MULTI-PURPOSE KITS FOR WELDING, BRAZING, HEATING AND FLAME CUTTING, WITH DIN CONNECTIONS

Powerful complete sets for welding, brazing and heating — STARLET *A*

Description	*Art. No.*	*Cat. No.*
Kit STARLET *A*	716.18036	010



consisting of:
1 handle type 1302, 1 spring lever cutting attachment type 8702-A/PMYE for all fuel gases
3 gas-mixing nozzles type ANME for cutting rangers 3 to 75 mm
7 welding tips type 321-A with hammered finish welding nozzles cleaning set, hose nipples with union nuts and operating instructions

Powerful complete sets for welding, brazing and heating — STARLET *PMYE*

Description	*Art. No.*	*Cat. No.*
Kit STARLET *PMYE*	716.06711	010



consisting of:
1 handle type 1302, 1 spring lever cutting attachment type 8702-A/PMYE for all fuel gases
3 gas-mixing nozzles type PNME for cutting ranges 3 to 75 mm
6 brazing and heating tips type Z-PMY with hammered finish brazing and heating nozzles sizes 1 to 6, torch carriage, torch spanner, gas igniter, protection goggles, nozzle cleaning set, hose nipples with union nuts and operating instruction

Powerful complete sets for welding, brazing and heating — STARLET *WS*1302

Description	*Art. No.*	*Cat. No.*
Kit Starlet *WS* 1302	716.06345	010



consisting of:
1 handle type 1302, 1 spring lever cutting attachment type 8702-A for all fuel gases
3 gas-mixing nozzles type ANME for cutting ranges 3 to 75 mm
3 welding tips type 321-A with hammered finish welding nozzles, for welding rangers 1,0 to 6,0 mm, operating instructions, including hose nipples with union nuts

Powerful complete sets for welding, brazing and heating — STARLET PROFIKIT *A*

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
PROFIkit *A* ME	G 1/4” RH	G 3/8“ LH	716.07280	010
PROFIkit *A* MB	G 3/8“ RH	G 3/8“ LH	716.07282	010
PROFIkit *A* MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	716.07283	010
PROFIkit *A* MF	M 16x1,5-RH (M)	M 16x1,5-LH (M)	716.07284	010
PROFIkit *A* MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	716.07285	010



Consisting of:
1 Handle STARLET 2221,
3 Gas mixing cutting nozzles type ANME for cutting range from 3 - 75 mm,
One each cylinder pressure regulator CONSTANT 2000 for Oxygen (10 bar) and Acetylene (1,5 bar),
One each flash-back arrestor DGN for Oxygen (G 1/4“) and Acetylene (G 3/8“ LH),
7 welding inserts type 321-A for welding range from 0,2 - 14,0 mm,
4 hose clips, twin hoses Oxygen/fuel gas 6/6 mm, length 4,5 m, multi-flame heating insert STARLET F-A 6, cutting inserts STARLET 8702, gas lighter, 10 replacement flint, protective goggles, adjustable screw spanner, set nozzle cleaners, operating manual including hose tails with connection nuts

Stand: 04/2013

MULTI-PURPOSE KITS FOR WELDING, BRAZING, HEATING AND FLAME CUTTING

SARLET *KS*

Powerful complete sets for welding, brazing and heating



Description		*Art. No.*	*Cat. No.*
Kit STARLET *KS*	DIN connections: G 1/4” RH - G 3/8” LH	716.04493	010
	BS connections: G 3/8” RH - G 3/8” LH		

consisting of:
1 handle type 2211, 1 spring lever cutting attachment type 1711-A for acetylene
3 cutting nozzles and 1 heating nozzle type A-RS for cutting ranges 3 to 40 mm
4 welding tips type 111-A, for welding ranges 1 to 9 mm
torch carriage, radius bar, torch spanner, set of nozzle cleaners, operating instructions, incl. hose nippels and union nuts

SARLET *N*

Powerful complete sets for welding, brazing and heating



Description	*Art. No.*	*Cat. No.*
Kit STARLET *N*	716.01786	010

consisting of:
1 handle type 2211, 1 spring lever cutting attachment type 2711-A for acetylene
2 block nozzles type A-BK, for cutting rangers 3 to 25 mm
4 welding tips type 111-A, for welding rangers 1 to 9 mm
torch carriage, torch spanner, set of nozzle cleaners, operating instructions,
incl. hose nipples and union nuts

