



Operating Instructions for the metal-shears

2017, 2017/E, 2020, 2020/E

To avoid any disturbance please read the following instructions:

For your safety:



1 Safe operation of this machine is possible only when the operating instructions and the safety precautions are read completely and the instructions contained therein are strictly observed.

2 The machine must not be used when damp and must not be operated in a wet environment.

3 Always inspect cable and plug before using machine. Only have damage repaired by a qualified professional. Put the plug into the mains socket only when the machine is switched off.

4+5 Always wears protective goggles, protective gloves and heavy-duty shoes when working.

- Do not carry the machine by the cable.
- Always remove the plug from the power supply socket before carrying out any work on the machine, when interrupting work and when not using the machine.
- Always place the cable to the rear away from the machine.
- Apply the machine to the sheet metal only when switched on.
- Always provide for secure footing when working.
- Firmly clamp the workpiece if it dose not remain stationary from its own weight.
- The knife should not rub on the jaws: Possible danger of cutting tool breakage.
- Do not exceed the maximum allowable material thickness especially when cutting over doublers, folded joints or welded seams.

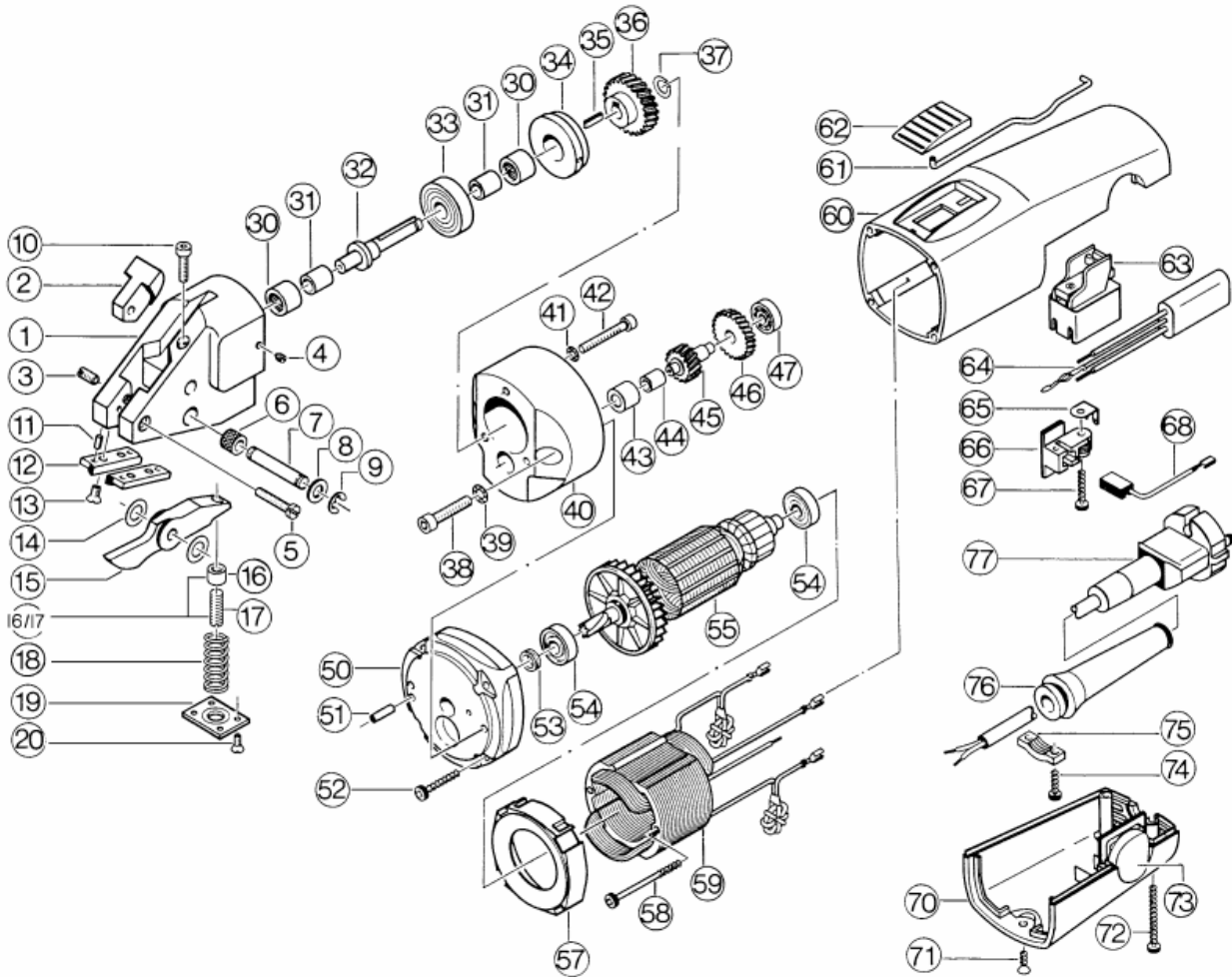


For further notes on safety refer to enclosed sheet

DRACO metal shears		2017	2020
max. cutting capacity	<i>Art.nr.</i>	61020	61040
steel	400 N/mm ² mm	1,7	2,0
stainless steel	600 N/mm ² mm	1,3	1,5
