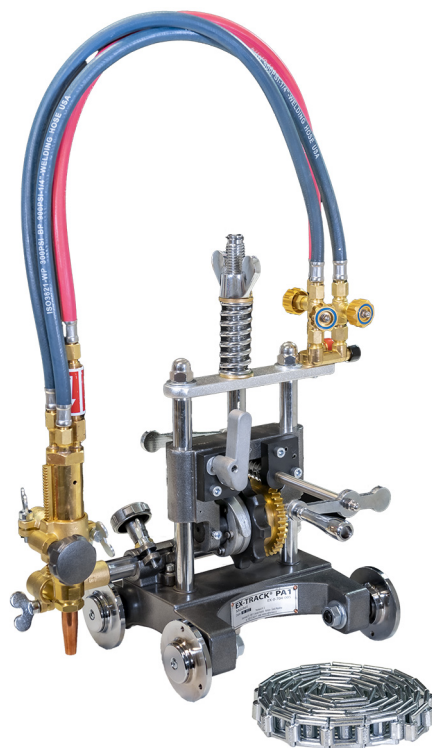




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EX-TRACK[®] PA-1

Pipe Cutting System

Operating Instructions - EX-0-902-002/N23557

Revision 1, 27th March, 2023

THERMACUT[®]
THE CUTTING COMPANY[®]

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1 Identification

The EX-TRACK® PA-1 is a portable manual gas cutter for cutting pipes with diameters of up to 600 mm. It is equipped with four wheels used to keep balance as well as chains to secure the device on the pipe. The device may be operated only with original Thermacut® parts. This documentation exclusively describes the EX-TRACK® PA-1 gas cutter.

When used in this documentation, the term "device" always refers to the EX-TRACK® PA-1 gas cutter.

1.1 Marking

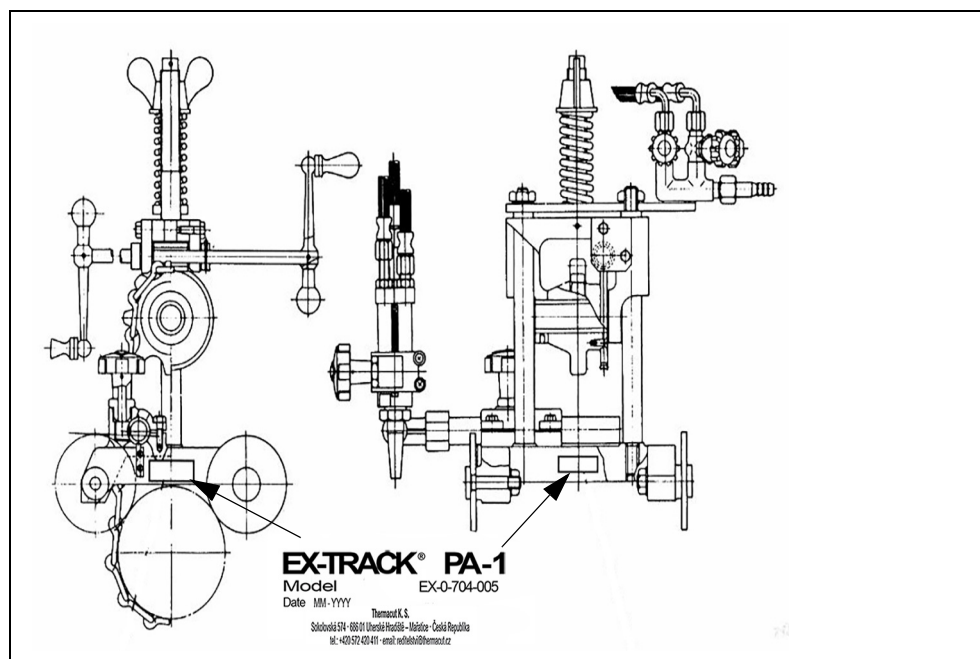
This product fulfills the requirements that apply to the market to which it has been introduced. A corresponding marking has been affixed to the product.

1.2 Identification plate

Fig. 1 EX-TRACK® PA-1 identification plate



The device is labeled by means of an identification plate on the housing.



- For inquiries, please have at hand the device type, device number, and year of construction per the identification plate.

1.3 Signs and symbols used

The following signs and symbols are used:

- General instructions.
- 1 Action(s) to be carried out in succession.
- Lists.
- ⇒ Cross-reference symbol refers to detailed, supplementary or further information.
- A Caption, item description.

1.4 Classification of the warnings

The warnings are divided into four different categories and are indicated prior to potentially dangerous work steps. The following signal words are used depending on the type of hazard:

DANGER

Describes an imminent threatening danger. If not avoided, it may cause severe injury or death.

WARNING

Describes a potentially dangerous situation. If not avoided, this may result in serious injury or death.

CAUTION

Describes a potentially harmful situation. If not avoided, this may result in slight or minor injuries.

NOTICE

Describes the risk of impairing work results or material damage and indicates irreparable damage to the device or equipment.

2 Safety

This chapter warns of hazards that should be kept in mind to operate the product safely. Non-observance of the safety instructions may result in risks to the life and health of personnel, environmental damage or material damage.

- Observe the document entitled "Safety Instructions".

2.1 Designated use

The device described in this document may be used only for the purpose and manner described. The device is exclusively intended to cut pipes. Any other use is considered improper and will lead to loss of warranty. Unauthorized modifications or changes to enhance the performance are not permitted and will lead to loss of warranty.

- Do not exceed the maximum load data as defined by the document supplied. Overloads lead to destruction.
- Do not make any modifications or changes to this product.
- Do not use or store the device outdoors where it is wet.

2.2 Obligations of the operator

- Ensure that only qualified personnel are permitted to work on the device or system.

Qualified personnel are:

- those who are familiar with the basic regulations on occupational safety and accident prevention;
 - those who have been instructed on how to handle the device;
 - those who have read and understood these operating instructions;
 - those who have been trained accordingly and have either of the following qualifications:
 - gas welding foreman's license,
 - diploma of gas welding training,
 - approval by the Ministry of Labor
 - those who are able to recognize possible risks because of their special training, knowledge, and experience.
- Keep untrained persons out of the work area.

