27	Bearing cap	31 3322
28	Groove ball bearing 6000-2 Z, C2 DIN 625	31 3211
34	Safy coupling complete	31 3150
35	Flange	31 3118
38	Needle bush	31 3220
39, 41	Switch slider, switch rod and spring	31 3557
40	Carbon brush 220 / 240 V	31 3512
42	Switch	31 3700
45	Electronic unit 220 / 240 V	31 3607
46	Motor cap	31 3116
48	Cable protection 115 / 240 V	31 3555
	Cable protection 220 V	31 3555
49	Cable with plug 220 V	31 3117
51	Condenser	31 3114
55	Face spanner 30 / 4 mm	27 1951

Year of manufacture until 1999, spare parts while stock lasts!



Electric motor 9150 – Biscuit joiner

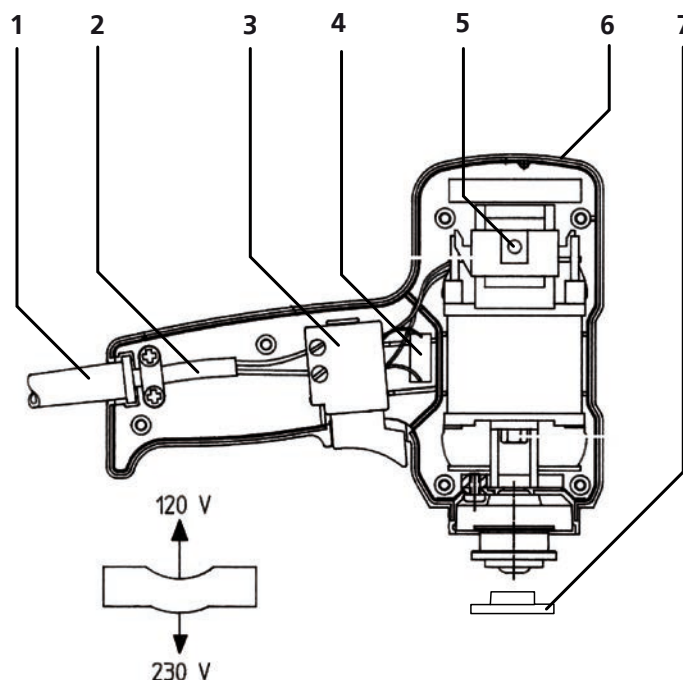


Pos.	Description	Art. No.
1	Gear case box	31 3310
10	Groove ball bearing	31 3210
15	Groove ball bearing	31 3212
28	Switch	31 3700
60	Cable with plug	31 3720
55	Flange with spindle	31 3314

Year of manufacture until 1993, spare parts while stock lasts!



Electric motor
D7640H (L49 / L49 A) – Patchmaker 2



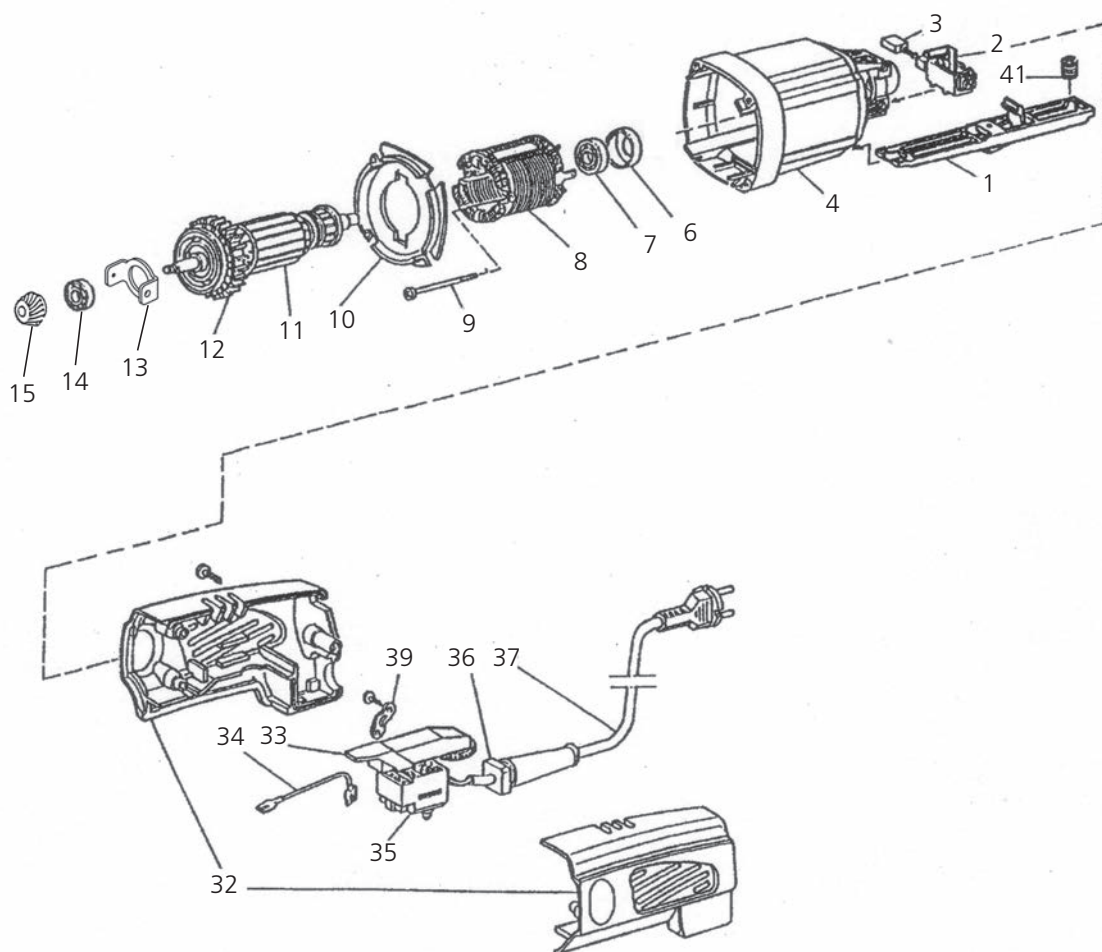
Pos.	Description	Art. No.
1	Cable with plug CH	31 5010
	Cable with plug D	31 5011
	Cable with plug US	31 5012
2	Cable protection	31 5018
3	Switch	31 5020
4	Condenser	31 5030
5	Carbon brush 230 V, 5 x 8 x 15, bis 2006	31 5035
	Carbon brush 230 V, 5 x 6 x 13, ab 2007	31 5035A
	Carbon brush 120 V	31 5036
6	Motor casing	31 5050
7	Flange nut	34 1355
1 - 6	Electric motor complete 230 V	Patchmaker 30 5002
	Electric motor complete 120 V	30 5003
	Electric motor complete 240 V	30 5004
	Electric motor complete 230 V	Cobra 30 5002
	Electric motor complete 230 V	Directa 30 5002
	Electric motor complete 230 V	Plano 30 5002

For electrotechnical safety reasons only the parts specified on the spare part list may be replaced. If other parts are defective the whole motor has to be replaced.

This motor must be checked with a high-voltage test after opening the housing in each case !!!



Electric motor L40, L42 – Top 20, Cantex

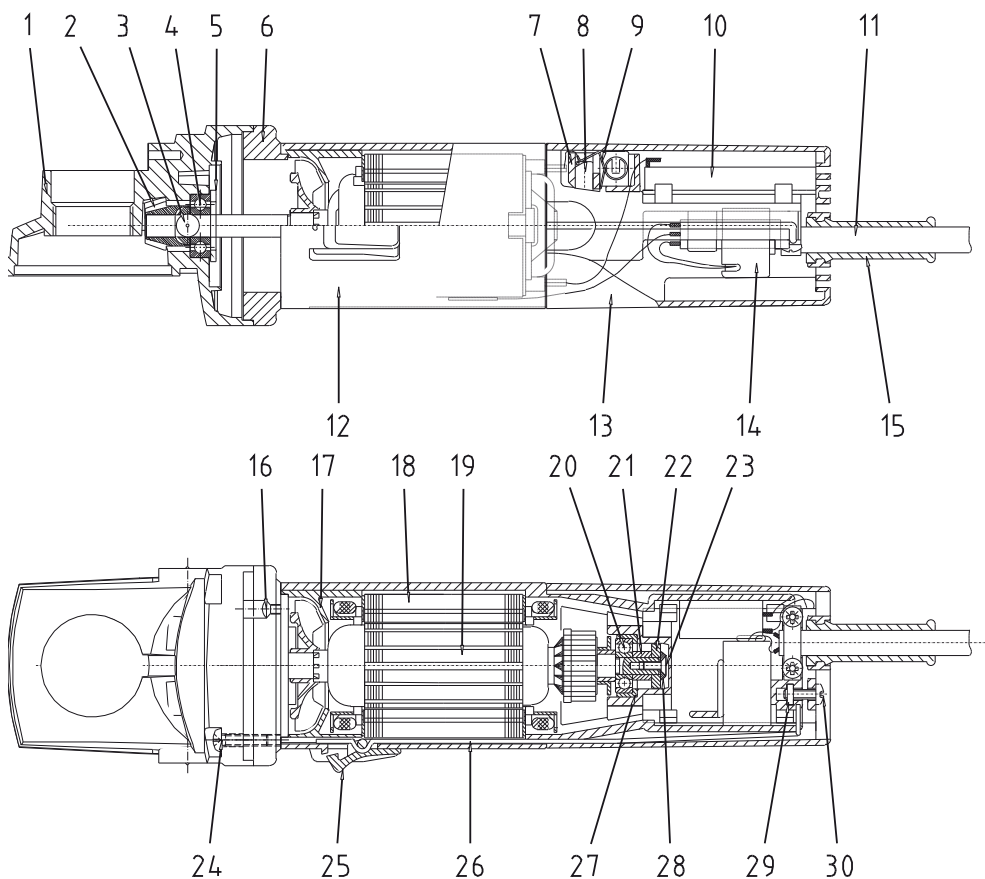


Pos.	Description	Art. No.
1, 41	Switch rod complete	31 4011
2, 3	Carbon brush without holder 230 V	31 4014
	Carbon brush with holder 120 V	31 4013
4	Motor casing red	31 4015
6	Insulating ring	31 4021
7	Groove ball bearing 607 ZZ	31 3209
8	Field coil 230 V	31 4019
	Field coil 120 V	no more available 31 4022
13	Relay	no more available 32 1041
14	Groove ball bearing 607 ZZ	31 3215
15	Ring gear with pinion	no more available 31 4041
7, 11 - 15	Rotor complete 120 V, with bearing, relay and pinion	no more available 31 4018
32	Motor cap, in 2 parts	no more available 31 4016
35	Switch and condenser	no more available 31 4010
37	Cable with plug CH	31 5010
	Cable with plug D	31 5011
	Cable with plug US	31 5012



Electric motor

L43, L43 S2 – Top 20, Top 20 S2, S3

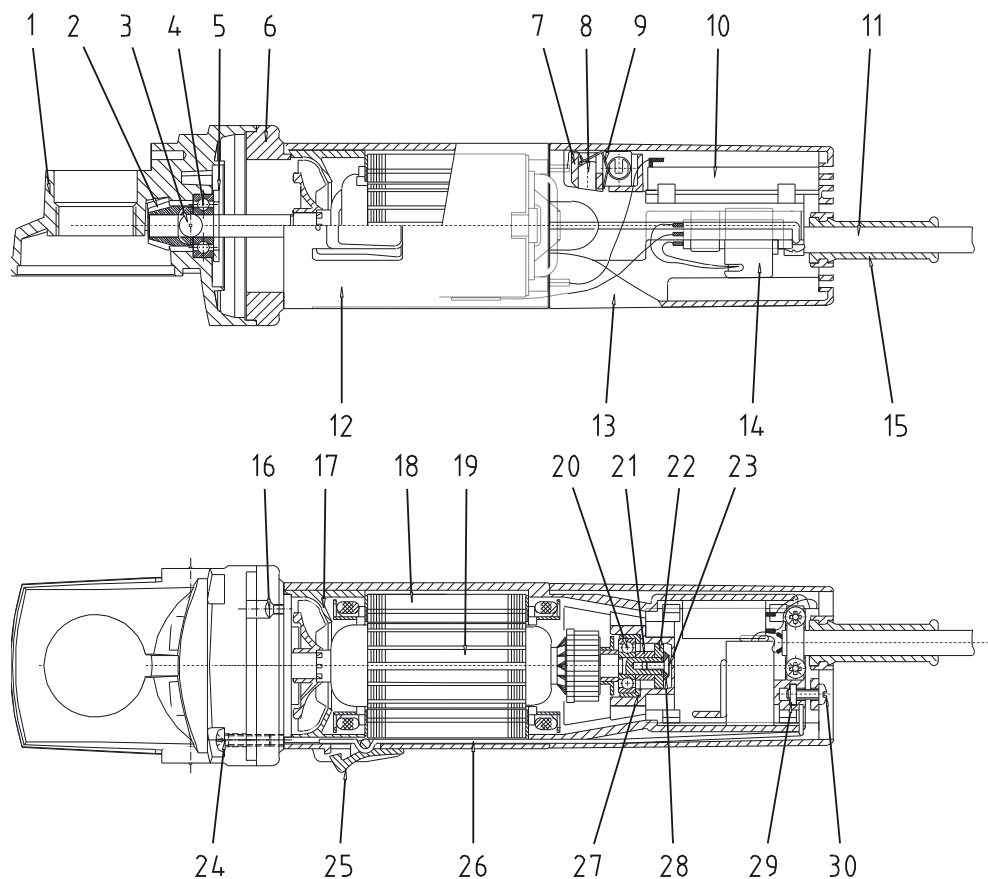


Pos.	Description	Art. No.
1	Gear box case	31 4323
2	Ring gear with pinion	L43 S2 / S3 31 4324
3	Hex-socket set-screw M8 x 10	35 7811
4	Groove ball bearing 608 ZZ	31 3215
5	Relay	32 1041
7, 9	Holder for carbon brush with spring	31 4314
8	Carbon brush 230 V	31 4305
	Carbon brush 110 V	31 4305US
10	Digital-Electronic with PTC, capacitor 230 V	31 4307
	Digital-Electronic with PTC, capacitor 120 V	31 4307US
	Condenser 0.22mF 230 V / 110 V	31 6005
11	Cable with plug type 11, «CH»	31 5010
	Cable with plug, Schuko «D»	31 5011
	Cable with plug, «US»	31 5012
	Cable with plug, «GB»	31 5014
12	Casing box, cable strap with screws	31 4310
13	Motor cap	31 4311
14	Switch 230 / 110 V	31 4303
15	Cable protection	31 6008
16	PT-screw KA 30x18	35 5318
17	Ventilator covering	31 4315
18	Stator with PTC 230 V	L43 / L43 S2 31 4302
	Stator with PTC 110 V	L43 / L43 S2 31 4302US
	Stator with PTC 230 V, 600 W	L43 S3 31 4308
	Stator with PTC 110 V, 600 W	L43 S3 31 4308US