stainless steel	800 N/mm ² mm	1,0	1,3
aluminium	250 N/mm ² mm	2,5	3,0
tightest radius	mm	175	200
working speed	m/min	5	5
strokes	min ⁻¹	2200	2200
motor capacity	Watt	350	350
weight	kg	1,8	1,8

2017 spare parts		2020 spare parts	
knife	01013	knife	010135
set of jaws	20234	set of jaws	35146
knife-pin set	35149	knife-pin set	35149
Optionales Zubehör			
metal-box			18000
adjustable guide S/01	up to 100 mm		10059
adjustable guide S/01	up to 250 mm		10060
adjustable guide S/01	up to 500 mm		10061
support roller			10077

Exploded view DRÄCO metal shears 2017, 2017/E, 2020, 2020/E



SERVICE TIPS

Before working on machine disconnect from power supply by removing plug from socket. Wear protective glasses!

Replacing/Adjusting the Knife

Clamp the machine in a vice on the clamping surfaces SV between aluminium protective jaws.

Unscrew the screws 70 and remove the spring plate 71. Remove the spring 72. Remove the Cotter Pin 76 and the Washer 77. Push back the knife pin 78.

⚠ Do NOT interchange the Spacing Shims 79: the wrong spacing could ruin the jaws and knife.

Insert a new knife with the old spacing Shims 79. Insert the knife pin 8. Mount the washer 77 and the Cotter Pin 76. Insert the spring 72. Reassemble spring plate 71.

Replacing the Jaws

Loosen the screws 80 and remove the jaws 82. Press out the positioning pins 81. Mount new jaws and positioning pins. Tighten the screws 80.

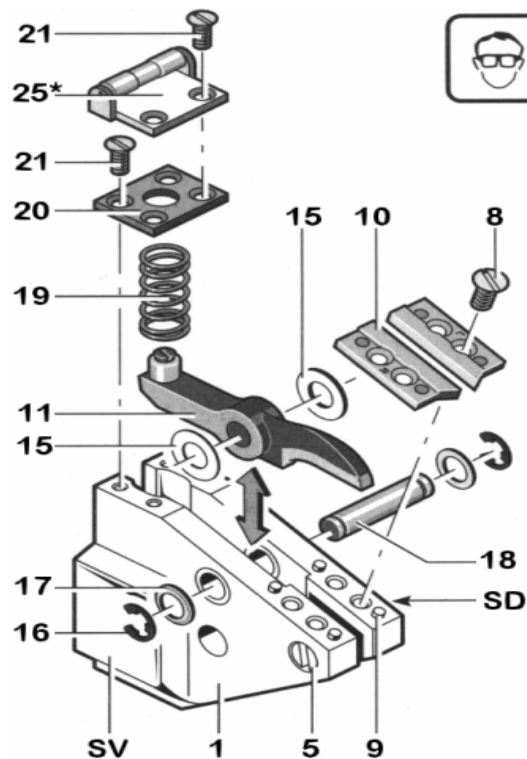
Adjusting the knife Clearance

For clearance between knife and jaws that is too large, loosen the fillister head screw 67. Adjust the clearance with the setscrew 68. Retighten the fillister head screw 67.