2.3 Warning and notice signs

The following warning, notice and mandatory signs can be found on the product:



- Read and observe the operating instructions.

These markings must always be legible. They may not be covered, obscured, painted over, or removed.

2.4 Product-specific safety instructions

- Only disassemble the device for maintenance and inspection purposes.
- The device is made from aluminum alloy. Do not drop it or subject it to heavy pressure.
- Mount and position the device correctly.
- Do not place the device on pipes when it is not used.
- Always check the correct and free motion of the device before starting the cutting operation.
- Verify the correct chain tension before operation.
- Do not mistake the top and bottom sides of the chain.
- Do not use deformed, damaged or rusted chains.
- Do not open any valves by force.
- Do not move the device while the pre-heat flame is on.
- Do not insert hands into rotary or moving sections.

2.5 Safety instructions for the pipe cutter

- Verify that the gas hoses are not damaged, for example, by being driven over, crushed or torn.
- Check the gas hoses for damage and wear at regular intervals.
- If it is necessary to replace the gas hoses, use only models which have been approved by the manufacturer and which fully comply with the local and/or national regulations.

2.6 Safety instructions for pipe cutting

- Oxy-fuel cutting may cause damage to the eyes, skin, and hearing. Note that other hazards may arise when the device is used with other cutting components. Therefore, always wear the prescribed personal protective equipment as defined by local regulations.
- All metal vapors, especially lead, cadmium, copper, and beryllium, are harmful. Ensure sufficient ventilation or extraction. Do not exceed the current occupational exposure limits (OEL).
- Ensure sufficient ventilation for gas cutting in order to prevent the air from being polluted.
- Adhere to the general fire protection regulations and remove flammable materials from the vicinity of the cutting work area prior to starting work. Provide appropriate fire extinguishing equipment in the workplace.
- Do not cut sealed containers or pressurized cylinders.
- Do not use defective or contaminated pressure regulators.
- Check for any leakage of gas from the distributor, the hoses or the torch.

2.7 Personal protective equipment

- Wear your personal protective equipment (PPE).
- Ensure that others in close proximity are also wearing personal protective equipment.

Personal protective equipment consists of protective clothing, safety goggles, face protection, ear protectors, protective gloves, and safety shoes.

2.8 Emergency information

- In the event of an emergency, immediately disconnect the following supplies at the gas inlet into the device or on the gas cylinders' side:
 - Oxygen supply
 - Fuel gas supply

3 Scope of delivery

The following components are included in the scope of supply:

- 1 × EX-TRACK® PA-1 body
- 1 x gas distributor incl. hoses and torch assembly
- 3 × tip for propane (type 1, 2, 3)
- 2 x open wrench
- 1 × consumables cleaning toolkit (needles)
- 2 × gas fittings
- 1 × horizontal torch holder
- 1 x vertical torch holder
- 1 x chain with 80 links
- 1 × operator manual
- 2 x larger wheels (for cutting pipes with diameters in a range between 80 - 108 mm)
- The order data and ID numbers for the equipment parts and consumables can be found at the end of this manual.
- For more information about points of contact, consultation, and orders, visit www.ex-track.com.

Although the items delivered are carefully checked and packaged, it is not possible to fully rule out the risk of transport damage.

Goods-in inspection

- Check for order completeness by checking the delivery note.
- Check the delivered goods for damage (visual inspection).

Claim process

- If goods are damaged, notify the final carrier.
- Keep the packaging for possible inspection by the carrier.

Returns

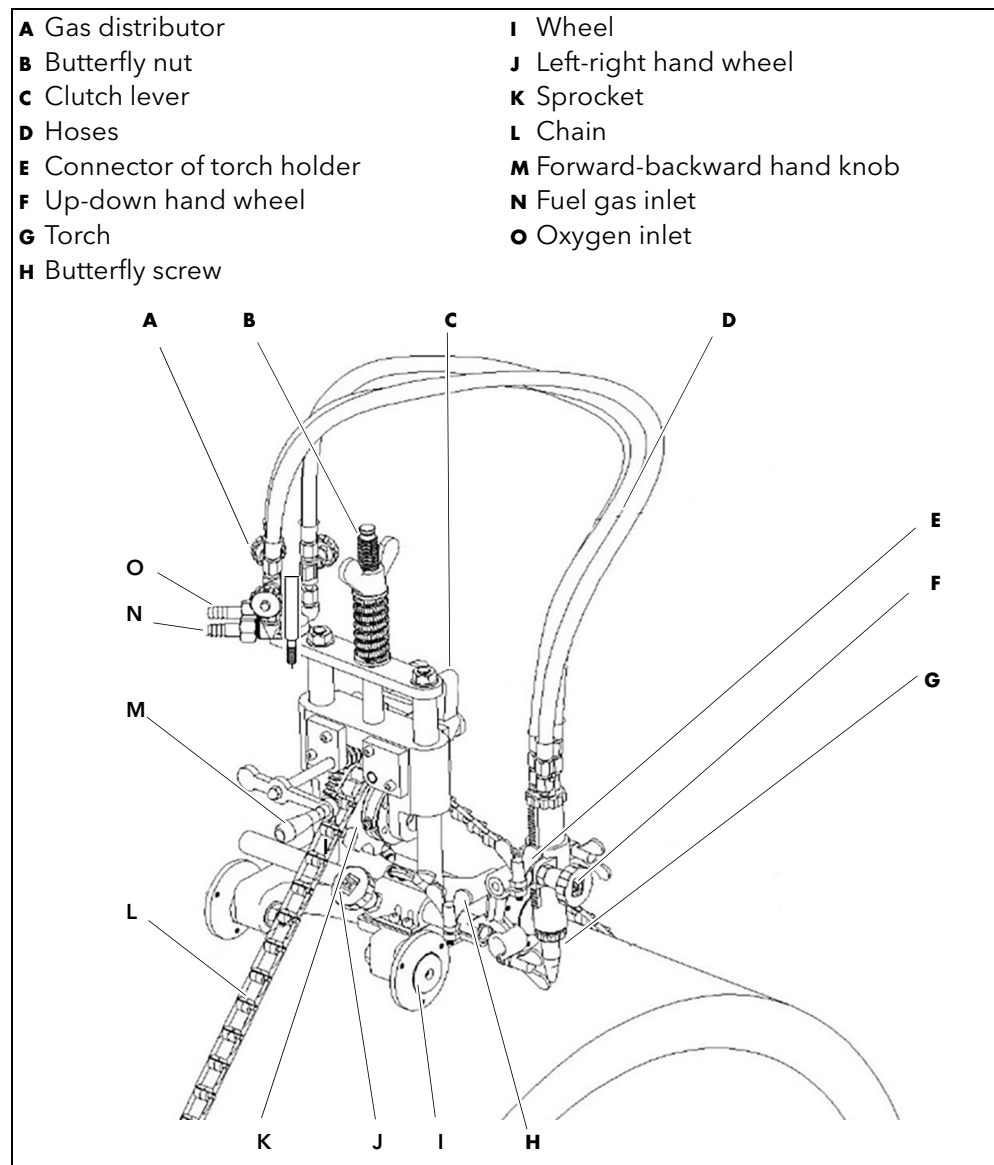
- Use original packaging and packing material for returns.
- If you have questions concerning the packaging or how to secure the device, contact your supplier, carrier or transport company.