to be continued



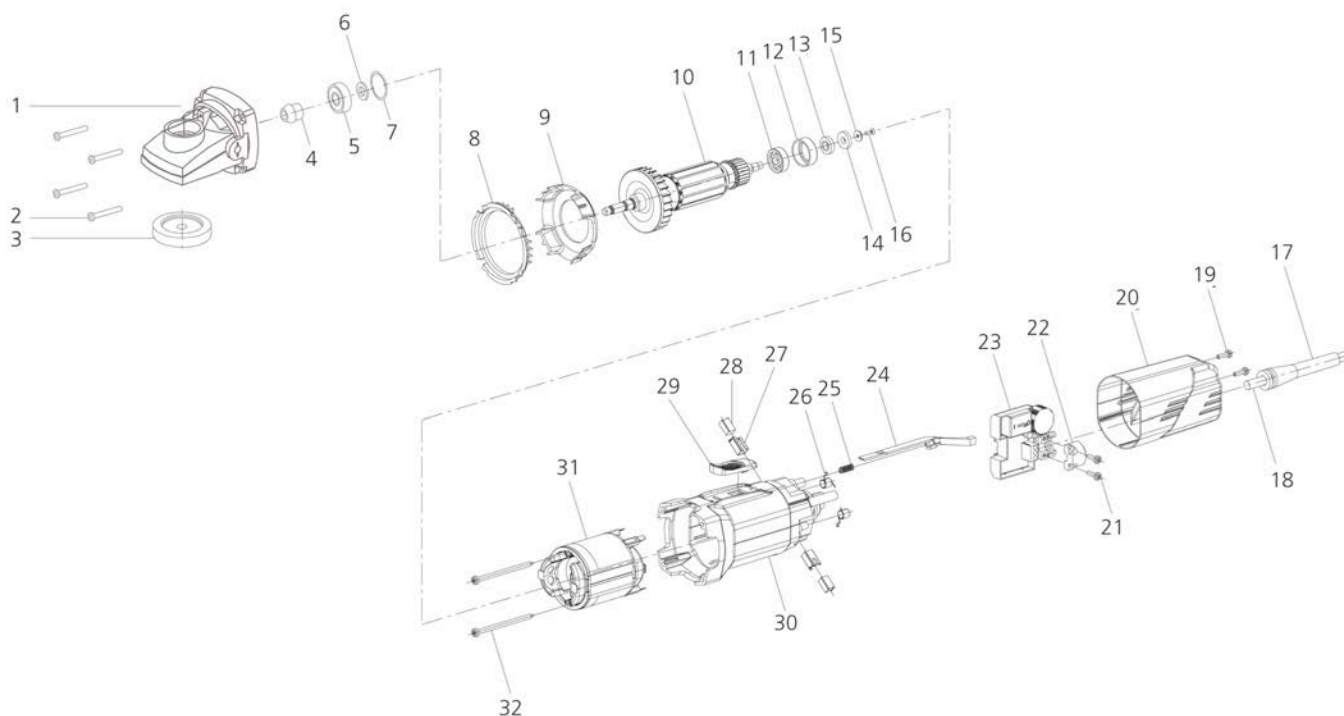
Electric motor
L43, L43 S2 – Top 20, Top 20 S2, S3



Pos.	Description	Art. No.
19, (2), 4, 5, 20, 21, 22, 23, 28	Rotor complete for 110 V with pinion / without ring gear	L43 S2 31 4325US
	Rotor complete for 110 V, 600 W	L43 S3 31 4326US
	Rotor complete for 230 V, 600 W	L43 S3 31 4326
	Rotor complete for 230 V	L43 31 4301
	Rotor complete for 110 V	L43 31 4301US
19, 1	Ventilator	31 5102
20	Deep-groove ball bearing 626 2RS	31 4320
21, 22, 23, 28	Ring magnet complete	31 4306
24	Screw M 4 x 18	35 2418A
25	Switch	31 4312
26	Switch rod	31 4313
27	Insulating ring	31 4316
29, 30	Square nut with screw M 4x10	31 4322
1 – 30 +	Electric motor complete L 44 E with guide and height adjustment 230 V CH	30 4415CH
	Electric motor complete L 44 E with guide and height adjustment 230 V DE	30 4415DE
	Electric motor complete L 44 E with guide and height adjustment 120 V US	30 4415US
	Electric motor complete L 44 E with guide and height adjustment 240 V GB	30 4415GB
	Electric motor complete L 44 E with guide and height adjustment 120 V AUS	30 4415AU



Electric motor
L44, L44 E – Top 20 S4, Top 21

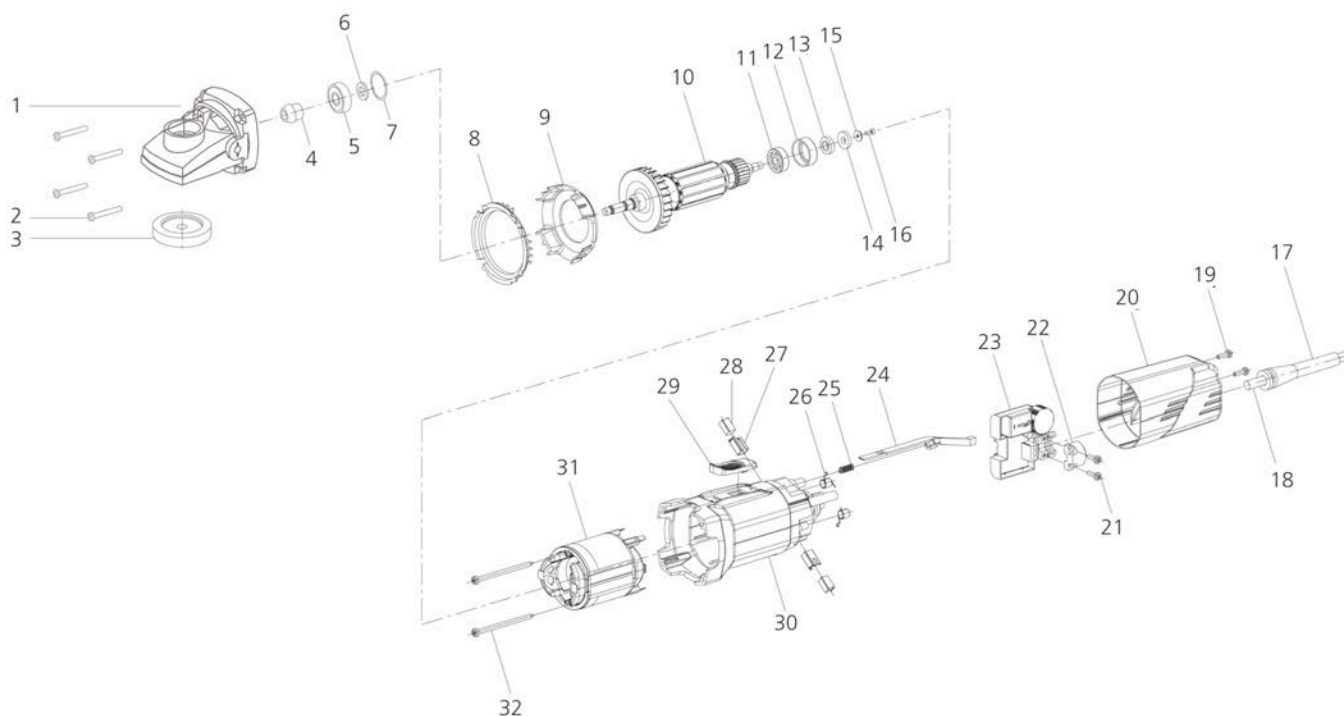


Pos.	Description	Art. No.
1	Gear box case with spindle stop	31 4425
2	Self-tapping screw Ø 4 x 20	31 4462
3	Ring gear spiral-toothed	31 4441
4	Pinion spiral-toothed	31 4463
3, 4	Ring gear + pinion spiral-toothed	31 4442
5	Groove ball bearing 6000 - 2RS	31 3211
6	Retaining ring DIN 471 10 x 1	31 4444
7	O-ring seal Ø 26 x 1	31 4445
8	Protective ring	31 4413
9	Fan cover	31 4412
4 - 7 + 10 - 16	Rotor complete 230 V	31 4461
	Rotor complete 110 V	31 4460
10	Rotor with fan 230 V	31 4456
	Rotor with fan 110 V	31 4455
11	Groove ball bearing 627 - 2RS - J/Y	31 4424
12	Insulating ring	31 4411
13	Support ring	31 4449
14	Ring magnet 16 poles	31 4448
15	Disc VSM M3	31 4447
16	Counter sunk M3 x 8	31 4446
17	Cable protection	31 4410
18	Cable with plug, 230 V, D	31 5011
	Cable with plug, 230 V, CH	31 5010
	Cable with plug, 120 V, US	31 5012
	Cable with plug, 240 V, GB	31 5014
	Cable with plug, 240 V, AU	31 5013
19, 20	End cap with screws	31 4426

to be continued



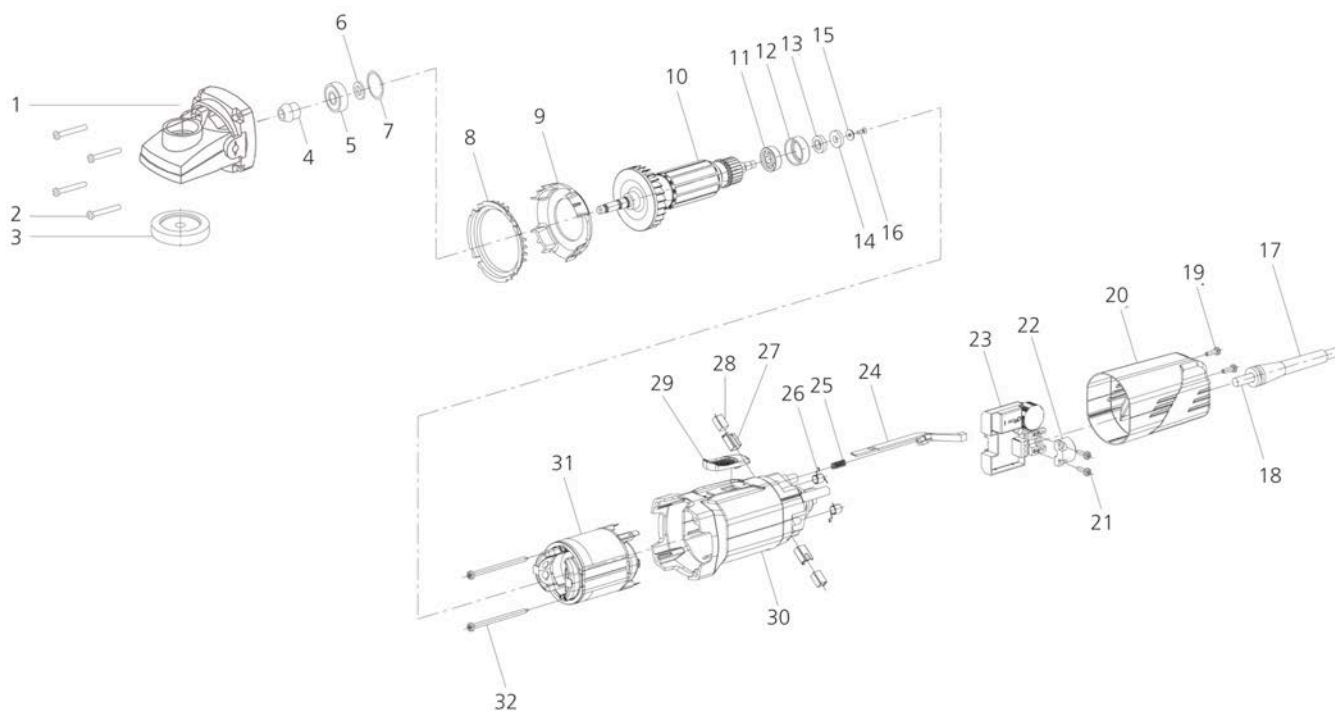
Electric motor
L44, L44 E – Top 20 S4, Top 21



