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A grayscale photograph of several industrial torches, likely used for welding or cutting. The torches are arranged in a grid-like pattern, with some in the foreground and others in the background, creating a sense of depth. The lighting is dramatic, highlighting the metallic surfaces and the cylindrical shapes of the torches.

User manual for **Koma Plus** torches

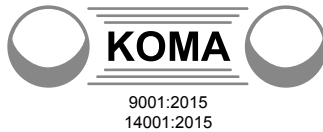
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KOMA  **PLUS**

The logo for Koma Plus, featuring the word "KOMA" in a bold, sans-serif font, followed by a stylized starburst or lightning bolt symbol, and then the word "PLUS" in a bold, sans-serif font.

This user manual is an integral part of the gas torch. Please read it carefully before installation, commissioning and use.

Please contact us for any further information.



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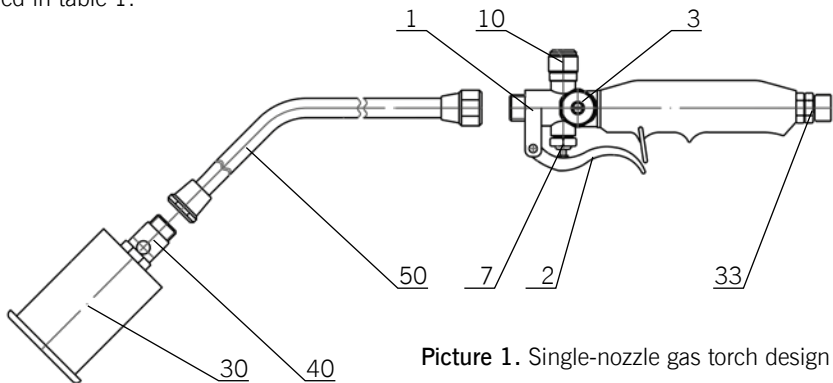
1. Purpose

A manual torch is designed to perform the following operations:

- the laying of thermo-weldable roofing paper,
- the artistic hot bending of metal elements,
- the defrosting of objects,
- artistic wood burning,
- the heating of oil paints, varnish, putty etc.,
- the welding of thermoplastics,
- clearing ice off stairs and pavements,
- the incinerating of animal carcasses,
- other operations which require concentrated thermal energy.

2. Torch components

A general view of a torch is presented in picture 1. The names of particular components are outlined in table 1.



Picture 1. Single-nozzle gas torch design

Numbers	Part (unit) name	Index no.
1	KOMA 2 body + handle	EKP0002
3	Valve knob	PP00256
7	Push rod	PP00387
2	Trigger	EP0010
30+40	Diffuser with nozzle	table nr 2
50	Connector	table nr 3
33	Swivel adaptor	
10	Flame regulator knob	PP00426

The torches are available with $\varnothing 25$, $\varnothing 38$, $\varnothing 45$, $\varnothing 50$, $\varnothing 60$, $\varnothing 70$ diffusers

Table 1. Main gas torch components









KOMA PLUS STAINLESS STEEL DIFFUSERS WITH NOZZLE		
	Part (unit) name	Index no.
	KP Ø25 diffuser with nozzle	EKP0013
	KP Ø38 diffuser with nozzle	EKP0010
	KP Ø45 diffuser with nozzle	EKP0009
	KP Ø50 diffuser with nozzle	EKP0001
	KP Ø60 diffuser with nozzle	EKP0008
KOMA PLUS TITANIUM DIFFUSERS WITH NOZZLE		
	Part (unit) name	Index no.
	KP Titanium Ø50 diffuser with nozzle	EKP0112
	KP Titanium Ø60 diffuser with nozzle	EKP0113
	KP Titanium Ø70 diffuser with nozzle	EKP0114

Table 2. Koma Plus diffusers with nozzle

Part (unit) name	Index no.
KP L700 TYTAN diffuser	EKP0011
KP L500 TYTAN diffuser	EKP0012
KP/OBR diffuser	EKP0007
KP L700 diffuser	EKP0006
KP L600 diffuser	EKP0005
KP L500 diffuser	EKP0004
KP L200 diffuser	EKP0003




Table 3. KOMA PLUS connectors

3. Estimated power and gas consumption (at 0.2 MPa).

- steel diffuser Ø38 (25kW - 1.8 kg/h)
- steel diffuser Ø45 (28 kW - 2.0 kg/h)
- steel diffuser Ø50 (35 kW - 2.4 kg/h)
- steel diffuser Ø60 (55kW - 4.2 kg/h)
- titanium diffuser Ø50 (35 kW - 2.4 kg/h)
- titanium diffuser Ø60 (55 kW - 4.2 kg/h)
- titanium diffuser Ø70 (80kW - 6.0 kg/h)

4. KOMA PLUS gas torch description

Koma Plus gas torches are freely configurable to user needs and requirements with suitable Koma Plus diffuser with nozzle and Koma Plus connectors.

