

Steelmax[®]

**SAFETY INSTRUCTIONS
AND OPERATOR'S MANUAL
FOR
DRILLING MACHINE
D2X**



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**BEFORE YOU START WORK WITH THE MACHINE,
PLEASE READ THESE INSTRUCTIONS CAREFULLY
AND USE ALL RECOMMENDATIONS.**

I. SAFETY INSTRUCTION

The magnetic drilling machine should be used only for the purpose described in this manual. Using the machine incorrectly or not for its intended use may result in serious injury and/or death.

1. GENERAL INFORMATION

Portable magnetic drilling machines are fast becoming universal power tools not only at steel fabricating workshops or steel building sites but also at every factory maintenance workshop, truck manufacturer & repair company, military equipment service, onboard ship maintenance shop, etc.

Full advantages of electromagnetic drilling machines can only be achieved with optimal tooling. Annular cutters are designed and manufactured specifically to offer a wide range of advantages in one precise pass not otherwise attainable with heavy stationary equipment. The drill is equipped with a powerful motor and automatically adjustable slides.

2. GENERAL SAFETY ADVICE

Drilling machine should not be used when:

1. The operator has not read the Operator's Manual.
2. The work to be done is not in agreement with the recommendations in this Manual.
3. Drilling machine is not complete or has been repaired with non-standard parts.
4. Power supply parameters do not conform to those stated on the motor's plate.
5. Machine operator has not checked the condition of the drilling machine, the condition of the power cable, control panel, cutter and other components.
6. Power supply socket is not equipped with a protection circuit.
7. Machine is not secured with a safety chain to protect it from falling down, especially when used at heights or in vertical or upside-down positions.
8. Bystanders are present in the immediate vicinity of machine.

Important rules of safe use of drilling machine

1. Before attempting to work with the machine, check condition of the electrical supply, including power cord and plug.
2. The drilling machine should be connected to an installation equipped with protection circuit (neutral or ground) and protected with a 15 Ampere fuse/circuit breaker for 220V and 20 Ampere fuse/circuit breaker for 120V.
3. Machine can be used outdoors, but it is not weatherproof. Do not expose to rain, snow or frost.
4. Machine should not be used on: rusty surfaces, steel plates covered in thick paint, uneven surfaces, next to a welding machine. When the machine is attached to any metal structure, that structure should not be welded. This can cause damage to the machine and will void the warranty. In all cases, always use a safety chain/strap (see drawing below). The safety chain must not be loose! To avoid this situation, the safety chain should be securely attached. Do not use the machine in explosive hazard areas. Do not start work if the machine has excessive play on guide slides. Always wear safety goggles and ear protection. Do not remove metal chips and strands with bare hands



Safety chain can also secure the drill through the handle.

1. Do not touch the spindle and cutter during work.

2. Tools must be fastened firmly. When an annular cutter is used, check before start of work to ensure the screws holding the cutter are tight.
3. It is not safe or productive to use blunt or damaged tools.
4. Do not use annular cutters without pilots, and arbors without ejection spring.



Do not touch or replace the annular cutter with power source on – while electromagnetic base is being used.

5. Use tools recommended in Operator's Manual only.
6. After use, always clean metal chips and coolant from drilling machine.
7. Always unplug the machine from the power supply during any maintenance work on the machine.

It is not advisable to use the drill on steel less than 3/8" (10 mm) thick. On thin steel (less than 3/8" (10 mm)) the magnet's adhesive power would be significantly reduced and can cause machine failure or operator injury. The Safe Magnet technology may not allow the drill to start. Use of a thicker backing plate under the surface to be drilled can solve this problem. The entire surface of the electromagnetic base should be located on the work piece! Before positioning the machine on the work surface, it is recommended that the work surface under the electromagnetic base be sanded down with abrasive paper to allow better adhesion!



Please follow all recommendations.

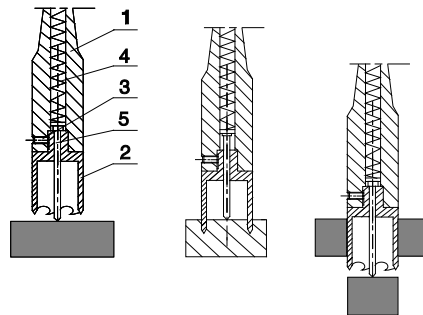
II. START UP AND OPERATION

1. Cutters and optional equipment features

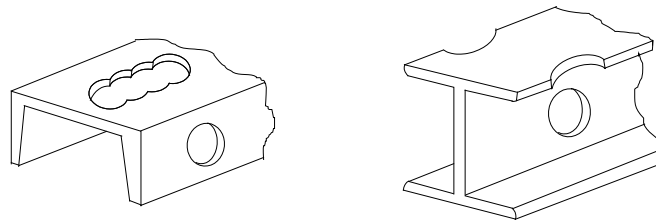
The D2X uses a #2 Morse taper which makes it possible to use twist steel bits by using our optional ½" adjustable chuck adapter. (Part # SM2MTJ)

The annular cutter (2) slides inside arbor body (1) and is fastened with screws (3). While fastening the cutter in the socket, be aware that screws should be screwed tight so that they do not come loose. It is important to position the cutter in relation to the socket in such a way that the flats on the cutter shank are positioned in line with the fixing screws (3). Both fastening screws (3) should be tightened on the cutter. The pilot (5) is located inside the cutter. It makes it easier to position the annular cutter over the center of a planned hole. During drilling, as the cutter goes deep into the steel, the pilot moves back into the arbor body and tightens the discharge spring (4). This spring ejects the plug which is a by-product of drilling a hole with an annular cutter.

On occasions when there is a need for an overlapping hole the pilot pin should not be used.



*Drawing 2.
Principle of annular cutter's work*



*Drawing 3.
A few types of holes that can be done with an annular cutter*

2. Machine start up

The machine is supplied in a metal box with complete standard equipment.

D2X comes in standard equipment set which consists of:

- metal box for storage or transport
- drilling machine
- arbor AMT2-C-19/2-2
- cooling system
- chip guard
- spoke handles
- Allen wrenches:
 - hex s=4
 - hex s=5
- wedge, MT2
- safety chain
- snap hook
- operator's manual

2.1 Before first drill:

- Steel elements of the drilling machine are protected for transit and storing with grease film.
- All grease should be removed before first start up of the machine
- All handles should be screwed into pinion before each use.

2.2 Before you cut

Before positioning the machine on work piece always make sure that:

- Work piece is made of steel;
- Thickness of work piece is at least 3/8" (10 mm)
- Surface of the steel under the magnet is flat
- Wipe, brush or sand down clean surface where you intend to place the drilling machine, so that you remove rust, paint, dirt etc which would reduce adhesive power of the electromagnetic base.

Install drill bit, annular cutter or other tooling such as tap or reamer in the machine before power is supplied to the unit. Then plug it in (see paragraph 3) and position where you wish to use it. Place the machine so that the tool is over the center of the hole you intend to make, and turn the magnetic base ON.

Prior to use always make sure that the machine is secured from falling with original chain (as described in paragraph 1 no. 2 "Important rules of safe use of drilling machine").

2.3 Cutting

- Select the right speed for the tool you intend to use (see the speed chart in this manual on page 12). Choose suitable cooling/lubricating fluid and fill cooling reservoir with it. The cooling system is an integral part of the machine and should always be used.

Warning: The cooling system can only be used when drilling machine is in the vertical position. In other positions, additional external source of cooling should be used, for example: a pressurized coolant bottle or an alternative lubricant such as Edge Cream which can be applied directly to edge of the cutter.

- Check proper operation of the cooling system. Open coolant reservoir's tap and apply pressure on the pilot by turning spokes counter clockwise. Cooling liquid should start to run down the cutters inner wall as the pilot starts to sink into the cutter. If there is no liquid flowing down the cutter, check if the tap is fully opened. It may take a few seconds for cooling liquid to fill the whole system.

- Turn the motor on.