Pos.	Description	Art. No.
21, 22, 23	Switch with Digital-Electronic with PTC, 230 V	31 4451
	Switch with Digital-Electronic with PTC, 120 V	31 4450
24, 25, 29	Switch rod, switch bar, spring	31 4427
26	Spring for carbon brush	31 4409
27	Brush holder	31 4407
28	Carbon brush 230 V (1 pair)	31 4408
	Carbon brush 120 V (1 pair)	31 4430
30	Motorcap	31 4404
31	Stator 230 V T.	31 4458
	Stator 110 V	31 4457
32	Screws Ø 4 × 68 for stator	31 4414
	Electric motor complete L 44 E with guide and Vertical mechanical drive 230 V CH	30 4415CH
	Electric motor complete L 44 E with guide and Vertical mechanical drive 230 V DE	30 4415DE
	Electric motor complete L 44 E with guide and Vertical mechanical drive 120 V US	30 4415US
	Electric motor complete L 44 E with guide and Vertical mechanical drive 240 V GB	30 4415GB
	Electric motor complete L 44 E with guide and Vertical mechanical drive 240 V AU	30 4415AU



**Electric motor
L44 EZ – Zeta**

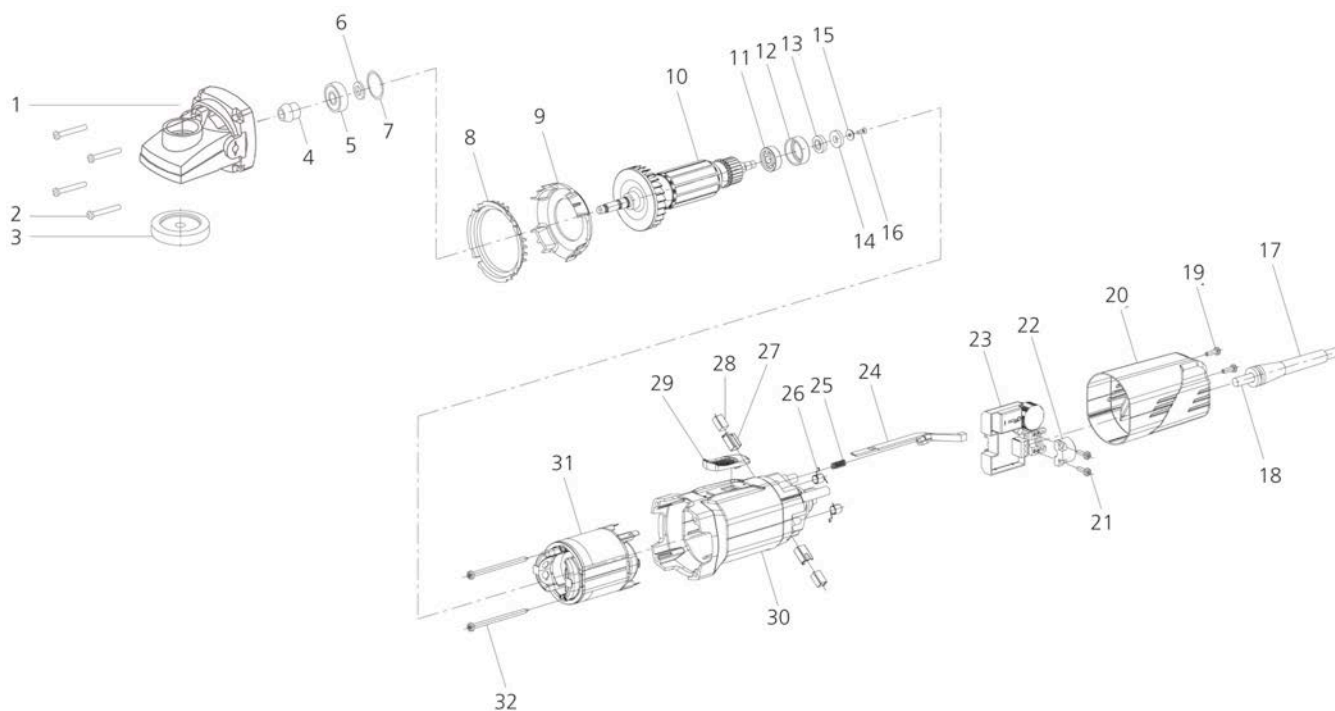


Pos.	Description	Art. No.
1	Gear box case with spindle stop	31 4428
2	Self-tapping screw Ø 4 x 20	31 4462
3	Ring gear spiral-toothed	31 4441
4	Pinion spiral-toothed	31 4463
3, 4	Ring gear + pinion spiral-toothed	31 4442
5	Groove ball bearing 6000 - 2RS	31 3211
6	Retaining ring DIN 471 10 x 1	31 4444
7	O-ring seal Ø 26 x 1	31 4445
8	Protective ring	31 4413
9	Fan cover	31 4412
4 - 7 + 10 - 16	Rotor complete 230 V	31 4461
	Rotor complete 110 V	31 4460
10	Rotor with fan 230 V	31 4456
	Rotor with fan 110 V	31 4455
11	Groove ball bearing 627 - 2RS - J/Y	31 4424
12	Insulating ring	31 4411
13	Support ring	31 4449
14	Ring magnet 16 poles	31 4448
15	Disc VSM M3	31 4447
16	Counter sunk M3 x 8	31 4446
17	Cable protection	31 4410
18	Cable with plug, 230 V, D	31 5011
	Cable with plug, 230 V, CH	31 5010
	Cable with plug, 120 V, US	31 5012
	Cable with plug, 240 V, GB	31 5014
	Cable with plug, 240 V, AU	31 5013
19, 20	End cap with screws	31 4426

to be continued



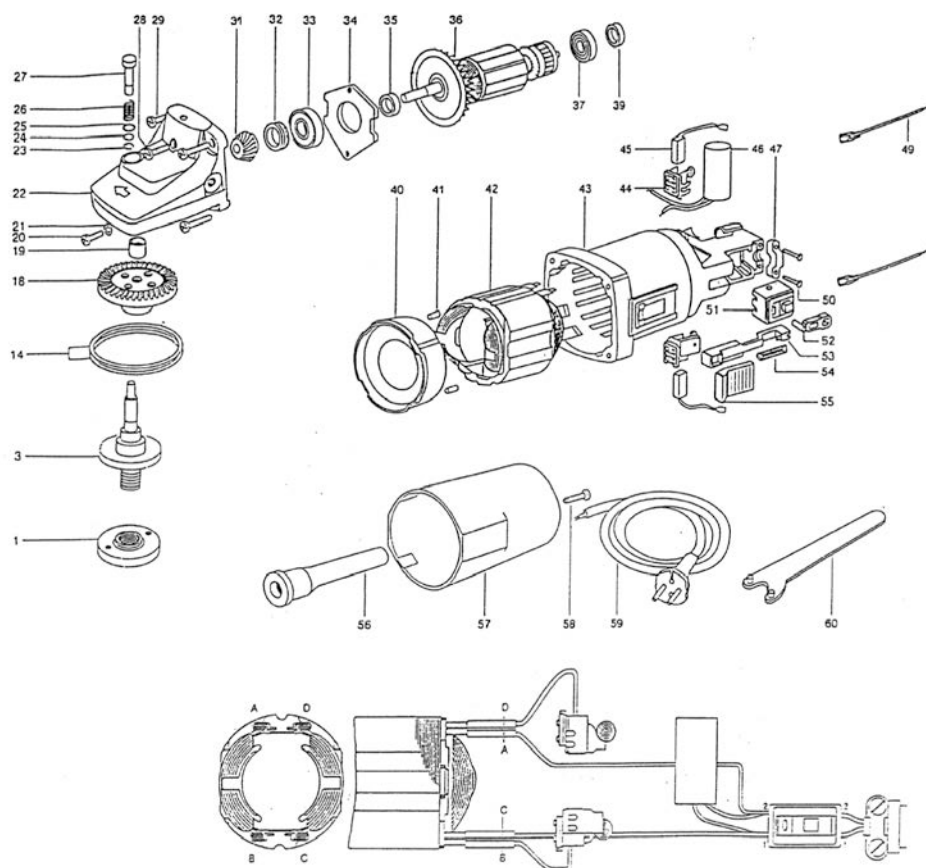
Electric motor
L44 EZ – Zeta



Pos.	Description	Art. No.
21, 22, 23	Switch with Digital-Electronic with PTC, 230 V	31 4451
	Switch with Digital-Electronic with PTC, 120 V	31 4450
24, 25, 29	Switch rod, switch bar, spring	31 4427
26	Spring for carbon brush	31 4409
27	Brush holder	31 4407
28	Carbon brush 230 V (1 pair)	31 4408
	Carbon brush 120 V (1 pair)	31 4430
30	Motorcap	31 4404
31	Stator 230 V T.	31 4458
	Stator 110 V	31 4457
32	Screws Ø 4 × 68 for stator	31 4414
	Electric motor complete L 44 EZ with guide and Vertical mechanical drive 230 V CH	30 4440CH
	Electric motor complete L 44 EZ with guide and Vertical mechanical drive 230 V DE	30 4440DE
	Electric motor complete L 44 EZ with guide and Vertical mechanical drive 120 V US	30 4440US
	Electric motor complete L 44 EZ with guide and Vertical mechanical drive 240 V GB	30 4440GB
	Electric motor complete L 44 EZ with guide and Vertical mechanical drive 240 V AU	30 4440AU



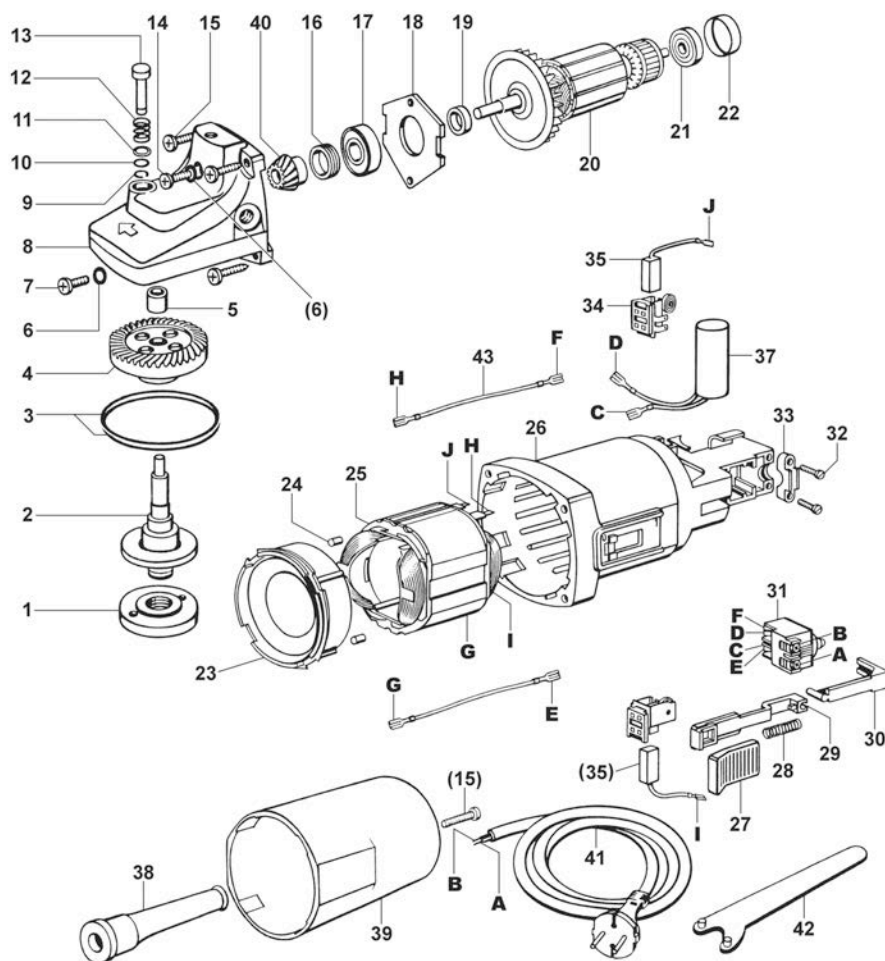
Electric motor L45 – Classic C2, G2A



Pos.	Description	Art. No.
1	Flange (tension nut)	31 4546
3	Milling spindle	31 4544
14	Distance disc	31 4534
18	Ring gear (not available individually)	31 4519
18 + 31	Ring gear with pinion	31 4542
22	Gear box case	31 4540
29	Screw for motor cap	31 4532
31	Pinion	31 4520
32	Sealing for rotor	31 4521
33	Ball bearing for rotor 629 ZR	31 4522
37	Groove ball bearing 626 Z	31 3213
31 - 37	Rotor complete, 230 V	31 4505
	Rotor complete 120 V	31 4506
39	Insulating ring	31 4527
40, 41	Air guiding disc	31 4531
42	Field coil 230 / 240 V	31 4507
	Field coil 120 V	31 4508
43	Motor casing red	31 4515
44	Brush holder 230 V /120 V	31 4517
45	Carbon brush 230 V /120 V	31 4514
46	Condenser	31 4513
49	Cable	31 4533
49.1	Inductor	31 4512
51	Switch	31 4510
52 - 55	Switch rod with bar complete	31 4511
56	Cable protection	31 4528
57	Motor cap	31 4516
58	Screw	31 4532
59	Cable with plug CH	31 5010
	Cable with plug D	31 5011
	Cable with plug US	31 5012
60	Face spanner 30/5	27 1949