SARLET *WS*

Powerful complete sets for welding, brazing and heating



Description	*Art. No.*	*Cat. No.*
Kit Starlet *WS*	716.02262	010

consisting of:
1 handle type 2211, 1 spring lever cutting attachment type 1711-PMYE for acetylene
3 cutting nozzles and 1 heating nozzle type A-RS for cutting ranges 3 to 40 mm
3 welding tips type 111-A, for welding ranges 1 to 6 mm, operating instruction,
incl. hose nipples and union nuts

Stand: 04/2013

✱ **on request**

MESSER Cutting Systems

Handle shells replaceable, maintenance-free and easy to repair — STARLET

Type	*Description*	*Connections*	*Art. No.*	*Cat. No.*
1302 ME	Valves V-positioned	DIN: G 1/4“ RH - G 3/8” LH	716.05978	024
1302 MB		BSP: G 3/8“ RH - G 3/8” LH	716.05976	024
1302 MU		CGA: 9/16“ RH - 9/16“ LH	716.05977	050
1302 MF		NFE: M16x1,5 RH - M16x1,5 LH	716.05979	050
1302 MN		AS: UNF 5/8“ RH - UNF 5/8“ LH	716.06136	050
1302 S	with built-in flashback arrestors	DIN: G 1/4“ RH - G 3/8“ LH	716.06712	024
2221			716.06815	024
3201	with Conax valves	Hose connection 6 / 6 mm	242.65000	024
6201	with pilot flame, tipping lever and Conax valves	Hose connection 4 / 4 mm	716.00200	004
7201	with tipping lever on-off and Conax valves	Hose connection 6 / 6 mm	716.01115	004





Length: approx. 210 mm (without hose connections), shaft diameter: 15 mm, weight: approx. 400 g

STARLET 1302 S:
Length: approx. 250 mm (without hose nipples),shaft diameter: 15 mm, weight: approx. 480 g

The ergonomic design of the STARLET handles allows easy handling, fatigue-free working and high operation comfort. Large cross-sectional areas enable high gas flow and guarantee maximum safety against flashbacks. The sturdy and compact aluminum construction guarantees high impact resistance and long service life.

The STARLET 302 S version is additionally equipped with built-in flashback arrestors with flame trap and non-return valve for oxygen and fuel gas, and thus can be used also for high-efficiency heating tips up to oxygen flow rates of 55 m^3/h.

For standard applications, nozzles replanceable — STARLET 111-A

Size	*O_2-Consumption*	*Welding range*	*Art. No. tip complete*	*Art. No. welding nozzle*	*Cat. No.*
0	approx. 40 l/h	0,2- 0,5 mm	716.01600	716.01540	024/007
1	approx. 80 l/h	0,5- 1,0 mm	716.01601	716.01541	024/007
2	approx. 160 l/h	1,0- 2,0 mm	716.01602	716.01542	024/007
3	approx. 315 l/h	2,0- 4,0 mm	716.01603	716.01543	024/007
3,5	approx. 410 l/h	3,0- 5,0 mm	716.01820	716.01882	024/007
4	approx. 500 l/h	4,0- 6,0 mm	716.01604	716.01544	024/007
5	approx. 800 l/h	6,0- 9,0 mm	716.01605	716.01545	024/007
6	approx. 1.250 l/h	9,0 - 14,0 mm	716.01606	716.01546	024/007



Tips for welding, brazing and heating with acetylene, with hammered finish welding nozzle bores

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STARLET 211-A

Laminar flame outlet, nozzles replaceable



Size	O_2-Consumption	Welding range	Art. No. tip complete	Art. No. welding nozzle	Cat. No.
1	approx. 80 l/h	0,5 - 1,0 mm	716.01611	242.34110	024/007
2	approx. 160 l/h	1,0 - 2,0 mm	716.01612	242.34210	024/007
3	approx. 315 l/h	2,0 - 4,0 mm	716.01613	242.34310	024/007
3,5	approx. 410 l/h	3,0 - 5,0 mm	716.01830	716.00686	024/007
4	approx. 500 l/h	4,0 - 6,0 mm	716.01614	242.34410	024/007
5	approx. 800 l/h	6,0 - 9,0 mm	716.01615	242.34510	024/007
6	approx. 1.250 l/h	9,0 - 14,0 mm	716.01616	242.34610	024/007