4 Product description

4.1 Assembly and use

The pipe cutter consists of the following components:

Fig. 2 Components and connections



Gas distributor (A)	The gas distributor controls the flow of the preheating oxygen, the fuel gas, and the cutting oxygen.
Butterfly nut (B)	The butterfly nut controls the chain tension and through this the fit of the device on the pipe to be cut.
Clutch lever (C)	Holds the device on the pipe. If the clutch lever is released, the device can be moved quickly on the pipe.
Hoses (D)	The three hoses are connected to the gas distributor.
Connector of torch holder (E)	Connects with the butterfly screw of the lateral bar.
Up-down hand wheel (F)	Moves the torch up and down.

Torch (G)	Torch installed in the torch holder
Butterfly screw (H)	Connects with the connector of the torch holder.
Wheel (I) (4x)	Provides balance and ensures cutting precision.
Left-right hand wheel (J)	Moves the device to the right or left.
Sprocket (K)	Accommodates the chain. The rotation of the sprocket moves the device.
Chain (L)	Is put around the sprocket and the pipe to hold the device in place.
Forward-backward hand knob (M)	Moves the device forward and backward. A clockwise turn moves the device forward, an anti-clockwise turn moves it backward.
Fuel gas inlet (N)	For the connection of the fuel gas hose.
Oxygen inlet (O)	For the connection of the oxygen hose.

4.2 Technical data

Table 1 Power supply specifications

Weight [kg]	12 (incl. accessories) 10.5 (without accessories)
Dimensions [mm]	325 x 325 x 425
Type of operation	manual
Effective pipe cutting diameter [mm]	108* - 600
Pipe wall thickness [mm]	5 - 90
Groove	I-shape and V-bevel (angle up to 45°)
Range of vertical torch movement [mm]	50
Range of lateral torch movement [mm]	100

* After installation of two larger wheels it is possible to cut pipes with a diameter between 80 - 108 mm.

Table 2 Ambient conditions for transport and storage

Ambient temperature	-20°C to +55°C
Relative humidity	< 50% at +40°C < 90% at +20°C

Table 3 Gas data

Permissible cutting gas	Propane
Max. gas inlet pressure propane	3 bar / 43.5 psi
Max. gas inlet pressure oxygen	10 bar / 145 psi

5 Transport and positioning

WARNING

Risk of injury due to improper transport and installation

Improper transport and installation can cause the device to tip or fall. This may result in injury.

- Wear your personal protective equipment.
- Ensure that all supply lines and cables do not encroach into the area in which employees are working.
- Note the weight of the device when lifting it.
⇒ 4.2 Technical data on page EN-10
- Use an appropriate lifting tool with load handling equipment for transporting and installing the device.
- Avoid abrupt lifting and setting down.
- Do not lift the device over individuals or other devices.

NOTICE

Risk of material damage due to improper transport and installation

The device is made from aluminum alloy. Improper transport or installation can therefore cause material and irreparable damage to the device.

- Protect the device against weather conditions, such as rain and direct sunlight.
- Do not drop the device.
- Do not drop anything on the device.
- Protect the device from spatter when cutting.
- Use the device only in dry, clean, and well-ventilated rooms.

6 Setting up the device

➤ All references to parts refer to figure 2 in this document.

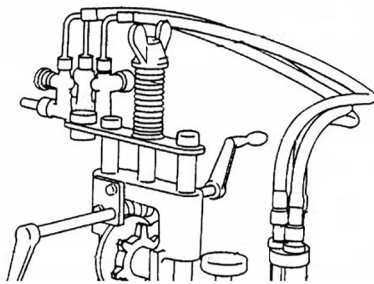
6.1 Connecting to the gas supply

⚠ WARNING

Risk of injury due to explosion

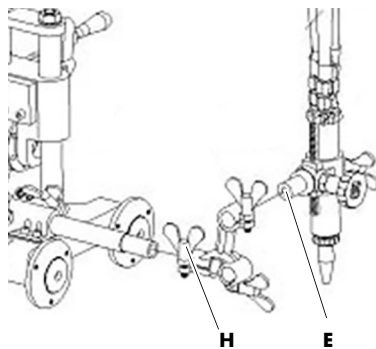
The use of defective or damaged gas cylinders or hoses can cause explosions. This can result in injury.

- Never use defective or leaking cylinders.
- Never use defective or leaking gas hoses.
- Use cylinders only for the purpose specified.
- Install cylinders in a place free from heat and open flame.
- Never cut pressurized cylinders or hermetically sealed containers.
- Ensure sufficient ventilation.



- 1 Position the gas distributor **(A)** on the device.
- 2 Fix the gas distributor with the hexagonal screw using a 6 mm hexagonal key.
- 3 Verify the hoses are correctly connected.
- 4 Verify there are no leaks.

6.2 Connecting the torch



- 1 Insert the connector of torch holder **(E)** into the butterfly nut casing at the lateral bar.
- 2 Connect the torch connector **(E)** to the butterfly screw of the lateral bar **(H)**.
- 3 Tighten both butterfly nuts.
- 4 Adjust the angle and tighten the connection.