Electric motor
L46 – Classic C3, G2A

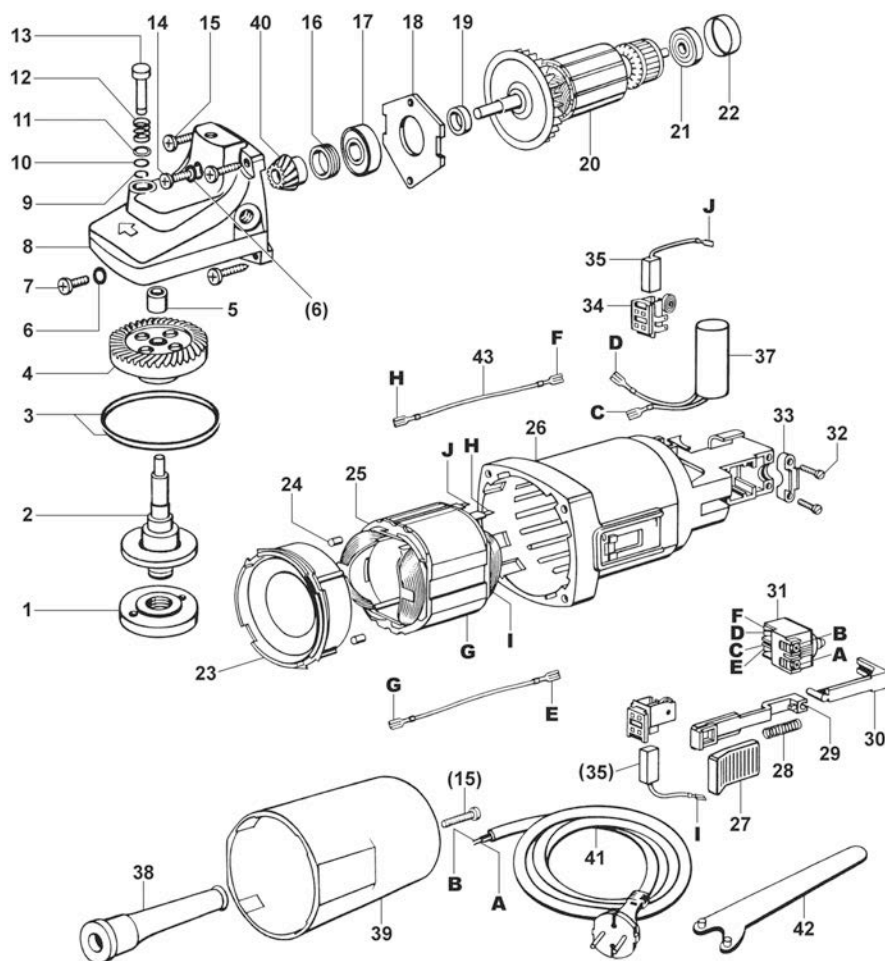


Pos.	Description	Art. No.
1	Flange (tension nut)	31 4518
2	Milling spindle	31 4544
3	Distance ring	31 4534
4	Ring gear (not available individually)	31 4519
4, 40	Ring gear with pinion	31 4542
8	Gear box case	31 4540
15	Screw	31 4532
16	Sealing	31 4521
17	Groove ball bearing 629 ZR	31 4522
21	Groove ball bearing 626 Z	31 3213
16 - 22, 40	Rotor complete 230 V	31 4505
	Rotor complete 120 V	31 4506
22	Insulating ring	31 4527
23, 24	Air guiding disc	31 4531
25	Field coil 230 V	31 4507
	Field coil 120 V	31 4508
26	Motor casing red	31 4615
27 - 30	Switch rod complete	31 4611
31	Switch	31 4610
31 A (Pos. 31 + 37)	Switch with condenser	31 4612
34	Brush holder 230 V / 120 V	31 4517
35, 36	Carbon brush 230 V / 120 V	31 4514
37	Condenser	31 4613
38	Cable protection	31 4528
39	Motor cap	31 4516

to be continued



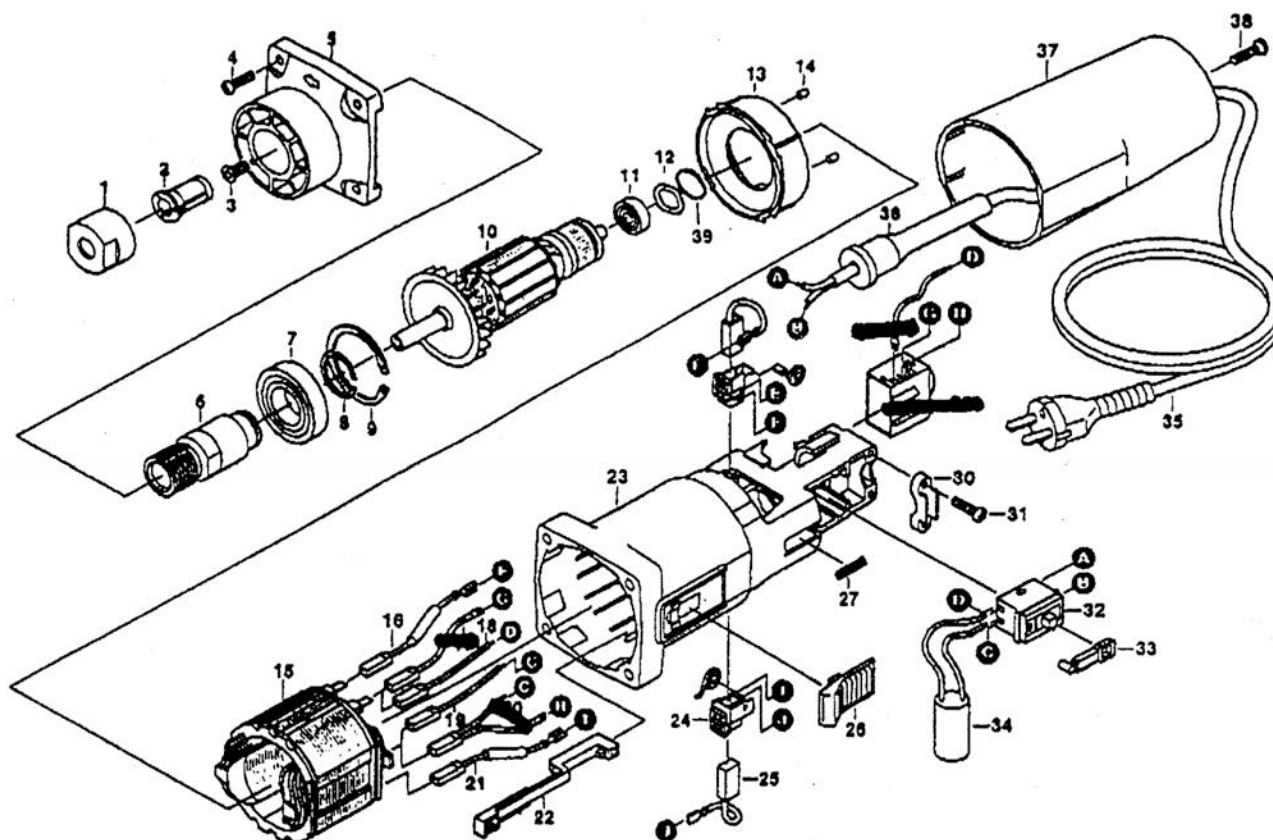
Electric motor
L46 – Classic C3, G2A



Pos.	Description	Art. No.
1 - 39	Electric motor complete 230 V, CH	30 4502
	Electric motor complete 230 V, D	30 4501
	Electric motor complete 120 V, US	30 4503
40	Pinion	31 4520
41	Cable with plug CH	31 5010
	Cable with plug D	31 5011
	Cable with plug US	31 5012
42	Face spanner 30/5	27 1949
43	Cable 230 V	31 4533
	Cable triple	31 4616
43.1	Inductor	31 4512
44	Cable	31 4617



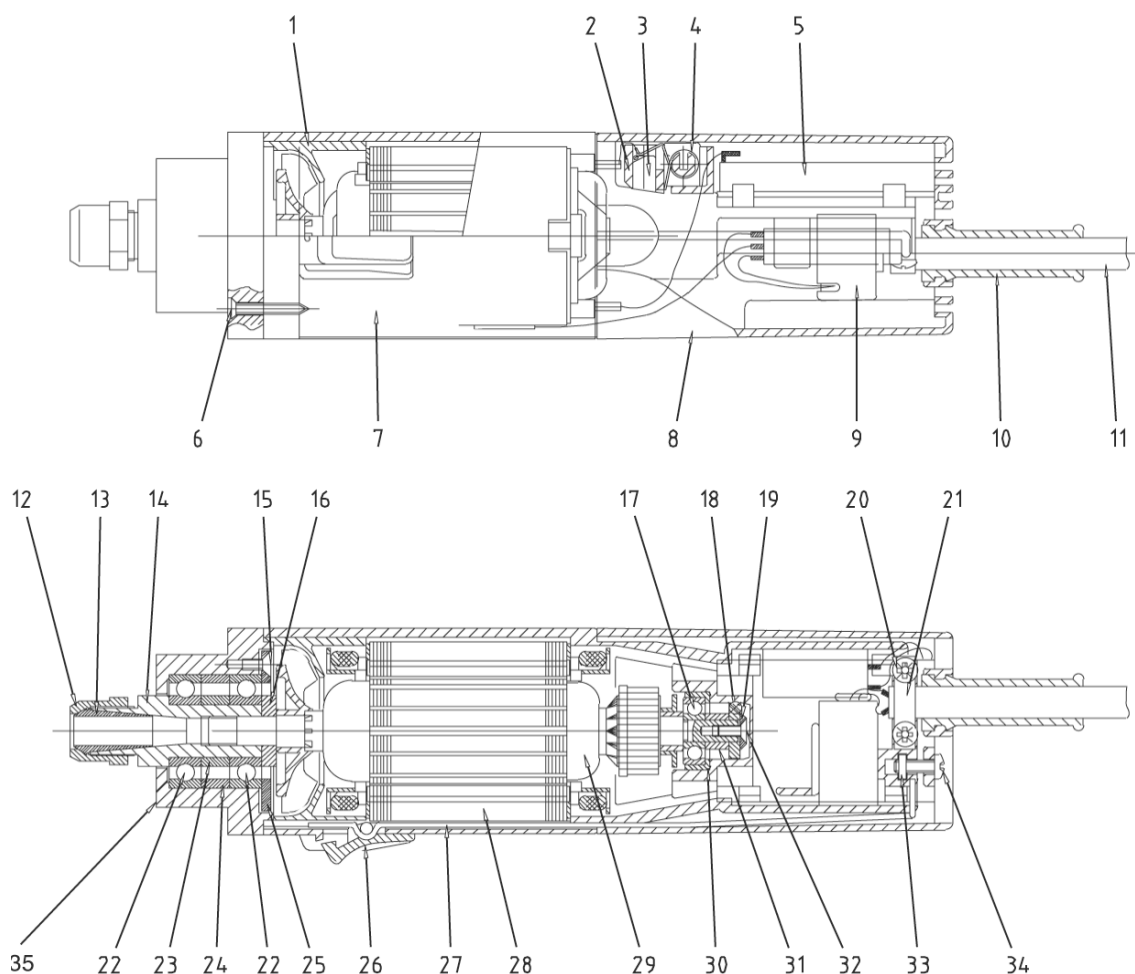
Electric motor
L50 – Profila E 230 V



Pos.	Description	Art. No.
1	Collect nut	25 1969
2	Collet chuck 6 mm	25 1960
	Collet chuck ¼"mm	25 1961
	Collet chuck 8 mm	25 1962
4	Screw	31 4532
6	Spindle	31 4509
7	Groove ball bearing for rotor 6002 ZZ	31 7217
11	Groove ball bearing for rotor 629 Z	31 3213
1 - 11	Rotor with flange 230 V	31 4605
12	Insulating ring	31 4527
13, 14	Air guiding disc	31 4531
15	Field coil 230 V	31 4607
16	Inductor	31 4512
23 + 24 + 12	Motor casing with brush holder	31 4515
24	Brush holder 230 V / 120 V	31 4517
25	Carbon brush 230 V / 120 V	31 4514
32	Switch	31 4510
34	Condenser	31 4513
35	Cable with plug «CH» Type 11	31 5010
	Cable with plug «D» Schuko	31 5011
	Cable with plug «US»	31 5012
37	Motor cap	31 4516
26, 33, 22, 27	Switch rod with bar complete	31 4511
1 - 38	Electric motor complete 230 V «CH» with collet chuck 8 mm	30 4602
	Electric motor complete 230 V «D» with collet chuck 8 mm	30 4601