Tips for welding, brazing and heating with acetylene

STARLET 321-A

Mixing tube with hammered finish welding nozzle



Size	O_2-Consumption	Welding range	Art. No. tip complete	Art. No. welding nozzle	Cat. No.
0	40 l/h	0,2 - 0,5 mm	716.06257	716.06258	024
1	80 l/h	0,5 - 1,0 mm	716.05051	716.05041	024
2	160 l/h	1,0 - 2,0 mm	716.05052	716.05042	024
3	315 l/h	2,0 - 4,0 mm	716.05053	716.05043	024
4	500 l/h	4,0 - 6,0 mm	716.05054	716.05044	024
5	800 l/h	6,0 - 9,0 mm	716.05055	716.05045	024
6	1.250 l/h	9,0 - 14,0 mm	716.05056	716.05046	024

Tips for acetylene, for welding, brazing and heating

STARLET 411-A

Flexible, mixing tube with brazed-on welding nozzle replaceable



Size	O_2-Consumption	Welding range	Art. No. tip complete	Art. No. mixing tube	Cat. No.
2	approx. 160 l/h	1,0 - 2,0 mm	716.01702	716.01742	024/007
3	approx. 315 l/h	2,0 - 4,0 mm	716.01703	716.01743	024/007
3,5	approx. 410 l/h	3,0 - 5,0 mm	716.01840	716.00461	024/007
4	approx. 500 l/h	4,0 - 6,0 mm	716.01704	716.01744	024/007
5	approx. 800 l/h	6,0 - 9,0 mm	716.01705	716.01745	024/007

Pipe welding tips for welding, brazing and heating in difficult areas, fuel gas acetylene

Stand: 04/2013

✱ on request

WELDING, BRAZING AND HEATING TIPS

Central flame outlet, nozzles replaceable — STARLET Z-A

Size	*O_2-Consumption*	*Welding range*	*Art. No. tip complete*	*Art. No. welding nozzle*	*Cat. No.*
7	max. 1,8 m^3/h	355 mm	716.01837	242.34710	004
8	max. 2,5 m^3/h	380 mm	716.01838	242.34810	004

Tips for welding, brazing and heating with acetylene



Central flame outlet, nozzles replaceable — STARLET Z-A

Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
7	1,2 - 4,2 m^3/h	430 mm	716.51805	242.34710	024
8	1,8 - 4,6 m^3/h	580 mm	716.51806	242.34810	024

Tips for acetylene, with mixing tube made of stainless steel, and replaceable brazing and heating nozzles for brazing and spot heating



Laminar flame outlet, nozzles replaceable — STARLET F-A

Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
3	0,3 - 0,7 m^3/h	200 mm	716.03443	716.02080	004
4	0,7 - 1,2 m^3/h	275 mm	716.01844	242.14460	004
6	1,2 - 2,1 m^3/h	335 mm	716.01846	242.47610	004
8	2,3 - 4,0 m^3/h	380 mm	716.01848	242.13811	004

Tips for laminar brazing and heating with acetylene



Laminar flame outlet, nozzles replaceable, particularly low noise (85 dB(A) up to size 8) — STARLET FB-A

Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
5	0,5 - 0,9 m^3/h	430 mm	716.51809	716.00725	004
6	0,9 - 1,6 m^3/h	430 mm	716.51810	716.00726	004
7	1,2 - 2,2 m^3/h	580 mm	716.51811	716.00727	004
8	1,8 - 2,8 m^3/h	580 mm	716.51812	716.00728	004
9	3,1 - 6,7 m^3/h	880 mm	716.51813	716.00779	004

Tips for acetylene with mixing tube made from stainless steel and replaceable brazing and heating nozzles, for brazing and laminar heating