6.3 Connecting the torch tip

NOTICE

Risk of material damage due to incorrect installation

If the tip is tightened too much, it will heat up during operation and become difficult to remove. Resulting damage to the tip will lead to backfire.

- Do not overtighten the tip.
- Avoid damage to the tip.

- 1 Select a suitable tip.
- 2 Insert the tip.
- 3 Tighten the nut with the two attached wrenches.

6.4 Determining the correct number of chain links

The chain can be adapted to suit most diameters by increasing or decreasing the number of links. The required number of links is calculated as follows:

Let Y be the number of links and

D be the diameter of the pipe in centimeter rounded up to the next full centimeter.

The formula then is $Y = D + 12$.

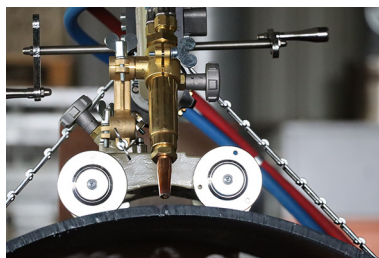
Example:

The diameter of a pipe is 258 mm. $258 \text{ mm} = 25.8 \text{ cm}$.

Rounded up it is 26 cm.

$Y = 26 + 12 = 38 \text{ links}$.

6.5 Changing the wheels



- 1 Unscrew the screws on the wheels using a Phillips screwdriver size 1.
- 2 Remove the wheels.
- 3 Put on new wheels.
- 4 Fix the wheels with the screws using a Phillips screwdriver size 1.

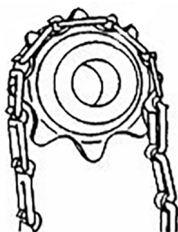
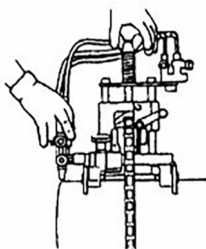
6.6 Positioning the device on the pipe

WARNING

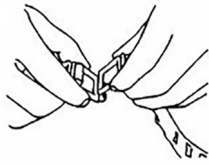
Risk of crushing

Improper assembly and disassembly of components can result in crushing of limbs.

- Do not reach into the hazardous areas.
- Check and wear your personal protective equipment.

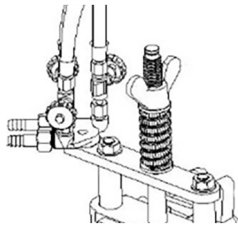


- 1 Calculate the required number of links.
- 2 Position the device on the pipe.
- 3 Turn the butterfly nut (**B**) to lower the bracket with the sprocket.
- 4 Place the chain over the sprocket.
 - Let the chain hang vertical to the pipe.



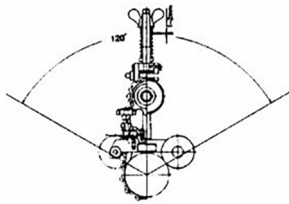
5 Close the links.

- Verify that the rounded side of the chain faces toward the pipe!



6 Turn the butterfly nut **(B)** clockwise to fix the device on the pipe.

- Leave a clearance of 1 to 2 mm so that the device can run smoothly.



7 Hold the device and release the clutch lever **(C)**.

8 Move the device within a range of 120 ° and align chain.

7 Operating the device

⚠ WARNING

Risk of injury or damage due to backfire

Backfires may cause serious accidents or fire.

- When a backfire occurs, you should find the cause.
- Inspect and maintain the device correctly before using it again.
- The followings are causes of backfire:
 - Improper gas pressure adjustment.
 - Overheated tip.
 - Dross clogging in tip.
 - Damages to the tapered section of tip or torch.
 - If oil or grease is used on the connections of the oxygen hose.

NOTICE

Material damage due to flashback

Flashbacks can cause fire and damage to the device. If there is a hissing sound in the torch, proceed as follows:

- Immediately disconnect the following supplies at the gas inlet into the device or on the gas cylinders' side:
 - Oxygen supply
 - Fuel gas supply

7.1 Selection of suitable torch tip

- 1 Select a tip that fits the thickness of the material to be cut.
- 2 Insert tip into torch.
- 3 Fix tip by tightening the nut with the two wrenches.
- If the material to be cut is heavily rusted or you need a bevel cut with an angle exceeding 20 degrees, select the tip one grade higher than specified in the cutting data.

7.2 Putting into operation

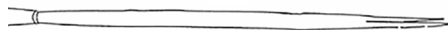
- Adjust the gas pressure on the following valves:
 - 1 Open the fuel gas valve 1/4 turn.
 - 2 Open the pre-heating oxygen valve 1/2 turn.
 - 3 Light the torch with an igniter.
 - 4 Gradually open the pre-heating oxygen valve until the standard flame shows a white cone. The incandescent area should be uniform and have a length about 5 to 6 mm.
 - 5 Open the cutting oxygen valve fully.
 - 6 Re-adjust the flame so it shows an orderly flow.

NOTICE

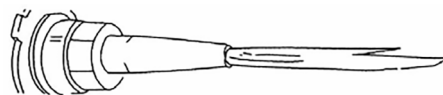
Bad cutting quality due to improper gas setting

A disorderly oxygen flow will have a serious negative impact on the cutting surface.

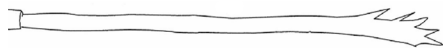
- Close the pre-heating oxygen and fuel gas valve.
- Keep the cutting oxygen flowing and clean tip with a needle.



A neutral flame ensures a good quality cut surface.



An oxygen flame shortens the flow of the cutting oxygen and can be used for bevel cutting. It can cause slug deposition or melting of the upper cutting surface.



Due to the high pressure of the cutting oxygen, a carbonizing flame has similar effects as the oxidizing flame.

- 7 Adjust the torch at a suitable distance from the surface:
 - Acetylene gas: 8 to 10 mm
 - Propane gas: 5 to 8 mm.