Electric motor
L51 – Profila E 120 V

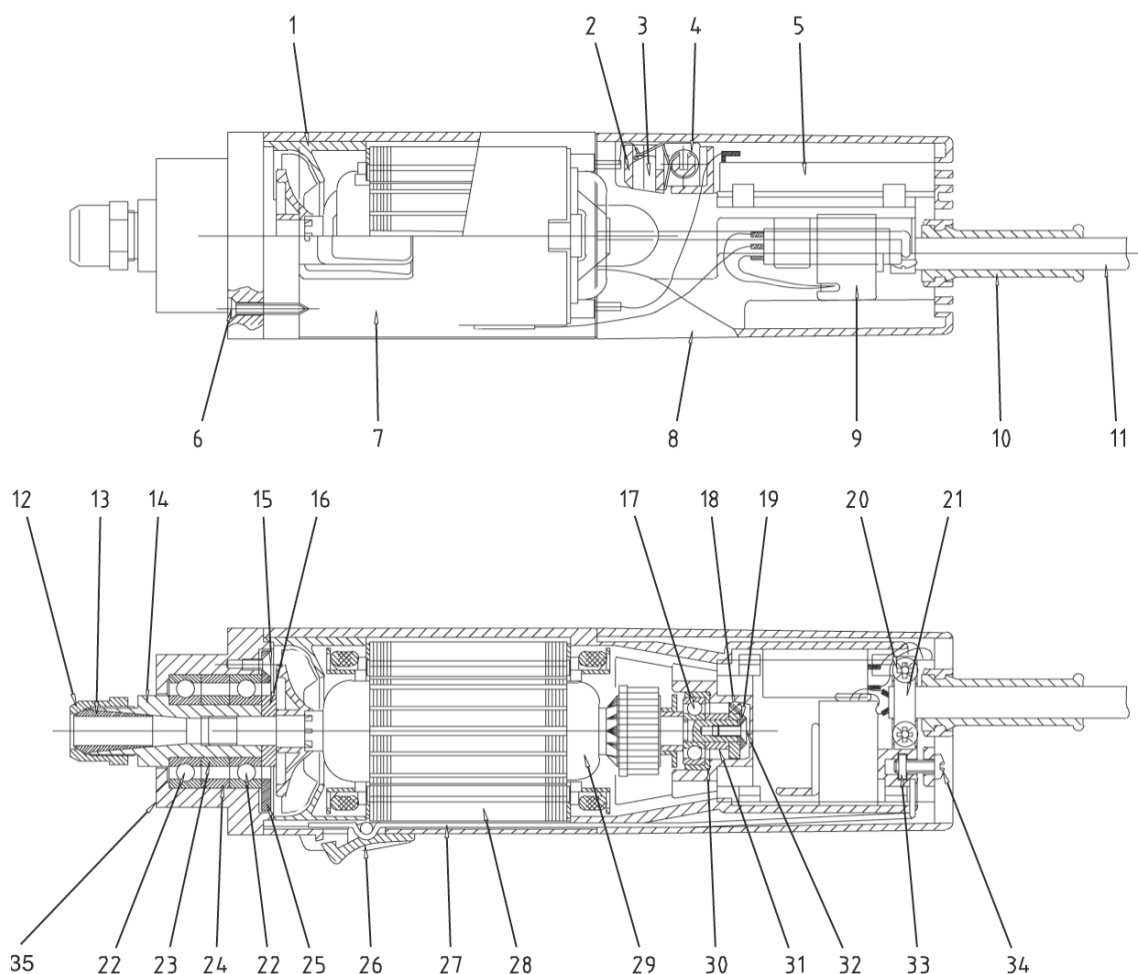


Pos.	Description	Art. No.
1	Ventilator covering	31 4315
2, 4	Holder for carbon brush with spring	31 4314
3	Carbon brush 230 V	31 4305
	Carbon brush 110 V	31 4305US
5	Electronic without PTC, condenser 230 V	31 5104
	Electronic without PTC, condenser 110 V no more available	31 5104US
	Condenser 0.22mF 230 / 110 V	31 6005
6	Countersunk screw 2.9 x 22	35 5022
7, 20, 21	Casing box, cable strap with screws	31 4310
8	Motor cap with screw, cable strap	31 4311
9	Switch 230 / 110 V	31 4303
10	Cable protection	31 4309
11	Cable with plug «CH» Typ 11	31 5010
	Cable with plug «D» Schuko	31 5011
	Cable with plug «US»	31 5012
	Cable with plug «AUS»	31 5013
12	Collet nut	31 5113
13	Collet chuck ± 8 mm	31 5112
14	Spindle	31 5110
15	Countersunk screw M 3 x 8	35 2308A
16	Stopring	31 5115
17	Deep-groove ball bearing 626 2RS	31 4320
16 - 19, 29, 31, 32	Rotor complete 230 V	31 5101
	Rotor complete 110 V	31 5101US
18, 19, 31, 32	Ring magnet complete	31 4306

to be continued



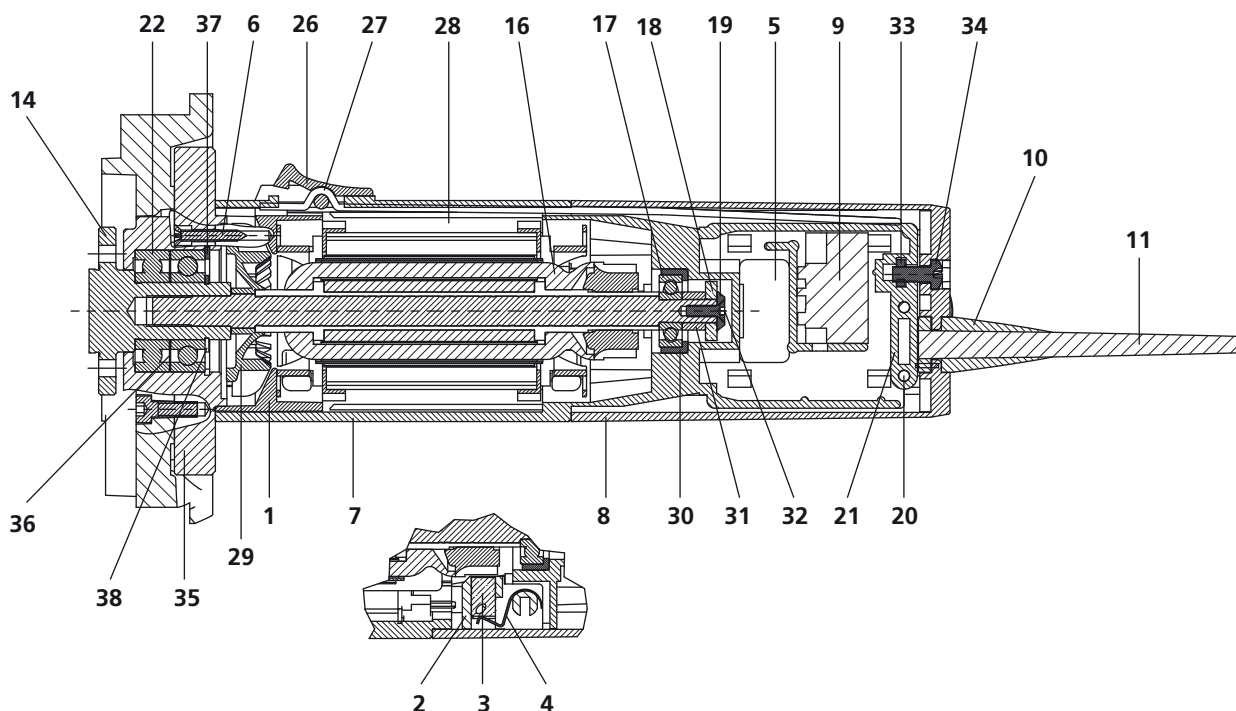
Electric motor
L51 – Profila E 120 V



Pos.	Description	Art. No.
22	Deep-groove ball bearing 6002 Z	31 5111
23, 24	Distance washer	31 5116
25	Pressure disk	31 5117
26	Switch bar	31 4312
	Switch rod	31 4313
28	Stator with PTC 230 V	31 4302
	Stator with PTC 110 V	31 4302US
28.1	Ventilator	31 5102
30	Insulating ring	31 4316
33, 34	Square nut with screw M4 x 10	31 4322
35	Flange	31 5114
1 - 35	Electric motor complete 230 V CH	30 5100CH
	Electric motor complete 230 V DE	30 5100D
	Electric motor complete 110 V	30 5100US
	Electric motor complete 230 V	30 5100AUS



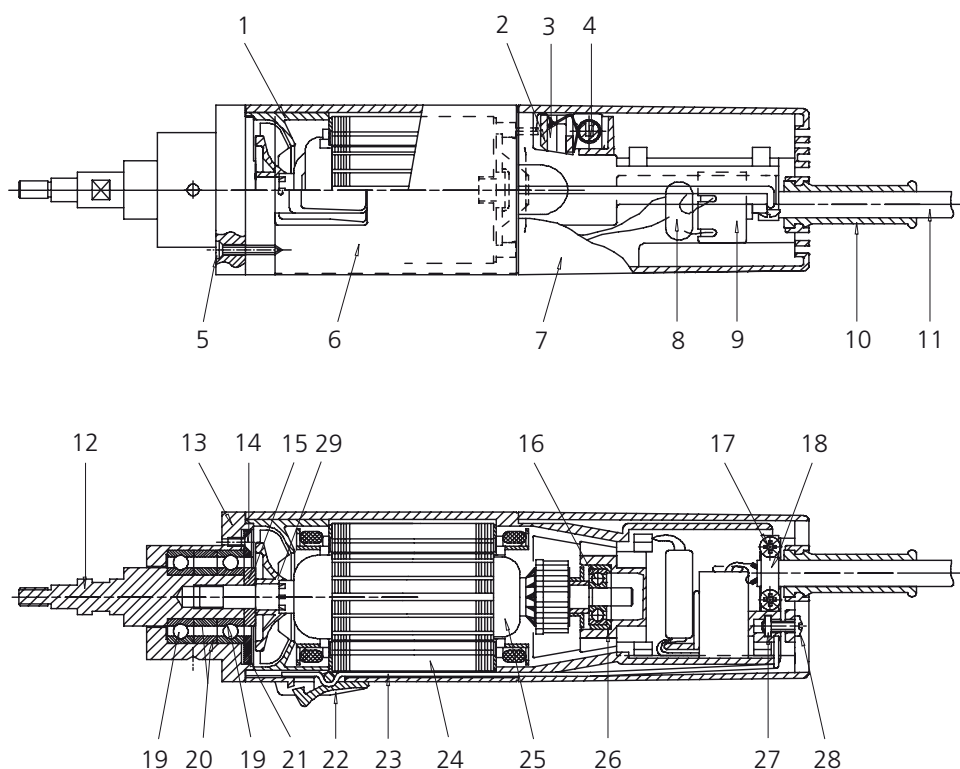
Electric motor L52 – Patchmaker 2 (Saw unit)



Pos.	Description	Art. No.
1	Ventilator covering	31 4315
2, 4	Holder for carbon brush with spring	31 4314
3	Carbon brush 230 V	31 4305
	Carbon brush 110 V	31 4305US
5	Elektronik mit Pot. und PTC 230 V	31 5204
	Elektronik mit Pot. und PTC 110 V	31 5204US
6	Senkblechschraube 2.9 x 22	35 5022
7, 20, 21	Isoliergehäuse, Kabelbride mit Schrauben	31 4310
8	Motor cap	31 4311
9	Switch 230 / 110 V	31 4303
10	Cable protection	31 4309
11	Cable with plug «CH» Typ 11	31 5010
	Cable with plug «D» Schuko	31 5011
	Cable with plug «US»	31 5012
	Cable with plug «AUS»	31 5013
14	Spindel	31 5209
17	Deep-groove ball bearing 626 2RS	31 4320
16 - 19, 29, 31, 32	Rotor complete 230 V	31 5101
	Rotor complete 110 V	31 5101US
18, 19, 31, 32	Ring magnet complete	31 4306
22	Deep-groove ball bearing 6002 Z	31 5111
26	Schiebeschalter	31 4312
27	Schaltstange	31 4313
28	Stator with PTC 230 V	31 4302
	Stator with PTC 110 V	31 4302US
29	Ventilator	31 5102
30	Insulating ring	31 4316
33, 34	Vierkantmutter, Linsenschraube M4 x 10	31 4322
35	Flange	31 5205
36	Justierscheibe	31 5210
27	Sicherungsring für Bohrung	31 5207
38	Sicherungsring für Welle	31 5208
1 - 35	Electric motor complete 230 V CH	30 5201CH
	Electric motor complete 230 V DE	30 5201D
	Electric motor complete 110 V	30 5201US
	Electric motor complete 230 V	30 5201AUS



