OXYFUEL TECHNOLOGY
MESSER CUTTING SYSTEMS

MESSER
Cutting Systems

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OXYFUEL TECHNOLOGY

Version: 01/2022

OVERVIEW OF TYPHOON FAMILY

TYPHOON L/R & LD/RD, 1-STAGE + 2-STAGE

For all technical applications
Inlet pressure up to 230 bar / 2335 psi
Outlet pressure up to 10 bar / 145 psi
In- and outlet connections according to DIN, BSP, CGA, NFE, AS.
Other connections available.

TYPHOON LDFG / RDFG

For welding and shielding applications
Inlet pressure up to 230 bar / 2335 psi
Outlet flow rate up to 32 l/min / 68 scfh
In- and outlet connections according to DIN, BSP, CGA, NFE, AS.
Other connections available.

TYPHOON LFM / LDFM / RDFM

For welding and shielding applications
Inlet pressure up to 230 bar / 2335 psi
Outlet flow rate up to 30 l/min / 64 scfh
In- and outlet connections according to DIN, BSP, CGA, NFE, AS.
Other connections available.

TYPHOON B

For all technical applications
Inlet pressure up to 230 bar / 2335 psi
Outlet pressure up to 10 bar / 145 psi
In- and outlet connections according to BSP.
Other connections available.

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OVERVIEW OF TYPHOON FAMILY

TYPHOON L/R & LD/RD

LEFT/RIGHT SIDE INLET, OUTLET PRESSURE GAUGE (BAR), 1-STAGE & 2-STAGE TECHNIQUE

- Oxygen
- Acetylene
- Propane
- Hydrogen
- Argon
- Carbon dioxide
- Nitrogen
- Helium

TYPHOON LDFG / RDFG

LEFT/RIGHT SIDE INLET, OUTLET FLOW GAUGE (L/MIN.), 2-STAGE TECHNIQUE

- Argon
- Carbon dioxide

TYPHOON LDFM / RDFM

LEFT/RIGHT SIDE INLET, OUTLET FLOW METER (L/MIN.), 2-STAGE TECHNIQUE

- Argon
- Carbon dioxide

TYPHOON LFM

LEFT SIDE INLET, OUTLET FLOW METER (L/MIN.), 1-STAGE TECHNIQUE

- Argon
- Carbon dioxide
- Nitrogen
- Helium

TYPHOON B

BOTTOM INLET, OUTLET PRESSURE GAUGE (BAR), 1-STAGE TECHNIQUE

- Acetylene
- Propane

Other techn. gases available.

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✱ on request | picture may differ | subject to change

MESSER Cutting Systems

TYPHOON L
230 BAR

LEFTHAND SIDE ENTRY **TYPHOON L**

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Outlet pressure*	*Art. No.*	*Cat. No.*
L/E-O	DIN	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.21058	000
L/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.21059	000
L/BU-O	BSP/CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.21111	000
L/U-O	CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.21112	000
L/E-A	DIN	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.21062	000
L/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.21063	000
L/BU-A	BSP/CGA	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.21113	000
L/U-A	CGA	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.21114	000
L/E-P	DIN	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.21067	000
L/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.21068	000
L/BU-P	BSP/CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.21115	000
L/U-P	CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.21116	000
L/E-H	DIN	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21072	000
L/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21073	000
L/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21117	000
L/U-H	CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21118	000
L/E-Ar	DIN	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.21076	000
L/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.21077	000
L/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.21119	000
L/U-Ar	CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.21120	000
L/E-C	DIN	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.21080	000
L/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.21081	000
L/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.21121	000
L/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.21122	000
L/E-N	DIN	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21084	000
L/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21085	000
L/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21123	000
L/U-N	CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21124	000
L/E-He	DIN	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.21088	000
L/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.21089	000
L/BU-He	BSP/CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.21125	000
L/U-He	CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.21126	000
Further options available						

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TYPHOON LFM
230 BAR

TYPHOON LFM — LEFTHAND SIDE ENTRY, OUTLET FLOW METER

Type	Standard	Gas Type	Inlet pressure	Max. flow rate	Art. No.	Cat. No.
LFM/E-Ar	DIN	Argon	230 bar / 3335 psi	30l/min / 64 scfh	770.21092	000
LFM/B-Ar	BSP	Argon	230 bar / 3335 psi	30l/min / 64 scfh	770.21093	000
LFM/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	30l/min / 64 scfh	770.21128	000
LFM/U-Ar	CGA	Argon	230 bar / 3335 psi	30l/min / 64 scfh	770.21129	000
LFM/E-C	DIN	CO2	100 bar / 1450 psi	30l/min / 64 scfh	770.21096	000
LFM/B-C	BSP	CO2	100 bar / 1450 psi	30l/min / 64 scfh	770.21097	000
LFM/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	30l/min / 64 scfh	770.21131	000
LFM/U-C	CGA	CO2	100 bar / 1450 psi	30l/min / 64 scfh	770.21132	000
LFM/E-N	DIN	Nitrogen	230 bar / 3335 psi	30l/min / 64 scfh	770.21100	000
LFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	30l/min / 64 scfh	770.21101	000
LFM/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	30l/min / 64 scfh	770.21134	000
LFM/U-N	CGA	Nitrogen	230 bar / 3335 psi	30l/min / 64 scfh	770.21135	000
LFM/E-He	DIN	Helium	230 bar / 3335 psi	30l/min / 64 scfh	770.21151	000
LFM/B-He	BSP	Helium	230 bar / 3335 psi	30l/min / 64 scfh	770.21152	000
LFM/BU-He	BSP/CGA	Helium	230 bar / 3335 psi	30l/min / 64 scfh	770.21153	000
LFM/U-He	CGA	Helium	230 bar / 3335 psi	30l/min / 64 scfh	770.21156	000
Further options available						

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✱ on request | picture may differ | subject to change

TYPHOON B + LD + LDFG + LDFM
230 BAR

BOTTOM ENTRY — TYPHOON B

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
B/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.21064	000
B/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.21071	000

Further options available

LEFTHAND SIDE ENTRY, 2-STAGE — TYPHOON LD

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art.No.	Cat. No.
LD/ B-O	BSP	O2	230 bar / 3335 psi	10 bar / 145 psi	770.25083	000
LD/B-AR	BSP	Ar	230 bar / 3335 psi	10 bar / 145 psi	770.25082	000
LD/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.25085	000
LD/B-N	BSP	N2	230 bar / 3335 psi	10 bar / 145 psi	770.25086	000
LD/B-H	BSP	H2	230 bar / 3335 psi	10 bar / 145 psi	770.25087	000
LD/B-A	BSP	Ace	230 bar / 3335 psi	10 bar / 145 psi	770.25081	000
LD/B-P	BSP	Propane	230 bar / 3335 psi	10 bar / 145 psi	770.25084	000

Further options available

LEFTHAND SIDE ENTRY, 2-STAGE, OUTLET FLOW GAUGE — TYPHOON LDFG

Type	Standard	Gas Type	Inlet pressure	Outlet flow rate	Art.No.	Cat. No.
LDFG/B-Ar	BSP	Ar	230 bar / 3335 psi	32l/min / 68 scfh	770.25090	000
LDFG/B-C	BSP	CO2	100 bar / 1450 psi	32l/min / 68 scfh	770.25091	000

Further options available

LEFTHAND SIDE ENTRY, 2-STAGE, OUTLET FLOW METER — TYPHOON LDFM

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art.No.	Cat. No.
LDFM/B-Ar	BSP	Ar	230 bar / 3335 psi	30l/min / 64 scfh	770.25088	000
LDFM/B-C	BSP	CO2	100 bar / 1450 psi	30l/min / 64 scfh	770.25089	000

Further options available

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TYPHOON RD
230 BAR

TYPHOON RD — RIGHTHAND SIDE ENTRY, 2-STAGE

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art.No.	Cat. No.
RD/B-O	BSP	O2	230 bar / 3335 psi	10 bar / 145 psi	770.25092	000
RD/U-O	CGA	O2	230 bar / 3335 psi	10 bar / 145 psi	770.25093	000
RD/BU-O	BSP / CGA	O2	230 bar / 3335 psi	10 bar / 145 psi	770.25094	000
RD/B-Ar	BSP	Ar	230 bar / 3335 psi	10 bar / 145 psi	770.25095	000
RD/U-Ar	CGA	Ar	230 bar / 3335 psi	10 bar / 145 psi	770.25096	000
RD/BU-Ar	BSP / CGA	Ar	230 bar / 3335 psi	10 bar / 145 psi	770.25097	000
RD/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.25098	000
RD/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.25099	000
RD/BU-C	BSP / CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.25100	000
RD/B-N	BSP	N2	230 bar / 3335 psi	10 bar / 145 psi	770.25101	000
RD/U-N	CGA	N2	230 bar / 3335 psi	10 bar / 145 psi	770.25102	000
RD/BU-N	BSP / CGA	N2	230 bar / 3335 psi	10 bar / 145 psi	770.25103	000
RD/B-H	BSP	H2	230 bar / 3335 psi	10 bar / 145 psi	770.25104	000
RD/U-H	CGA	H2	230 bar / 3335 psi	10 bar / 145 psi	770.25105	000
RD/BU-H	BSP / CGA	H2	230 bar / 3335 psi	10 bar / 145 psi	770.25106	000
RD/B-A	BSP	Ace	25 bar / 360 psi	1,5 bar / 22 psi	770.25107	000
RD/U-A	CGA	Ace	25 bar / 360 psi	1,5 bar / 22 psi	770.25108	000
RD/BU-A	BSP / CGA	Ace	25 bar / 360 psi	1,5 bar / 22 psi	770.25109	000
RD/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.25110	000
RD/U-P	CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.25111	000
RD/BU-P	BSP / CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.25112	000

Further options available

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✱ on request | picture may differ | subject to change

TYPHOON RDFG + RDFM
230 BAR

RIGHTHAND SIDE ENTRY, 2-STAGE, OUTLET FLOW GAUGE — TYPHOON RDFG

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Outlet flow rate*	*Art.No.*	*Cat. No.*
RDFG/B-Ar	BSP	Ar	230 bar / 3335 psi	32l/min / 68 scfh	770.25119	000
RDFG/U-Ar	CGA	Ar	230 bar / 3335 psi	32l/min / 68 scfh	770.25120	000
RDFG/BU-Ar	BSP/CGA	Ar	230 bar / 3335 psi	32l/min / 68 scfh	770.25121	000
RDFG/B-C	BSP	CO2	100 bar / 1450 psi	32/min / 68 scfh	770.25122	000
RDFG/U-C	CGA	CO2	100 bar / 1450 psi	32/min / 68 scfh	770.25123	000
RDFG/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	32/min / 68 scfh	770.25124	000
Further options available						

RIGHTHAND SIDE ENTRY, 2-STAGE, OUTLET FLOW METER — TYPHOON RDFM

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Outlet pressure*	*Art.No.*	*Cat. No.*
RDFM/B-Ar	BSP	Ar	230 bar / 3335 psi	30l/min / 64 scfh	770.25113	000
RDFM/U-Ar	CGA	Ar	230 bar / 3335 psi	30l/min / 64 scfh	770.25114	000
RDFM/BU-Ar	BSP/CGA	Ar	230 bar / 3335 psi	30l/min / 64 scfh	770.25115	000
RDFM/B-C	BSP	CO2	100 bar / 1450 psi	30/min / 64 scfh	770.25116	000
RDFM/U-C	CGA	CO2	100 bar / 1450 psi	30/min / 64 scfh	770.25117	000
RDFM/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	30/min / 64 scfh	770.25118	000
Further options available						

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NOMENCLATURE

REGULATOR FEATURES

Marking	*Description*	
L	Lefthand side entry	
R	Righthand side entry	
B	Bottom entry	
S	Side outlet	
T	Pressure adjustment by **T-bar**	
D	Double stage / 2-stage	
FG	Outlet Flow Gauge l/min.	
FM	Outlet Flow Meter l/min.	
FM2	Double Outlet Flow Meter	(Tornado only)
„e“	Electrically Heated (CO2 only)	(Tornado only)
W	Tornado „W“ type Flowmeter (AR-CO2-AR/CO2 mix only)	(Tornado only)

REGULATOR INLET CONNECTION STANDARDS

Marking	*Description*
E	European, German DIN 477
B	BS British, BSP
F	French AFNOR, NFE
AS	Australian AS 2473.2
U	US, CGA
BU	BSP / CGA

GAS TYPES

Marking	*Description*
O	Oxygen
A	Acetylene
P	Propane, LPG
H	Hydrogen
Ar	Argon
C	CO2
X	Ar/CO2 mix
N	Nitrogen
He	Helium

(e.g.: BDFM2/B-H means: bottom entry, 2-stage, double flow meter, BSP std inlet connection, Hydrogen)

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OVERVIEW OF TORNADO FAMILY

TORNADO-W

For welding and shielding applications
Inlet pressure up to 230 bar / 23000 KPa / 2335 psi
Outlet flow rate up to 30 l/min / 64 scfh
In- and outlet connections according to DIN, BSP, CGA, NFE, AS.
Other connections available.

TORNADO

Widest range for all technical applications
Inlet pressure up to 230 bar 23000 KPa / 2335 psi
Outlet pressure up to 100 bar / 10000 KPa / 1450 psi
Outlet flow rate (with flow-meter or flow-gauge) up to 32 l/min / 68 scfh
In- and outlet connections according to DIN, BSP, CGA, NFE, AS.
Other connections available.

TORNADO 300

For high flow applications
Inlet pressure up to 230 bar / 23000 KPa / 2335 psi
Outlet pressure up to 20 bar / 2000 / 290 psi
In- and outlet connections according to DIN, BSP, CGA, NFE, AS.
Other connections available.