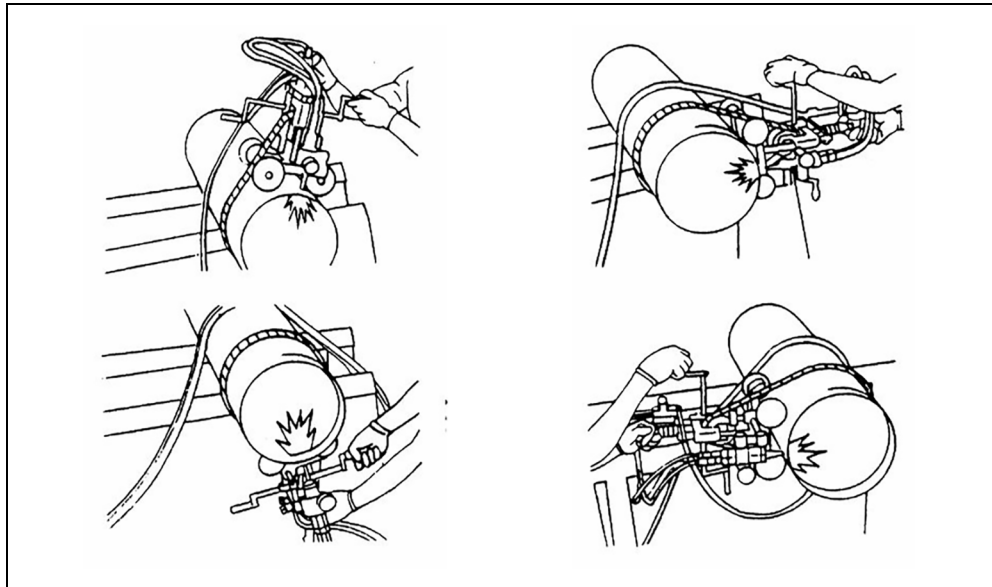
7.3 Cutting

There are three ways to start cutting:

- 1 Drill a hole and start on the edge of the hole, or
- 2 Pierce through the material, or
- 3 Start from the edge of the material.

Then

- 4 Align the torch tip with the cutting start point.
 - 5 Open the valves as described in chapter 7.2.
 - 6 Ignite the torch with a lighter.
 - 7 Adjust the flame.
- ⇒ <https://youtu.be/MCr54FVrzzY>
- 8 Pre-heat the cutting point until it is white hot.
 - 9 Open the valve for the cutting oxygen about 1/8 turn.
 - 10 Position the torch tip about 15 to 20 mm above the surface to be cut in order to prevent contamination of the tip.
 - 11 Inspect the cutting state and use the knob **(M)** to control the cutting speed.
 - 12 Hold the butterfly nut **(B)** with one hand during operation. When the device moves down, support it, when it moves up, lift it, as shown in the following illustration.



- 13 In order to change direction, turn the knob **(M)**.
Turning the knob clockwise moves the device forward, turning the knob anti-clockwise moves the device backwards.

7.3.1 Bevel cutting

The torch connector is equipped with two holes. For bevel cuts position the torch in the lower one. Proceed as follows:

- 1 Position the torch in the lower hole of the torch connector.
- 2 Position the torch holder and torch in the required angle.
- 3 Fix the torch with the butterfly nut **(B)**.
- 4 Choose a tip one grade larger than specified in the cutting data for the material thickness.
- 5 Use an oxidizing flame and reduce the speed a little bit.

7.4 Stopping the cutting process

CAUTION

Risk of injury due to hot parts

Parts may still be hot after the operation. People are at a risk of burns.

- Wear your personal protective equipment.
- Allow the cutting torch to cool down for 5 - 10 minutes before touching the parts.

- 1 Close the following supplies at the gas inlet into the device or on the gas cylinders' side:
 - Oxygen valve
 - Fuel gas valve

8 Putting out of operation

- 1 Disconnect the device from the oxygen supply.
- 2 Disconnect the device from the fuel gas supply.

9 Maintenance and cleaning

Scheduled maintenance and cleaning are prerequisites for a long service life and trouble-free operation. The maintenance cycle is determined by the work environment and the device's maintenance intervals. If the device is operated for more than 8 hours a day, the maintenance intervals should be changed as needed. Always observe the provisions of DIN 31051 "Fundamentals of maintenance" and DIN EN 13306 "Maintenance - Maintenance terminology", as well as any local laws and regulations.

CAUTION

Fire hazard due to contamination

Dust deposits inside the device can lead to a reduction in insulation. This can cause short circuits or fires.

- Clean the device annually with dried compressed air to remove dust and cutting fume residue.

9.1 Maintenance and cleaning intervals

The specified intervals are standard values and refer to single-shift operation. We recommend recording the inspections. The date of the inspection, the detected defects and the name of the inspector should be documented.

- Maintenance and inspection services should always be performed by skilled repair engineers.

WARNING

Risk of self-ignition if oil or grease is used with oxygen.

If oil or grease is used on the connections of the oxygen pipe or on the pressure regulators, self-ignition can occur.

- Never use oil or grease together with oxygen.

Daily/every 6 hours of cutting	➤ Clean the four wheels with an iron wire brush.
	➤ Lubricate the rotary section of the device, i.e. the wheels, sprocket, worm gear, handle, and worm bearing.
	➤ Check the consumables for wear.
	➤ Clean the nozzle orifice of the tip.
Weekly	➤ Lubricate the butterfly nut and sliding sections
Every 3 months	➤ Check the device for signs of cracks.
	➤ Check the gas hose and connections for leaks.

10 Faults and troubleshooting

- Contact your retailer or Thermacut® in the event of questions or problems.

Table 4 Fault messages in the display

Error	Cause	Troubleshooting
Device does not work	➤ Chain tension too great.	➤ Adjust the chain tension.
	➤ Worn worm gear.	➤ Clean and/or repair worm gear.
	➤ Wheel does not rotate.	➤ Lubricate or replace, if necessary.
Defective surface	➤ Worn or damaged tip.	➤ Clean the tip or replace, if necessary.
	➤ Unsuitable gas pressure and/or cutting speed.	➤ Verify the correct gas pressure and cutting speed.
Tip	➤ The injection stream of cutting oxygen does not extend straight.	➤ Replace the tip.
	➤ The injection stream of the cutting oxygen bifurcates.	
	➤ The tip emanates a clicking sound when cutting.	
	➤ The pre-heating flame is not flat.	
	➤ Gas leaks and/or burns at the nut.	