Making a hole with an annular cutter should ideally be done in one pass. Enter the cut slowly until the cutter is ejecting a continuous thread of cuttings. Then apply steady and continuous pressure letting the cutter do the work. Excessive pressure will cause excessive

heat and premature dulling of the cutter. Plug must be ejected after the hole is completed. If you experience plugs getting stuck inside a cutter after hole is complete, try to reduce pressure on the cutter or use a different coolant. Do not allow excessive shavings to build up around the cutter and arbor. If a plug is stuck in the cutter after the drilling operation then turn off the drill and the coolant flow, move the drill over a smooth metal surface and tap the cutter lightly using the spoke handles to lower the cutter down to the flat surface. Tapping the plug with a wooden object can also help dislodge the plug. In severe cases the plug may need to be removed with pliers. Stuck plugs can be the result of using dull or dirty cutters.

WARNING: When the annular cutter goes through the material the plug can be pushed out often with considerable strength. Pay attention to avoid injury.

- After a hole is made, the cutter should be withdrawn back and both the motor and the electromagnet should be switched OFF.
- When work with the machine is finished, the power cord should be disconnected from the power source, the machine should be cleaned, and the cutter should be removed and cleaned.

2.4 How to use the special functions

There are some factors affecting the value of the clamping force. They are as follows: thickness of the base, presence of the paint coats, rust and other contamination, non-flat surface, excessive stock roughness, extended wear of the magnets lower surface and the make up of the steel surface.

The Safe Magnet circuitry will not allow the motor to operate when there is insufficient magnetic holding power which can occur under any of the conditions cited in the previous paragraph.

To operate this machine properly you should push on the main switch in position "I". Then you should turn on the green button "I" to turn on the motor. To stop the motor you should push on red button "O" (It turns the motor off, the magnet still holds). To move the machine and drill in another place you should stop the motor and then push the main switch in position "O".

2.5 Working in difficult areas

While working in difficult access areas, as well as for left-handed operators, one may change location of the pinion with the spoke handles to the other side of drilling machine.

3. Operating instructions

The machine is supplied in a metal box. Steel elements of the drilling machine are protected for transit and storing with grease film. Before first start up of the machine all grease should be removed. Before each use all spoke handles should be screwed into the pinion.

Control panel includes below elements:

- (01) - Main switch MAGNET,
 - (02) - START-STOP button MOTOR.
- a) In order to start the machine, press the main switch MAGNET (01) on “I” button. Now you can start the motor by pressing green button MOTOR (02) on “I”.
 - b) Stopping the motor is executed with red button “O” (then the motor is switched OFF but the electromagnetic base is still ON) (02).
 - c) To move machine into next drilling spot, stop the motor as described above and push the magnet switch (01) to the position “O”.
 - d) Use the gear box lever to change the speed. It may be necessary to slightly rotate the arbor by hand in order to change speeds.



Drawing 5. Control panel

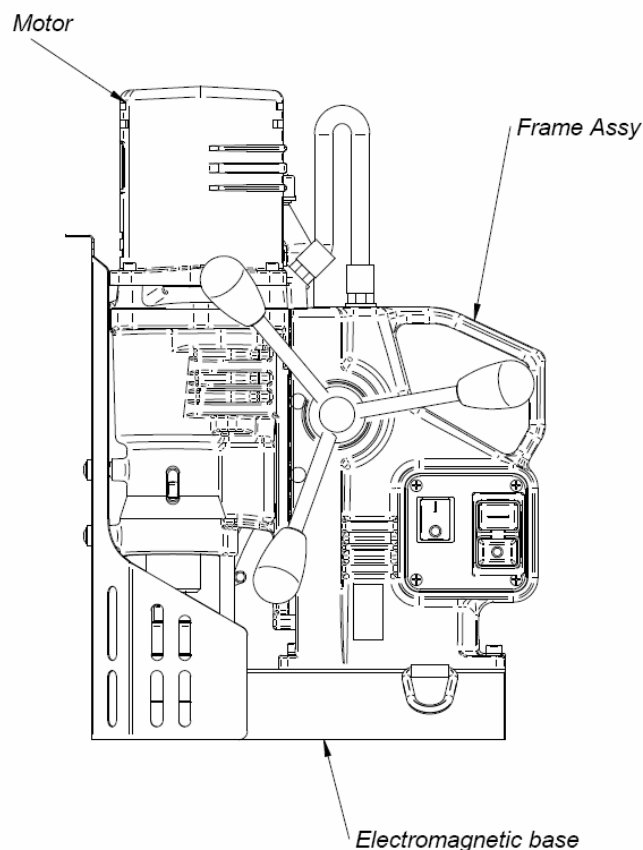


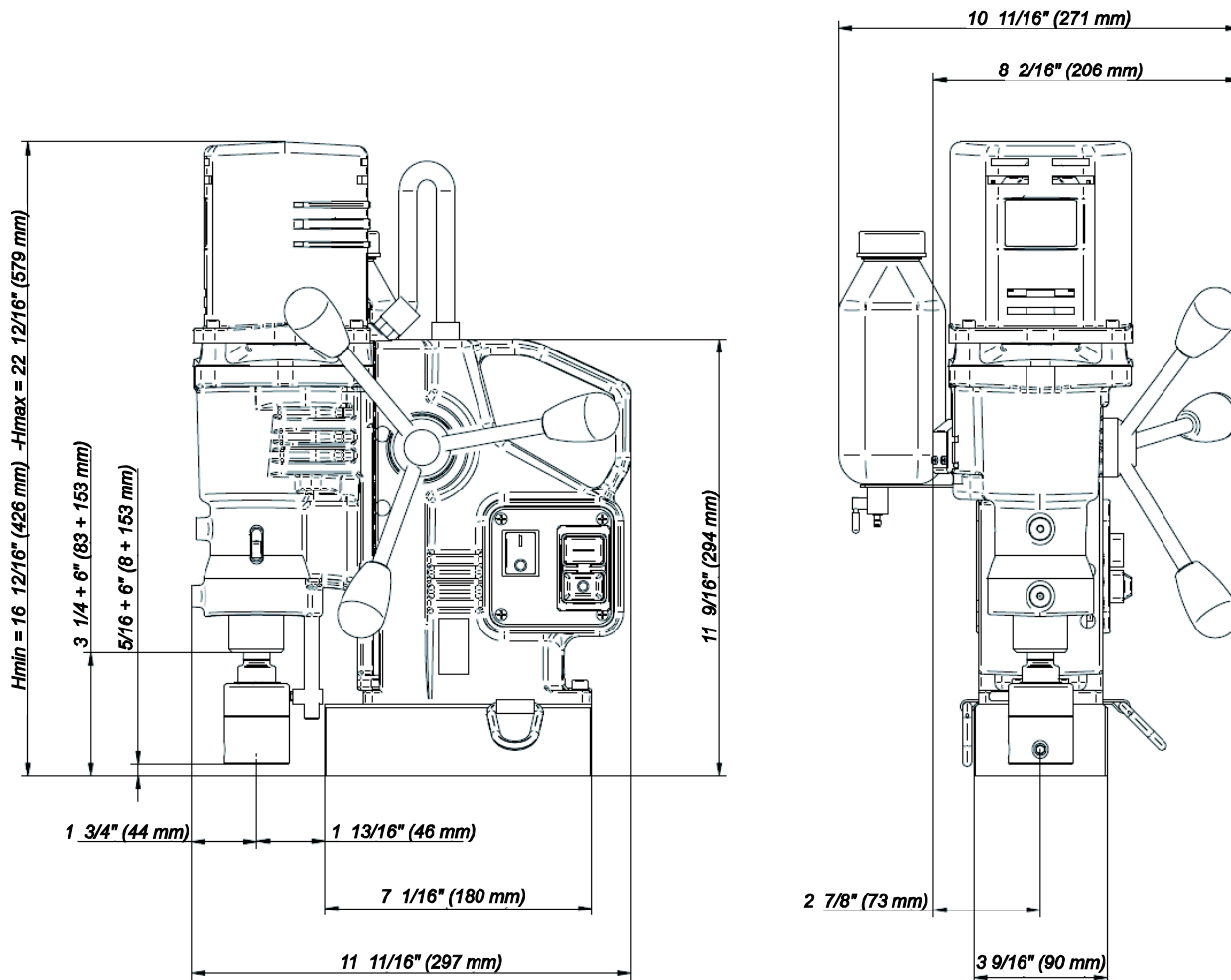
To move the machine into next drilling spot, stop the motor as described above and push the main switch MAGNET to the position “O”. To change the speed, use the gear box lever. The motor must be stopped before switching gears.