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OVERVIEW OF TORNADO FAMILY

TORNADO-W — FLOWMETER OUTLET ONLY

- Argon
- Carbon Dioxide
- Argon / Carbon Dioxide mix

TORNADO L & LS — LEFTHAND SIDE INLET CONNECTION

- Oxygen
- Acetylene
- Propane
- Hydrogen
- Nitrogen
- Argon
- Carbon dioxide
- Helium

TORNADO R & RS — RIGHTHAND SIDE INLET CONNECTION

- Oxygen
- Acetylene
- Propane
- Hydrogen
- Nitrogen
- Argon
- Carbon dioxide
- Helium

TORNADO B & BS — BOTTOM INLET CONNECTION

- Oxygen
- Acetylene
- Propane
- Hydrogen
- Nitrogen
- Argon
- Carbon dioxide
- Helium

TORNADO-300 — HIGH-FLOW

- Oxygen
- Acetylene
- Propane
- Hydrogen
- Nitrogen
- Argon
- Carbon dioxide
- Helium

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OVERVIEW OF MOST COMMON INLET- AND OUTLET CONNECTIONS

MOST COMMON INLET (CYLINDER) CONNECTIONS

GAS TYPE	GAS CODE	CYLINDER CONNECTION DIN	BSP	CGA	NFE	AS
Acetylene	A	Bracket DIN 477	G 5/8”-LH(M)	0,880”x1/4”-LH(M)	G 5/8”-LH(M)	G 5/8”-LH(M)
Argon	Ar	W21,8x1/4”-RH(F)	G 5/8”-RH(M)	0,960”x1/4”-RH(M)	W21,7x1/4”-RH(F)	G 5/8”-RH(M)
Carbon dioxide	C	W21,8x1/4”-RH(F)	0,860”x1/4”-RH(F)	0,830”x1/4”-RH(F)	W21,7x1/4”-RH(F)	0,890”x1/4” T.P.I.-RH(F)
Helium	He	W21,8x1/4”-RH(F)	G 5/8”-RH(M)	0,960”x1/4”-RH(M)	W21,7x1/4”-RH(F)	G 5/8”-RH(M)
Hydrogen	H	W21,8x1/4”-LH(F)	G 5/8”-LH(F)	0,830”x1/4”-LH(F)	W21,7x1/4”-LH(F)	G 5/8”-LH(M)
Nitrogen	N	W24,32x1/4”-RH(F)	R 5/8”-RH(M)	0,960”x1/4”-RH(M)	W21,7x1/4”-RH(F)	G 5/8”-RH(M)
Oxygen	O	G 3/4-RH(F)	G 5/8”-RH(M)	0,908”x1/4”-RH(F)	G 5/8”-RH(M)	G 5/8”-RH(M)
Propane	P	W21,8x1/4”-LH(F)	G 5/8”-LH(M)	0,880”x1/4”-LH(M)	W21,7x1/4”-LH(F)	G 5/8”-LH(M)
Argon / N_2	I	W21,8x1/4”-RH(F)	G 5/8”-RH(M)	0,960”x1/4”-RH(M)	W21,7x1/4”-RH(F)	G 5/8”-RH(M)
Argon / CO_2	X	W21,8x1/4”-RH(F)	G 5/8”-RH(M)	0,960”x1/4”-RH(M)	W21,7x1/4”-RH(F)	G 5/8”-RH(M)

MOST COMMON OUTLET CONNECTIONS

GAS TYPE	GAS CODE	OUTLET CONNECTION DIN	BSP	CGA	NFE	AS
Acetylene	A	G 3/8”-LH(M)	G 3/8”-LH(M)	9/16”NF-LH(M)	M 16x1,5-LH(M)	5/8 UNF-LH(M)
Argon	Ar	G 1/4”-RH(M)	G 3/8”-RH(M)	9/16”NF-RH(M)	G 1/4”-RH(M)	5/8 UNF-RH(M)
Carbon dioxide	C	G 1/4”-RH(M	G 3/8”-RH(M)	9/16”NF-RH(M)	G 1/4”-RH(M)	5/8 UNF-RH(M)
Helium	He	G 1/4”-RH(M	G 3/8”-RH(M)	9/16”NF-RH(M)	G 1/4”-RH(M)	5/8 UNF-RH(M)
Hydrogen	H	G 3/8”-LH(M)	G 3/8”-LH(M)	9/16”NF-LH(M)	G 1/4”-LH(M)	5/8 UNF-LH(M)
Nitrogen	N	G 1/4”-RH(M	G 3/8”-RH(M)	9/16”NF-RH(M)	G 1/4”-RH(M)	5/8 UNF-RH(M)
Oxygen	O	G 1/4”-RH(M	G 3/8”-RH(M)	9/16”NF-RH(M)	M 16x1,5-RH(M)	5/8 UNF-RH(M)
Propane	P	G 3/8”-LH(M)	G 3/8”-LH(M)	9/16”NF-LH(M)	M 16x1,5-LH(M)	5/8 UNF-LH(M)
Argon / N_2	I	G 1/4”-RH(M	G 3/8”-RH(M)	9/16”NF-RH(M)	G 1/4”-RH(M)	5/8 UNF-RH(M)
Argon / CO_2	X	G 1/4”-RH(M	G 3/8”-RH(M)	9/16”NF-RH(M)	G 1/4”-RH(M)	5/8 UNF-RH(M)

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TORNADO W
230 BAR

TORNADO – W

LEFTHAND / RIGHTHAND SIDE INLET, OUTLET FLOW METER

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Max.flow rate*	*Art. No.*	*Cat. No.*
W/E-Ar	DIN	Argon	230 bar / 3335 psi	30 l/min	770.21047	000
W/B-Ar	BSP	Argon	230 bar / 3335 psi	30 l/min	770.53952	000
W/U-Ar	CGA	Argon	230 bar / 3335 psi	30 l/min	770.21041	000
W/E-C	DIN	CO2	100 bar / 1450 psi	30 l/min	770.21048	000
W/B-C	BSP	CO2	100 bar / 1450 psi	30 l/min	770.53953	000
W/U-C	CGA	CO2	100 bar / 1450 psi	30 l/min	770.21042	000
W/E-X	DIN	Ar/CO2	230 bar / 3335 psi	30 l/min	770.21049	000
W/B-X	BSP	Ar/CO2	230 bar / 3335 psi	30 l/min	770.53951	000
W/U-X	CGA	Ar/CO2	230 bar / 3335 psi	30 l/min	770.21043	000

Further options available

Version: 01/2022

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MESSER Cutting Systems

TORNADO L + LS
230 BAR

LEFTHAND SIDE INLET — TORNADO L

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
L/E-O	DIN	Oxygen	200 bar / 2900 psi	10 bar / 145 psi	770.51740	000
L/B-O	BSP	Oxygen	200 bar / 2900 psi	10 bar / 145 psi	770.51742	000
L/E-A	DIN	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51756	000
L/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51758	000
L/E-P	DIN	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51772	000
L/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51774	000
L/E-H	DIN	Hydrogen	200 bar / 2900 psi	10 bar / 145 psi	770.51788	000
L/B-H	BSP	Hydrogen	200 bar / 2900 psi	10 bar / 145 psi	770.51790	000
L/E-Ar	DIN	Argon	200 bar / 2900 psi	10 bar / 145 psi	770.51804	000
L/B-Ar	BSP	Argon	200 bar / 2900 psi	10 bar / 145 psi	770.51806	000
L/E-C	DIN	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51820	000
L/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51822	000
L/E-N	DIN	Nitrogen	200 bar / 2900 psi	10 bar / 145 psi	770.51836	000
L/B-N	BSP	Nitrogen	200 bar / 2900 psi	10 bar / 145 psi	770.51838	000
L/E-He	DIN	Helium	200 bar / 2900 psi	10 bar / 145 psi	770.51852	000
L/B- He	BSP	Helium	200 bar / 2900 psi	10 bar / 145 psi	770.51854	000

LEFTHAND SIDE INLET - SIDE OUTLET — TORNADO LS

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
LS/E-O	DIN	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51741	000
LS/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51743	000
LS/E-A	DIN	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51757	000
LS/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51759	000
LS/E-P	DIN	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51773	000
LS/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51775	000
LS/E-H	DIN	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51789	000
LS/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51791	000
LS/E-N	DIN	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51837	000
LS/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51839	000
LS/E-Ar	DIN	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51805	000
LS/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51807	000
LS/E-C	DIN	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51821	000
LS/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51823	000
LS/E-He	DIN	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51853	000
LS/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51855	000

Further options available

Version: 01/2022

TORNADO TL
230 BAR

TORNADO TL — LEFTHAND SIDE INLET, T-BAR

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
TL/E-O 20	DIN	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.21210	000
TL/B-O 20	BSP	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.21222	000
TL/E-O 50	DIN	Oxygen	230 bar / 3335 psi	50 bar / 725 psi	770.21214	000
TL/B-O 50	BSP	Oxygen	230 bar / 3335 psi	50 bar / 725 psi	770.21228	000
TL/E-O 100	DIN	Oxygen	230 bar / 3335 psi	100 bar / 1450 psi	770.21218	000
TL/B-O 100	BSP	Oxygen	230 bar / 3335 psi	100 bar / 1450 psi	770.21230	000
TL/E-H 20	DIN	Hydrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21234	000
TL/B-H 20	BSP	Hydrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21246	000
TL/E-H 50	DIN	Hydrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21238	000
TL/B-H 50	BSP	Hydrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21250	000
TL/E-H 100	DIN	Hydrogen	230 bar / 3335 psi	100 bar / 1450 psi	770.21242	000
TL/B-H 100	BSP	Hydrogen	230 bar/ 3335 psi	100 bar / 1450 psi	770.21254	000
TL/E-N 20	DIN	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21290	000
TL/B-N 20	BSP	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21302	000
TL/E-N 50	DIN	Nitrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21294	000
TL/B-N 50	BSP	Nitrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21306	000
TL/E-N 100	DIN	Nitrogen	230 bar / 3335 psi	100 bar / 1450 psi	770.21298	000
TL/B-N 100	BSP	Nitrogen	230 bar/ 3335 psi	100 bar / 1450 psi	770.21310	000
TL/E-Ar 20	DIN	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.21258	000
TL/B-Ar 20	BSP	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.21270	000
TL/E-Ar 50	DIN	Argon	230 bar / 3335 psi	50 bar / 725 psi	770.21262	000
TL/B-Ar 50	BSP	Argon	230 bar / 3335 psi	50 bar / 725 psi	770.21274	000
TL/E-Ar 100	DIN	Argon	230 bar / 3335 psi	100 bar / 1450 psi	770.21266	000
TL/B-Ar 100	BSP	Argon	230 bar/ 3335 psi	100 bar / 1450 psi	770.21278	000
TL/E-C 20	DIN	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.21282	000
TL/B-C 20	BSP	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.21286	000
TL/E-He 20	DIN	Helium	230 bar / 3335 psi	20 bar / 290 psi	770.21314	000
TL/B-He 20	BSP	Helium	230 bar / 3335 psi	20 bar / 290 psi	770.21326	000

Further options available

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

TORNADO TLS
230 BAR

LEFTHAND SIDE INLET, T-BAR , SIDE OUTLET — TORNADO TLS

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
TLS/E-O 20	DIN	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.21211	000
TLS/B-O 20	BSP	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.21223	000
TLS/E-O 50	DIN	Oxygen	230 bar / 3335 psi	50 bar / 725 psi	770.21215	000
TLS/B-O 50	BSP	Oxygen	230 bar / 3335 psi	50 bar / 725 psi	770.21227	000
TLS/E-O 100	DIN	Oxygen	230 bar / 3335 psi	100 bar / 1450 psi	770.21219	000
TLS/B-O 100	BSP	Oxygen	230 bar / 3335 psi	100 bar / 1450 psi	770.21231	000
TLS/E-H 20	DIN	Hydrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21235	000
TLS/B-H 20	BSP	Hydrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21247	000
TLS/E-H 50	DIN	Hydrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21239	000
TLS/B-H 50	BSP	Hydrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21251	000
TLS/E-H 100	DIN	Hydrogen	230 bar / 3335 psi	100 bar / 1450 psi	770.21243	000
TLS/B-H 100	BSP	Hydrogen	230 bar/ 3335 psi	100 bar / 1450 psi	770.21255	000
TLS/E-N 20	DIN	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21291	000
TLS/B-N 20	BSP	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21303	000
TLS/E-N 50	DIN	Nitrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21295	000
TLS/B-N 50	BSP	Nitrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21307	000
TLS/E-N 100	DIN	Nitrogen	230 bar / 3335 psi	100 bar / 1450 psi	770.21299	000
TLS/B-N 100	BSP	Nitrogen	230 bar/ 3335 psi	100 bar / 1450 psi	770.21311	000
TLS/E-Ar 20	DIN	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.21259	000
TLS/B-Ar 20	BSP	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.21271	000
TLS/E-Ar 50	DIN	Argon	230 bar / 3335 psi	50 bar / 725 psi	770.21263	000
TLS/B-Ar 50	BSP	Argon	230 bar / 3335 psi	50 bar / 725 psi	770.21275	000
TLS/E-Ar 100	DIN	Argon	230 bar / 3335 psi	100 bar / 1450 psi	770.21267	000
TLS/B-Ar 100	BSP	Argon	230 bar/ 3335 psi	100 bar / 1450 psi	770.21279	000
TLS/E-C 20	DIN	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.21283	000
TLS/B-C 20	BSP	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.21287	000
TLS/E-He 20	DIN	Helium	230 bar / 3335 psi	20 bar / 290 psi	770.21315	000
TLS/B-He 20	BSP	Helium	230 bar / 3335 psi	20 bar / 290 psi	770.21327	000

Further options available

Version: 01/2022

TORNADO LD + LSD
230 BAR

TORNADO LD — LEFTHAND SIDE INLET, 2-STAGE

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
LD/E-O	DIN	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	❋	000
LD/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52432	000
LD/E-H	DIN	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52440	000
LD/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52442	000
LD/E-N	DIN	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52470	000
LD/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52472	000
LD/E-Ar	DIN	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52450	000
LD/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52452	000
LD/E-C	DIN	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52460	000
LD/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52462	000
LD/E-He	DIN	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52480	000
LD/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52482	000

Further options available

TORNADO LSD — LEFTHAND SIDE INLET, SIDE OUTLET, 2-STAGE

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
LSD/E-O	DIN	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52431	000
LSD/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52433	000
LSD/E-H	DIN	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52441	000
LSD/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52443	000
LSD/E-N	DIN	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52471	000
LSD/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52473	000
LSD/E-Ar	DIN	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52451	000
LSD/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52453	000
LSD/E-C	DIN	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52461	000
LSD/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52463	000
LSD/E-He	DIN	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52481	000
LSD/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52483	000

Further options available

Version: 01/2022

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MESSER Cutting Systems

TORNADO LFG + LSFG
230 BAR

LEFTHAND SIDE INLET, OUTLET FLOW GAUGE — TORNADO LFG

Type	Standard	Gas Type	Inlet pressure	Max. flow rate	Art. No.	Cat. No.
LFG/E-H	DIN	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.51999	000
LFG/E-H	DIN	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52000	000
LFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52003	000
LFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52004	000
LFG/E-N	DIN	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.51983	000
LFG/E-N	DIN	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.51984	000
LFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.51987	000
LFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.51988	000
LFG/E-Ar	DIN	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.51951	000
LFG/E-Ar	DIN	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.51952	000
LFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.51955	000
LFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.51956	000
LFG/E-C	DIN	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.51967	000
LFG/E-C	DIN	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.51968	000
LFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.51971	000
LFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.51972	000

LEFTHAND SIDE INLET, SIDE OUTLET, OUTLET FLOW GAUGE — TORNADO LSFG

Type	Standard	Gas Type	Inlet pressure	Max. flow rate	Art. No.	Cat. No.
LSFG/E-H	DIN	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52001	000
LSFG/E-H	DIN	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52002	000
LSFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52005	000
LSFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52006	000
LSFG/E-N	DIN	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.51985	000
LSFG/E-N	DIN	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.51986	000
LSFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.51989	000
LSFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.51990	000
LSFG/E-Ar	DIN	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.51953	000
LSFG/E-Ar	DIN	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.51954	000
LSFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.51957	000
LSFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.51958	000
LSFG/E-C	DIN	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.51969	000
LSFG/E-C	DIN	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.51970	000
LSFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.51973	000
LSFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.51974	000

Further options available

Version: 01/2022

TORNADO LDFG + LSDFG
230 BAR

TORNADO LDFG — LEFTHAND SIDE INLET, 2-STAGE, OUTLET FLOW GAUGE

Type	Standard	Gas Type	Inlet pressure	Max. flow rate	Art. No.	Cat. No.
LDFG/E-H	DIN	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52630	000
LDFG/E-H	DIN	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52631	000
LDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52634	000
LDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52635	000
LDFG/E-N	DIN	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52614	000
LDFG/E-N	DIN	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52615	000
LDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52618	000
LDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52619	000
LDFG/E-Ar	DIN	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52538	000
LDFG/E-Ar	DIN	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52539	000
LDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52542	000
LDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52543	000
LDFG/E-C	DIN	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52554	000
LDFG/E-C	DIN	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52555	000
LDFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52558	000
LDFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52559	000