11 Disposal

- Disassemble equipment prior to proper disposal.
- Collect components separately and recycle in an environmentally responsible manner.
- Observe local regulations, laws, provisions, standards and guidelines.

11.1 Disposal of materials

This product is mainly made of metallic materials that can be melted in steel and iron works and are thus almost infinitely recyclable. The plastic materials used are labeled in preparation for their sorting and separation for later recycling.

11.2 Disposal of consumables

Oil, greases and cleaning agents must not contaminate the ground or enter the sewage system. These substances must be stored, transported and disposed of in suitable containers. Observe the relevant local regulations and disposal instructions in the safety data sheets specified by the manufacturer of the consumables. Contaminated cleaning tools (brushes, rags, etc.) must also be disposed of in accordance with the information provided by the consumables' manufacturer.

- Observe the relevant local regulations and disposal instructions in the safety data sheets specified by the manufacturer of the consumables.

11.3 Packaging

Thermacut® has reduced the packaging to the necessary minimum. The ability to recycle packaging materials is always considered during their selection.

12 Warranty

This warranty statement is an integral part of the Terms and Conditions ("T&C") of Thermacut® (hereinafter "Seller") and applies to deliveries of goods under the contract concluded between the Seller and the other party to the contract as the recipient of the goods (hereinafter "Buyer"); the terms used herein have the same meaning as attributed to them in the T&C.

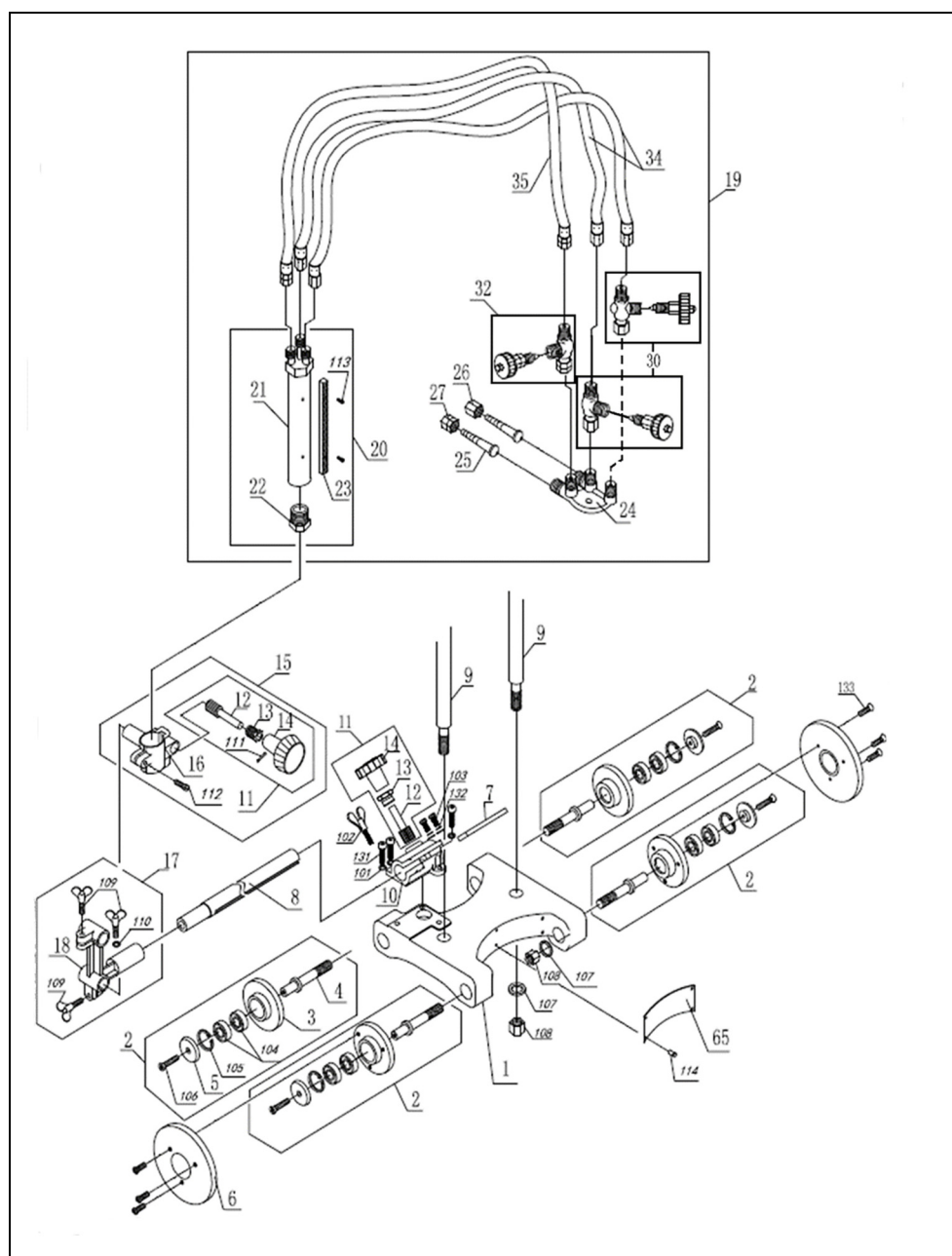
- 1 The Seller warrants to the Buyer that during the warranty period specified below, the goods delivered under the contract shall retain the properties specified in the technical data sheet for the goods available on the Seller's websites at the time the binding offer is sent (Section 2.2 of the T&C), otherwise in the quality and design suitable for the purpose resulting from the contract, otherwise for the usual purpose.
- 2 The period begins on the day of delivery of the goods to the buyer (Section 5.1, 5.2 of the T&C).
- 3 For the notification (claim) of warranty defects, the assertion of rights arising from the defective performance and other rights and obligations of the Seller and the Buyer, Section 3.4 ff and the following provisions of the T&C apply.
- 4 The warranty period is:
 - One (1) year for EX-TRACK® PA-1 portable cutting systems.
 - One (1) year for cutting torches and cable assemblies
- 5 The warranty does not cover normal wear and tear of the goods or their parts as a result of their use, such as nozzles, electrodes, shields, O-rings, vortex rings, etc.
- 6 The Seller shall not be liable for damage to the goods caused by the Buyer or third parties as a result of incorrect or improper handling of the goods (in particular repair or modification by persons not authorized by the Seller) or their installation, improper use of the goods or insufficient maintenance, in particular use of the goods for a purpose other than the specified purpose or other non-compliance with the operating instructions, use of excessive force or use of unauthorized goods.