READ THE WHOLE INSTRUCTION MANUAL BEFORE ATTEMPTING TO START UP

III. ADJUSTMENT, MAINTENANCE AND SERVICE

- Every 50 hours of work, or as need arises, elimination of excess play in slide guides should be performed. The screws and the locking nuts are provided for that reason. The slide guide should go up easily and not slide down under its own weight.
- When the drill is not in regular usage it should be stored on its side (laying horizontally) in order to keep the gearbox grease spread adequately around the gears. Simply return the drill to its case which prevents dust accumulation on the drill and lay the case flat on a shelf.
- The position of the gear lever (used for selection of gearbox speed) should be changed occasionally to ensure proper gearbox lubrication. Regularly check condition of carbon brushes. (see paragraph IV – Technical data).
- Lubricate the brass slide guide inserts regularly with grease as well as the rack and pinion.
- To prevent the machine from rusting (especially when used outdoors) all steel parts should be covered with thin layer of grease film.
- All repair work should be done only by authorized service centers.



IV. TECHNICAL DATA


Power supply	<input type="checkbox"/> 110÷120V AC / 50-60 Hz <input type="checkbox"/> 220÷240V AC / 50-60 Hz
Power required	1300 W
Motor power	1260 W
Tool holder	3/4" (19 mm) Weldon
Max. twist drill diameter	7/8" (23 mm)
Max. annular drilling diameter	2" (50 mm)
Max. annular drilling depth	2" (50 mm)
Insulation Class	I
Standard adhesive force of electromagnet (for steel 7/8" (22 mm) thick and $R_a \leq 1,25$)	12 000 N
Slide stroke	6" (153 mm)
Machine speeds /under load/	Low speed – 200 rpm High speed – 400 rpm
Electromagnetic base	90x180x48 mm
Length of the power cord	10' (3 m)
Total weight	36.3lbs (16.5 kg)
Noise level	85 dB
Surrounding temperature	32°F to 104°F (0°C ÷ 40°C)

The D2X machine is capable of cutting 2” (50 mm) holes through 2” plate. That is unique for an electromagnetic drill of this size and weight

Check the condition of the carbon brushes for every 100 hours of work. If the length of the brush is less than 5 mm, they should be replaced. After replacement, new brushes should be run without a load for about 20 minutes in order to seat properly for efficient operation. Replacement of brushes is possible without removal of the motor.

The transmission spine may also be replaced which can extend the life of the D2X by a considerable amount.

1. Relationship between machine speed and cutter diameter – parameters

Position of gear lever (used for selection of gearbox speed) should be changed occasionally in order to keep the gearbox fully lubricated.

Relationship between machine speed and cutter diameter

The cutter diameter		Rotary speed [rpm]
[inch]	[mm]	
1” to 1.5”	12mm to 35mm	400
1.5” to 2”	36mm to 50mm	200

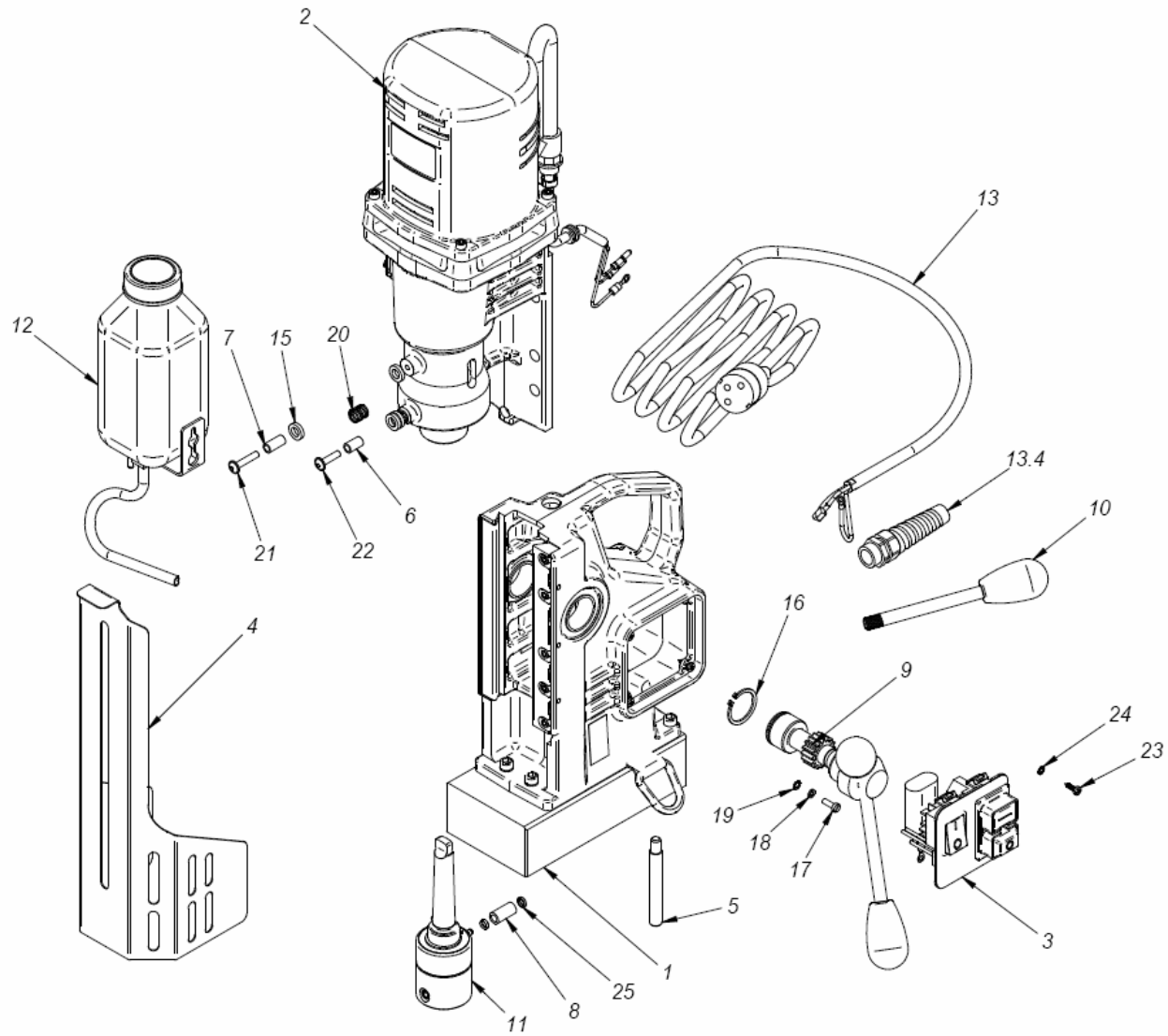
Relationship between machine speed and twist drill diameter

The twist drill diameter		Rotary speed [rpm]
[inch]	[mm]	
0.04 to .5”	3.5mm to 13mm	400
9/16” to 7/8”	14mm to 22mm	200