TORNADO LSDFG — LEFTHAND SIDE INLET, SIDE OUTLET, 2-STAGE, OUTLET FLOW GAUGE

Type	Standard	Gas Type	Inlet pressure	Max. flow rate	Art. No.	Cat. No.
LSDFG/E-H	DIN	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52632	000
LSDFG/E-H	DIN	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52633	000
LSDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52636	000
LSDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52637	000
LSDFG/E-N	DIN	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52616	000
LSDFG/E-N	DIN	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52617	000
LSDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52620	000
LSDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52621	000
LSDFG/E-Ar	DIN	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52540	000
LSDFG/E-Ar	DIN	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52541	000
LSDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52544	000
LSDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52545	000
LSDFG/E-C	DIN	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52556	000
LSDFG/E-C	DIN	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52557	000
LSDFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52560	000
LSDFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52565	000

Further options available

Version: 01/2022

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MESSER Cutting Systems

TORNADO LFM + LDFM
230 BAR

LEFTHAND SIDE INLET, OUTLET FLOW METER — TORNADO LFM

Type	Standard	Gas Type	Inlet pressure	Max. flow rate	Art. No.	Cat. No.
LFM/E-H	DIN	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52119	000
LFM/E-H	DIN	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52120	000
LFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52121	000
LFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52122	000
LFM/E-N	DIN	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52111	000
LFM/E-N	DIN	Nitrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52112	000
LFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52113	000
LFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52114	000
LFM/E-Ar	DIN	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52095	000
LFM/E-Ar	DIN	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52096	000
LFM/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52097	000
LFM/B-Ar	BSP	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52098	000
LFM/E-C	DIN	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52103	000
LFM/E-C	DIN	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52104	000
LFM/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52105	000
LFM/B-C	BSP	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52106	000

LEFTHAND SIDE INLET, 2-STAGE, OUTLET FLOW METER — TORNADO LDFM

Type	Standard	Gas Type	Inlet pressure	Max. flow rate	Art. No.	Cat. No.
LDFM/E-H	DIN	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52750	000
LDFM/E-H	DIN	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52751	000
LDFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52752	000
LDFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52753	000
LDFM/E-N	DIN	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52742	000
LDFM/E-N	DIN	Nitrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52743	000
LDFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52744	000
LDFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52745	000
LDFM/E-Ar	DIN	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52726	000
LDFM/E-Ar	DIN	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52727	000
LDFM/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52728	000
LDFM/B-Ar	BSP	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52729	000
LDFM/E-C	DIN	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52734	000
LDFM/E-C	DIN	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52735	000
LDFM/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52736	000
LDFM/B-C	BSP	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52737	000

Further options available

Version: 01/2022

TORNADO LFM2 + LDFM2
230 BAR

TORNADO LFM2 — LEFTHAND SIDE INLET, OUTLET DOUBLE FLOW METER

Type	Standard	Gas Type	Inlet pressure	Max. flow rate	Art. No.	Cat.
LFM2/E-H	DIN	Hydrogen	230 bar / 3335 psi	2x16 l/min / 34 scfh	770.52191	000
LFM2/E-H	DIN	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52192	000
LFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52193	000
LFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52194	000
LFM2/E-N	DIN	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52183	000
LFM2/E-N	DIN	Nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52184	000
LFM2/B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52185	000
LFM2/B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52186	000
LFM2/E-Ar	DIN	Argon	230 bar / 3335 psi	2x16 l/min / 34 scfh	770.52167	000
LFM2/E-Ar	DIN	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52168	000
LFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52169	000
LFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52170	000
LFM2/E-C	DIN	CO2	100 bar / 1450 psi	2x16 l/min / 34 scfh	770.52175	000
LFM2/E-C	DIN	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52176	000
LFM2/B-C	BSP	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52177	000
LFM2/B-C	BSP	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52178	000

TORNADO LDFM2 — LEFTHAND SIDE INLET, 2-STAGE, OUTLET DOUBLE FLOW METER

Type	Standard	Gas Type	Inlet pressure	Max. flow rate	Art. No.	Cat.
LDFM2/E-H	DIN	Hydrogen	230 bar / 3335 psi	2x16 l/min / 34 scfh	770.52822	000
LDFM2/E-H	DIN	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52823	000
LDFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52824	000
LDFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52825	000
LDFM2/E-N	DIN	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52814	000
LDFM2/E-N	DIN	Nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52815	000
LDFM2/B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52816	000
LDFM2/B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52817	000
LDFM2/E-Ar	DIN	Argon	230 bar / 3335 psi	2x16 l/min / 34 scfh	770.52798	000
LDFM2/E-Ar	DIN	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52799	000
LDFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52800	000
LDFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52801	000
LDFM2/E-C	DIN	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52806	000
LDFM2/E-C	DIN	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52807	000
LDFM2/B-C	BSP	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52808	000
LDFM2/B-C	BSP	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52809	000

Further options available

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

TORNADO

CYLINDER PRESSURE REGULATOR

ISO 2503

TORNADO Le + LSe + LFGe + LSFGe ELECTRICALLY HEATED
100 BAR - CARBON DIOXIDE 230V - 50/60 HZ

LEFTHAND SIDE INLET — TORNADO Le

Type	Standard	Gas Type	Inlet Pressure	Flow Rate	Art. No.	Cat. No.
Le/E-C	DIN	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52870	000
Le/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52872	000

LEFTHAND SIDE INLET, SIDE OUTLET — TORNADO LSe

Type	Standard	Gas Type	Inlet Pressure	Flow Rate	Art. No.	Cat. No.
LSe/E-C	DIN	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52871	000
LSe/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52873	000

LEFTHAND SIDE INLET, OUTLET FLOW GAUGE — TORNADO LFGe

Type	Standard	Gas Type	Inlet Pressure	.Flow Rate	Art. No.	Cat. No.
LFGe/E-C	DIN	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52884	000
LFGe/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52886	000

LEFTHAND SIDE INLET, SIDE OUTLET, OUTLET FLOW GAUGE — TORNADO LSFGe

Type	Standard	Gas Type	Inlet Pressure	Flow Rate	Art. No.	Cat. No.
LSFGe/E-C	DIN	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52885	000
LSFGe/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52887	000

LEFTHAND SIDE INLET, OUTLET FLOW METER — TORNADO LFMe

Type	Standard	Gas Type	Inlet Pressure	Flow Rate	Art. No.	Cat. No.
LFMe/E-C	DIN	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52898	000
LFMe/B-C	BSP	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52899	000

Further options available

Version: 01/2022

SAFETY INSTRUCTIONS – TORNADO

Do not operate this equipment unless you are trained in its proper use or are under competent supervision!

This regulator was designed according to the latest state-of-the-art technology and meets the requirements of the existing standards and regulations.

Important safety instructions

- ! Use only for gases for which is an identification marking present on the regulator.
- ! Always open the cylinder valve (1) slowly.
- ! All parts coming in contact with oxygen must be kept in an oil and grease free condition.
- ⊘ In cases of incorrect handling or use for non-designated purposes, dangers for the user or other persons may arise or the appliance may be damaged.
- ⊘ No alterations or additions to the regulator shall be carried out without the approval of manufacturer.
- ⊘ No adapters shall be used between the cylinder valve (1) and the regulator.
- ⊘ Protect gas cylinders against falling.
- ⊘ All cylinders should be used and stored in an upright position.
- ⊘ Never drop, strike, or use a damaged cylinder.
- ⊘ Examine hoses for cuts, burns or worn areas before each use. Also inspect fittings and replace any damaged ones.
- ⊘ Do not repair hoses with friction tape.
- ⊘ Always wear gloves made of leather or suitable substitutes.
- ⊘ Always wear welding goggles with proper filter lenses.
- ⊘ Due not wear torn or ragged clothes. Sparks can ignite ragged ends.
- ⊘ Never use oxygen or fuel gas to blow soot or dirt of clothing.

Fire or explosion hazard!

- ! Smoking or open fires in the vicinity of the gas supply system is strictly prohibited.
- ! Never test for gas leaks with a flame. Use approved leak-detector product.
- ! Never use oil or grease on any inlet or outlet connections or cylinder valves.
- ! Upon completion of work, inspect area for any possible fire or smouldering material.
- ! Do not use at ambient temperatures below –30 °C or above +60 °C.

Statement of user responsibilities

The service life of a device may be infinite when properly installed, operated and maintained. Improper use and adverse conditions will affect the service life of the equipment.
This device should be checked periodically and replaced when necessary for continued safe and reliable performance. The use of defective equipment or not in accordance with the given instructions may be dangerous to the operators or result in property damage.

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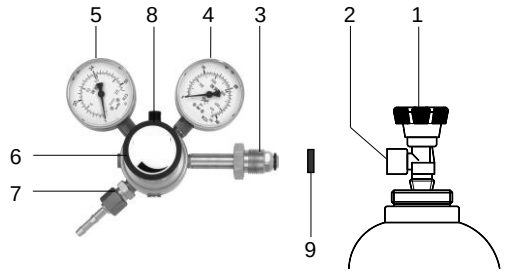
SET UP AND OPERATION GUIDE



1 Cylinder valve
2 Cylinder valve port
3 Regulator inlet connection
4 High pressure gauge
5 Pressure-gauge
6 Adjustment hand knob
7 Regulator outlet connection
8 Relief valve
9 Seal (depending on connection)

5.1 Before work begins, the details in these operating instructions must be read, and they must be observed when works are in progress.
5.2 Inspect the cylinder valve (1) for grease, oil or damaged threads.
! **Caution: If oil or grease is found in the cylinder valve (1), discontinue use of cylinder immediately and contact your gas supplier.**
5.3 While standing sidelong, rapidly open and close (“purge“) each cylinder valve (1) in a flame free area. This clears the valve of any foreign material.
! **Caution: Do not open the cylinder valve (1) any more than is necessary to clear the valve port (2). Opening the valve (1) too much may cause the cylinder to tip over due to the force of the escaping gas. Do not stand in front of the valve port (2).**
5.4 Confirm, that the pressure regulator has the correct pressure rating and gas service connection for the cylinder being used.
5.5 Make sure, that the pressure regulator inlet connector (3), the thread and the connection seal (9) are clean and undamaged.
If any of these parts are damaged the regulator shall not be connected.
! **Caution: If oil or grease is found in the regulator inlet connection (3), discontinue use of regulator immediately and take it to a qualified repair station for cleaning.**
5.6 Connect the pressure regulator to the closed gas cylinder valve (1). Tighten it leakproof with a spanner. Adjustment hand knob (6) shall face horizontal.
! **Note: When using a flowmeter regulator, flowmeter must be positioned vertically in order to obtain accurate flow readings.**
5.7 Connect hose to outlet connector (7) of the pressure regulator and to the consumer appliance.
5.8 Secure hoses with suitable hose clamps.
5.9 Release the adjustment spring by turning the adjustment hand knob (6) counter clockwise
! **Caution: Releasing the pressure on the adjustment spring prior to opening the cylinder valve (1) can damage diaphragm and render the pressure regulator inoperable (blasting shock).**
5.10 While standing with the cylinder valve (1) between you and the regulator, open cylinder valve (1) slowly and check for leaks. Use only an approved leak detector fluid. The high pressure gauge (4) shows the cylinder pressure.
! **Caution: Do not stand in front or behind a pressure regulator when opening cylinder valve (1).**
Acetylene cylinder valves should be opened to a maximum of one full turn.
5.11 Using adjustment hand knob (6) for adjusting regulator delivery gas pressure rate as required for your application.
5.12 Open the inlet valve slightly on the consumer appliance. If the gas pressure falls, correct the pressure setting with the adjustment hand knob (6).

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TORNADO R
230 BAR

TORNADO R — RIGHTHAND SIDE INLET

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
R/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51868	000
R/BU-O	BSP/CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51746	000
R/U-O	CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51748	000
R/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51870	000
R/BU-A	BSP/CGA	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51762	000
R/U-A	AS	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51764	000
R/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51872	000
R/BU-P	BSP/CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51778	000
R/U-P	CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51780	000
R/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51874	000
R/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51794	000
R/U-H	CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51796	000
R/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51880	000
R/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51842	000
R/U-N	CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51844	000
R/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51876	000
R/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51810	000
R/U-Ar	CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51812	000
R/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51878	000
R/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51826	000
R/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51828	000
R/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51882	000
R/BU-He	BSP/CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51858	000
R/U-He	CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51860	000

Further options available

Version: 01/2022

❋ on request | picture may differ | subject to change

MESSER Cutting Systems

TORNADO RS
230 BAR

RIGHTHAND SIDE INLET - SIDE OUTLET

TORNADO RS

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RS/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51869	000
RS/BU-O	BSP/CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51747	000
RS/U-O	CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51749	000
RS/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51871	000
RS/BU-A	BSP/CGA	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51763	000
RS/U-A	CGA	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51765	000
RS/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51873	000
RS/BU-P	BSP/CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51779	000
RS/U-P	CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51781	000
RS/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51875	000
RS/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51795	000
RS/U-H	CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51797	000
RS/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51881	000
RS/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51843	000
RS/U-N	CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51845	000
RS/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51877	000
RS/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51811	000
RS/U-Ar	CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51813	000
RS/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51879	000
RS/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51827	000
RS/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51829	000
RS/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51883	000
RS/BU-He	BSP/CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51859	000
RS/U-He	CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51861	000

Further options available

Version: 01/2022

TORNADO TR + TRS
230 BAR

TORNADO TR — RIGHTHAND SIDE INLET , T-BAR

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
TR/U-O 20	CGA	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.21341	000
TR/U-O 50	CGA	Oxygen	230 bar / 3335 psi	50 bar / 725 psi	770.21377	000
TR/U-O 100	CGA	Oxygen	230 bar / 3335 psi	100 bar / 1450 psi	770.21407	000
TR/U-H 20	CGA	Hydrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21347	000
TR/U-H 50	CGA	Hydrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21383	000
TR/U-H 100	CGA	Hydrogen	230 bar / 3335 psi	100 bar / 1450 psi	770.21413	000
TR/U-N 20	CGA	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21365	000
TR/U-N 50	CGA	Nitrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21395	000
TR/U-N 100	CGA	Nitrogen	230 bar / 3335 psi	100 bar / 1450 psi	770.21425	000
TR/U-Ar 20	CGA	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.21353	000
TR/U-Ar 50	CGA	Argon	230 bar / 3335 psi	50 bar / 725 psi	770.21389	000
TR/U-Ar 100	CGA	Argon	230 bar / 3335 psi	100 bar / 1450 psi	770.21419	000
TR/U-C 20	CGA	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.21359	000
TR/U-He 20	CGA	Helium	230 bar / 3335 psi	20 bar / 290 psi	770.21371	000

Further options available

TORNADO TRS — RIGHTHAND SIDE INLET , T-BAR , SIDE OUTLET

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
TRS/U-O 20	CGA	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.21342	000
TRS/U-O 50	CGA	Oxygen	230 bar / 3335 psi	50 bar/725 psi	770.21378	000
TRS/U-O 100	CGA	Oxygen	230 bar / 3335 psi	100 bar/1450 psi	770.21408	000
TRS/U-H 20	CGA	Hydrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21348	000
TRS/U-H 50	CGA	Hydrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21384	000
TRS/U-H 100	CGA	Hydrogen	230 bar / 3335 psi	100 bar / 1450 psi	770.21414	000
TRS/U-N 20	CGA	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21366	000
TRS/U-N 50	CGA	Nitrogen	230 bar / 3335 psi	50 bar / 725 psi	770.21396	000
TRS/U-N 100	CGA	Nitrogen	230 bar / 3335 psi	100 bar / 1450 psi	770.21426	000
TRS/U-Ar 20	CGA	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.21354	000
TRS/U-Ar 50	CGA	Argon	230 bar / 3335 psi	50 bar / 725 psi	770.21390	000
TRS/U-Ar 100	CGA	Argon	230 bar / 3335 psi	100 bar / 1450 psi	770.21420	000
TRS/U-C 20	DIN	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.21360	000
TRS/U-He 20	CGA	Helium	230 bar / 3335 psi	20 bar / 290 psi	770.21372	000