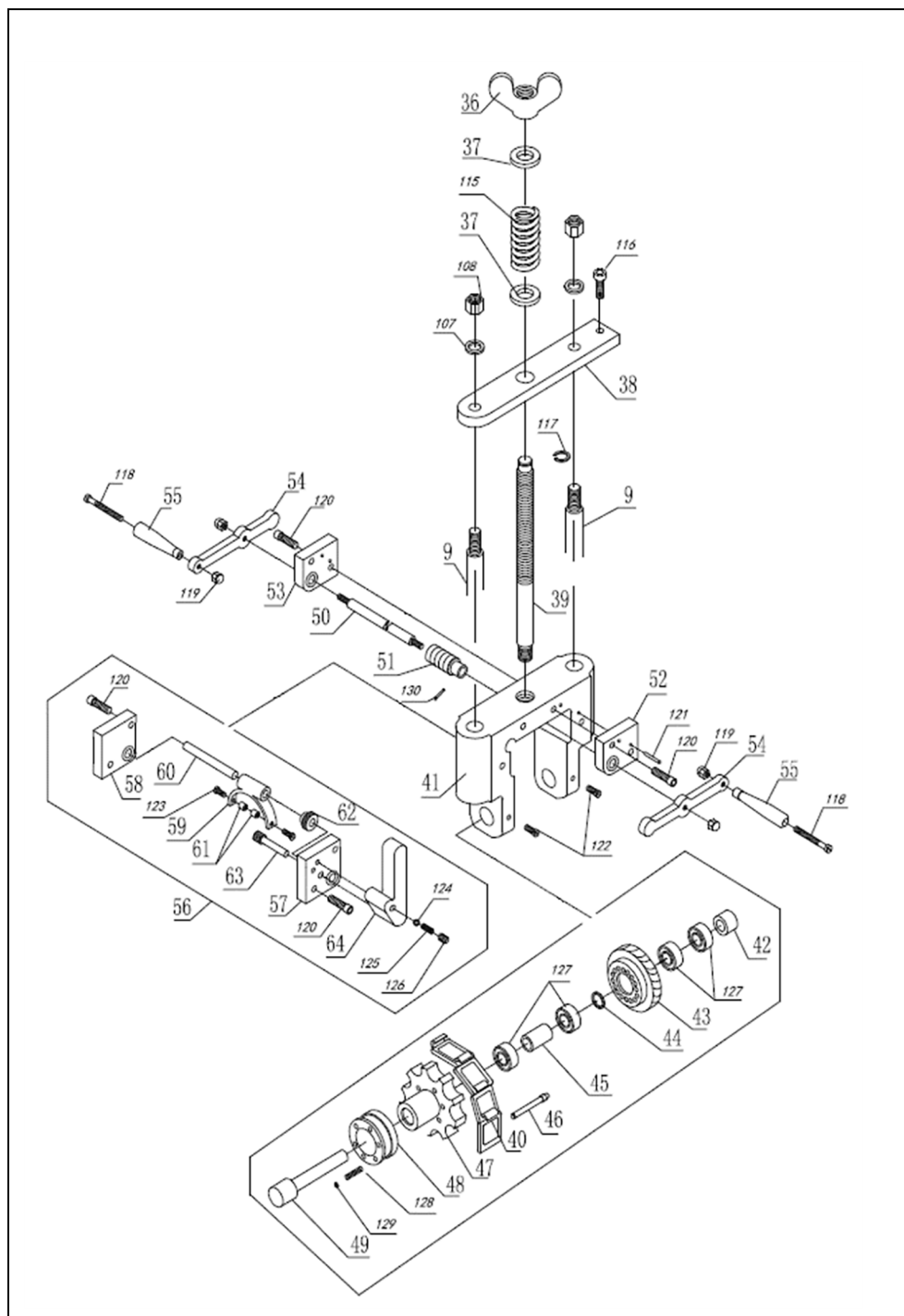
13 Ordering information

Table 5 Ordering information

Description	Quantity	Part number
EX-TRACK® PA-1/CE/1-OXY/ pipe cutter	1	EX-0-704-005
Cutting tip propane 00 (1 to 5 mm)	1	EX-0-708-017
Cutting tip propane 0 (5 to 10 mm)	1	EX-0-708-018
Cutting tip propane 1 (10 to 20 mm)	1	EX-0-708-019
Cutting tip propane 2 (20 to 35 mm)	1	EX-0-708-020
Cutting tip propane 3 (35 to 60 mm)	1	EX-0-708-021
Cutting tip propane 4 (60 to 90 mm)	1	EX-0-708-022