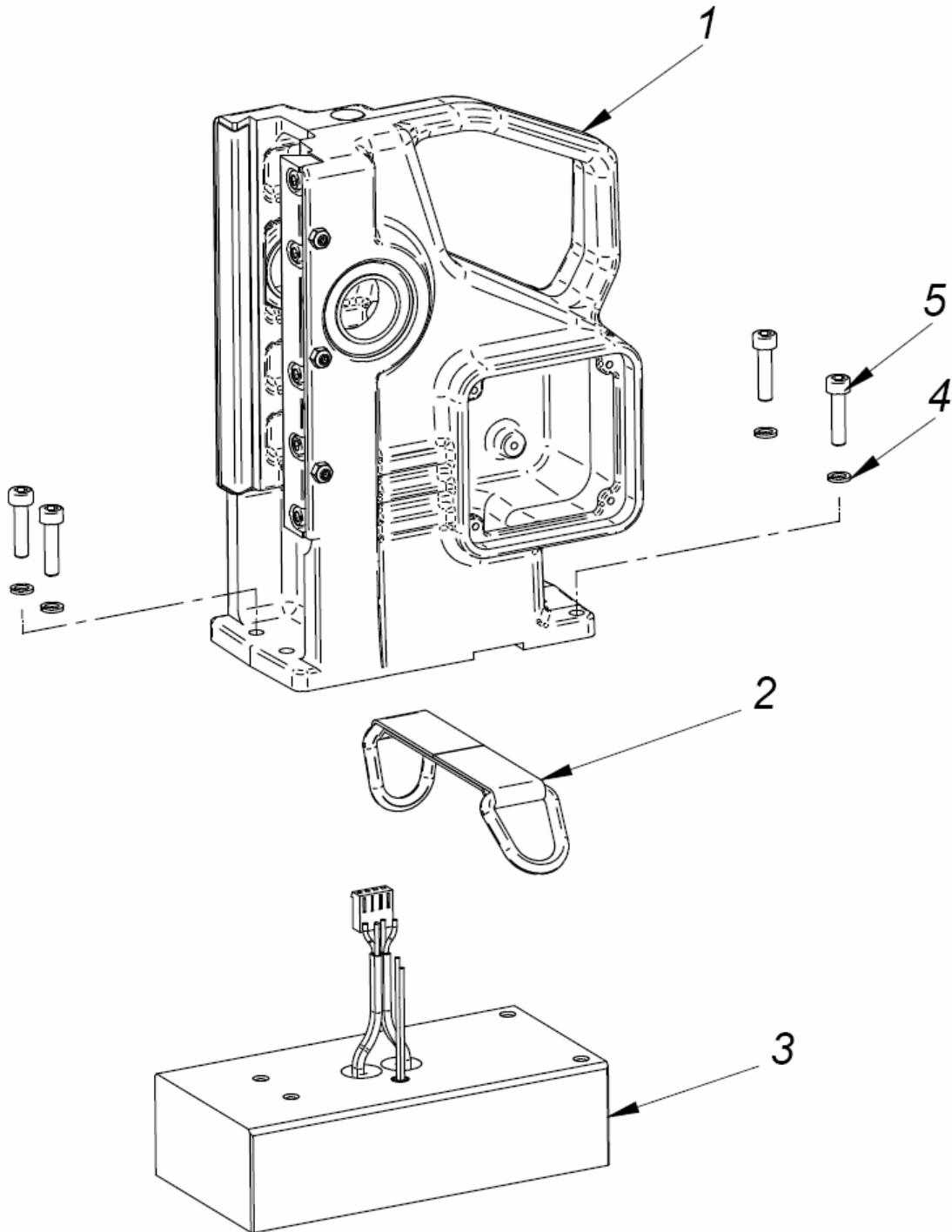
V. Parts List/Exploded Drawings

WRT-0399-24-10-00-0			Drilling Machine Steelmax D2X /115V	
WRT-0399-24-20-00-0			Drilling Machine Steelmax D2X /230V	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
1	STJ-0399-01-00-00-1	1975	FRAME ASSEMBLY,	1
2	NPD-0399-02-00-00-1	1976	MOTOR ASSY /115V,	1
2	NPD-0399-02-00-00-0	1977	MOTOR ASSY /230V,	1
3	PNL-0300-04-00-01-0	1978	CONTROL PANEL /115V	1
3	PNL-0300-04-00-01-0	1979	CONTROL PANEL /230V	1
4	OSL-0399-04-00-00-0	2484	GUARD ASSY,	1
5	PLC-0399-05-00-00-0		STOP ROD	1
6	TLJ-0399-06-00-00-0		LOWER SLEEVE,	2
8	RRA-0399-08-00-00-0		SAFETY PIPE,	1
9	WLK-0212-00-07-00-1		PINION SHAFT,	1
10	DZW-0212-12-00-00-0		SPOKE HANDLE INCLUDING KNOB (ASSY),	3
11	UCW-0220-00-00-01-0	765	ARBOR SET - AMT2-C19/2-2	1
12	UKL-0399-11-00-00-0		COOLANT SYSTEM	1
13	SZN-0075-00-51-00-5		POWER CORD 120V 3x2,08,	1
13.4	DLW-000007		STRAIN RELIEF PG11	1
13	SZN-0212-10-02-00-2		POWER CORD 230V 3x1,5	1
13.4	DLW-000007		STRAIN RELIEF PG11	1
14	NKL-0272-15-00-00-0		LABEL FOR ELECTRICAL INSTALATION,	1
15	PDK-000151		NYLON WASHER SR1940,	4
16	PRS-000019		EXTERNAL RETAINING RING 28z	1
17	WKR-000183		SCREW M4X10 PHCRMS	2
18	PDK-000043		SPRING WASHER-4.1	2
19	PDK-000060		SPRING WASHER 4,3	1
20	SPR-000030		PUSH SPRING,	2
21	WKR-000394		SOCKET BUTTON HEAD CAP SCREW WITH FLANGE M5x25,	1
22	WKR-000395		SOCKET BUTTON HEAD CAP SCREW WITH FLANGE M5x20,	1
23	WKR-000415		CROSS RECESSED PAN HEAD TAPPING SCREW 3,5x13,	4
24	PDK-000161		SPRING WASHER EXTERNAL STAR 3,7	4
25	PRS-000112		SEAL O-RING 5x2	2
26*	SKR-0399-15-00-00-1	2057	METAL BOX	1
27*	ZST-0399-25-00-00-0	1985	EQUIPMENT SET,	1
27.1*	LNC-0223-00-01-00-0		SAFETY CHAIN	1
27.3*	KLC-000008		HEX. WRENCH S=5	1
27.4*	KLC-000007		HEX. WRENCH S=4	1
27.5*	OPK-000001		PLASTIC BOX,	1
27.6*	KLN-0103-01-00-00-0		WEDGE MT2	1
27.7*	INS-0399-28-00-00-6		SERVICE MANUAL	1
28*	NKL-0272-25-01-03-0		LABEL: WARRANT TO USE OF HEARING AND EYE PROTECTION	1
29*	NKL-0399-10-00-06-0		CLEARANCE CONTROL LABEL	1
30*	NKL-0399-10-08-05-0		LABEL FOR LID OF METAL BOX - big	1
31*	NKL-0399-10-08-04-0		LABEL FOR SIDE OF METAL BOX - small	4
32*	NKL-0300-25-06-02-0		LOGO LABEL	2