Koma Plus line includes the following gas torches:

- **Koma Plus - stainless steel:** Ø25, Ø38, Ø45, Ø60 diffuser, L100, L200, L500, L600, L700 connector, Koma Plus handle;
- **Koma Plus - titanium diffuser:** Ø50, Ø60, Ø70 diffuser, L200, L500, L600, L700 stainless steel connector, Koma Plus handle;
- **Koma Plus - Titanium:** Ø50, Ø60, Ø70 titanium diffuser, L500, L700 titanium connector, Koma Plus handle;
- **Koma Plus PP1 gas torch:** the set includes three stainless steel diffusers (Ø25, Ø38, Ø45), L107 connector, Koma Plus handle, orange rubber hose with connectors 3 m, open ended spanner 17-19, Koma holder and gas regulator. All KP- PP1 gas torch components are supplied in a metal carry case with handle.

Titanium gas torches are lighter than stainless steel gas torches.



Picture 2. KP-PP1 gas torch set

5. Markings explanation

The following markings have been placed on the torch handle:

KOMA the manufacturer's logo

P a letter code determining the type of flammable gas allowed for use (P = Liquefied Petroleum Gas LPG, propane-butane in the gas form)

The torch diffuser has been marked with the **nozzle diameter** (f.ex. \varnothing 50 or \varnothing 60).

6. Safety equipment

For proper functioning of particular types of torches and their safe operation fuse-fitted pressure regulators (912L or M50V/ST) are used.

Regulators user manual is available on website www.koma.zgora.pl

7. Handle-attached equipment

rubber hose - (acc. to EN 559:1994. Gas-powered welding devices. Rubber hoses for welding, cutting and related methods), orange in colour 5-m or 10-m long for Special Line torches, fastened to the connector end on the handle with the G3/8L connection acc. to PN-92/M-69260; it supplies gas from the pressure regulator on the cylinder to the torch handle; the hose bears the B safety mark on the basis of the certificate issued by the Polish Centre for Testing and Certification.

In order to prevent the rubber hose from sliding off the connectors, specialized KOMA-produced clamps are used.

pressure regulator - with the 0-400 kPa range with a built-in safety valve protecting against the effects of hose damage and designed to reduce the variable inlet pressure and to maintain the outlet pressure at a possibly stable level. The regulator's outlet connector is connected with a rubber hose to the torch handle.

8. Preparing torch for operation

Before operation the following actions must be performed.

- 1). Examine the technical condition of the valve and the valve seals on the cylinder. If either is damaged or the seal is missing, do not use the cylinder.
- 2). Assemble the torch, the hose and the pressure regulator.
- 3). Tighten the regulator onto the cylinder valve and then tighten the fixing nut.
- 4). With the knob (number 3 picture 1 and 3) close the valve of the torch handle.
- 5). Open the gas cylinder valve slowly.
- 6). In case of smelling gas, check the tightness of connections.
- 7). Open the valve adjustment screw (3; picture. 1, 3).
- 8). Regulate the desired gas flow from the torch nozzle.
- 9). If the flame is too small, regulate it – pilot light knob number 10 picture 1 and 3

A torch regulated as in point 8 above is ready for operation.

9. Torch operation manual

The torches should be operated solely by personnel trained by the employer in proper and safe torch operation.