⚠ The knife must not rub on the jaws: Danger of breakage.
Note: If heavy burring is produced while cutting, repeat the adjustment.

Sharpening the Knife/Jaws

The Knife and the Jaws must be sharpened and adjusted at the same time. This work should be performed by an authorised DRÄCO customer service location. Send in the complete machine for this purpose.



*Optional

Spare Parts List for DRÄCO Metal Shears **2017, 2020, 2017/E, 2020/E**

Pos.	Item	Pc. No.	Pos.	Item	Pc. No.
	Shear Head 2017 Pos. 1 - 43	1 20170	38	Screw	2 81031
	Shear Head 2017/E Pos. 1 - 43	1 20171	39	Securing Washer	2 81243
	Shear Head 2020 Pos. 1 - 43	1 20236	40	Gear Case Cover Pos. 38-43	1 BG13046
	Shear Head 2020/E Pos. 1 - 43	1 20235	41	Securing Washer	3 81249
	Drive shaft cpl. Pos. 31 -37	1 BG20202	42	Screw	3 81262
	Pinion with gear cpl. Pos. 44 - 47	1 BG20203	43	Needle Bearing	1 13043
	Motor 230 V	1 20204	44	Sleeve	1 13042
	Motor 115 V	1 20207	45	Pinion	1 13041
1	Head Casting Serie F	1 BG20241	46	Gear	1 20231
2	Spacing Block Serie F	1 BG37059	47	Ball Bearing	1 13039
3	Tap Screw	1 81120	50	Connection Flange	1 20220
4	Tap Screw	2 81239	51	Pin	1 20221
5	Hex Socket Screw	1 81176	52	Ejot-PT-Screw	4 20222
6	Knife Pin Bushing Ø 10 mm	2 35542	53	Seal Ring	1 20223
6	Knife Pin Bushing Ø 11 mm	2 35542/11	54	Ball Bearing	2 13034
7	Knife Pin Pos. 7-9,14	1 BG35149	55	Armature 230 V	1 20205
8	Washer	2 81072	55	Armature 115 V	1 20208
9	Circlip	2 81275	57	Air Cover Ring	1 20224
10	Hex Socket Screw	1 81263	58	Ejot-PT-Screw	2 20225
11	Pin	4 81248	59	Field 230 V	1 20206
12	Set of jaws (2017+2017E) Pos.11-13	1 BG20234	59	Field 115 V	1 20209
12	Set of jaws (2020+2020E) Pos.11-13	1 BG35146	60	Motor Housing	1 20210
13	Flat Head Screw	4 81270	61	Switch connection lever	1 20211
14	Spacing Shims	1 BG12400	62	Switch Pad	1 20212
15	Knife standard	1 01013	63	Switch	1 13017
15	Knife standard	1 010135	64	FE-Condensator	1 20226
15	Knife for stainl. Steel	1 01013E	65	Connector	2 20227
15	Knife for stainl. Steel	1 010135E	66	Carb.Brush Holder	1 20228
16/17	Lock Ring +Screw	1 35566	67	Ejot-PT-Screw	2 20229
18	Spring	1 12200	68	Carbon Brush	1 20230
19	Spring Cover Plate Pos. 18-20	1 BG12300	70	Motor Housing Cover	1 20214
20	Flat Head Screw	4 81285	71	Ejot-PT-Screw	1 20215
30	Needle Bearing	2 10300	72	Ejot-PT-Screw	2 20216
31	Sleeve	2 10005	73	Cap	1 20217
32	Eccentric Shaft	1 10004	74	Ejot-PT-Screw	2 20218
32	Eccentric Drive Shaft Pos. 31-33, 35, 37	1 BG10004	75	Cord clamp	1 20219
33	Ball Bearing	1 10250	76	Rubber Sleeve	1 13022
34	Cover for Bearing	1 BG10450	77	Cable with Plug Europe	1 32046
35	Key	1 10006	77	Cable with plug USA	1 20242
36	Gear	1 13051	77	Cable with plug CH	1 20260
37	Circlip	1 10009	77	Cable with Plug GB	1 20270