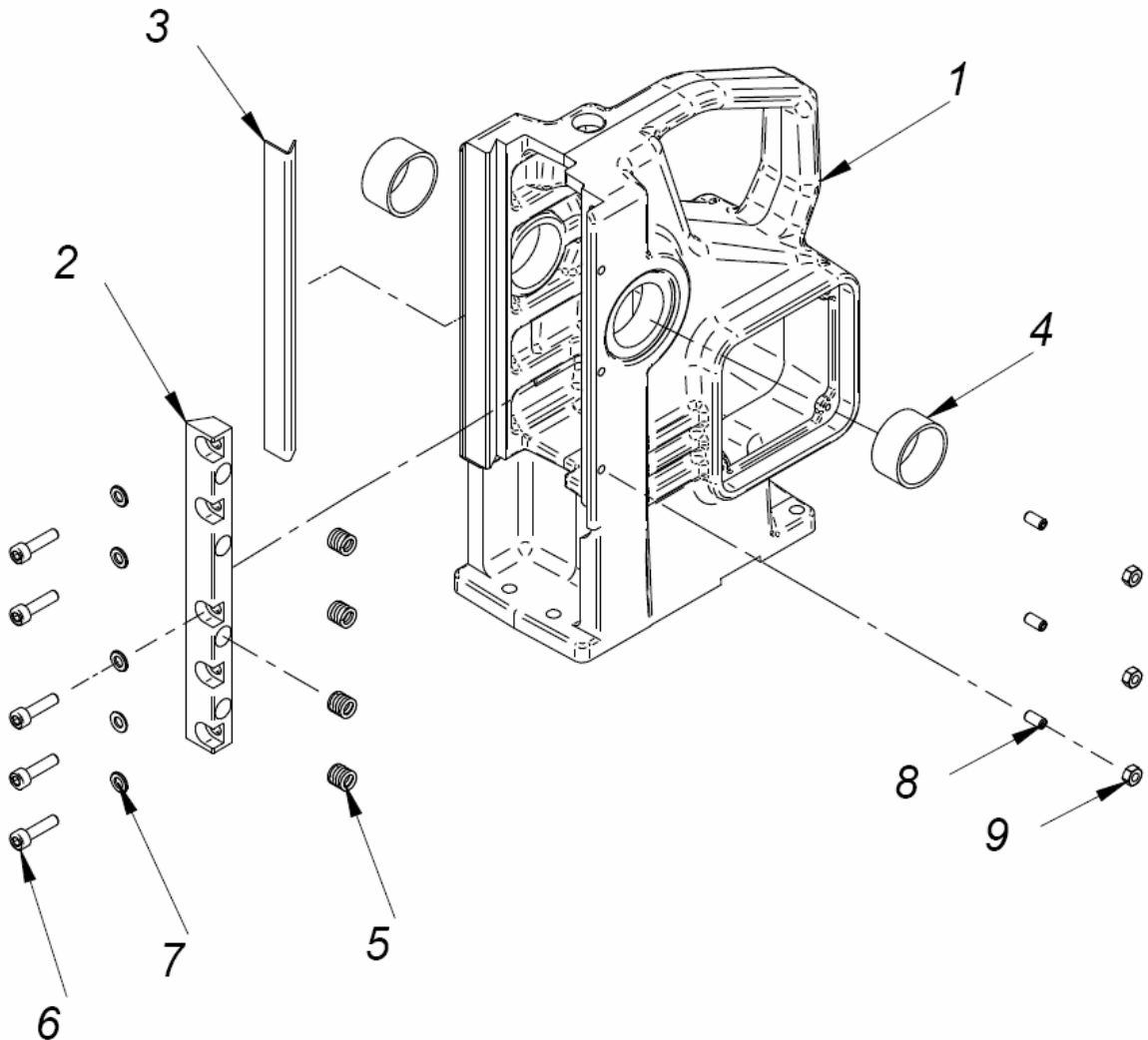
*not shown on the drawing



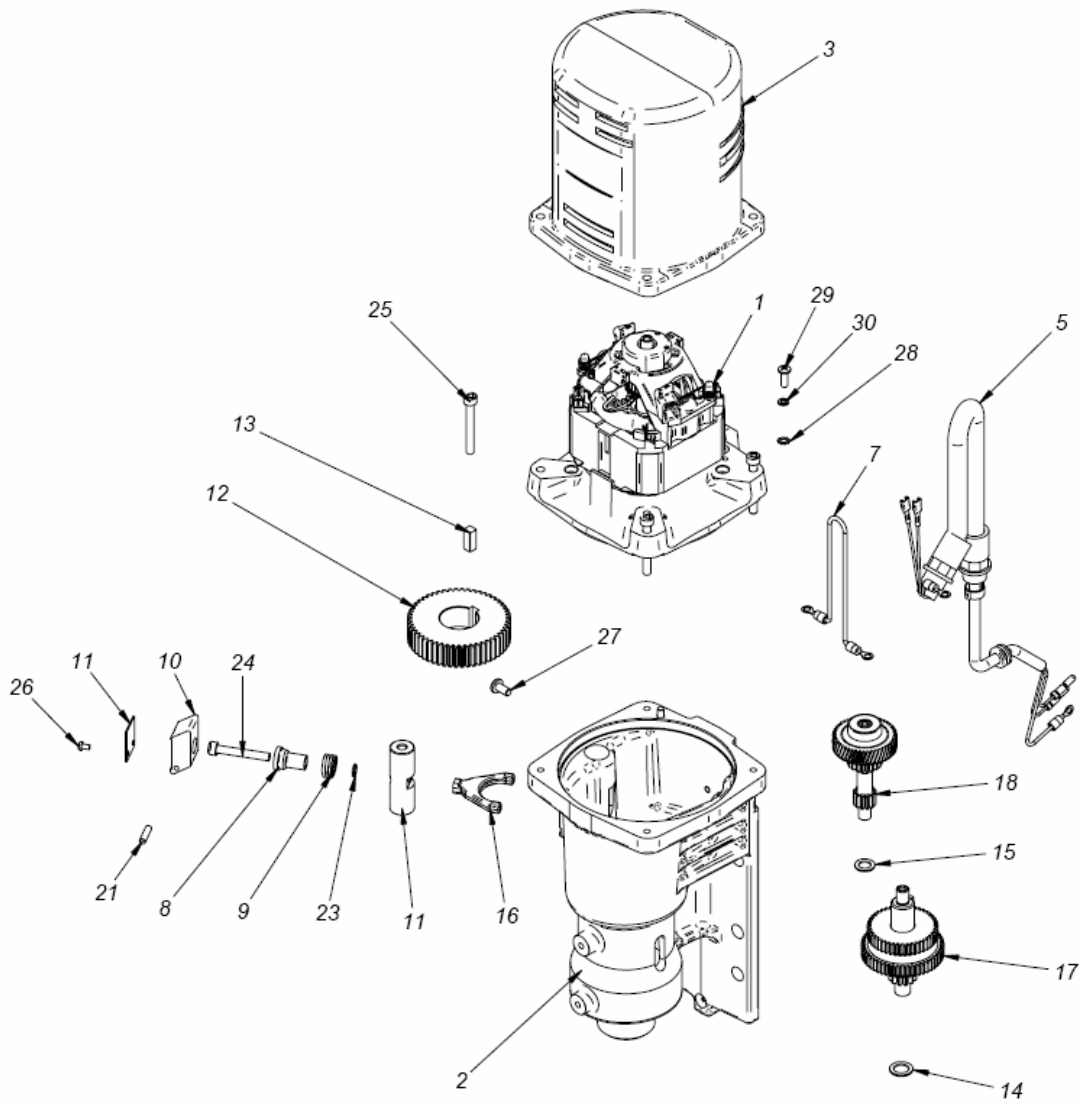
STJ-0399-01-00-00-1			FRAME ASSEMBLY	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
1.1	KRP-0399-01-01-00-1	1850	MAIN BODY ASSY	1
1.2	PAS-0212-00-23-00-1		D-RING STRAP	1
1.3	PDS-0300-01-02-00-0		ELECTROMAGNETIC BASE,	1
1.4	PDK-000046		SPRING WASHER 6,1	4
1.5	SRB-000115		HEX SOCKET BOLT M6X25	4
1.6*	NKL-0399-10-08-02-0		FRAME LABEL	1



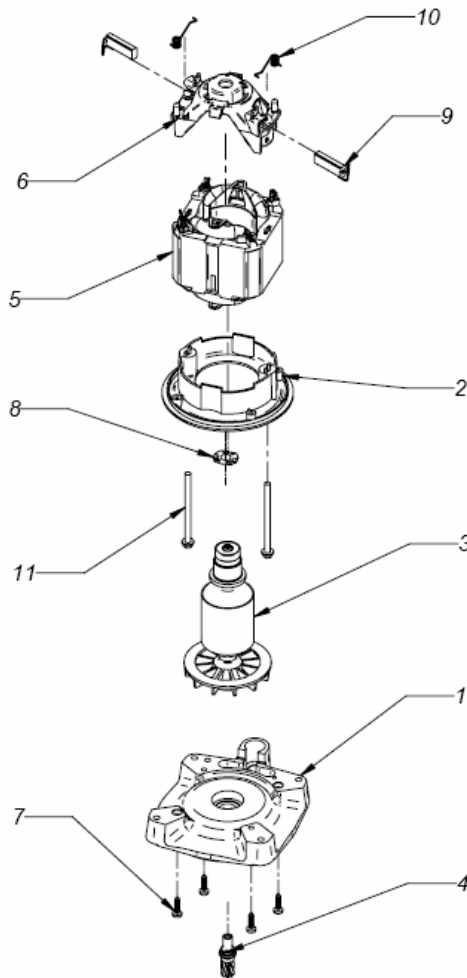
KRP-0399-01-01-00-1			MAIN BODY ASSY	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
1.1.1	KRP-0399-01-01-01-1	1030	MAIN BODY,	1
1.1.2	LST-0399-01-01-02-1		PRESSURE PLATE	1
1.1.3	LST-0257-01-03-00-0		SLIDE INSERT - LEFT	1
1.1.4	TLJ-000010		SELF LUBRICATING SLEEVE 28,05H7x32x16,	2
1.1.5	SPR-000043		SPRING, 1,6x8x14,5	4
1.1.6	SRB-000086		HEX SOCKET BOLT-M5X20	5
1.1.7	PDK-000017		ROUND WASHER 5,3	5
1.1.8	WKR-000043		SOCKET SET SCREW M5 x 10	3
1.1.9	NKR-000016		HEX. NUT M5	3