Electric motor
L56 – Lamina

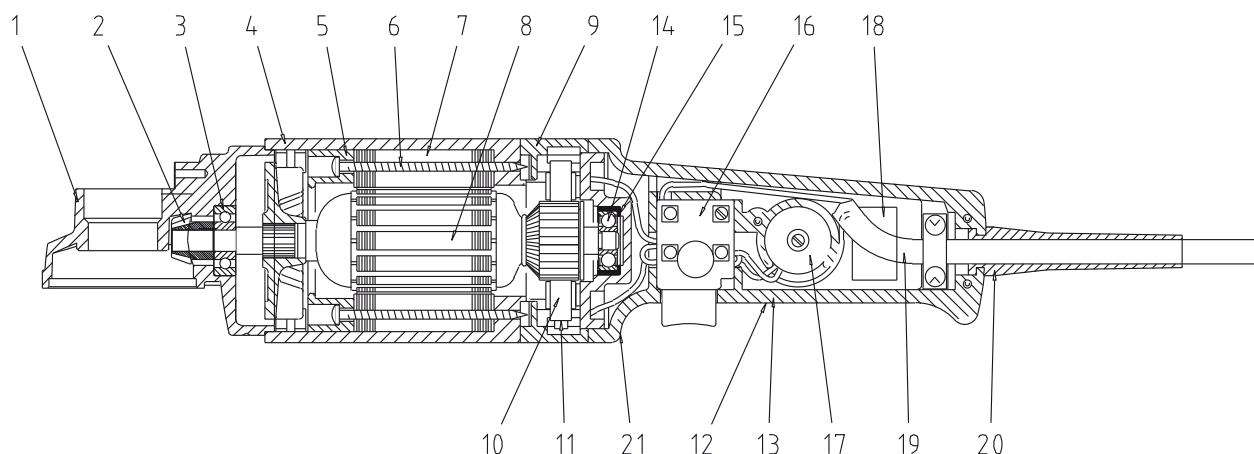


Pos.	Description	Art. No.
1	Ventilator covering	31 4315
2, 4	Holder for carbon brush with spring	31 4314
3	Carbon brush 230 V (Paar)	31 4305
	Carbon brush 120 V (Paar)	31 4305US
5	Countersunk screw 2.9 x 22	35 5022
6, 18	Casing box, cable strap with screws	31 4310
7, 17, 18	Motor cap	31 4311
8	Condenser 0.22 mF 230 / 110 V	31 6005
9	Switch 230 / 110 V	31 4303
10	Cable protection	31 4309
11	Cable with plug «CH» Typ 11	31 5010
	Cable with plug «D» Schuko	31 5011
	Cable with plug «US»	31 5012
	Cable with plug «AUS»	31 5013
12	Spindle	31 5611
13	Flange	31 5610
14	Countersunk screw M3 x 8	35 2308A
15	Stopping	31 5115
16	Deep-groove ball bearing 626 2RS	31 4320
15, 16, 25, 26	Rotor complete 230 V	31 5601
	Rotor complete 110 V	31 5601US
19	Deep-groove ball bearing 6002 Z	31 5111
20	Distance washer	31 5116
21	Pressure disk	31 5117
22	Switch bar	31 4312
23	Switch rod	31 4313
24	Stator 230 V	31 5602
	Stator 110 V	31 5602US
1	Ventilator	31 5102
26	Insulating ring	31 4316
27, 28	Square nut with screw M4 x 10	31 4322
1 - 28	Electric motor complete 230 V «CH»	30 5600CH
	Electric motor complete 230 V «D»	30 5600D
	Electric motor complete 110 V «US»	30 5600US
	Electric motor complete 230 V «AUS»	30 5600AUS



Electric motor

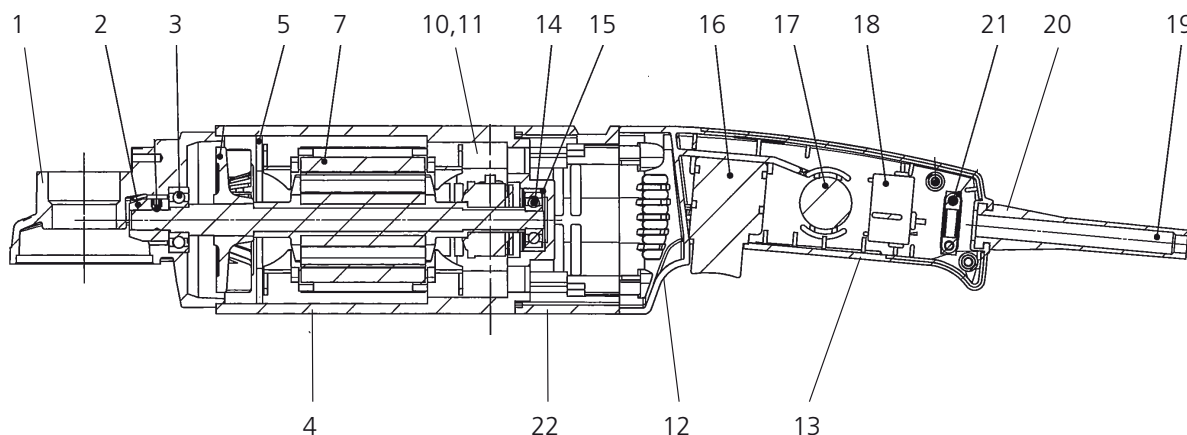
L60, L60 S2 – Cantex (S, S2), Plano 45 (S, S2)



Pos.	Description		Art. No.
1	Gear box case		26 6000
2	Ring gear, pin and pinion, spiral-toothed	L 60 S2	31 6031
3	Groove ball bearing 6000-2RS		31 3211
4	Casing complete		31 6011
5	Ventilator covering		31 6014
6	Sheet metal screw 3.9 x 68, 2 Stk.		31 6015
7	Stator 110 V, 1000 W		31 6002US
	Stator 230 V, 1000 W		31 6002
2, 3, 38, 14	Rotor complete 230 V	L 60 S2	31 6030
	Rotor complete 110 V	L 60 S2	31 6030US
9	Covering (carbon)		31 6013
10	Carbon brush 6.3 x 8 x 16110 / 230 V, 2 Stk		31 6006
11	Spring ring 3, 2 pcs		31 6007
12, 13, 21	Handle complete: Handle, cover, screws, cable strap		31 6012
14	Ball bearing 627 RCS C3 627 Z		31 6017
15	Insulating ring		31 6016
16	Switch 110 V Capax		31 6003US
	Switch 230 V Capax		31 6003
17	Protection switch 10 A, 110 V		31 6004US
	Protection switch 5 A, 230 V		31 6004
18	Condenser 0,22 mF 110 / 230 V		31 6005
19	Cable with plug «CH» Typ 11		31 3720
	Cable with plug «D» Schuko		31 3721
	Cable with plug «US»		31 3523
20	Cable protection		31 6008
21	Sheet metal screw B, 30.5 x 25, 4 Stk		31 6018
1 - 21	Electric motor complete 230 V:		
	motor, gear unit, guide	L 60 S2	30 6005CH
	Electric motor complete 230 V	L 60 S2	30 6005D
	Electric motor complete 110 V	L 60 S2	30 6005US
	Conversion set from straight to spiral toothing	L60-L60 S2	25 1860



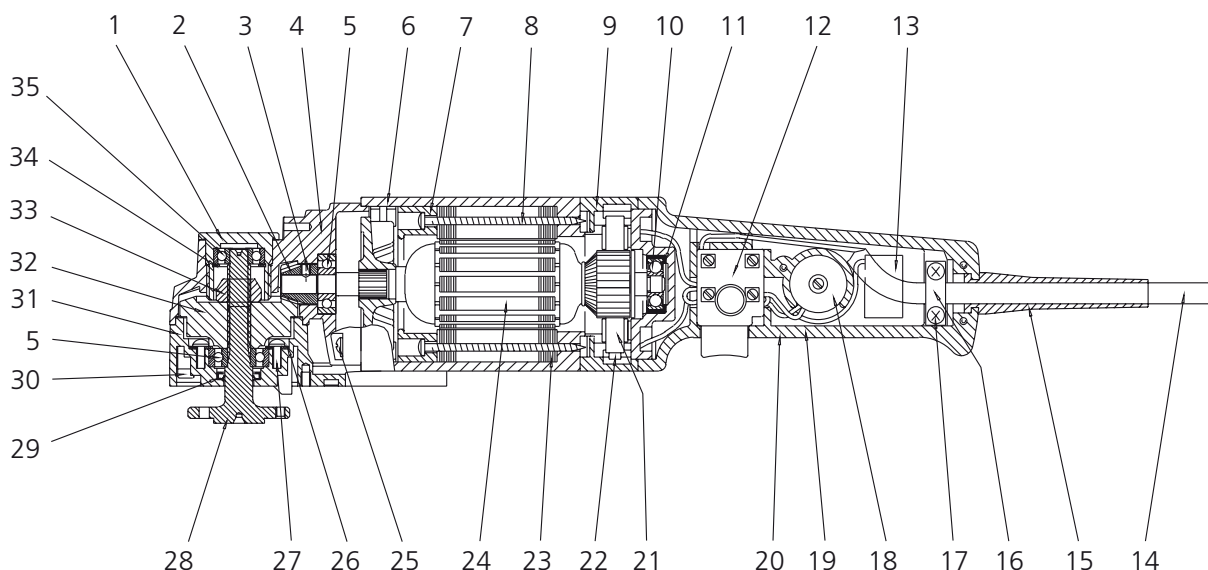
Electric motor L60 – with electronic fast stop



Pos.	Description	Art. No.
1	Gear box case	26 6000
2	Pinion + ring gear spiral-thoothed	L 60 S2 31 6031
3	Ball bearing 6000-2RS	31 3211
4	Casing box complete (without electronic motor stop)	31 6011
5	Ventilator covering	31 6014
7	Stator 230 V, 1000 W	31 6002
2, 3, 38, 14	Rotor complete 230 V	L 60 S2 31 6030
10	Carbon automatic stopping motion 6.3 x 8 x 16110 / 230 V, 2 pcs	31 6006
11	Spring ring 3, 2 pcs	31 6007
12, 13, 21	Handle complete: Handle, cover, screws, cable strap	31 6012
14	Ball bearing 627 RCS C3 627 Z	31 6017
15	Insulating ring	31 6016
16	Switch 230 V Capax	31 6003
17	Protection switch 5 A, 230 V	31 6004
18	Condenser 0,22 mF 110 / 230 V	31 6005
19	Cable with plug «CH» Typ 11	31 3720
	Cable with plug «D» Schuko	31 3721
20	Cable protection	31 6008
21	Screw B, 30.5 x 25, 4 pcs	31 6018
22	Electronic motor stop	31 6019
1 - 22	Electric motor complete 230 V: motor, gear unit, guide with electronic motor stop	L 60 S2 31 6090D



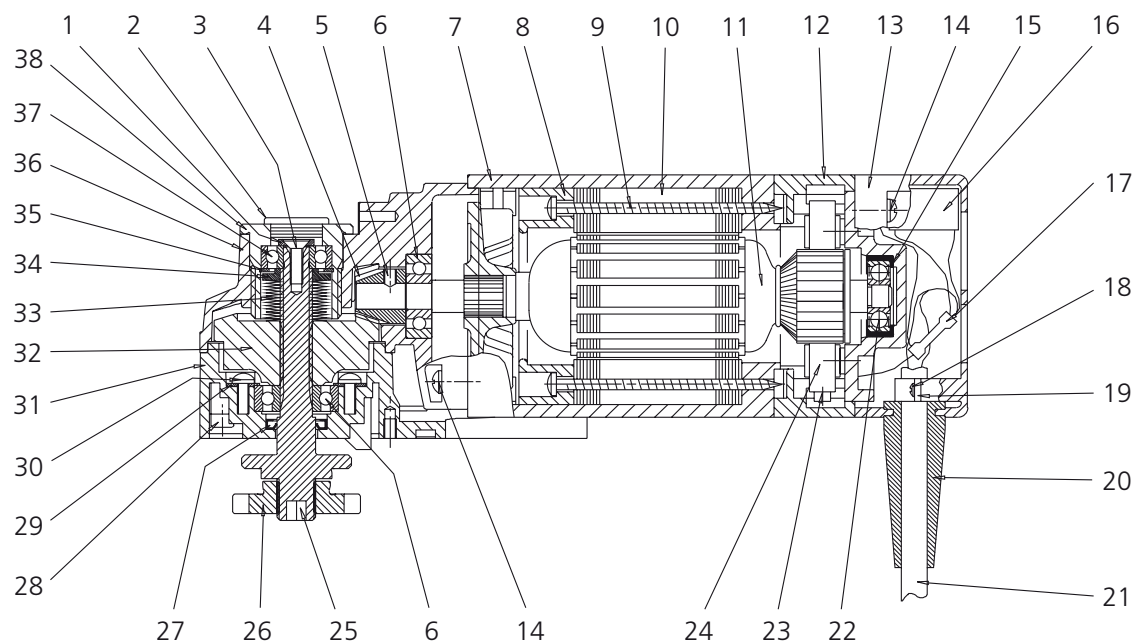
Electric motor L 61, L 61 S2 – Tanga 1811 (S, S2)