Further options available

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

TORNADO RD + RSD
230 BAR

IGHTHAND SIDE INLET, 2-STAGE — TORNADO RD

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RD/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52490	000
RD/BU-O	BSP/CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52434	000
RD/U-O	CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52492	000
RD/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52494	000
RD/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52444	000
RD/U-H	CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52469	000
RD/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52506	000
RD/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52474	000
RD/U-N	CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52508	000
RD/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52498	000
RD/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52454	000
RD/U-Ar	CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52500	000
RD/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52502	000
RD/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52464	000
RD/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52504	000
RD/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52510	000
RD/BU-He	BSP/CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52484	000
RD/U-He	CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52512	000

RIGHTHAND SIDE INLET, SIDE OUTLET, 2-STAGE — TORNADO RSD

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RSD/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52491	000
RSD/BU-O	BSP/CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52435	000
RSD/U-O	CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52493	000
RSD/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52495	000
RSD/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52445	000
RSD/U-H	CGA	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52497	000
RSD/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52507	000
RSD/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52475	000
RSD/U-N	CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52509	000
RSD/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52499	000
RSD/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52455	000
RSD/U-Ar	CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52501	000
RSD/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52503	000
RSD/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52465	000
RSD/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52505	000
RSD/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52511	000
RSD/BU-He	BSP/CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52485	000
RSD/U-He	CGA	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52513	000

Version: 01/2022

TORNADO RFG
230 BAR

TORNADO RFG — RIGHTHAND SIDE INLET, OUTLET FLOW GAUGE

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
RFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52051	000
RFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52052	000
RFG/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52055	000
RFG/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52056	000
RFG/U-H	CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52059	000
RFG/U-H	CGA	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52060	000
RFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52039	000
RFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52040	000
RFG/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52043	000
RFG/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52044	000
RFG/U-N	CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52047	000
RFG/U-N	CGA	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52048	000
RFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52015	000
RFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52016	000
RFG/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52019	000
RFG/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52020	000
RFG/U-Ar	CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52023	000
RFG/U-Ar	CGA	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52024	000
RFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52027	000
RFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52028	000
RFG/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52031	000
RFG/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52032	000
RFG/U-C	CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52035	000
RFG/U-C	CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52036	000

Further options available

Version: 01/2022

✱ on request | picture may differ | subject to change

TORNADO RSFG 230 BAR

RIGHTHAND SIDE INLET, SIDE OUTLET, 2-STAGE, OUTLET FLOW GAUGE — TORNADO RSFG

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Max. Flow Rate*	*Art. No.*	*Cat. No.*
RSFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52053	000
RSFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52054	000
RSFG/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52057	000
RSFG/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52058	000
RSFG/U-H	CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52061	000
RSFG/U-H	CGA	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52062	000
RSFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52041	000
RSFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52042	000
RSFG/BU-N	BPS/CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52045	000
RSFG/BU-N	BPS/CGA	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52046	000
RSFG/U-N	CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52049	000
RSFG/U-N	CGA	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52050	000
RSFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52017	000
RSFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52018	000
RSFG/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52021	000
RSFG/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52022	000
RSFG/U-Ar	CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52025	000
RSFG/U-Ar	CGA	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52026	000
RSFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52029	000
RSFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52030	000
RSFG/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52033	000
RSFG/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52034	000
RSFG/U-C	CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52037	000
RSFG/U-C	CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52038	000

Further options available

Version: 01/2022

TORNADO RDFG
230 BAR

TORNADO RDFG — RIGHTHAND SIDE INLET, 2-STAGE, OUTLET FLOW GAUGE

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Max. Flow Rate*	*Art. No.*	*Cat. No.*
RDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52682	000
RDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52683	000
RDFG/BU-H	BSP/ CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52656	000
RDFG/BU-H	BSP/ CGA	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52687	000
RDFG/U-H	CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52690	000
RDFG/U-H	CGA	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52691	000
RDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52670	000
RDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52671	000
RDFG/BU-N	BSP/ CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52674	000
RDFG/BU-N	BSP/ CGA	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52675	000
RDFG/U-N	CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52678	000
RDFG/U-N	CGA	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52679	000
RDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52646	000
RDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52647	000
RDFG/BU-Ar	BSP/ CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52650	000
RDFG/BU-Ar	BSP/ CGA	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52651	000
RDFG/U-Ar	CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52654	000
RDFG/U-Ar	CGA	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52655	000
RDFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52658	000
RDFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52659	000
RDFG/BU-C	BSP/ CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52662	000
RDFG/BU-C	BSP/ CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52663	000
RDFG/U-C	CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52666	000
RDFG/U-C	CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52667	000

Further options available

Version: 01/2022

❋ on request | picture may differ | subject to change

MESSER Cutting Systems

TORNADO RSDFG
230 BAR

RIGHTHAND SIDE INLET, SIDE OUTLET, 2-STAGE, OUTLET FLOW GAUGE — TORNADO RSDFG

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Max. Flow Rate*	*Art. No.*	*Cat. No.*
RSDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52864	000
RSDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52685	000
RSDFG/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52688	000
RSDFG/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52689	000
RSDFG/U-H	CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52692	000
RSDFG/U-H	CGA	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52693	000
RSDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52672	000
RSDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52673	000
RSDFG/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52676	000
RSDFG/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52677	000
RSDFG/U-N	CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52680	000
RSDFG/U-N	CGA	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52681	000
RSDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52648	000
RSDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52649	000
RSDFG/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52652	000
RSDFG/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52653	000
RSDFG/U-Ar	CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52656	000
RSDFG/U-Ar	CGA	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	770.52657	000
RSDFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52660	000
RSDFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52661	000
RSDFG/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52664	000
RSDFG/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52665	000
RSDFG/U-C	CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52668	000
RSDFG/U-C	CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52669	000

Further options available

Version: 01/2022

TORNADO RFM
230 BAR

TORNADO RFM — RIGHTHAND SIDE INLET, OUTLET FLOW METER

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat..
RFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52145	000
RFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52146	000
RFM/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52147	000
RFM/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52148	000
RFM/U-H	CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52149	000
RFM/U-H	CGA	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52150	000
RFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52139	000
RFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52140	000
RFM/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52141	000
RFM/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52142	000
RFM/U-N	CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52143	000
RFM/U-N	CGA	Nitrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52144	000
RFM/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52127	000
RFM/B-Ar	BSP	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52128	000
RFM/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52129	000
RFM/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52130	000
RFM/U-Ar	CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52131	000
RFM/U-Ar	CGA	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52132	000
RFM/B-C	BPS	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52133	000
RFM/B-C	BPS	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52134	000
RFM/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52135	000
RFM/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52136	000
RFM/U-C	CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52137	000
RFM/U-C	CGA	CO2	100 bar / 1450 psi	30 l/min / 68 scfh	770.52138	000

Further options available

Version: 01/2022

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MESSER Cutting Systems

TORNADO RDFM
230 BAR

RIGHTHAND SIDE INLET, 2-STAGE, OUTLET FLOW METER — TORNADO RDFM

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Max. Flow Rate*	*Art. No.*	*Cat. No.*
RDFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52776	000
RDFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52777	000
RDFM/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52778	000
RDFM/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52779	000
RDFM/U-H	CGA	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52780	000
RLFM/U-H	CGA	Hydrogen	230 bar / 3335 psi	30 l/min / 64 scfh	770.52781	000
RDFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52707	000
RDFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	30 l/min / 68 scfh	770.52771	000
RDFM/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52772	000
RDFM/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	30 l/min / 68 scfh	770.52773	000
RDFM/U-N	CGA	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52774	000
RDFM/U-N	CGA	Nitrogen	230 bar / 3335 psi	30 l/min / 68 scfh	770.52775	000
RDFM/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52758	000
RDFM/B-Ar	BSP	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52759	000
RDFM/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52760	000
RDFM/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52761	000
RDFM/U-Ar	CGA	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52762	000
RDFM/U-Ar	CGA	Argon	230 bar / 3335 psi	30 l/min / 64 scfh	770.52763	000
RDFM/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52764	000
RDFM/B-C	BSP	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52765	000
RDFM/BU-C	BSP/CGA	Co2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52766	000
RDFM/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52767	000
RDFM/U-C	CGA	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52768	000
RDFM/U-C	CGA	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52769	000

Further options available

Version: 01/2022

TORNADO RFM2
230 BAR

TORNADO RFM2 — RIGHTHAND SIDE INLET, OUTLET DOUBLE FLOW METER

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Max. Flow Rate*	*Art. No.*	*Cat. No.*
RFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x16 l/min / 34 scfh	770.52217	000
RFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52218	000
RFM2/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52219	000
RFM2/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52220	000
RFM2/BU-H	CGA	Hydrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52221	000
RFM2/BU-H	CGA	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52222	000
RFM2/B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52211	000
RFM2/B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52212	000
RFM2/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52213	000
RFM2/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52214	000
RFM2/U-N	CGA	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52215	000
RFM2/U-N	CGA	Nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52216	000
RFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x16 l/min / 34 scfh	770.52199	000
RFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52200	000
RFM2/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52201	000
RFM2/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52202	000
RFM2/U-Ar	CGA	Argon	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52203	000
RFM2/U-Ar	CGA	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52204	000
RFM2/B-C	BSP	CO2	100 bar / 1450 psi	2x16 l/min / 34 scfh	770.52205	000
RFM2/B-C	BSP	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52206	000
RFM2/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52207	000
RFM2/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52208	000
RFM2/U-C	CGA	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52209	000
RFM2/U-C	CGA	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52210	000

Further options available

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

TORNADO RDFM2
230 BAR

RIGHTHAND SIDE INLET, 2-STAGE, OUTLET DOUBLE FLOW METER — TORNADO RDFM2

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Max. Flow Rate*	*Art. No.*	*Cat. No.*
RDFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x16 l/min / 34 scfh	770.52848	000
RDFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52849	000
RDFM2/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52850	000
RDFM2/BU-H	BSP/CGA	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52851	000
RDFM2/U-H	CGA	Hydrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52852	000
RDFM2/U-H	CGA	Hydrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52853	000
RDFM2/B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52842	000
RDFM2/B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52843	000
RDFM2/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52844	000
RDFM2/BU-N	BSP/CGA	Nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52845	000
RDFM2/U-N	CGA	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52846	000
RDFM3/U-N	CGA	nitrogen	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52847	000
RDFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x16 l/min / 34 scfh	770.52830	000
RDFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52831	000
RDFM2/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52832	000
RDFM2/BU-Ar	BSP/CGA	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52833	000
RDFM2/U-Ar	CGA	Argon	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52834	000
RDFM2/U-Ar	CGA	Argon	230 bar / 3335 psi	2x 30 l/min / 64 scfh	770.52835	000
RDFM2/B-C	BSP	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52836	000
RDFM2/B-C	BSP	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52837	000
RDFM2/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52838	000
RDFM2/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52839	000
RDFM2/U-C	CGA	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52840	000
RDFM2/U-C	CGA	CO2	100 bar / 1450 psi	2x 30 l/min / 64 scfh	770.52841	000

Further options available

Version: 01/2022

TORNADO Re + RSe + RFGe + RSFGe - ELECTRICALLY HEATED
100 BAR - CARBON DIOXIDE

TORNADO Re — RIGHTHAND SIDE INLET

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
Re/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52874	000
Re/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52878	000
Re/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52876	000

TORNADO RSe — RIGHTHAND SIDE INLET, SIDE OUTLET

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RSe/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52875	000
RSe/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52879	000
RSe/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52877	000

TORNADO RFGe — RIGHTHAND SIDE INLET, OUTLET FLOW GAUGE

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
RFGe/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52888	000
RFGe/BU	BSP/CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52892	000
RFGe/U-C	CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52890	000

TORNADO RSFGe — RIGHTHAND SIDE INLET, SIDE OUTLET, OUTLET FLOW GAUGE

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
RSFGe/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52889	000
RSFGe/BU	BSP/CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52893	000
RSFGe/U-C	CGA	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	770.52891	000

Further options available

Please note:

BSP + BSP/CGA	230V - 50/60 Hz
CGA	110V - 50/60 Hz

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

TORNADO RFMe - ELECTRICALLY HEATED
100 BAR - CARBON DIOXIDE

RIGHTHAND SIDE INLET, OUTLET FLOW METER

TORNADO RFMe

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Max. Flow Rate*	*Art. No.*	*Cat. No.*
RFMe/B-C	BSP	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52900	000
RFMe/BU-C	BSP/CGA	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52902	000
RFMe/U-C	CGA	CO2	100 bar / 1450 psi	30 l/min / 64 scfh	770.52901	000

Further options available

Please note:

BSP + BSP/CGA	230V - 50/60 Hz
CGA	110V - 50/60 Hz

Version: 01/2022

Notes:

Version: 01/2022

TORNADO B + BS + BD + BSD
230 BAR

BOTTOM INLET — TORNADO B

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
B/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51744	000
B/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51760	000
B/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51776	000
B/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51792	000
B/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51840	000
B/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51808	000
B/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51824	000
B/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51856	000

BOTTOM INLET - SIDE OUTLET — TORNADO BS

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
BS/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.51745	000
BS/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.51761	000
BS/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.51777	000
BS/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51793	000
BS/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.51841	000
BS/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.51809	000
BS/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.51825	000
BS/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.51857	000

BOTTOM INLET, 2-STAGE — TORNADO BD

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
BD/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52514	000
BD/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52518	000
BD/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52530	000
BD/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52522	000
BD/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52526	000
BD/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52534	000

BOTTOM INLET, SIDE OUTLET, 2-STAGE — TORNADO BSD

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
BSD/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.52515	000
BSD/B-H	BSP	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52519	000
BSD/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.52531	000
BSD/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.52523	000
BSD/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.52527	000
BSD/B-He	BSP	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.52535	000

Further options available

Version: 01/2022

TORNADO BFG + BSFG + BDFG
230 BAR

TORNADO BFG — BOTTOM INLET, OUTLET FLOW GAUGE

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
BFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52087	000
BFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	✱	000
BFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52079	000
BFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	✱	000
BFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52063	000
BFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	✱	000
BFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	77052071	000
BFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	✱	000

TORNADO BSFG — BOTTOM INLET, SIDE OUTLET, OUTLET FLOW GAUGE

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
BSFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52088	000
BSFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	✱	000
BSFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52080	000
BSFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	770.52083	000
BSFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52064	000
BSFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	✱	000
BSFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52072	000
BSFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	✱	000

TORNADO BDFG — BOTTOM INLET, 2-STAGE, OUTLET FLOW GAUGE

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
BDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.51718	000
BDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	✱	000
BDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52710	000
BDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	✱	000
BDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52694	000
BDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	✱	000
BDFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52702	000
BDFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	✱	000