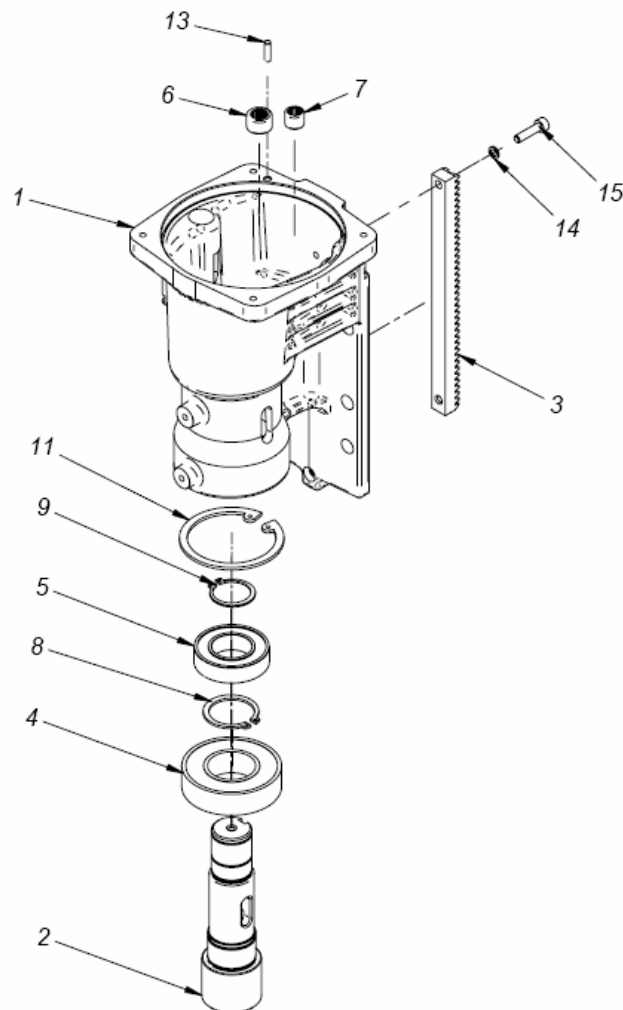
NPD-0399-02-00-00-1			MOTOR COMPLETE /115V,	
NPD-0399-02-00-00-0			MOTOR COMPLETE /230V,	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
2.1	SLN-0399-02-01-00-1		MOTOR ASSY/115V,	1
2.1	SLN-0399-02-01-00-0		MOTOR ASSY/230V,	1
2.2	KRP-0399-02-02-00-0	1792	GEARCASE ASSY,	1
2.3	OBD-0399-02-03-00-3	1876	MOTOR HOUSING	1
2.5	PWD-0399-02-05-00-0		MOTOR WIRE ASSY,	1
2.7	PWD-0399-02-07-00-0		GROUND CONDUCTOR,	1
2.8	TLJ-0171-00-22-00-0		SHIFT DRIVE PIN (USA-5)	1
2.9	SPR-0171-00-23-00-0		COMPRESSION SPRING (USA 5)	1
2.10	DZW-0171-00-24-00-0		SHIFT LEVER	1
2.11	WLK-0202-00-16-00-1		SHIFT PIN SHORT	1
2.12	KOL-0211-00-10-00-0		GEAR z 52, m=1.25mm	1
2.13	WPS-0211-00-13-00-0		SQUARE KEY 6x6x15	1
2.14	PDK-0211-00-15-00-0		WASHER, THRUST 10x1 (2x2)	1
2.15	PDK-0211-00-16-00-0		BEARING WASHER 8,1	1
2.16	WDL-0211-00-28-00-1		SHIFT FORK	1
2.17	WLK-0399-02-08-00-0		PINION SHAFT z12, z20 ASSY,	1
2.18	WLK-0211-01-02-00-0		PINION SHAFT Z=12 ASSY,	1
2.19	TBL-0202-00-30-00-0		LABEL, SHIFT LEVER	1
2.20	LOZ-000006		BEARING, NEEDLE RHNA 081210	1
2.21	KLK-000005		SPRING PIN 3x14	1
2.22	PRS-000017		EXTERNALE RETAINING RING 25z	1
2.23	PDK-000044		SPRING WASHER M5	1
2.24	SRB-000090		HEX. SOCKET BOLT M5x35	1
2.25	SRB-000092		HEX. SOCKET BOLT M5x40	4
2.26	WKR-000180		SCREW M3x5 PHCRMS	2
2.27	WKR-000419		CROSS RECESSED RAISED COUNTERSUNK HEAD SCREW M5x10	2
2.28	WKR-000184		SCREW M4X12 PHCRMS,	3
2.29	PDK-000060		SPRING WASHER 4,3	2
2.30	PDK-000043		SPRING WASHER-4.1	2
2.31	SMR-000001		GREASE LUBRIPLATE BP1	0.39kg
2.32*	NKL-0399-10-08-03-0		MOTOR LABEL /115V	1
2.32*	TBL-0399-10-14-03-0		MOTOR LABEL /230V	1



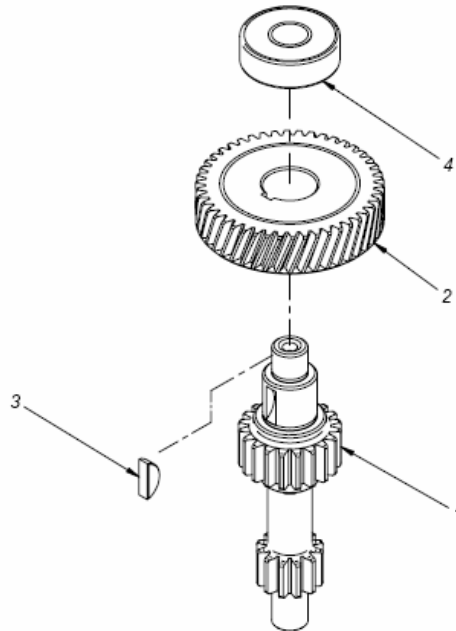
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SLN-0399-02-01-00-0			MOTOR ASSY/230V,	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
2.1.1	PKR-0399-02-01-01-3	1905	MOTOR COVER	1
2.1.2	KRW-0400-02-01-02-0		GUIDE FAN	1
2.1.3	WRN-0399-02-01-10-1		ARMATURE ASSY /120V	1
2.1.3	WRN-0399-02-01-10-0		ARMATURE ASSY /230V	1
2.1.4	KNC-0399-02-04-00-1		ARMATURE TOOTH END z12	1
2.1.5	STN-000026		FIELD /120V	1
2.1.5	STN-000027		FIELD /230V	1
2.1.6	OBD-000023		UPPER HOUSING	1
2.1.7	WKR-000407		CROSS RECESSED PAN HEAD TAPPING SCREW 4x20	4
2.1.8	PDK-000157		SPRING WASHER	1
2.1.9	SCZ-000021		BRUSH /120V	2
2.1.9	SCZ-000022		BRUSH /230V	2
2.1.10	SPR-000042		SPRING BRUSH	2
2.1.11	SRB-000295		HEXAGON BOLT M5x57	2



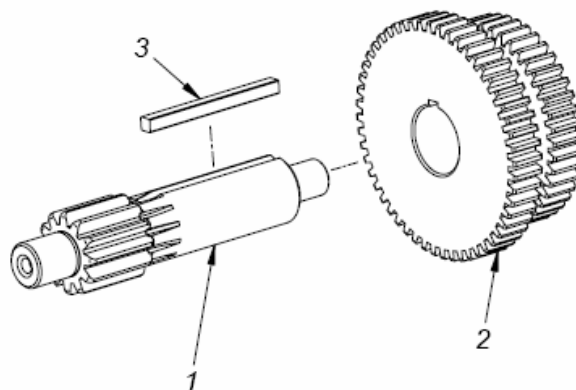
KRP-0399-02-02-00-0			GEARCASE ASSY,	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
2.2.1	KRP-0399-02-02-11-1	1793	GEARCASE,	1
2.2.2	WRZ-0399-02-02-02-0		SPINDLE,	1
2.2.3	LST-0399-02-02-03-0		GEAR RACK,	1
2.2.4	LOZ-000075		BEARING 6206 2Z 30x62x16	1
2.2.5	LOZ-000028		UPPER SPINDLE BEARING 6005 25x47x12	1
2.2.6	LOZ-000009		BEARING, NEEDLE RHNA 101610	1
2.2.7	LOZ-000006		BEARING, NEEDLE RHNA 081210	1
2.2.8	PRS-000021		EXTERNAL RETAINING RING 30z	1
2.2.9	PRS-000017		EXTERNALE RETAINING RING 25z	1
2.2.11	PRS-000035		INTERNAL RETAINING RING 62W	1
2.2.13	KLK-000034		PIN 6x14	1
2.2.14	PDK-000045		SPRING WASHER 5,1	2
2.2.15	SRB-000086		HEX SOCKET BOLT M5X20	2