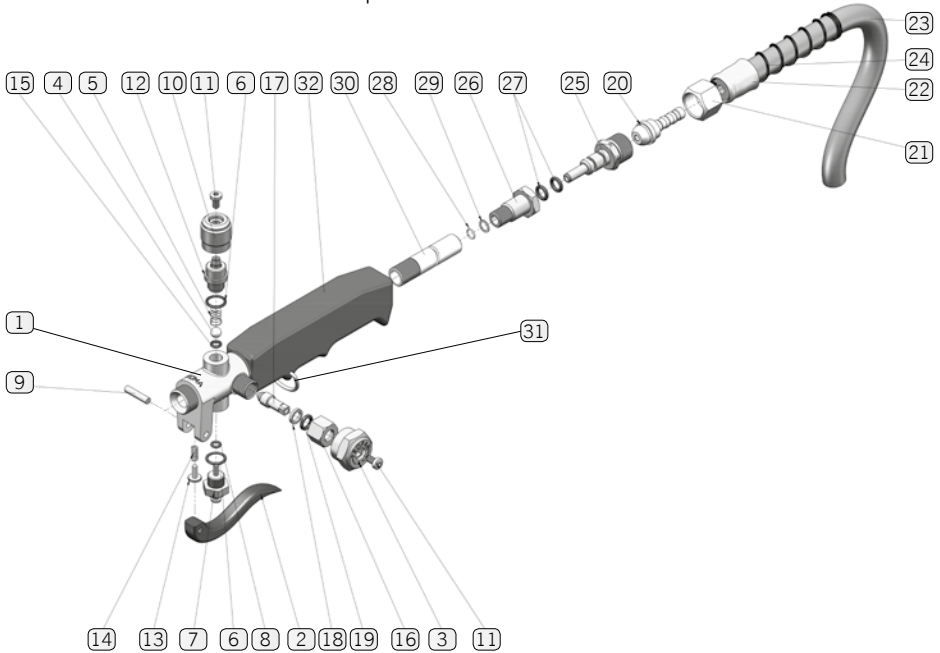
Breaks in operation:

- for short breaks in operation, release the trigger;
- for long breaks in operation, follow the torch shutdown instructions.

Torch shutdown instructions:

- release the trigger,
- wait for the torch flame to go out,
- close the valve adjustment screw (3; picture 1, 3),
- unscrew the connections at the ends of the rubber hose,
- unscrew the cylinder pressure regulator, roll up the hose and put the torch in a safe storage place.

Picture 3. KOMA PLUS handle components



no.	part (unit) name	items	Index no.	no.	part (unit) name	items	Index no.
1	body KOMA PLUS	1	PP00165	19	o-ring 5,3x2,4	2	S0009
2	trigger	1	EP0010	20	connector end	1	PP00001
3	valve knob	1	PP00265	21	nut G3/8"L	1	PP00002
4	ball Ø 6.4	1	S0012	22	clamp	1	
5	valve spring	1	S0003	23	hose	1	EP0020
6	o-ring 8x1.5	2	S0007	24	hose clamp	1	
7	push rod	1	PPO0387	25	swivel adaptor (part 1)	1	
8	o-ring 3x2	1	S0008	26	swivel adaptor (part 2)		
9	dowel	1	PP00030	27	o-ring 5x2 silikon	2	
10	flame regulator knob	1	PPO0426	28	ring A6	1	
11	screw M3.5	2	S0011	29	swivel adaptor (part 3)	1	
12	flame regulator	1	PP00334	30	handle connector KO	1	
13	mushroom lifter	1	PPO0029	31	locking clamp	1	PP00033
14	trigger spring	1	S0004	32	handle	2	EP0110
15	o-ring 4x1.5	1	S0005				
16	compression nut	1	PPO0024				
17	valve	1	PPO0026				
18	ring	1	PP00028				

Table 4. KOMA PLUS handle components



10. Safety instructions

- the torch should be operated solely by personnel trained by the employer in proper and safe torch operation,
- preparing the torch for operation must be done according to p. 7 of this manual,
- any operation in enclosed spaces requires an efficient general ventilation system,
- during torch operation do not direct the flame at the rubber hose supplying the propane-butane gas to the torch handle nor at the propane-butane cylinder present at the workplace,
- using the torch in the vicinity of fuel tanks, flammable materials, explosives etc. is strictly forbidden,
- using the torch in the engine compartment of wheeled motor vehicles etc. is forbidden,
- if a gas leak has been detected on the valves, torch components or their connections, stop the operation and eliminate the cause of the leak,
- the tightness of the torch and the rubber hose must not be checked with the gas flame,
- the torch and the rubber hose must not be exposed to direct sunlight or other heat sources for longer periods of time as it accelerates the ageing process of the rubber components of the torch,
- if the rubber components are found to be mechanically damaged or aged, they must immediately be replaced with new ones,
- during breaks in operation the torch must be stored in a place designated by the employer, which meets all the requirements of applicable health and fire safety regulations.

11. Repairs

If any of the torch components is found to be damaged, it is to be replaced with new KOMA - produced ones. The repair must be done by a qualified employee, authorized by the employer. Using self-made spare parts or parts from other suppliers is forbidden (should that be the case, complaints shall not be considered).

The producer gives a 24-month warranty on this product.

WARRANTY CARD

Date of production:

Date of sale:

signature, stamp of quality controller



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