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STARLET Z-PMY

Mixing tube with hammered finish brazing and heating nozzle, cetral flame outlet



Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. brazing nozzle*	*Cat. No.*
1	80 l/h	157 mm	716.06491	716.06481	004
2	160 l/h	176 mm	716.06492	716.06482	004
3	315 l/h	191 mm	716.06493	716.06483	004
4	500 l/h	207 mm	716.06494	716.06484	004
5	800 l/h	245 mm	716.06495	716.06485	004
6	1.250 l/h	266 mm	716.06496	716.06486	004

Tips for propane, methane, Mapp, with hammered finish nozzle for brazing and spot heating

STARLET Z-PMYE

Central flame outlet, nozzles replaceable



Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
1	max. 0,1 m^3/h	145 mm	716.01861	716.00590	004
2	max. 0,2 m^3/h	175 mm	716.01862	716.00591	004
3	max. 0,4 m^3/h	205 mm	716.01863	716.00592	004
4	max. 0,6 m^3/h	235 mm	716.01864	716.00593	004
6	max.1,6 m^3/h	265 mm	716.01866	716.00594	004
8	max.2,4 m^3/h	315 mm	716.01868	716.00595	004

Tips for spot brazing and heating with propane, methane, Mapp, ethylene

STARLET F-PME

Laminar flame outlet, nozzles replaceable



Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
4	max. 0,5 m^3/h	275 mm	716.01854	716.00570	004
6	max. 3,8 m^3/h	335 mm	716.01856	716.00571	004
8	max. 6,1 m^3/h	285 mm	716.01858	716.00596	004
10	max. 5,5 m^3/h	310 mm	716.01860	716.00597	004

Tips for laminar brazing and heating with propane, methane, ethylene

Stand: 04/2013

✱ on request

MESSER Cutting Systems

WELDING, BRAZING AND HEATING TIPS

Stabilised, central flame outlet, nozzles replaceable — STARLET Z-PMEY

Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
6	1 - 3 m^3/h	430 mm	716.51712	716.01233	004
8	2 - 6 m^3/h	430 mm	716.51713	716.01234	004
10	6 - 14 m^3/h	580 mm	716.51714	716.01235	004
12	11 - 35 m^3/h	880 mm	716.51715	716.01236	004
14	18 - 40 m^3/h	1.090 mm	716.51716	716.01241	004



Tips for propane, methane, Mapp, ethylene, with mixing tube made of stainless steel, and replaceable brazing and heating nozzles, for brazing and stable spot heating

Laminar flame outlet, nozzles repaceable — STARLET F-PMEY

Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
8	2 - 6 m^3/h	430 mm	716.51717	716.01237	004
10	6 - 14 m^3/h	580 mm	716.51718	716.01238	004
12	11 - 35 m^3/h	580 mm	716.51719	716.01239	004



Tips for propane, methane, Mapp, ethylene, with mixing tube made of stainless steel, and replaceable brazing and heating nozzles, for brazing and laminar heating

Laminar flame outlet, nozzles replaceable — STARLET HF-PM

Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
12	5 - 12 m^3/h	430	716.51722	716.05646	004
13	8 - 23 m^3/h	580	716.51723	716.05647	004



Tips for propane, methane, with mixing tube made of stainless steel, and replaceable brazing and heating nozzles, for brazing and laminar heating

Accessories for brazing and heating tips — CONNECTING ADAPTER

Nozzle thread	*Mixing tube thread*	*Art. No.*	*Cat. No.*
M 12 x 1,5	1/2“ x 25 Gg.	716.51705	039
M 14 x 1,5	1/2“ x 25 Gg.	716.51706	039
M 18 x 1,5	1/2“ x 25 Gg.	716.51707	039



for brazing and heating tips Z-A, FB-A, F-A, Z-PMYE and F-PMYE
only for stainless steel mixing tubes

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FORKED TORCH STARLET F

Laminar flame outlet, nozzles replaceable



Size	*O2-Consumption F-A*	*O2-Consumption F-PM*	*Art. No. Type F-A*	*Art. No. Type F-PM*	*Cat. No.*
F 1	0,4 m^3/h	1,1 m^3/h	716.50766 ✱	716.50759 ✱	039
F 2	0,7 m^3/h	2,1 m^3/h	716.50767 ✱	716.50760 ✱	039
F 3	1,2 m^3/h	2,5 m^3/h	716.50768 ✱	716.50761 ✱	039
F 4	1,7 m^3/h		716.50769 ✱	--	039
F 5	2,5 m^3/h		716.50770 ✱	--	039