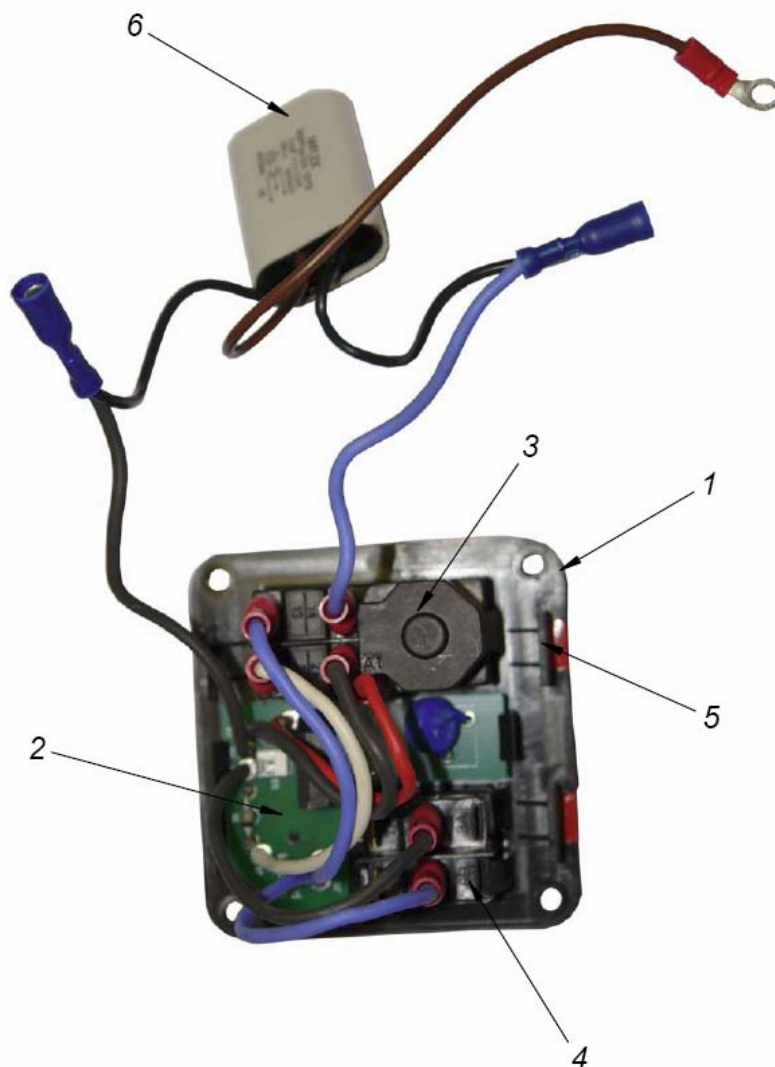
WLK-0399-02-08-00-0			PINION SHAFT z12, z20 ASSY,	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
2.17.1	WLK-0211-00-07-00-0		GEARSHAFT, 12T/20T (2x2)	1
2.17.2	KOL-0399-02-08-01-0		HELICAL INPUT GEAR z46,	1
2.17.3	WPS-0211-00-17-00-0		WOODRUFF KEY 3x3.7	1
2.17.4	LOZ-000055		BEARING, BALL- 8X22X7	1



WLK-0211-01-02-00-0			PINION SHAFT Z=12 ASSY,	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
2.18.1	WLK-0211-00-09-00-0		GEARSHAFT, 12T (2x2)	1
2.18.2	KOL-0211-00-08-00-0		CLUSTER GEAR z52/z44, m=1mm	1
2.18.3	WPS-0211-00-14-00-0		SQUARE KEY 3x3x36	1

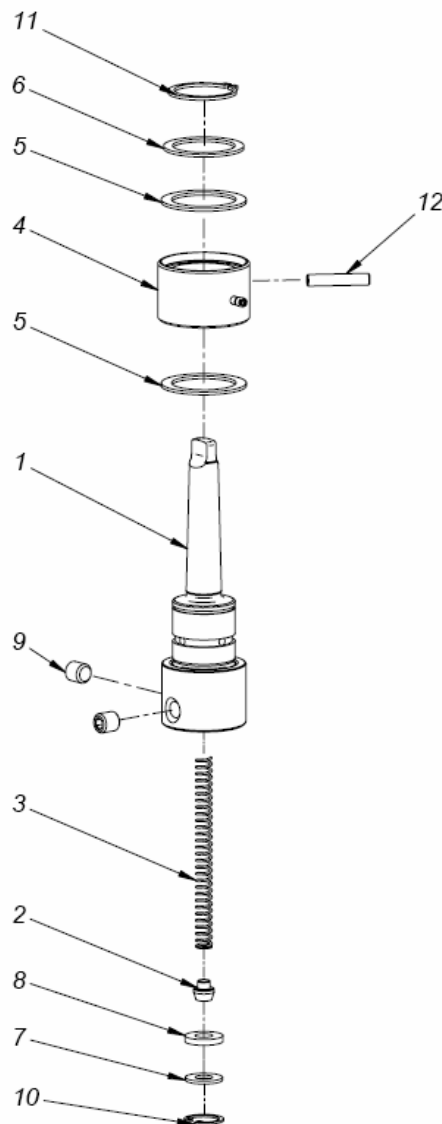


PNL-0300-04-00-01-0		1978	CONTROL PANEL/115V	
PNL-0300-04-00-01-0		1979	CONTROL PANEL/230V	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
3.1	MSK-0300-04-01-00-1	1982	PANEL PLATE ASSY	1
3.1.2*	NKL-0399-10-08-01-0		LABEL PANEL PLATE	1
3.2	STR-0257-04-03-00-3		ELECTRONIC CONTROLLER SW-30M /120V,	1
3.2	STR-0257-04-03-00-2		ELECTRONIC CONTROLLER SW-30M /230V,	1
3.3	WLC-000005		SWITCH START-STOP /115V,	1
3.3	WLC-000007		SWITCH START-STOP /230V,	1
3.4	PNK-000013		SWITCH MAGNET	1
3.6	FLT-0257-04-12-00-0		INTERFERENCE ELIMINATOR,,	1