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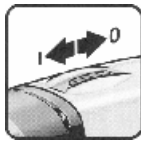
Your dealer:

Operating Instructions

1. **Intended use.** This Power Tool is intended for industrial applications, for cutting sheet metal (maximum capacity is indicated in the Specifications), for use with cutting jaws and cutting blades which are indicated in these operating instructions or recommended by DRÄCO
2. **Initial Operation**

Observe the rated voltage: The voltage of the power source must match that given on the nameplate of the machine. Machines for 230V can also be operated on 220 V power sources.

Switching ON and OFF
Switching ON: Slide the switch (62) forward
Switching OFF: Slide the switch (62) to the rear.
5. For inside cutting, the shortest curve possible has a radius of 200 mm ($\pm 8''$). If cutting a radius with the right hand, cut from right to left. The outside radius is unlimited.
6. For **cutting out** curved or circular inside patterns, a 14 mm ($\pm 1/2''$) hole, or a punched slot should be made to insert the centre cutter.
7. If after cutting, a **small strip** remains this can easily be trimmed off to the exact measurement, without leaving a burr or any distortion of the material. Just one side of the power tools can be used for cutting also (e.g. along a marked line). Lift the power tools out of the shavings while the motor is running. Cut off longer shavings.
8. Both knife and jaws can be sharpened. After being sharpened or replaced, the knife at its lowest point should protrude the jaws by approximately 3 mm. The knife should have approximately 0,05 mm (0,005'') play on each side of the jaws, centring the cutter with spacing shims supplied.
9. Every 200 operating hours have the cutting blade and cutting jaws sharpened at a specialist workshop.
10. **Ensure that the material to be cut is free of oil and grease.**



2. **The material to be cut must always be free of oil or grease.** Always place the machine flat on the work piece
3. **Cut-outs:** Drill a starting hole with a 12-14 mm diameter drill. **Circular cuts:** Always cut counter clockwise and from left to right.
4. Do NOT cut sheet metal along welding points. Do NOT cut multi layer sheets, which exceed the maximum cutting capacity.

Environmental protection



Recycling raw materials instead of waste disposal. Machine, accessories and packaging should be sorted for environment-friendly recycling. These instructions are printed on recycling paper manufactured without chlorine

Care and Maintenance



Before working on machine disconnect from power supply by removing plug from socket.
Always keep the machine and the ventilation slots clean.
Oil the knife pin and knife at regular intervals.
If the machine should happen to fail despite the care taken in manufacture and testing, repair should be carried out by an authorised customer services agent for DRÄCO power tools

CE-Declaration of conformity

We declare under our sole responsibility that this product is in conformity with the following standards or standardisation documents:

EG 98/37, EG 73/23 EG, EG 89/336 EG, EN 292 Teil I, EN 292 Teil II, EN 50 144, EN 55 014, EN 60 555, HD 400, HD 400.3 Teil II/H

CE 95

A handwritten signature in black ink, appearing to read 'Max Draenert'.

Noise/vibration information

Measured values determined according to EN 50 144. Typically the A-weighted sound pressure level of the tool is 83 dB(A). The noise level when working can exceed 85 db (A).

Wear ear protection!

The typical hand-arm vibration is below 2,5 m/s²

Warranty

DRÄCO tools carry a guarantee of 6 months from date of delivery.

Damage attributable to normal wear and tear, overload or improper handling will be excluded from the guarantee. (e.g. blades/knives and jaws)

In case of complaint please send the machine, **undismantled**, to your dealer or the DRÄCO Service Centre for electric power tools.