Further options available

Version: 01/2022

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MESSER Cutting Systems

TORNADO BSDFG + BFM + BDFM
230 BAR

BOTTOM INLET, SIDE OUTLET, 2-STAGE, OUTLET FLOW GAUGE — TORNADO BSDFG

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
BSDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52719	000
BSDFG/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 68 scfh	❋	000
BSDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52711	000
BSDFG/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 68 scfh	❋	000
BSDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52695	000
BSDFG/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 68 scfh	❋	000
BSDFG/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52703	000
BSDFG/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 68 scfh	❋	000

BOTTOM INLET, OUTLET FLOW METER — TORNADO BFM

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
BFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52163	000
BFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 64 scfh	770.52164	000
BFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52159	000
BFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 64 scfh	770.52160	000
BFM/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52151	000
BFM/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 64 scfh	770.52152	000
BFM/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52155	000
BFM/B-C	BSP	CO2	100 bar / 1450 psi	32 l/min / 64 scfh	770.52156	000

BOTTOM INLET, 2-STAGE, OUTLET FLOW METER — TORNADO BDFM

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
BDFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52794	000
BDFM/B-H	BSP	Hydrogen	230 bar / 3335 psi	32 l/min / 64 scfh	770.52795	000
BDFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	16 l/min / 34 scfh	770.52790	000
BDFM/B-N	BSP	Nitrogen	230 bar / 3335 psi	32 l/min / 64 scfh	770.52791	000
BDFM/B-Ar	BSP	Argon	230 bar / 3335 psi	16 l/min / 34 scfh	770.52782	000
BDFM/B-Ar	BSP	Argon	230 bar / 3335 psi	32 l/min / 64 scfh	770.52783	000
BDFM/B-C	BSP	CO2	100 bar / 1450 psi	16 l/min / 34 scfh	770.52786	000
BDFM/B-C	BSP	Co2	100 bar / 1450 psi	32 l/min / 64 scfh	770.52787	000

Further options available

Version: 01/2022

TORNADO BFM2 + BDFM2
230 BAR

TORNADO BFM2 — BOTTOM INLET, OUTLET DOUBLE FLOW METER

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
BFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52235	000
BFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 32 l/min / 64 scfh	770.52236	000
BFM/2B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52231	000
BFM/2B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 32 l/min / 64 scfh	770.52232	000
BFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52223	000
BFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 32 l/min / 64 scfh	770.52224	000
BFM/2B-C	BSP	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52227	000
BFM/2B-C	BSP	CO2	100 bar / 1450 psi	2x 32 l/min / 64 scfh	770.52228	000

Further options available

TORNADO BDFM2 — BOTTOM INLET, 2-STAGE, OUTLET DOUBLE FLOW METER

Type	Standard	Gas Type	Inlet pressure	Max. Flow Rate	Art. No.	Cat. No.
BDFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52866	000
BDFM2/B-H	BSP	Hydrogen	230 bar / 3335 psi	2x 32 l/min / 64 scfh	770.52867	000
BDFM/2B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52862	000
BDFM/2B-N	BSP	Nitrogen	230 bar / 3335 psi	2x 32 l/min / 64 scfh	770.52863	000
BDFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 16 l/min / 34 scfh	770.52854	000
BDFM2/B-Ar	BSP	Argon	230 bar / 3335 psi	2x 32 l/min / 64 scfh	770.52855	000
BDFM/2B-C	BSP	CO2	100 bar / 1450 psi	2x 16 l/min / 34 scfh	770.52858	000
BDFM/2B-C	BSP	Co2	100 bar / 1450 psi	2x 32 l/min / 64 scfh	770.52859	000

Further options available

Version: 01/2022

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MESSER Cutting Systems

TORNADO 300 RH + RSH HIGH FLOW
230 BAR

RIGHTHAND SIDE INLET — TORNADO RH

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RH/E-O	DIN	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53038	000
RH/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53030	000
RH/U-O	CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53032	000
RH/E-A	DIN	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.53044	000
RH/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.53046	000
RH/U-A	CGA	Acetylene	25 bar / 360 psi	1,0 bar / 14,5 psi	770.53048	000
RH/E-P	DIN	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.53054	000
RH/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.53056	000
RH/U-P	CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.53034	000
RH/E-N	DIN	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.53082	000
RH/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.53084	000
RH/U-N	CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.53086	000
RH/E-Ar	DIN	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.53062	000
RH/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.53064	000
RH/U-Ar	CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.53066	000
RH/E-C	DIN	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.53072	000
RH/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.53074	000
RH/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.53076	000

RIGHTHAND SIDE INLET, SIDE OUTLET — TORNADO RSH

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RSH/E-O	DIN	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53039	000
RSH/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53031	000
RSH/U-O	CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53033	000
RSH/E-A	DIN	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.53045	000
RSH/B-A	BSP	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.53047	000
RSH/U-A	CGA	Acetylene	25 bar / 360 psi	1,0 bar / 14,5 psi	770.53049	000
RSH/E-P	DIN	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.53055	000
RSH/B-P	BSP	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.53057	000
RSH/U-P	CGA	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.53035	000
RSH/E-N	DIN	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.53083	000
RSH/B-N	BSP	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.53085	000
RSH/U-N	CGA	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.53087	000
RSH/E-Ar	DIN	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.53063	000
RSH/B-Ar	BSP	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.53065	000
RSH/U-Ar	CGA	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.53067	000
RSH/E-C	DIN	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.53073	000
RSH/B-C	BSP	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.53075	000
RSH/U-C	CGA	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.53077	000

Further options available

Version: 01/2022

TORNADO 300 230 BAR — RN + RSN — HIGH FLOW

TORNADO RN — RIGHTHAND SIDE INLET, NUT

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RN/E-O	DIN	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53224	000
RN/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53226	000
RN/U-O	CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53228	000
RN/E-N	DIN	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53254	000
RN/B-N	BSP	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53256	000
RN/U-N	CGA	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53258	000
RN/E-Ar	DIN	Argon	230 bar / 3335 psi	20 bar/290 psi	770.53234	000
RN/B-Ar	BSP	Argon	230 bar / 3335 psi	20 bar/290 psi	770.53236	000
RN/U-Ar	CGA	Argon	230 bar / 3335 psi	20 bar/290 psi	770.53238	000
RN/E-C	DIN	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53244	000
RN/B-C	BSP	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53246	000
RN/U-C	CGA	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53248	000

Further options available

TORNADO RSN — RIGHTHAND SIDE INLET, SIDE OUTLET

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RSN/E-O	DIN	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53225	000
RSN/B-O	BSP	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53227	000
RSN/U-O	CGA	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53229	000
RSN/E-N	DIN	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53255	000
RSN/B-N	BSP	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53257	000
RSN/U-N	CGA	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53259	000
RSN/E-Ar	DIN	Argon	230 bar / 3335 psi	20 bar/290 psi	770.53235	000
RSN/B-Ar	BSP	Argon	230 bar / 3335 psi	20 bar/290 psi	770.53237	000
RSN/U-Ar	CGA	Argon	230 bar / 3335 psi	20 bar/290 psi	770.53239	000
RSN/E-C	DIN	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53245	000
RSN/B-C	BSP	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53247	000
RSN/U-C	CGA	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53249	000

Further options available

Version: 01/2022

❋ on request | picture may differ | subject to change

TORNADO 300 RT + RST HIGH FLOW 230 BAR

RIGHTHAND SIDE INLET, T-BAR — TORNADO RT

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RT/E-O	DIN	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.53092	000
RT/B-O	BSP	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.53036	000
RT/U-O	CGA	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.53094	000
RT/E-N	DIN	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53214	000
RT/B-N	BSP	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53216	000
RT/U-N	CGA	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53218	000
RT/E-Ar	DIN	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.53100	000
RT/B-Ar	BSP	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.53102	000
RT/U-Ar	CGA	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.53104	000
RT/E-C	DIN	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53204	000
RT/B-C	BSP	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53206	000
RT/U-C	CGA	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53208	000

Further options available

RIGHTHAND SIDE INLET, SIDE OUTLET, T-BAR — TORNADO RST

Type	Standard	Gas Type	Inlet pressure	Outlet pressure	Art. No.	Cat. No.
RST/E-O	DIN	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.53093	000
RST/B-O	BSP	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.53037	000
RST/U-O	CGA	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.53095	000
RST/E-N	DIN	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53215	000
RST/B-N	BSP	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53217	000
RST/U-N	CGA	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.53219	000
RST/E-Ar	DIN	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.53101	000
RST/B-Ar	BSP	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.53103	000
RST/U-Ar	CGA	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.53105	000
RST/E-C	DIN	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53205	000
RST/B-C	BSP	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53207	000
RST/U-C	CGA	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.53209	000

Further options available

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TORNADO 300 230 BAR **HS + NS + TS** **HIGH FLOW**

TORNADO HS — SIDE INLET + OUTLET, HANDKNOB OPERATED

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Outlet pressure*	*Art. No.*	*Cat. No.*
HS/I-O	Internat.	Oxygen	230 bar / 3335 psi	10 bar / 145 psi	770.53264	000
HS/I-A	Internat.	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.21157	000
HS/I-P	Internat.	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.21163	000
HS/I-H	Internat.	Hydrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21169	000
HS/I-N	Internat.	Nitrogen	230 bar / 3335 psi	10 bar / 145 psi	770.21187	000
HS/I-Ar	Internat.	Argon	230 bar / 3335 psi	10 bar / 145 psi	770.21175	000
HS/I-C	Internat.	CO2	100 bar / 1450 psi	10 bar / 145 psi	770.21181	000
HS/I-He	Internat.	Helium	230 bar / 3335 psi	10 bar / 145 psi	770.21193	000

Without connection fittings.

TORNADO NS — SIDE INLET + OUTLET, NUT OPERATED

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Outlet pressure*	*Art. No.*	*Cat. No.*
NS/I-O	Internat	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.53268	000
NS/I-A	Internat	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.21161	000
NS/I-P	Internat	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.21167	000
NS/I-H	Internat.	Hydrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21173	000
NS/I-N	Internat.	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21191	000
NS/I-Ar	Internat.	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.21179	000
NS/I-C	Internat.	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.21185	000
NS/I-He	Internat.	Helium	230 bar / 3335 psi	20 bar / 290 psi	770.21197	000

Without connection fittings.

TORNADO TS — SIDE INLET + OUTLET, T-BAR OPERATED

Type	*Standard*	*Gas Type*	*Inlet pressure*	*Outlet pressure*	*Art. No.*	*Cat. No.*
TS/I-O	Internat	Oxygen	230 bar / 3335 psi	20 bar / 290 psi	770.53266	000
TS/I-A	Internat.	Acetylene	25 bar / 360 psi	1,5 bar / 22 psi	770.21159	000
TS/I-P	Internat.	Propane	25 bar / 360 psi	2,5 bar / 36 psi	770.21165	000
TS/I-H	Internat.	Hydrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21171	000
TS/I-N	Internat.	Nitrogen	230 bar / 3335 psi	20 bar / 290 psi	770.21189	000
TS/I-Ar	Internat.	Argon	230 bar / 3335 psi	20 bar / 290 psi	770.21177	000
TS/I-C	Internat.	CO2	100 bar / 1450 psi	20 bar / 290 psi	770.21183	000
TS/I-He	Internat.	Helium	230 bar / 3335 psi	20 bar / 290 psi	770.21195	000

Without connection fittings.

Version: 01/2022

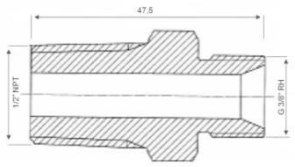
✱ on request | picture may differ | subject to change

MESSER Cutting Systems

TORNADO 300 - HIGH FLOW CONNECTION NIPPLES

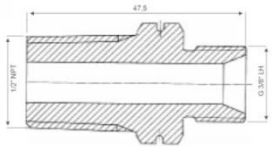
CONNECTORS PN 40

Connection on Regulator	Hose connection	Art.No.	Cat.No.
1/2” NPT RH	G 3/8” RH	716.07157	000



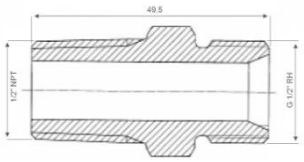
CONNECTORS PN 40

Connection on Regulator	Hose connection	Art.No.	Cat.No.
1/2” NPT RH	G 3/8” LH	716.07158	000



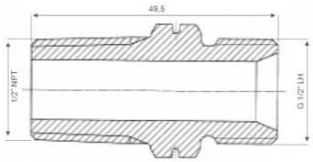
CONNECTORS PN 40

Connection on Regulator	Hose connection	Art.No.	Cat.No.
1/2” NPT RH	G 1/2” RH	716.07159	000



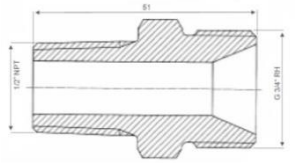
CONNECTORS PN 40

Connection on Regulator	Hose connection	Art.No.	Cat.No.
1/2” NPT RH	G 1/2” LH	716.07160	000



CONNECTORS PN 40

Connection on Regulator	Hose connection	Art. No.	Cat. No.
1/2” NPT RH	G 3/4” RH	716.07161	000



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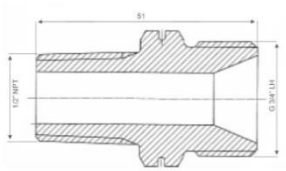
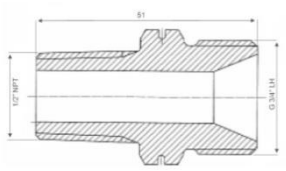
TORNADO 300 - HIGH FLOW
CONNECTION NIPPLES

CONNECTORS PN 40



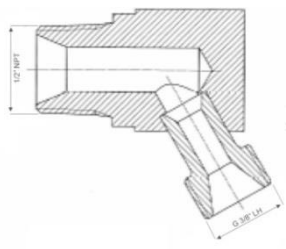
Connection on Regulator	Hose connection	Art.No.	Cat.No.
1/2” NPT RH	G 3/4” LH	716.07162	000

CONNECTORS PN 40



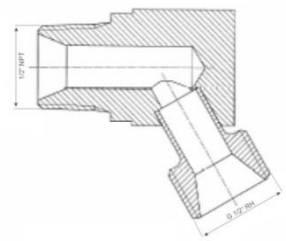
Connection on Regulator	Hose connection	Art.No.	Cat.No.
1/2” NPT RH	G 3/8” RH	716.07163	000

CONNECTORS PN 40



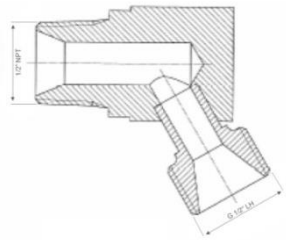
Connection on Regulator	Hose connection	Art.No.	Cat.No.
1/2” NPT RH	G 3/8” LH	716.07164	000

CONNECTORS PN 40



Connection on Regulator	Hose connection	Art.No.	Cat.No.
1/2” NPT RH	G 1/2” RH	716.07165	000

CONNECTORS PN 40



Connection on Regulator	Hose connection	Art.No.	Cat.No.
1/2” NPT RH	G 1/2” LH	716.07166	000

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❋ on request | picture may differ | subject to change

MESSER Cutting Systems

THE CYLINDER PRESSURE REGULATOR FROM MESSER — A MILLION TIMES TRIED AND TESTED

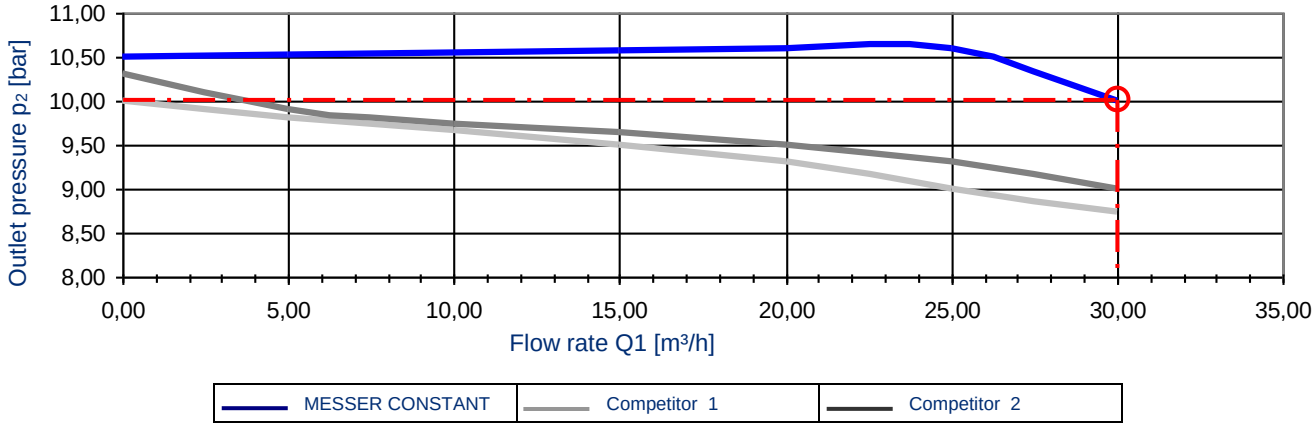
The MESSER CONSTANT 2000 cylinder pressure regulator for 200 and 300 bar, has been established on the international market for over 30 years as an absolute quality product. During this time it has been developed further and has already passed the million production units mark.