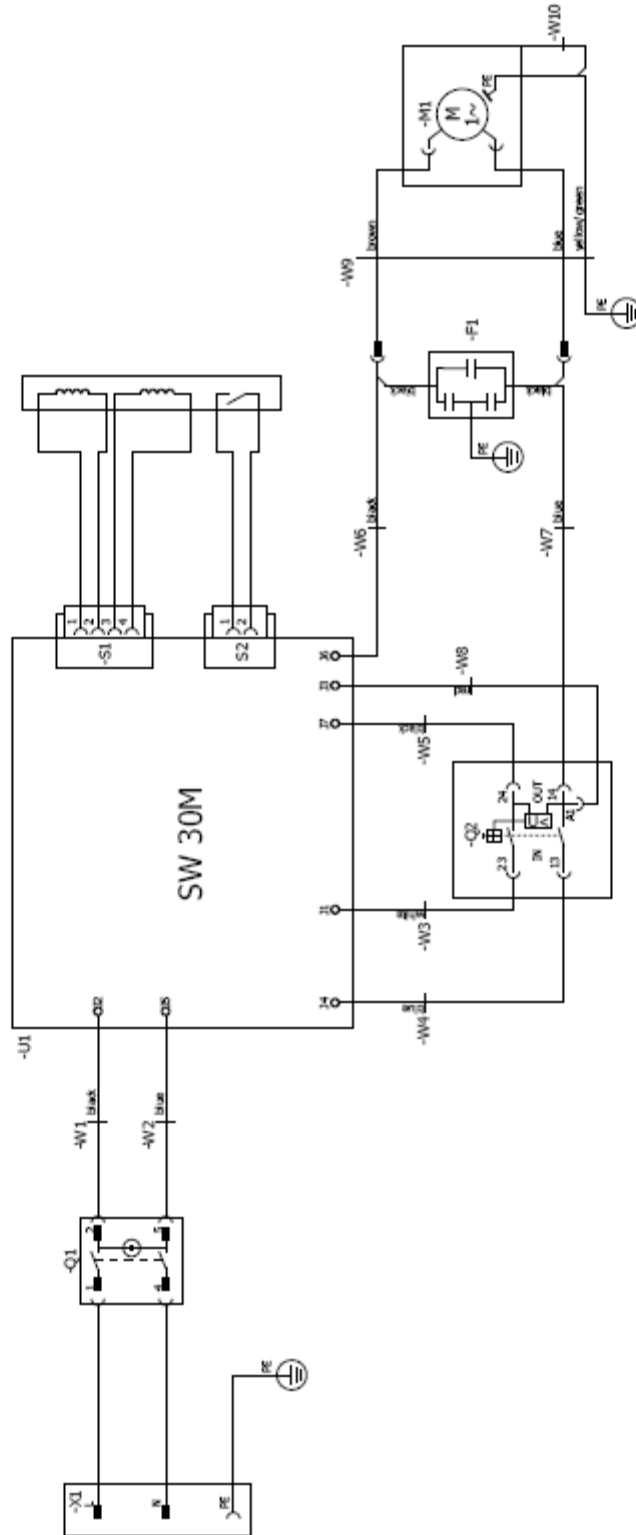


UCW-0220-00-00-01-0	ARBOR SET - AMT2-C19/2-2
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ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
11.1	KRP-0220-00-02-00-0		ARBOR BODY ,	1
11.2	WYP-0203-06-02-00-0		PLUNGER	1
11.3	SPR-000002		SPRING 2x2 MT2	1
11.4	TLJ-0284-00-07-00-3		COOLANT RING	1
11.5	PDK-0234-00-09-00-0		WASHER II	2
11.6	PRT-0151-06-13-00-7		BAR L=25,	1
11.7	PDK-0203-06-04-00-0		WASHER	1
11.8	USZ-0203-06-03-00-0		SEAL	1
11.9	KNC-0257-05-03-04-0		CONNECTOR 4x11,5	1
11.10	WKR-000032		HEX SET SCREW-M10X10	2
11.11	PRS-000009		INTERNAL RETAINING RING 19W	1
11.12	PRS-000017		EXTERNALE RETAINING RING 25z	1
11.13	PRS-000105		SEAL O-RING 25.2x3	2



VI. ELECTRICAL DIAGRAM



V. EC DECLARATION OF CONFORMITY

Declaration of compatibility

We

PROMOTECH Ltd.
Elewatorska street 23/1
15-620 Bialystok, Poland

declare with full responsibility that product:

D2X DRILLING MACHINE

which the declaration applies to is in accordance with the following standard(s) placed below:

EN 50144-1, EN 55014 and satisfies safety regulations of guidelines: 2004/108/EC, 2006/95/EC,
2006/42/EC

Bialystok, 2009-10-15



Prezes

VIII. MACHINE TEST CERTIFICATE

Machine control card

D2X /120V

Serial No. _____

Date of test: _____

Electric test results:

Test	Result
Test with sinusoidal voltage of 1000 V and frequency 60 Hz	
Resistance of the protective circuit [Ω]	

The above-mentioned product meets the requirements of safe usage as prescribed in standard IEC-745

Name of tester _____

Quality Control _____

IX. WARRANTY CARD

WARRANTY CARD No.....

..... in the name of
Manufacturer warrants the Drilling Machine to be free of defects in material and
workmanship under normal use for a period of one year from date of manufacture.

This warranty does not cover cutters, damage or wear arises from misuse,
accident, tempering or any other causes not related to defects in workmanship or
material.

Date of Production Serial No

Quality Control:

Date of Purchase:.....

Signature of Seller.....

3/4" SHANK M2AL ANNULAR CUTTERS

M2AL Cutter Diameter	DECIMAL EQUIVALENT	1" D.O.C.	2" D.O.C.
		PART#	PART#
7/16"	0.4375	SM-AC-0438-1	SM-AC-0438-2
1/2"	0.5000	SM-AC-0500-1	SM-AC-0500-2
9/16"	0.5625	SM-AC-0563-1	SM-AC-0563-2
5/8"	0.6250	SM-AC-0625-1	SM-AC-0625-2
11/16"	0.6875	SM-AC-0688-1	SM-AC-0688-2
3/4"	0.7500	SM-AC-0750-1	SM-AC-0750-2
13/16"	0.8125	SM-AC-0813-1	SM-AC-0813-2
7/8"	0.8750	SM-AC-0875-1	SM-AC-0875-2
15/16"	0.9375	SM-AC-0938-1	SM-AC-0938-2
1"	1.0000	SM-AC-1000-1	SM-AC-1000-2
1-1/16"	1.0620	SM-AC-1063-1	SM-AC-1063-2
1-1/8"	1.1250	SM-AC-1125-1	SM-AC-1125-2
1-3/16"	1.1870	SM-AC-1188-1	SM-AC-1188-2
1-1/4"	1.2500	SM-AC-1250-1	SM-AC-1250-2
1-5/16"	1.3120	SM-AC-1313-1	SM-AC-1313-2
1-3/8"	1.3750	SM-AC-1375-1	SM-AC-1375-2
1-7/16"	1.4370	SM-AC-1438-1	SM-AC-1438-2
1-1/2"	1.5000	SM-AC-1500-1	SM-AC-1500-2
1-9/16"	1.5620	SM-AC-1563-1	SM-AC-1563-2
1-5/8"	1.6250	SM-AC-1625-1	SM-AC-1625-2
1-11/16"	1.6870	SM-AC-1688-1	SM-AC-1688-2
1-3/4"	1.7500	SM-AC-1750-1	SM-AC-1750-2
1-13/16"	1.8120	SM-AC-1813-1	SM-AC-1813-2
1-7/8"	1.8750	SM-AC-1875-1	SM-AC-1875-2
1-15/16"	1.9370	SM-AC-1938-1	SM-AC-1938-2
2"	2.0000	SM-AC-2000-1	SM-AC-2000-2
2-1/16"	2.0620	SM-AC-2063-1	SM-AC-2063-2
2-1/8"	2.1250	SM-AC-2125-1	SM-AC-2125-2
2-3/16"	2.1870	SM-AC-2188-1	SM-AC-2188-2
2-1/4"	2.2500	SM-AC-2250-1	SM-AC-2250-2
2-5/16"	2.3120	SM-AC-2313-1	SM-AC-2313-2
2-3/8"	2.3750	SM-AC-2375-1	SM-AC-2375-2
14mm	0.5512	SM-AC-14-M-1	SM-AC-14-M-2
15mm	0.5906	SM-AC-15-M-1	SM-AC-15-M-2
16mm	0.6299	SM-AC-16-M-1	SM-AC-16-M-2
17mm	0.6693	SM-AC-17-M-1	SM-AC-17-M-2
18mm	0.7087	SM-AC-18-M-1	SM-AC-18-M-2
19mm	0.7480	SM-AC-19-M-1	SM-AC-19-M-2
20mm	0.7874	SM-AC-20-M-1	SM-AC-20-M-2
21mm	0.8268	SM-AC-21-M-1	SM-AC-21-M-2
22mm	0.8661	SM-AC-22-M-1	SM-AC-22-M-2
23mm	0.9055	SM-AC-23-M-1	SM-AC-23-M-2
24mm	0.9449	SM-AC-24-M-1	SM-AC-24-M-2
25mm	0.9843	SM-AC-25-M-1	SM-AC-25-M-2
26mm	1.0230	SM-AC-26-M-1	SM-AC-26-M-2
28mm	1.1020	SM-AC-28-M-1	SM-AC-28-M-2
29mm	1.1410	SM-AC-29-M-1	SM-AC-29-M-2
31mm	1.2200	SM-AC-31-M-1	SM-AC-31-M-2