Pos.	Description	Art. No.
1, 4, 34, 35	Gear box case complete	31 6110
2, 3, 32	Pinion + ring gear, spiral-toothed	L 61 S2 31 6031
	Pinion + ring gear, spiral-toothed	L 61 31 4041
5	Ball bearing 6000-2RS	31 3211
6	Casing box complete	31 6011
7	Ventilator covering	31 6014
8	Sheet metal screw 3.9 x 68, 2 pcs.	31 6015
9	Covering (brushes)	31 6013
10	Ball bearing 627 RCS C3	31 6017
11	Insulating ring	31 6016
12	Switch 230 V Capax	31 6003
	Switch 110 V Capax	31 6003US
13	Condenser 0.22mF 230 V / 110 V	31 6005
14	Cable with plug «CH» Typ 11	31 3720
	Cable with plug «D» Schuko	31 3721
	Cable with plug «US»	31 3523
15	Cable protection	31 6008
16, 17, 19, 20	Handle complete with cable strap	31 6012
18	Protection switch 5 A, 230 V	31 6004
	Protection switch 10 A, 110 V	31 6004US
21	Carbon automatic stopping motion 110 / 230 V, 6.3 x 8 x 16	31 6006
22	Spring ring 3, 2 pcs	31 6007
23	Stator 110 V, 1000 W	31 6002US
	Stator 230 V, 1000 W	31 6002
2, 3, 5, 10, 24	Rotor complete 110 V, 1000 W: Pinion spiral-toothed, rotor, 2 bearings	31 6030US
	Rotor complete 230 V, 1000 W: (dito 110 V)	31 6030
25	Screw B, 3.5 x 25, 4 pcs	31 6018
5, 26, 27, 29, 31	Guide complete	25 6101
28	Milling spindle	34 1530
30	Screw M4 x 25	35 2425
32	Ring gear, with helical toothing	L 61 S2 31 6032
	Ring gear, straight toothing	L 61 34 1042
33	Safety nut M10	35 4110
34	Safety ring for holes d 22	35 1044
1 - 35	Electric motor complete L61 S2, CH, 230 V with guide	30 6105CH
	Electric motor complete L61 S2, D, 230 V with guide	30 6105D



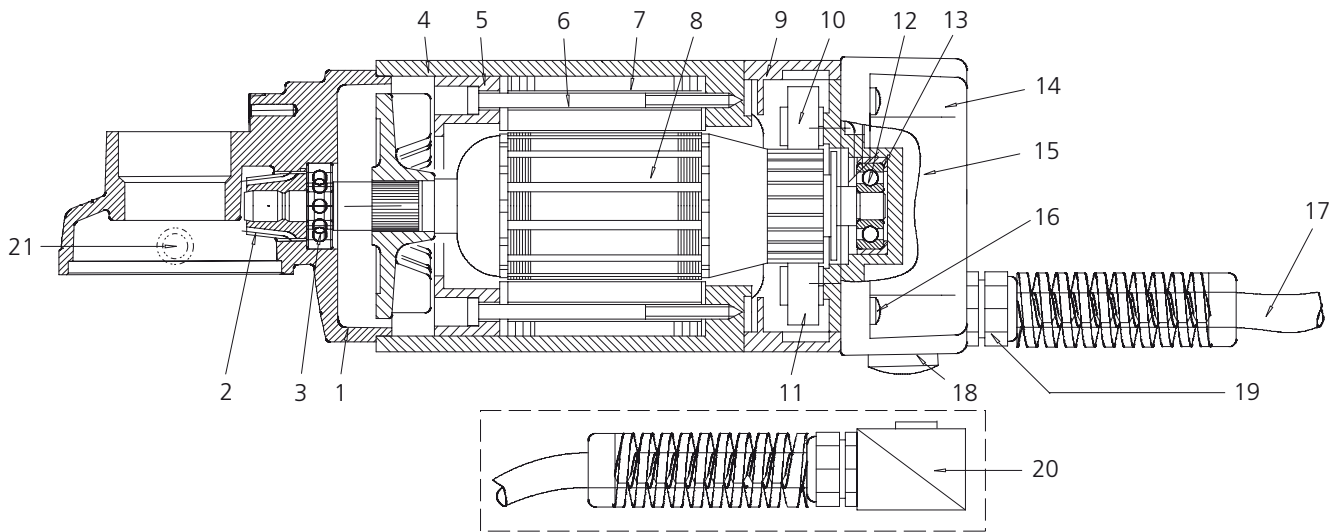
Electric motor L62 S2 – Minisport G20 S2



Pos.	Description	Art. No.
1, 3	Countersunk screw and washer	31 4045
2	Plastic plug black	33 1741
5, 32	Ring gear, pin and pinion	31 6031
6	Groove ball bearing 6000-2RS	31 3211
7	Casing box complete	31 6011
8	Ventilator covering	31 6014
9	Sheet metal screw 3.9 x 68, 2 Stk.	31 6015
10	Stator 110 V, 1000 W	31 6002US
	Stator 230 V, 1000 W	31 6002
4 - 6, 11, 22	Rotor complete 110 V	31 6030US
	Rotor complete 230 V	31 6030
12	Covering (carbon)	31 6013
13, 18, 19	Motor cap with cable strap	31 6203
14	Sheet metal screw B, 3.5 x 25, 4 Stk	31 6018
15	Insulating ring	31 6016
16	Condenser 0,22mF 110 / 230 V	31 6005
17	Isolated shock connector	31 6204
20	Cable protection	31 6008
21	Cable with plug «CH» Typ 11	31 3720
	Cable with plug «D» Schuko	31 2721
	Cable with plug «US»	31 3523
22	Ball bearing 627 RCS C3	31 6017
23	Spring ring 3, 2 Stk	31 6007
24	Carbon brush automatic stopping 6.3 x 8 x 16, 110 / 230 V, 2 pcs	31 6006
25	Milling spindle	34 1750
26	Flange	34 1751
28	Screw M4 x 25	35 2425
6, 27, 29, 30, 31	Guide complete	25 6101
32	Ring gear, with helical toothing	31 6032
33, 34	Disk spring with spacing disk	31 4042
35	Safety ring for holes d 22	35 1044
36	Gear box casing	31 6202
37	Groove ball bearing 608 ZZ	31 3215
38	Screw	34 1752
1 - 38	Electric motor complete L62 S2, 230 V	30 6200
	Electric motor complete L62 S2, 110 V	30 6200US



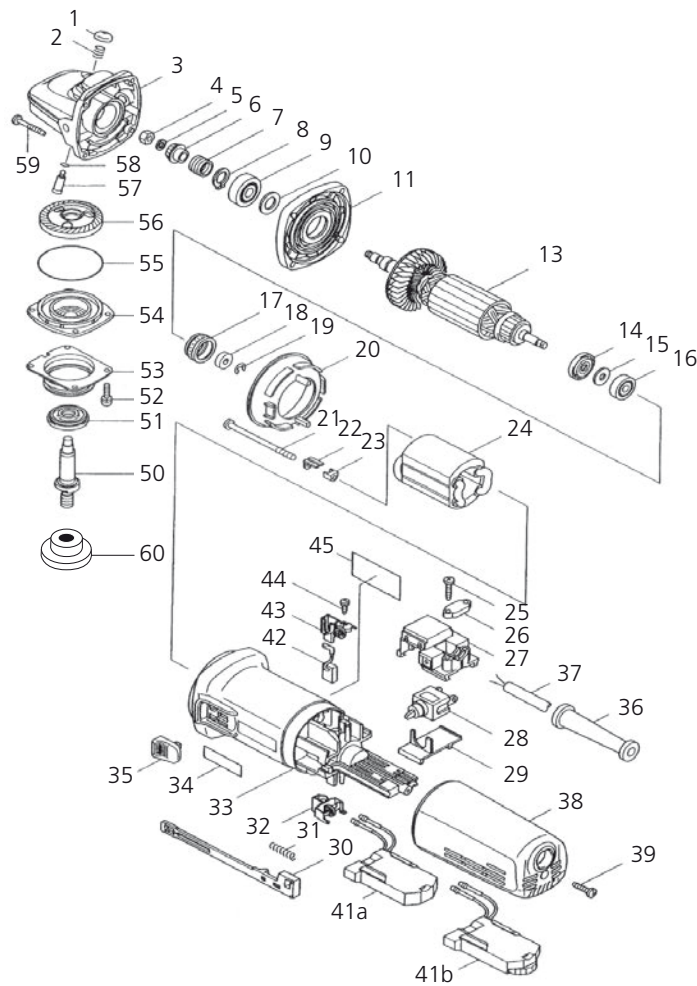
Electric motor
L63 – Cantex Ergo



Pos.	Description	Art. No.
1, 21	Gear box with spindle stop	31 6202
2	Ring gear and pinion	31 6031
3	Groove ball bearing 6000-2RS	31 3211
4	Casing box complete	31 6011
5	Ventilator covering	31 6014
6	Sheet metal screw 3.9 x 68; 2 pcs.	31 6015
7	Stator 110 V, 1000 W	31 6002US
	Stator 230 V, 1000 W	31 6002
2, 3, 8, 12	Rotor complete 110 V, 1000 W: pinion, rotor, 2 bearings	31 6030US
	Rotor complete 230 V, 1000 W: (dito 110 V)	31 6030
9	Covering (carbon)	31 6013
10	Carbon automatic stopping 6.3 x 8 x 16, 110 / 230 V, 2 pcs	31 6006
11	Spring ring 3, 2 pcs	31 6007
12	Ball bearing 627 RCS C3 627 Z	31 6017
13	Insulating ring	31 6016
14, 16, 18, 20	Motor cap with fitting for 90° cable retraining	31 6301 (CH/D/US)
15	Condenser	31 6005
16	Screw 3.5 x 25; 4 pcs.	31 6018
17	Cable with plug «CH»	31 3720
	Cable with plug «D» Schuko	31 3721
	Cable with plug «US»	31 3523
18	Cover screw	31 6302
19	Cable protection	31 6303
20	Fitting for 90° cable retraining with nut	31 6304
21	Spindle stop	31 6305



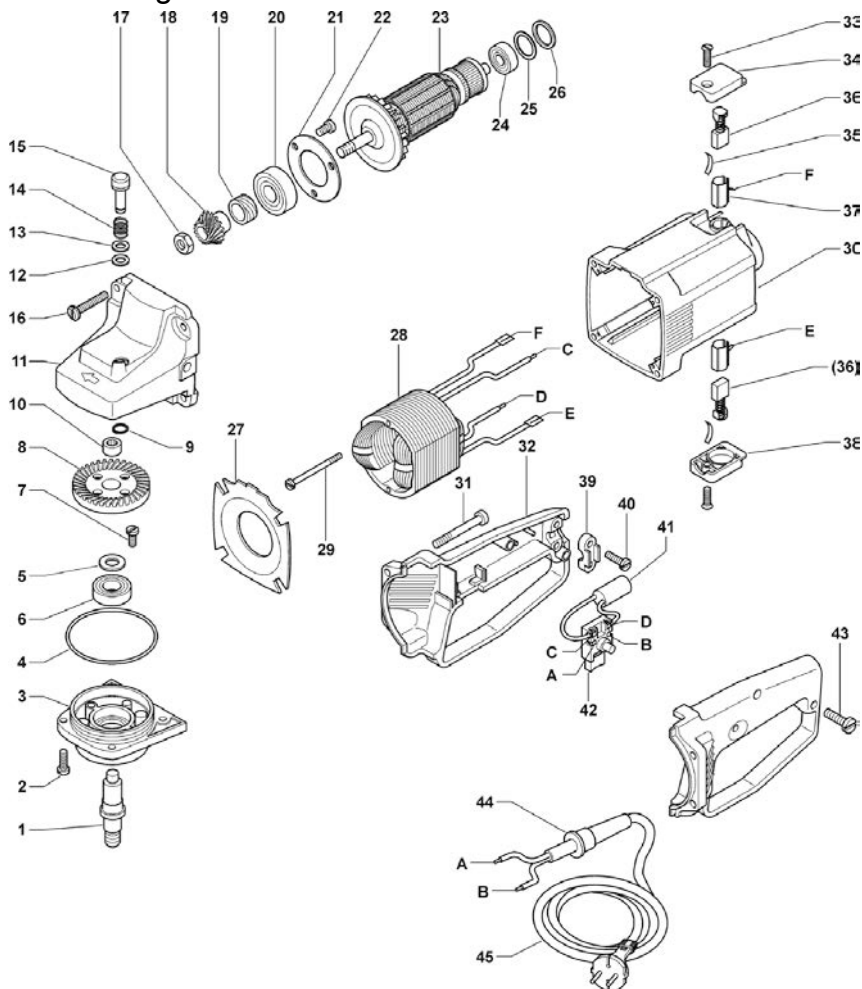
Electric motor L70 – Tanga Swiss



Pos.	Description	Art. No.
6	Pinion	31 7020
13 - 16	Rotor 230 V, with Groove ball bearing	31 7003
24	Stator 230 V	31 7004
28	Switch 230 V	31 7010
41a	Electronic (9565C, U/min fix)	31 7008
41b	Electronic (9565CV, U/min var.)	31 7007
42	Carbon brush 230 V	31 7006
56	Ring gear	31 7021
60	Flange	25 7002