14 Parts list





Ref. no.	Position	Description	pcs./ machine	Std order qty.
EX-0-700-003	1	Base	1	1
EX-0-700-004	2	Guide wheel assembly	4	1
EX-0-700-005	3	Guide wheel	4	1
EX-0-700-006	4	Guide wheel shaft	4	1
EX-0-700-007	5	Guide wheel cover	4	1
EX-0-700-008	6	Guide wheel (bigger)	2	1
EX-0-700-009	7	Rack positioning pin	1	1
EX-0-700-010	8	Transverse rack	1	1
EX-0-700-011	9	Bracket post	2	1
EX-0-700-012	10	Transverse bridge	1	1
EX-0-700-013	11	Tension knob assembly	2	1
EX-0-700-014	12	Tension knob screw	2	1
EX-0-700-015	13	Tension knob cover	2	1
EX-0-700-016	14	Knob	2	1
EX-0-700-017	15	Cutting torch holder assembly	1	1
EX-0-700-018	16	Torch holder	1	1
EX-0-700-019	17	Clamp connector assembly	1	1
EX-0-700-020	18	Clamp connector	1	1
EX-0-700-021	19	Cutting torch and gas circuit assembly	1	1
EX-0-708-015	20	Oxy-fuel torch assembly	1	1
EX-0-700-023	21	Cutting torch	1	1
EX-0-708-016	22	Cutting nozzle nut (CU ø 22*19)	1	1
EX-0-700-025	23	Rack of cutting torch	1	1
EX-0-700-026	24	Gas distributor	1	1
EX-0-708-002	25	Hose nipple	2	1
EX-0-708-004	26	Oxygen nut (UNF 9/16"-18)	1	1
EX-0-708-001	27	Fuel gas nut (UNF 9/16"-18 LH)	1	1
EX-0-708-014	30	Oxygen valve (UNF 9/16"-18)	2	1
EX-0-708-012	32	Fuel gas valve (UNF 9/16"-18LH)	1	1
EX-0-700-036	34	Oxygen hose blue	2	1
EX-0-700-037	35	Fuel gas hose	1	1
EX-0-700-038	36	Large butterfly nut	1	1
EX-0-700-039	37	Washer	2	1
EX-0-700-040	38	Bracket plate	1	1
EX-0-700-041	39	Lifting screw	1	1
EX-0-700-042	40	Chain (standard maximum diameter 0.6 m)	82 pcs./kit	1
EX-0-700-043	41	Bracket	1	1
EX-0-700-044	42	Sprocket shaft sleeve	1	1
EX-0-700-045	43	Large worm gear	1	1
EX-0-700-046	44	Worm gear casing	1	1
EX-0-700-047	45	Bearing bushing	1	1
EX-0-700-048	46	Clutch pull pin	6	1

Ref. no.	Position	Description	pcs./ machine	Std order qty.
EX-0-700-049	47	Sprocket	1	1
EX-0-700-050	48	The clutch	1	1
EX-0-700-051	49	Sprocket shaft	1	1
EX-0-700-052	50	Hand worm gear shaft	1	1
EX-0-700-053	51	Hand worm gear	1	1
EX-0-700-054	52	Front positioning block for worm gear	1	1
EX-0-700-055	53	Rear positioning block for worm gear	1	1
EX-0-700-056	54	Crank arm	2	1
EX-0-700-057	55	Crank handle	2	1
EX-0-700-058	56	Clutch fork assembly	1	1
EX-0-700-059	57	Position block front of pulling fork	1	1
EX-0-700-060	58	Position block back of pulling fork	1	1
EX-0-700-061	59	The clutch fork	1	1
EX-0-700-062	60	Clutch fork shaft	1	1
EX-0-700-063	61	Fork sleeve	2	1
EX-0-700-064	62	Clutch fork gear	1	1
EX-0-700-065	63	Clutch gear shaft	1	1
EX-0-700-066	64	The clutch handle	1	1
EX-0-700-067	65	Nameplate	1	1
EX-0-700-068	101	Flat gasket ø5	1	1
EX-0-700-069	102	Butterfly screws M5*20	1	1
EX-0-700-070	103	Round screw M5*12	1	1
EX-0-700-071	104	Bearing	8	1
EX-0-700-072	105	Spring ø28	4	1
EX-0-700-073	106	Countersunk screw M5*12	4	1
EX-0-700-074	107	Washer	3	1
EX-0-700-075	108	Retaining nut	8	1
EX-0-700-076	109	Butterfly screws M6*15	2	1
EX-0-700-077	110	Flat gasket ø6	1	1
EX-0-700-078	111	Round pin ø2.5*18	1	1
EX-0-700-079	112	Round screw M6*20	1	1
EX-0-700-080	113	Front positioning block retaining screw	2	1
EX-0-700-081	114	Rivet ø2	4	1
EX-0-700-082	115	Spring ø32*60	1	1
EX-0-700-083	116	Hexagon socket head cap screw M8*16	1	1
EX-0-700-084	117	Spring ø10	1	1
EX-0-700-085	118	Round screw M6*60	2	1
EX-0-700-086	119	Nut M5	2	1
EX-0-700-087	120	Hexagon socket head cap screw M6*25	4	1
EX-0-700-088	121	Round pin 4*20	1	1
EX-0-700-089	122	Round screw M6*12	2	1
EX-0-700-022	123	Screws for clutch fork	22	1
EX-0-700-024	124	Steel ball ø6	1	1

Ref. no.	Position	Description	pcs./ machine	Std order qty.
EX-0-700-027	125	Spring ø6*12	1	1
EX-0-700-028	126	Screw M8*8	1	1
EX-0-700-029	127	Worm gear bearings	4	1
EX-0-700-030	128	Spring ø7*22	1	1
EX-0-700-031	129	Spring ø4	1	1
EX-0-700-032	130	Hand worm gear retaining screw	1	1
EX-0-700-033	131	Hexagon socket head cap screw M5*15	3	1
EX-0-700-034	132	Flat gasket ø5	2	1
EX-0-700-035	133	Round screw M5*12	8	1

For more information about accessories, visit our website:
www.ex-track.com.

15 Cutting data

- All pressures are torch inlet pressures.
- Oxygen purity is minimum 99.7%, propane is minimum JIS grade 3.

15.1 Propane cut charts

The cut charts are a guide for the operator. Due to the varying types and quality of steel, climatic/ atmospheric conditions, it is advisable to make the relevant setting and adjustments to suit the work in hand.

Table 6 Cutting data

Part no.	Tip type	Material thickness [mm]	Torch height [mm]	Pressure [bar]			Consumption [l/h]			Cutting speed [mm/min]
				Preheat O ²	Cutting O ²	Fuel gas (propane)	Preheat O ²	Cutting O ²	Fuel gas (propane)	
EX-0-708-017	00	1 - 5	8 - 10	1.5	2.0	0.2	1180	1200	310	750 - 550
EX-0-708-018	0	5 - 10	8 - 10	1.5	2.3	0.2	1180	1200	310	600 - 450
EX-0-708-019	1	10 - 20	8 - 10	1.5	2.5	0.2	1370	2300	310	480 - 380
EX-0-708-020	2	20 - 35	8 - 10	1.5	3.0	0.25	1370	4300	360	400 - 320
EX-0-708-021	3	35 - 60	8 - 10	1.5	3.5	0.3	1860	6500	490	350 - 280
EX-0-708-022	4	60 - 90	8 - 10	1.5	4.5	0.3	1860	11000	490	300 - 240

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