Overall length approx. 250 mm, nozzle distance 30 - 60 mm (flexible)

STARLET F-A forked torch for laminar heating and brazing with acetylene
STARLET F-PM forked torch for laminar heating and brazing with propane, methane

HEATING NOZZLES STARLET FK

Replaceable nozzles for STARLET F forked torch, laminar flame outlet



Size	*Art. No. Type FK-A*	*Art. No. Type FK-PMY*	*Cat. No.*
FK 1	716.03006	716.03016	039
FK 2	716.03007	716.03017	039
FK 3	716.03008	716.03018	039
FK 4	716.52217	--	039
FK 5	716.52270	--	039

Heating nozzles FK-A for forked torch STARLET F-A, fuel gas acetylene
Heating nozzles FK-PM for forked torch STARLET F-PM, fuel gases propane, methane

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✱ **on request**

Central flame outlet, nozzles replaceable

FORKED TORCH
STARLET Z

Size	*O2-Consumption Z-A*	*O2-Consumption Z-PM*	*Art. No. Type Z-A*	*Art. No. Type Z-PM*	*Cat. No.*
Z 1	--	0,5 m^3/h	--	716.50756 ✱	039
Z 2	0,3 m^3/h	1,1 m^3/h	716.50762 ✱	716.50757 ✱	039
Z 3	0,7 m^3/h	1,4 m^3/h	716.50763 ✱	716.50758 ✱	039
Z 4	1,2 m^3/h	--	716.50764 ✱	--	039
Z 5	2,5 m^3/h	--	716.50765 ✱	--	039



Overall length approx.. 250 mm, nozzle distance 30 - 60 mm (flexible)

STARLET Z-A forked torch for spot heating and brazing with acetylene
STARLET Z-PM forked torch for spot heating and brazing with propane, methane

Replaceable nozzles for STARLET Z forked torch, central flame outlet

HEATING NOZZLES
STARLET ZK

Size	*Art. No. Type ZK-A*	*Art. No. Type ZK-PMY*	*Cat. No.*
ZK 1	--	716.03011	039
ZK 2	257. 26232	716.03012	039
ZK 3	257.26332	716.03013	039
ZK 4	257.26432	--	039
ZK 5	257.26532	--	039



Heating nozzles ZK-A for forked torch STARLET Z-A, fuel gas acetylene
Heating nozzles ZK-PM for forked torch STARLET Z-PM, fuel gases propane, methane

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STARLET CUTTING ATTACHMENTS

For manual flame cutting, fuel gases acetylene or propane, methane, Mapp

	Description	*Nozzle type*	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
	STARLET 1711 with spring lever	Ring/ slot nozzles	716.05168	716.05337	024
	STARLET 1211 with handwheel	Ring/ slot nozzles	716.05338	716.05333	024
	STARLET 2711 with spring lever	Block nozzles	716.05329	--	024
	STARLET 8702 with spring lever	Gas-mixing nozzles with international 30° nozzle connection		716.05960	024
	STARLET 8711-A/PMEY with spring lever	Gas-mixing nozzles	716.05335	716.05335	024

Cutting attachments for ethylene gases available on request

Calculation of fuel gas consumption

Mixing ratio during torch operation in atmosphere and maximum flame temperature of different gases

	Acetylene	Propane	Methane (Natural gas)	Mapp	Ethylene	Hydrogen
Fuel gas: oxygen [m^3 : m^3]	1 : 1,1	1 : 3,75	1 : 1,6	1 : 3,0	1 : 1,9	1 : 0,36
maximum flame temperature [°C]	3.160	2.820	2.780	2.910	2.940	2.860
Fuel gas: compressed air [m^3 : m^3]	1 : 5,5	1 : 19	1 : 8	1 : 15	1 : 9,5	1 : 1,8
maximum flame temperature [°C]	2.330	1.990	1.950	1.995	2.120	2.280

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✱ **on request**

MESSER Cutting Systems