The essential advantages of the CONSTANT 2000 over its competition are:

- In contrast to competitive products, the CONSTANT 2000 has a very consistent flow performance.
- The CONSTANT 2000 is characterised by its very high control accuracy even with low operating pressures and low withdrawal rates.
- The CONSTANT 2000 is extremely reliable in operation through its integrated central filter
- By combination of a blow-off valve and ratchet stops, the CONSTANT 2000 has a double protected outlet pressure limitation.
- The simple replacement of wear parts makes the CONSTANT 2000 very easy to maintain.
- The unit weight of the brass housing of the CONSTANT 2000 is, at 7,9g/cm³ , significantly higher than that of competitive products and makes the CONSTANT 2000 especially resistant to icing.

NOMINAL FLOW RATE Q_1

Requirements according to DIN EN ISO 2503: equipment class 3 Q_1 = 30 m³/h at P_2 = 10 bar



To be able to meet equipment class 3 of DIN EN ISO 2503, the cylinder pressure regulator must achieve a nominal flow rate Q1 of 30 m³/h with an inlet pressure p1 of 21 bar and an outlet pressure p2 of 10 bar.

Expressions:

p_1	=	Inlet pressure
p_2	=	Outlet or operating pressure
p_3	=	Inlet pressure for the test
p_4	=	Outlet pressure for evaluation of the flow coefficient R
p_5	=	Outlet pressure for evaluation of the inconsistency coefficient i
R	=	Flow rate coefficient
i	=	Inconsistency coefficient
Q_1	=	Nominal flow rate

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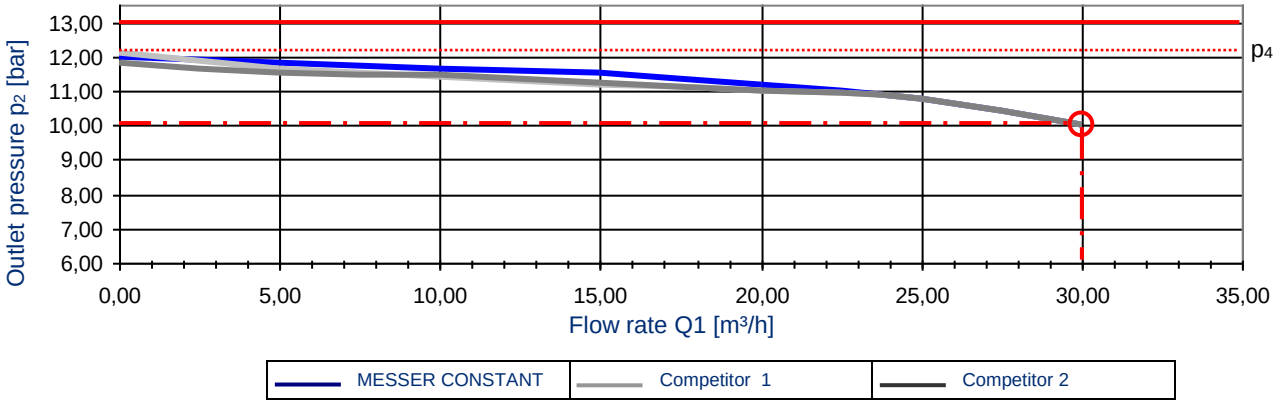
PRESSURE INCREASE COEFFICIENT R

Requirements according to DIN EN ISO 2503: R > 0,3

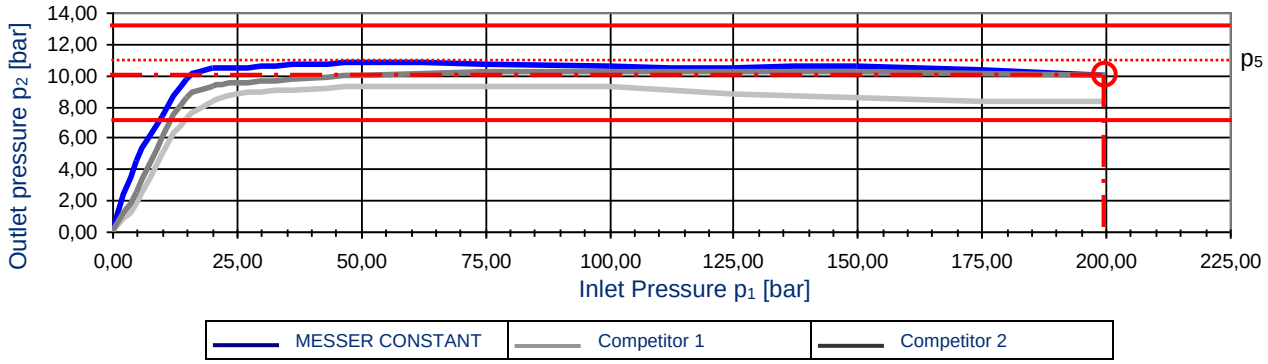


To achieve equipment class 3 to DIN EN ISO 2503, the pressure regulator is set to an inlet pressure for the test p3 (p3 = 2 x p2 + 1 bar) = 21 bar, with an outlet pressure p2 = 10 bar and a nominal gas flow rate Q1 = 30 m³/h.
With these settings the flow rate of 30 m3/h is evenly and steadily reduced to 0 m3/h.
During this procedure the outlet pressure may deviate by max. 30 % from the outlet pressure p_2.
This deviation pressure is defined by DIN EN ISO 2503 as the closing pressure p4.
The pressure increase coefficient R is then calculated as follows:

$$R = \frac{p_4 - p_2}{p_2} \qquad R = \frac{12\ \text{bar} - 10\ \text{bar}}{10\ \text{bar}} \qquad R = 0{,}2$$

INCONSISTANCY COEFFICIENT I

Requirements of DIN EN ISO 2503: -0,3 < i < +0,3



To achieve equipment class 3 to DIN EN ISO 2503, the pressure regulator is set to an inlet pressure p_1 = 200 bar with an outlet pressure p_2 of 10 bar and a nominal flow rate Q_1 of 30 m³/h.
With these settings the inlet pressure of p_1 = 200 bar is evenly and steadily reduced to a test pressure p_3 = 21.
During this the outlet pressure may deviate by max. 30 % from the outlet pressure p_2.
This outlet pressure is defined by DIN EN ISO 2503 as the highest or lowest outlet pressure for establishing the inconsistency coefficient p_5.

$$i = \frac{p_5 - p_2}{p_2} \qquad i = \frac{10{,}5\ \text{bar} - 10\ \text{bar}}{10\ \text{bar}} \qquad i = 0{,}05$$

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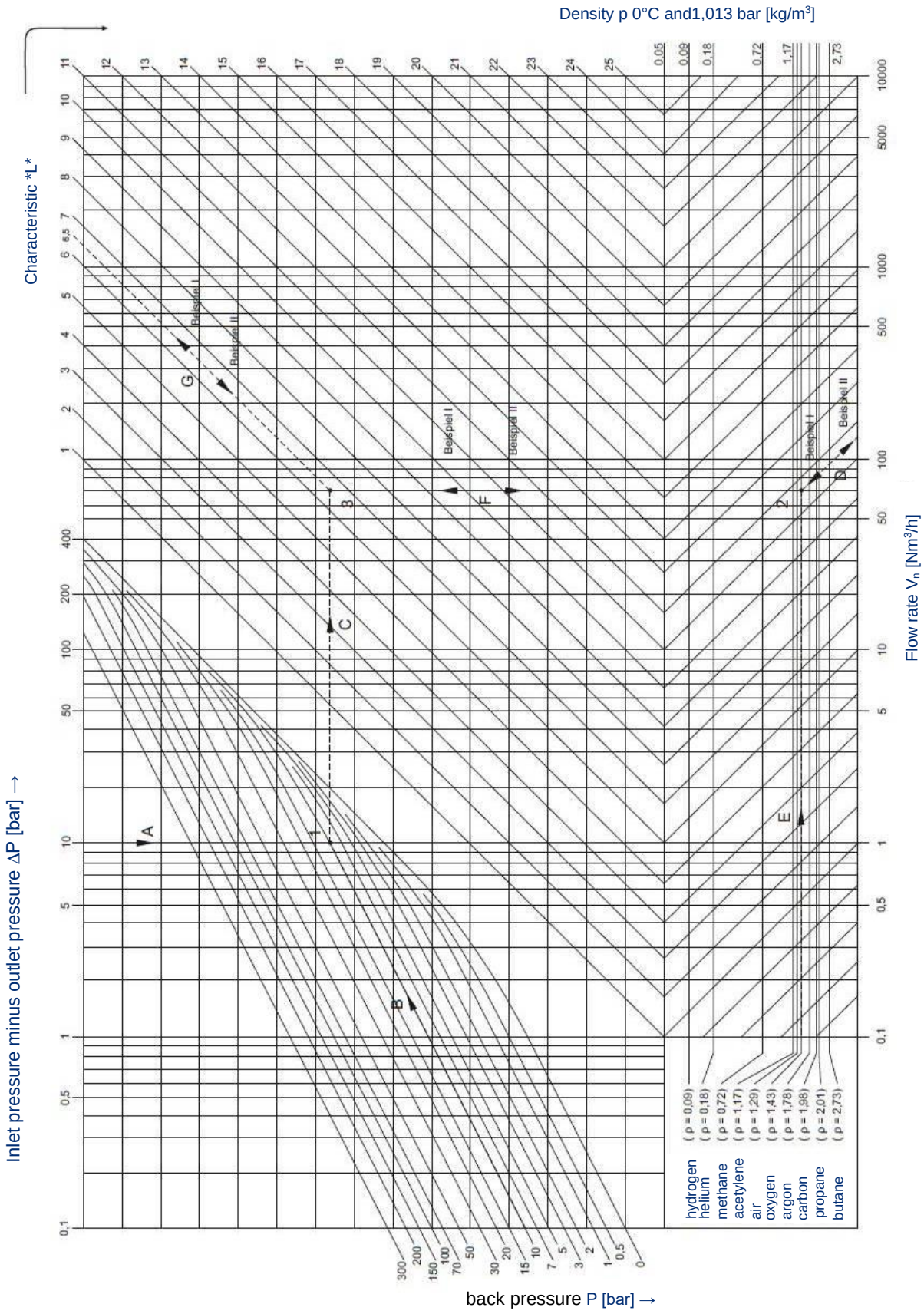

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EXAMPLE I
DETERMINATION OF THE PERFORMANCE CHARACTERISTIC L

Inlet pressure P_V, outlet pressure P_H, flow rate V_n and gas type are known

Operating data:
- Inlet pressure varies between 30 and 20 bar
- Outlet pressure should be able to be set between 8 and 10 bar
- Flow rate required 120 m³/h
- Gas type Oxygen

The pressure regulator must be designed for the worst case, so for the minimum pressure difference.
ΔP= Inlet pressure$_{min.}$ minus outlet pressure $_{max.}$
ΔP= 20 bar – 10 bar
ΔP= 10 bar

Calculating the performance characteristic L

- Inlet pressure minus outlet pressure = 10 bar → vertically downwards (A)
- Outlet pressure = 10 bar → diagonally upwards (B)
- Intercept (1)
- Flow rate = 120 m³/h → parallel to the guide lines diagonally left upwards (D)
- Gas line OXYGEN → horizontally to the right (E)
- Intercept (2)
- From intercept point (1) → horizontally to the right (C)
- From intercept point (2) → vertically upwards (F) to line (C)
- Intercept point (3)
- From intercept point (3) → parallel to the guide lines diagonally upwards and right (G)
- Characteristic L = 6,5

If the pressure regulator type is to be selected then the gas type, inlet pressure, outlet pressure and flow rate is used to calculate the performance characteristic.
It must be observed here, that the pressure regulator has to be selected for the worst case, i.e. for the minimum pressure difference. If there is doubt, it is advisable to determine the performance characteristic for several operating points and to select the pressure regulator for the largest performance characteristic.