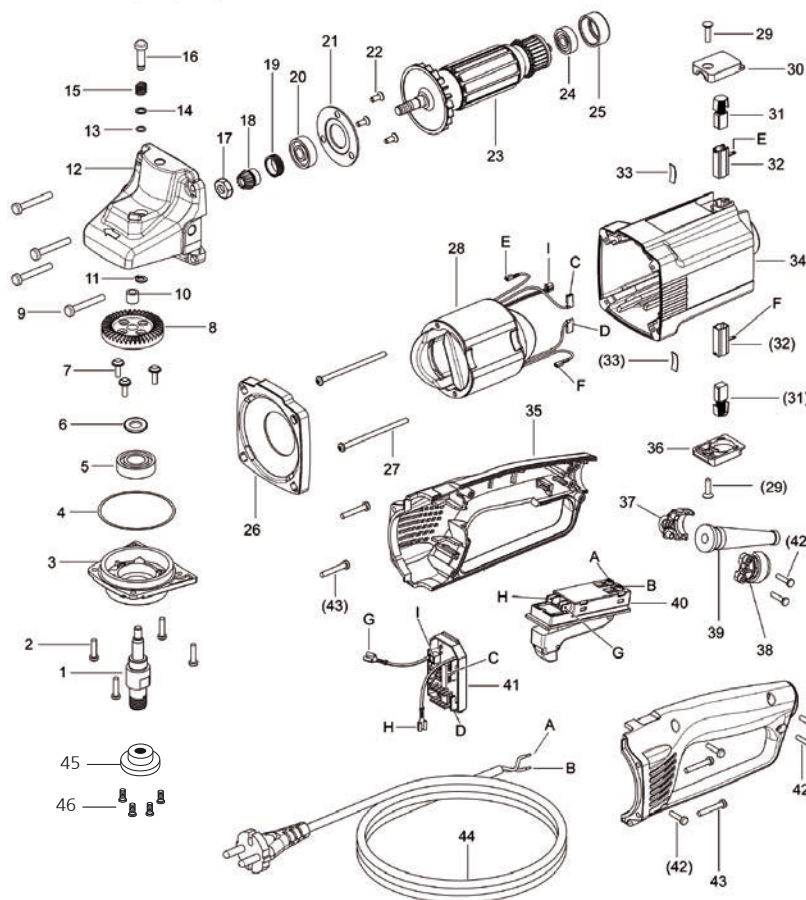
Electric motor L72 – Tanga Delta



Pos.	Description	Art. No.
4	Distance washer	31 7216
6	Groove ball bearing 6002 ZZ	31 7217
8	Ring gear (not available individually)	31 7219
8, 18	Ring gear with pinion	31 7218
1 - 8	Spindle with ring gear and flange	31 7212
10 - 16	Gear box complete	31 7213
16	Sheet metal screw 4.8 x 25	35 4825
18	Pinion (not available individually)	31 7220
19	Seal spring	31 7221
20	Groove ball bearing 629 ZR	31 4522
21	Covering	31 7222
23	Rotor	31 7201
24	Groove ball bearing 627 ZZ	31 3212
17 - 26	Rotor 230 V complete	no more available
27	Air channaling disk	31 7223
28	Stator 230 V	31 7202
30	Motor casing	31 7224
31, 32, 43	Casing complete in 2 parts	31 7225
33, 34	Carbon brush cover top with screw	31 7204
36	Carbon brush	31 7206
37	Brush holder	31 7207
33, 38	Carbon brush cover bottom with screw	31 7205
41	Condenser	31 7208
42	Switch	31 7209
44	Cable protector	31 4528
45	Cable with plug 4 m, CH	31 7210
	Cable with plug 4 m, D	31 7011
1 - 45	Electric motor complete 230 V, CH	30 7300CH
	Electric motor complete 230 V, CH	30 7300D



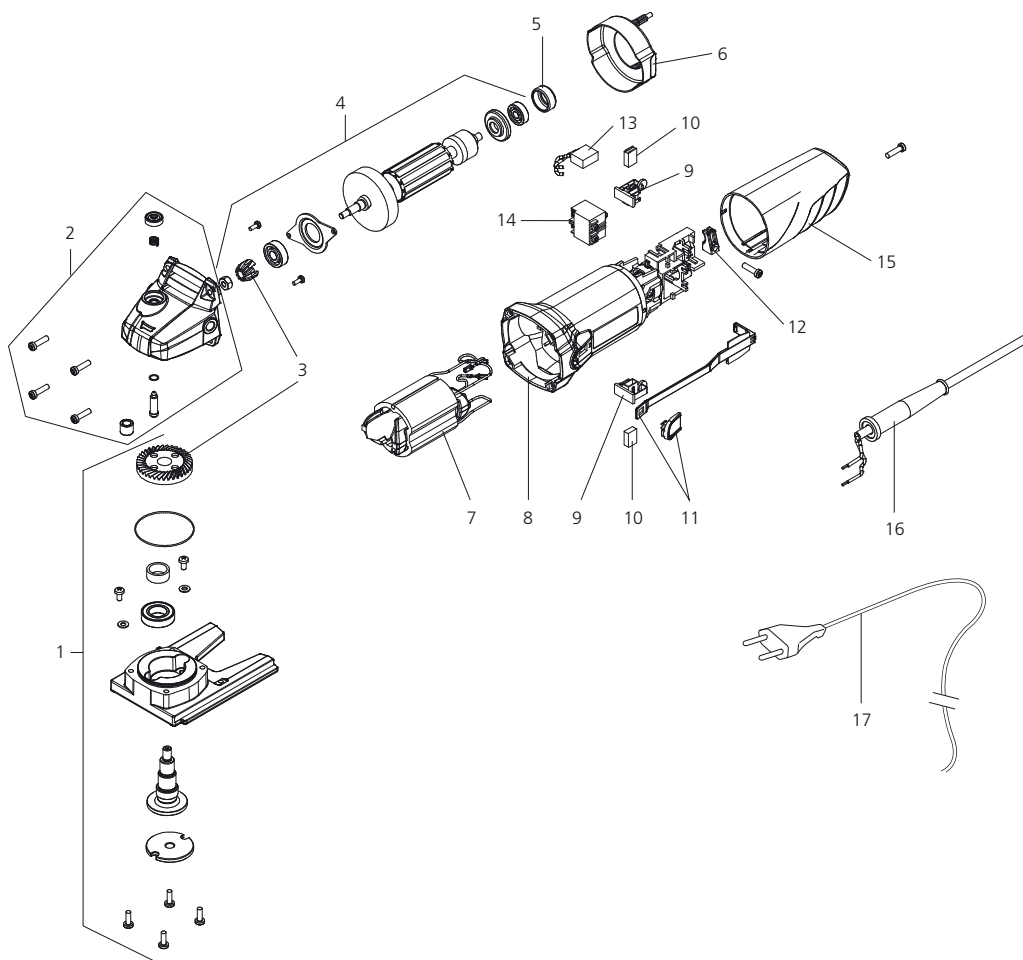
Electric motor L73 – Tanga Delta (H, S2)



Pos.	Description	Art. No.
4	Distance washer	31 7216
5	Groove ball bearing 6002 ZZ	31 7217
8	Ring gear	31 7219
8, 18	Ring gear with pinion	31 7218
1 - 8	Spindel with ring gear and flange	31 7312
10 - 16	Gear box complete	31 7213
9	Sheet metal screw 4.8 x 37	35 4837
18	Pinion	31 7220
19	Seal spring	31 7221
20	Groove ball bearing 629 ZR	31 4522
21	Covering	31 7222
23	Rotor	31 7301
24	Groove ball bearing 627 ZZ	31 3212
17 - 25	Rotor 230 V complete	31 7303
26	Air chaneling disk	31 7304
28	Stator 230 V	31 7302
32	brush holder	31 7207
34	Motor casing	31 7224
35, 41, 43	Handle complete	31 7305
29, 30	Carbon brush cover top with screw	31 7204
31	Carbon brush	31 7206
28, 36	Carbon brush cover bottom with screw	31 7205
39	Cable protector	31 7308
40	Switch	31 7306
41	Adjustable electronic	31 7307
44	Cable with plug 4 m, CH	31 7210
	Cable with plug 4 m, D	31 7211
45	Flange	34 1521
46	Screws	35 2408
1 - 46	Electric motor complete 230 V, D	30 7300D
	Electric motor complete 230 V, CH	30 7300CH



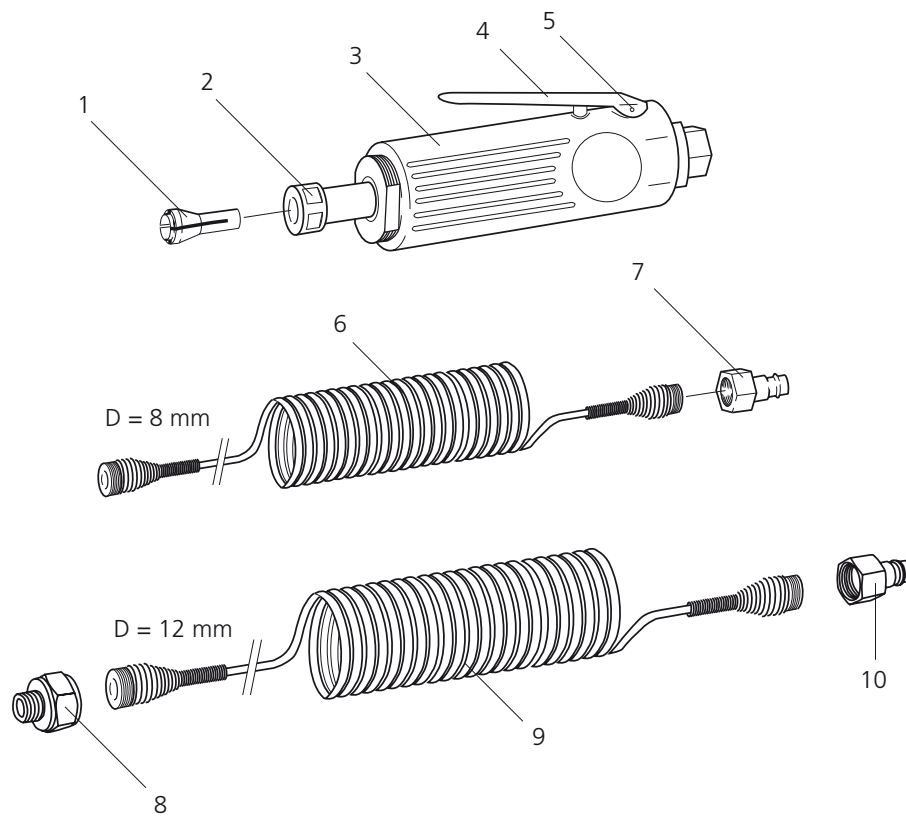
Electric motor
L81 – Classic X



Pos.	Description	Art. No.
1	Guide complete for Classic X	25 1011
2	Gear box complete incl spindle stopp	31 8115
3	Ring gear and pinion	31 8113
4	Rotor complete, 230 V, with pinion	31 8117
	Rotor complete, 120 V, with pinion	31 8120
5	Rubber insert	31 8121
6	Air deflection disk	31 8122
7	Field coil 230V	31 8123
	Field coil 120V	31 8124
8	Motor casing	31 8125
9	Holder for carbon brush	31 8126
10	Carbon brush set	31 8127
11	Switch slider and switch bar	31 8130
12	Cable clamp	31 8131
13	Condenser	31 8132
14	Switch	31 8133
15	Motor cap	31 8134
16	Cable protection	31 8135
17	Cable with plug 230 V D	31 5011
	Cable with plug 230 V CH	31 5010
	Cable with plug 120 V US	31 5012
	Cable with plug 230 V GB	31 5014
	Cable with plug 240 V AU	31 5013



**Compressed air motor
P50 – Profila P**

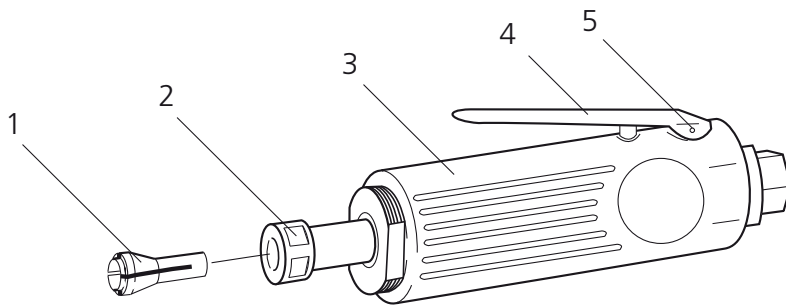


Pos.	Description	Art. No.
1	Collet chuck 6 mm	25 1966
	Collet chuck 1/4" (6.35 mm)	25 1967
	Collet chuck 8 mm	25 1968
2	Cap nut	25 1954
4, 5	Inductord lever	25 1955
1 - 5	Compressed air motor P 50 complete	30 1950
	Replacement motor P 50 (return defective motor)	30 1950A
6, 7	Spiral hose d = 8 mm, complete	25 1957
8 - 10	Spiral hose d = 12 mm, complete	25 1953

Year of manufacture until 2001, spare parts while stock lasts!



Compressed air motor
P51, P52 – Profila P2, Profila Pro



Pos.	Description	Art. No.
1	Collet chuck 6 mm	25 1966
	Collet chuck 1/4" (6.35 mm)	25 1967
	Collet chuck 8 mm	25 1968
2	Cap nut	25 1954
4, 5	Inductord lever	25 1955
1 - 5	Compressed air motor P 50 complete	30 1950
	Replacement motor P 50 (return defective motor)	30 1950A
	Replacement motor Pro	30 1952A