EXAMPLE II
DETERMINATION OF THE FLOW RATE

Pressure regulator type, characteristic value and gas type are known

Operating data:
- Characteristic value 6,5
- Inlet pressure varies between 30 and 20 bar
- Outlet pressure should be able to be set between 8 and 10 bar
- Gas type Oxygen

Determining the flow rate

- Inlet pressure minus outlet pressure = 10 bar → vertically downwards (A)
- Outlet pressure = 10 bar → diagonally upwards (B)
- Intercept (1)
- From intercept point (1) → horizontally to the right (C)
- Characteristic L = 6,5 → parallel to the guide lines diagonally left downwards (G)
- Intercept point (3)
- From intercept point (3) → vertically downwards (F)
- Gas line OXYGEN → horizontally to the right (E)
- Intercept point (2)
- From intercept point (2) → parallel to the guidelines diagonally right downwards (D)

Flow rate = 120 m³/h

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TECHNICAL INFORMATION

Flow chart for pressure regulators, single stage, in accordance with DIN EN ISO 2503

Oxygen [1] Inlet pressure P_V [bar]	Flow Rate Q [m^3/h] [2] with back pressure P_2 [bar]					Acetylene Inlet pressure P_V [bar]	Flow rate Q [m^3/h] [2] with back pressure P_2 [bar]		
	1	2,5	4	10	16		0,5	1	1,2
300	8	14	20	47	67				
200	8	14	20	45	69				
100	8	14	20	43	65				
40	8	14	20	38	54	18	5	6	8
20	8	14	19	30	31	10	4,5	5,5	6,5
10	8	14	14	17	--	4	3	4	5
5	3	8	9	--	--	2	1,5	2	3

[1] Flow rate is multiplied by the following factors for other gas types:

Argon	0,90	Nitrogen	1,05
Compressed Air	1,05	Methane	1,40
Carbon Dioxide	0,85	Hydrogen	4,00

[2] in normal status
(with free outlet)

Equipment classification for pressure regulators in accordance with DIN EN ISO 2503 (table 3)

Gas type	*Equipment*	*Maximum inlet pressure P_1 [bar]*	*Maximum outlet pressure P_2 [bar]*	*Nominal gas flow Q1 [m^3/h]*
Oxygen and other compressed gases up to 300 bar	0 1 2 3 4 5	0 to 300	2 4 6 10 12,5 20	1,5 5 15 30 40 50
Dissolved acetylene	1 2	25	0,8 < 1,5	1 5
MPS (Mapp)	0 1	25	1,5 4	1 5
LPG	1 2	25	1,5 4	1 5
CO_2	0 1	200	2 4	4 2

Identification in accordance with DIN EN ISO 2503

3 - 0 - 200

- Maximum inlet pressure
- Gas type
- Equipment class or maximum P_2

Identification in accordance with DIN EN 13918

Z - M - 1 - 10 - 200 - Ar

- Gas type
- Maximum inlet pressure
- Flow accuracy (%)
- Nominal gas flow l/min
- Indicator
  M = pressure gauge; S = flow meter
- Z = double stage; V = balanced main valve

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OXYGEN — single stage

Max. working pressure/min.flow	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar / 40m³/h	G 3/4“	G 1/4“, DN 6	716.20100	025
20 bar	G 3/4“	G 1/4“, DN 6	716.20101	025
50 bar	G 3/4“	Brazing nipple G 1/4“, DN 6 **	716.20333	026
With polymer spring bonnet for outlet pressures up to 20 bar				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

** Brazing nipple included in delivery

OXYGEN — double stage

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
1,5 bar	G 3/4“	G 1/4“, DN 6	716.20104	026
2,5 bar	G 3/4“	G 1/4“, DN 6	716.20105	026
10 bar	G 3/4“	G 1/4“, DN 6	716.20106	026
With polymer spring bonnet for outlet pressures up to 20 bar				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

OXYGEN — single stage

Max. working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
100 bar	G 3/4“	G 1/2“, DN 15 **	716.20345	004

** Brazing nipple included in delivery

OXYGEN U13-F — HIGH FLOW, single stage

Max. working pressure/min.flow	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar/ 150m³/h	G 3/4“	G 1/2“, DN 9	509.99850	004
20 bar	G 3/4“	G 1/2“, DN 9	509.99900	004
High efficiency pressure regulator for high flow rates				
Union nut G 1/2”			286.256	008
Hose nipple DN 9			749.111	039

Further options available !

Art.No.s = with German DIN 477 connections)
Performance characteristics available for your individual application.

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single stage — ACETYLENE

Max. Inlet pressure	*Max. working pressure / min. flow*	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
25 bar	1,5 bar/ 8m³/h	Clamp	G 3/8“ LH, DN 8	716.20107	025
	With polymer spring bonnet for outlet pressures up to 20 bar				
Union Nut G 3/8”LH				700.50040	008
Hose nipple DN 9				471.40090	008

single stage — PROPANE

Max. Inlet pressure	*Max. working pressure / min. flow*	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar	2,5 bar/ 8m³/h	W 21,80 x 1/14” LH	G 3/8“ LH, DN 8	716.20108	026
	With polymer spring bonnet for outlet pressures up to 20 bar				
	Union Nut G 3/8”LH			700.50040	008
	Hose nipple DN 9			471.40090	008

single stage — PROPAN

Max. Inlet pressure	*Max. working pressure / min. flow*	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
40 bar	6 bar	W 21,80 x 1/14" LH	G 1/2" LH, DN 11	716.55598	004

single stage — MAPP

Max. Inlet pressure	*Max. working pressure / min. flow*	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
20 bar	2,5 bar/ 10m³/h	W 21,80 x 1/14“ LH	G 3/8“ LH, DN 8	716.20109	026
	With polymer spring bonnet for outlet pressures up to 20 bar				
	Union Nut G 3/8”LH			700.50040	008
	Hose nipple DN 9			471.40090	008

single stage — FUEL GASES

Max. working pressure / min. flow	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar/ 160m³/h	W 21,80 x 1/14“ LH	G 3/8“ LH, DN 9	716.20110	026
20 bar	W 21,80 x 1/14“ LH	G 3/8“ LH, DN 9	716.20111	026
50 bar	W 21,80 x 1/14“ LH	Brazing nipple G 3/8“LH, DN 8 **	716.20344	026
With polymer spring bonnet for outlet pressures up to 20 bar For Back-Shielding gas, test gas, methane, city gas, natural gas and hydrogen				
Union Nut G 3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008
** Brazing nipple included in delivery				

Version: 01/2022

CONSTANT

CYLINDER PRESSURE REGULATOR

200 BAR- TECHNOLOGY

FUEL GASES — double stage

Maximum Working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
1,5 bar	W 21,80 x 1/14“ LH	G 3/8“ LH, DN 9	716.20116	026
2,5 bar	W 21,80 x 1/14“ LH	G 3/8“ LH, DN 9	716.20117	026
10 bar	W 21,80 x 1/14“ LH	G 3/8“ LH, DN 9	716.20118	026
For Back-Shielding gas, test gas, methane, city gas, natural gas and hydrogen				
Union Nut G 3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008

FUEL GASES — single stage

Maximum Working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
100 bar	W 21,80 x 1/14“ LH	G 1/2“, DN 15 **	717.05540	004

For Back-Shielding gas, test gas, methane, city gas, natural gas and hydrogen

** Brazing nipple included in delivery

HYDROGEN — single stage, outlet flow meter

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
16 l/min	W 21,80 x 1/14“ LH	G 3/8“ LH, DN 9	716.20115	023
With polymer spring bonnet				
Union Nut G 3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008

BACK-SHIELDING GAS — single stage, outlet flow gauge

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
50 l/min	W 21,80 x 1/14“ LH	G 3/8“ LH, DN 9	716.20114	023
With polymer spring bonnet				
Union Nut G 3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008

BACK-SHIELDING GAS — single stage, outlet flow meter

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
16 l/min	W 21,80 x 1/14“LH	G 3/8“LH, DN 6	716.20127	023
With polymer spring bonnet				
For argon / hydrogen mix (97% / 3%)				
Union nut G 3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008

Further options available !

(Art.No.s = with German DIN 477 connections) Performance characteristics available for your individual application.

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single stage — SHIELDING GASES

Max. working pressure / min. flow	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar/ 35m³/h	W 21,80 x 1/14“	G 1/4“, DN 6	716.20119	026
20 bar	W 21,80 x 1/14“	G 1/4“, DN 6	716.20120	026
50 bar	W 21,80 x 1/14“	Brazing nipple G 1/4“, DN 6 **	716.20337	026
With polymer spring bonnet for outlet pressures up to 20 bar				
For Argon and other inert gases, carbon dioxide (CO2), mixed gases				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

single stage — SHIELDING GASES

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
100 bar	W 21,80 x 1/14“	Brazing nipple G 1/2“, DN 15 **	716.20338	004
200 bar	W 21,80 x 1/14“	Brazing nipple G 1/2“, DN 15 **	716.20339	004
For Argon and other inert gases, carbon dioxide (CO2), mixed gases				

double stage — SHIELDING GASES

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
1,5 bar	W 21,80 x 1/14“	G 1/4“, DN 6	716.20128	026
2,5 bar	W 21,80 x 1/14“	G 1/4“, DN 6	716.20129	026
10 bar	W 21,80 x 1/14“	G 1/4“, DN 6	716.20130	026
With polymer spring bonnet for outlet pressures up to 20 bar				
For Argon and other inert gases, carbon dioxide (CO2), mixed gases				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

single stage, outlet flow gauge — ARGON / CO2

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
16 l/min	W 21,80 x 1/14“	G 1/4“, DN 6	716.20123	025
32 l/min	W 21,80 x 1/14“	G 1/4“, DN 6	716.20124	023
With polymer spring bonnet				
Flow rate indication with flow gauge				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

**** Brazing nipple included in delivery**
Further options available !

Performance characteristics available for your individual application.
(Art.No.s = with German DIN 477 connections)

ARGON / CO2 — single stage, outlet flow meter

Max. flow rate	Cylinder connection	Hose connection	Art. No.	Cat. No.
16 l/min	W 21,80 x 1/14“	G 1/4“, DN 6	716.20125	023
30 l/min	W 21,80 x 1/14“	G 1/4“, DN 6	716.20126	023
With polymer spring bonnet				
Flow rate indication with flow meter				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

ARGON / CO2 — single stage, outlet double flow meter

Max. flow rate	Cylinder connection	Hose connection	Art. No.	Cat. No.
16 l/min	W 21,80 x 1/14“	G 1/4“, DN 6	716.20352	023
30 l/min	W 21,80 x 1/14“	G 1/4“, DN 6	716.20353	023
Flow rate indication with 2 flow meters				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

ARGON / CO2 — double stage, outlet flow meter

Max. flow rate	Cylinder connection	Hose connection	Art. No.	Cat. No.
1 l/min	W 21,80 x 1/14“	G 1/4“, DN 6	716.20131	023
5 l/min	W 21,80 x 1/14“	G 1/4“, DN 6	716.20132	023
With polymer spring bonnet				
Flow rate indication with flow meter				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

Further options available !
(Art.No.s with German DIN 477 connections)

Performance characteristics available for your individual application.

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200 BAR- TECHNOLOGY

single stage — NITROGEN

Max. working pressure / min. flow	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar/ 40m³/h	W 24,32 x 1/14“	G 1/4“, DN 6	716.20133	026
20 bar	W 24,32 x 1/14“	G 1/4“, DN 6	716.20134	026
50 bar	W 24,32 x 1/14“	Brazing nipple G 1/4“, DN 6 **	716.20340	026
With polymer spring bonnet for outlet pressures up to 20 bar				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

single stage — NITROGEN

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
100 bar	W 24,32 x 1/14“	Brazing nipple G 1/2“, DN 15 **	716.20341	026
150 bar	W 24,32 x 1/14“	Brazing nipple G 1/2“, DN 15 **	716.20342	026
200 bar	W 24,32 x 1/14“	Brazing nipple G 1/2“, DN 15 **	716.20343	026

single stage, outlet flow meter — NITROGEN

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
16 l/min	W 24,32 x 1/14“	G 1/4“, DN 6	716.20137	023
With polymer spring bonnet				
Flow rate indication with flow meter				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

double stage — NITROGEN

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
1,5 bar	W 24,32 x 1/14“	G 1/4“, DN 6	716.20138	026
2,5 bar	W 24,32 x 1/14“	G 1/4“, DN 6	716.20139	026
10 bar	W 24,32 x 1/14“	G 1/4“, DN 6	716.20140	026
With polymer spring bonnet for outlet pressures up to 20 bar				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

**** Brazing nipple included in delivery**
Further options available !

(Art.No.s = with German DIN 477 connections)
Performance characteristics available for your individual application.

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COMPRESSED AIR — single stage

Max. working pressure / min. flow	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar/ 40m³/h	G 5/8“ext.	G 1/4“, DN 6	716.20141	026
20 bar	G 5/8“ext.	G 1/4“, DN 6	716.20142	026
50 bar	G 5/8“ext.	Brazing nipple G 1/4“, DN 6 **	716.20334	026
With polymer spring bonnet for outlet pressures up to 20 bar				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
100 bar	G 5/8“ext.	Brazing nipple G 1/2“, DN 15 **	716.20335	004
200 bar	G 5/8“ext.	Brazing nipple G 1/2“, DN 15 **	716.20336	004

COMPRESSED AIR — double stage

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
1,5 bar	G 5/8“ext.	G 1/4“, DN 6	716.20145	026
2,5 bar	G 5/8“ext.	G 1/4“, DN 6	716.20146	026
10 bar	G 5/8“ext.	G 1/4“, DN 6	716.20147	026
With polymer spring bonnet for outlet pressures up to 20 bar				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

TEST GAS — single stage

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar	M 19 x 1,5 LH	G 3/8“, DN 9	716.20148	026
With polymer spring bonnet for outlet pressures up to 20 bar				
For test gas without corrosive components				
Union nut G3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008

NITROUS OXIDE — single stage

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar	G 3/8“	G 1/4“, DN 6	716.20150	004
Inlet pressure up to 50 bar				
With polymer spring bonnet for outlet pressures up to 20 bar				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

**** Brazing nipple included in delivery**
Further options available !

(Art.No.s = with German DIN 477 connections)
Performance characteristics available for your individual application.

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HIGH FLOW, single stage — OXYGEN U13-F

Max. working pressure / min. flow	Cylinder connection	Hose connection	Art. No.	Cat. No.
10 bar/ 150m³/h	W30x2 - Ø 17.3/18.3	G 1/2“, DN 9	717.06901	004
20 bar	W30x2 - Ø 17.3/18.3	G 1/2“, DN 9	717.06902	004
High efficiency pressure regulator for high flow rates				
Union nut G 1/2”			286.256	008
Hose nipple DN 9			749.111	039

single stage — OXYGEN

Max. working pressure / min. flow	Cylinder connection	Hose connection	Art. No.	Cat. No.
10 bar/ 40m³/h	W30x2 - Ø 17.3/18.3	G 1/4“, DN 6	716.30100	026
20 bar	W30x2 - Ø 17.3/18.3	G 1/4“, DN 6	716.30101	026
50 bar	W30x2 - Ø 17.3/18.3	Brazing nipple G 1/4“, DN 6 **	716.30102	026
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

single stage — OXYGEN

Max. working pressure	Cylinder connection	Hose connection	Art. No.	Cat. No.
100 bar	W30x2 - Ø 17.3/18.3	G 1/2“, DN 15 **	716.30103	026

** Brazing nipple included in delivery

single stage, balanced main valve — OXYGEN

Max. working pressure	Cylinder connection	Hose connection	Art. No.	Cat. No.
2.5 bar	W30x2 - Ø 17.3/18.3	G 1/4“, DN 6	716.30120	026
10 bar	W30x2 - Ø 17.3/18.3	G 1/4“, DN 6	716.30121	026
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

double stage — OXYGEN

Max. working pressure	Cylinder connection	Hose connection	Art. No.	Cat. No.
1,5 bar	W30x2 - Ø 17.3/18.3	G 1/4“, DN 6	716.30138	026
2,5 bar	W30x2 - Ø 17.3/18.3	G 1/4“, DN 6	716.30139	026
10 bar	W30x2 - Ø 17.3/18.3	G 1/4“, DN 6	716.30140	026
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

Version: 01/2022

CONSTANT

CYLINDER PRESSURE REGULATOR

Fuel gases — single stage

Max. working pressure / min. flow	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar/ 160m³/h	W30x2LH-Ø 15.2/20.8	G 3/8“LH, DN 9	716.30115	026
20 bar	W30x2LH-Ø 15.2/20.8	G 3/8“LH, DN 9	716.30116	026
50 bar	W30x2LH-Ø 15.2/20.8	G 3/8“ LH, DN 8 **	716.30117	026
For methane, hydrogen, back-shielding gas ** Brazing nipple included in delivery				
Union nut G3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008

Fuel gases — single stage

Max. working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
100 bar	W30x2LH - Ø 15.2/20.2	G 1/2“ LH, DN 15 **	716.30118	026
200 bar	W30x2LH - Ø 15.2/20.2	G 1/2“ LH, DN 15 **	716.30119	026
For methane, hydrogen, back-shielding gas ** Brazing nipple included in delivery				

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single stage, balanced main valve, outlet flow meter — HYDROGEN

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
16 l/min	W30x2LH - Ø 15.2/20.2	G 3/8“LH, DN 9	716.30129	026
With pressure balanced main valve (V) Flow rate indication with flow meter				
Union nut G3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008

single stage, balanced main valve — HYDROGEN

Max. working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
2,5 bar	W30x2LH - Ø 16.6/19.4	G 3/8“LH, DN 6	716.30122	026
10 bar	W30x2LH - Ø 16.6/19.4	G 3/8“LH, DN 6	716.30123	026
Union nut G3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008

double stage — HYDROGEN

Max. working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
1,5 bar	W30x2LH - Ø 16.6/19.4	G 3/8“LH, DN 6	716.30147	026
2,5 bar	W30x2LH - Ø 16.6/19.4	G 3/8“LH, DN 6	716.30148	026
10 bar	W30x2LH - Ø 16.6/19.4	G 3/8“LH, DN 6	716.30149	026
Union nut G 1/4"			700.50030	008
Hose nipple DN 6			700.50050	008

**** Brazing nipple included in delivery**
Further options available !

Performance characteristics available for your individual application

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BACK-SHIELDING GAS — single stage, balanced main valve, outlet flow gauge

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
50 l/min	W30x2LH - Ø 15.2/20.2	G 3/8“LH, DN 9	716.30134	026
With pressure balanced main valve (V) Flow rate indication with flow gauge				
Union nut G3/8”LH			700.50040	008
Hose nipple DN 9			471.40090	008

NITROGEN / SHIELDING GASES — single stage

Max. working pressure/min. flow	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar/ 40m³/h	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30110	026
20 bar	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30111	026
10 bar	W30x2 - Ø 15.9/20.1	G 3/8“, DN 9	716.30137	026
50 bar	W30x2 - Ø 15.9/20.1	Brazing nipple G 1/4“, DN 6 **	716.30112	026
For nitrogen and other inert gases, CO_2 (carbon dioxide), mixed gases				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

NITROGEN / SHIELDING GASES — single stage

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
100 bar	W30x2 - Ø 15.9/20.1	Brazing nipple G 1/2“, DN 15 **	716.30113	026
200 bar	W30x2 - Ø 15.9/20.1	Brazing nipple G 1/2“, DN 15 **	716.30114	026
For nitrogen and other inert gases, CO_2 (carbon dioxide), mixed gases				

NITROGEN / SHIELDING GASES — single stage, balanced main valve

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
16 l/min	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30128	026
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

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✱ on request

MESSER Cutting Systems

300 BAR- TECHNOLOGY

single stage, balanced main valve

NITROGEN / SHIELDING GASES

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
2,5 bar	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30150	026
10 bar	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30151	026
Union nut G 1/4"			700.50030	008
Hose nipple DN 6			700.50050	008

double stage

NITROGEN / SHIELDING GASES

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
1,5 bar	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30144	026
2,5 bar	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30145	026
10 bar	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30146	026
Union nut G 1/4"			700.50030	008
Hose nipple DN 6			700.50050	008

**** Brazing nipple included in delivery**
Further options available !

Performance characteristics available for your individual application

Version: 01/2022

ARGON / CO_2 — single stage, balanced main valve

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
16 l/min	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30152	026
32 l/min	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30153	026
With pressure balanced main valve (V) Flow rate indication with flow gauge				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

ARGON / CO2 — single stage, balanced main valve; outlet flow meter

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
16 l/min	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30126	026
30 l/min	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30130	026
With pressure balanced main valve (V); Flow rate indication with flow meter				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

ARGON / CO2 — single stage, balanced main valve; double outlet flow meter

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
2x16 l/min	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30131	026
2x30 l/min	W30x2 - Ø 15.9/20.1	G 1/4“, DN 6	716.30132	026
With pressure balanced main valve (V); Flow rate indication with 2 flow meters				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

ARGON / CO2 — double stage, outlet flow meter

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
1 l/min	W30x2 - Ø 15.2/20.2	G 1/4“, DN 6	716.30124	026
5 l/min	W30x2 - Ø 15.2/20.2	G 1/4“, DN 6	716.30125	026
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

ARGON / HYDROGEN — double stage, outlet flow meter

Max. flow rate	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
16 l/min	W30x2LH - Ø 15.2/20.8	G 3/8“LH, DN 9	716.30127	026
Union nut G 3/8”			700.50040	008
Hose nipple DN 9			700.40090	008

Version: 01/2022

❋ on request

MESSER Cutting Systems

300 BAR- TECHNOLOGY

single stage — COMPRESSED AIR

Max. working pressure/min. flow	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
10 bar/ 40m³/h	W30x2 - Ø 16.6/19.4	G 1/4“, DN 6	716.30105	026
20 bar	W30x2 - Ø 16.6/19.4	G 1/4“, DN 6	716.30106	026
50 bar	W30x2 - Ø 16.6/19.4	Brazing nipple G 1/4“, DN 6 **	716.30107	026
With polymer spring bonnet for outlet pressures up to 20 bar				
Union nut G 1/4”			700.50030	008
Hose nipple DN 6			700.50050	008

single stage — COMPRESSED AIR

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
100 bar	W30x2 - Ø 16.6/19.4	G 1/2“, DN 15 **	716.30108	026
200 bar	W30x2 - Ø 16.6/19.4	G 1/2“, DN 15 **	71630109	026
** Brazing nipple included in delivery				

double stage — COMPRESSED AIR

Maximum working pressure	*Cylinder connection*	*Hose connection*	*Art. No.*	*Cat. No.*
1,5 bar	W30x2 - Ø 16.6/19.4	G 1/4“, DN 6	716.30141	026
2,5 bar	W30x2 - Ø 16.6/19.4	G 1/4“, DN 6	716.30142	026
10 bar	W30x2 - Ø 16.6/19.4	G 1/4“, DN 6	716.30143	026
Union nut G 1/4"			700.50030	008
Hose nipple DN 6			700.50050	008

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GAUGES — Ø 63 mm, G 1/4" , pressure indication

Medium	Pressure limitation/ Red Mark	Scale end value	Housing Color	Art. No.	Cat .No.
Oxygen	1,5 bar	2,5 bar	Brass	0.640.114	008
	2,5 bar	4 bar	Brass	0.640.113	008
	10 bar	16 bar	Brass	0.640.477	008
	10 bar	16 bar	Black	0.640.586	008
	16 bar	25 bar	Brass	0.640.109	008
	20 bar	40 bar	Brass	0.640.108	008
	50 bar	100 bar	Brass	0.640.105	008
	200 bar	315 bar	Brass	0.640.476	008
	200 bar	315 bar	Black	0.640.588	008
	300 bar	400 bar	Brass	0.640.576	008
Acetylene	1,5 bar	2,5 bar	Brass	0.640.479	008
	1,5 bar	2,5 bar	Black	0.640.585	008
	25 bar	40 bar	Brass	0.640.478	008
	25 bar	40 bar	Black	0.640.587	008
Fuel gases / neutral gases	1,5 bar	2,5 bar	Brass	0.640.070	008
	2,5 bar	4 bar	Brass	0.640.069	008
	10 bar	16 bar	Brass	0.640.066	008
	16 bar	25 bar	Brass	0.640.065	008
	20 bar	40 bar	Brass	0.640.064	008
	50 bar	100 bar	Brass	0.640.061	008
	100 bar	160 bar	Brass	0.640.060	008
	150 bar	220 bar	Brass	0.640.315	004
	200 bar	315 bar	Brass	0.640.059	008
	300 bar	400 bar	Brass	0.640.321	008

GAUGES — Ø 63 mm, G 1/4" , with flow rate indication

Medium	Max. Flow rate/ Red Mark	Scale end value	Art. No.	Cat .No.
Argon / CO_2	16 l/min	25 l/min	0.640.141	004
	32 l/min	50 l/min	0.640.139	004
Back-Shielding gas	50 l/min	70 l/min	0.640.142	004

GASKET

(without picture)

Description	Art. No.	Cat. No.
Sealing gasket for gauges	452.08020	008
Sealing 11,7 x 18 x 2 for regulator connection 200 Bar	716.20047	008
O-Ring 5,7 x 1,9 for regulator connection 300 Bar	162.36560	008
Set: 2 pcs 162.36560	717.06941	008

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❋ on request

MESSER Cutting Systems

SPARE PARTS / ACCESSORIES

for gauges with flow rate indication — ORIFICES

Gas type	Indication range	Bore diameter	Art. No.	Cat. No.
Argon / CO_2	0 - 16 l/min	0,55 mm	717.00753	004
Argon / CO_2	0 - 32 l/min	0,75 mm	717.00787	004
Forming gas	0 - 50 l/min	0,85 mm	717.00788	004

gauge protection against damage — PROTECTING CAP

Description	Art. No.	Cat. No.
for fuel gas, yellow design	0.462.571	043
for oxygen, blue design	0.462.572	043

Description	Art. No.	Cat. No.
Rubber protection cap for gauges, dark-grey/black	0.647.614	008

for flow meters — MEASURING GLASSES

Gas type	Indication range	Art. No.	Cat. No.
Argon / CO_2	1 l/min	717.00725	004
Argon / CO_2	16 l/min	717.00724	004
Hydrogen	16 l/min	717.00726	004
Protection cover for measuring glass (without picture)		152.02250	004

flow meter cpl. — FLOW METER

Gas type	Indication range	Art. No.	Cat. No.
Argon / CO_2	16 l/min	717.05877	000
Argon / CO_2	30 l/min	717.05878	000

oxygen and compressed gases — DOUBLE OUTLET VALVE

Gas type	Connection	Art. No.	Cat. No.
for oxygen and compressed gases	G ¼"	512.11653	038
Acetylene	G 3/8" LH	512.11602	038
Fuel gas	G 3/8" LH	716.55018	038

Connection: G 3/8" LH union nut

up to 25 l — GAS FLOW TESTER

Description	Art. No.	Cat. No.
Gas flow tester	0.445.464	038

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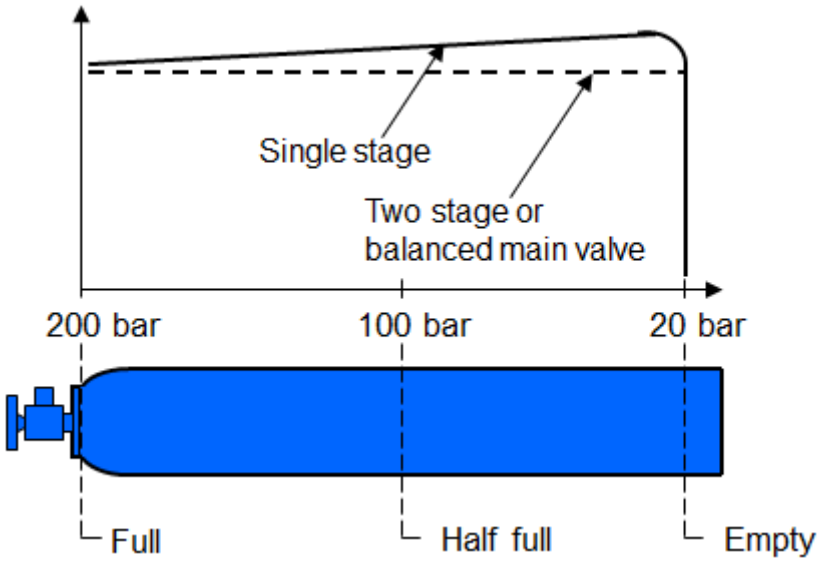
Characteristically function of a pressure regulator



There is a interdependency between inlet pressure and outlet pressure. With a single-stage regulator, working pressure may rise in relation to the decreasing filling level of the gas cylinder.
Outlet pressure must be re-adjusted in this situation.

Version: 01/2022

MINITHERM THE FEATHERWEIGHT TORCH WITH HEAVYWEIGHT PERFORMANCE

The MINITHERM® product range has been developed in accordance with the requirements of industry and trade for a small and lightweight injector torch to cover special demands.

Compared with conventional hand torches the considerably lower weight of our MINITHERM® handles and attachments enable fatigue-free continuous working. This is of particular advantage in pipework construction, sanitary sector, in manufacturing of jewellery, dental laboratories and for other precision parts as well as for mass production of hand-welded, brazed or heat-treated components.

Due to the small handle size any welding, brazing and heating work in difficult areas and hard to reach locations can usually be carried out with adequate free moving space.
The entire MINITHERM® product range complies with the requirements of the "Accident Prevention Regulations for Welding, Cutting and Allied Processes" (DGUV-R 500/2.26) as well as with DIN EN ISO 5172.

- High level of safety thanks to the injector suction principle:
  The mixing of oxygen with fuel gas is effected using the under-pressure mixing system. This prevents the intrusion of fuel gas into the Oxygen supply. MINITHERM® torches meet the requirements of the established accident prevention regulations.
- Universal range of applications:
  A wide range of torch inserts with varying flame characteristics and flame powers offers a virtually complete range of applications from the barely visible micro flame up to the powerful welding and cutting flame.
- Large moving space through small size:
  Through the compact size of the handle and inserts it is possible to carry out welding, brazing, soldering and heating tasks even at hard to access locations without any problems
- Fatigue free working through the low weight:
  The low weights of the handle and inserts make the MINITHERM® torch significantly lighter than conventional oxyfuel hand-held equipment. This ensures fatigue-free long-term use and gives high production quality.
- Comprehensive accessories program:
  The MINITHERM® program includes various pressure regulators, safety devices, hoses for Oxygen and different types of fuel gases, torch supports, flame ignition accessories and a broad range of accessories to enable the widest variety of applications to be tackled smoothly.

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Notes:

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KITS AND HANDLES

High-performance kits for welding, brazing and heating (Acetylene) — MINITHERM KIT *A*

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
MINITHERM Kit *A* EH	G 1/4” RH	G 3/8“ LH	716.01407	010
MINITHERM Kit *A* BH	G 3/8“ RH	G 3/8“ LH	716.01427	010
MINITHERM Kit *A* UH	9/16“ NF-RH (M)	9/16“ NF-LH (M)	✱	010
MINITHERM Kit *A* FH	M16x1,5-RH (M)	M16x1,5-LH (M)	✱	010
MINITHERM Kit *A* ASH	5/8 UNF-RH (M)	5/8 UNF-LH (M)	✱	010

Each consisting of:
1 MINITHERM handle, with mounted oxygen and fuel gas hoses, length 3 m
5 welding, brazing and heating tips MINITHERM size 00 to 3
Operating instruction

High-performance kits for welding, brazing and heating (Propane, Methane) — MINITHERM KIT *PM*

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
MINITHERM Kit *PM* EH	G 1/4” RH	G 3/8“ LH	716.01408	010
MINITHERM Kit *PM* BH	G 3/8“ RH	G 3/8“ LH	716.01428	010
MINITHERM Kit *PM* UH	9/16“ NF-RH (M)	9/16“ NF-LH (M)	✱	010
MINITHERM Kit *PM* FH	M16x1,5-RH (M)	M16x1,5-LH (M)	✱	010
MINITHERM Kit *PM* ASH	5/8 UNF-RH (M)	5/8 UNF-LH (M)	✱	010

Each consisting of:
1 MINITHERM handle, with mounted oxygen and fuel gas hoses, length 3 m
5 welding, brazing and heating tips MINITHERM size 00 to 3
Operating instruction

Small handle with high flow efficiency, for welding, brazing heating and cutting — MINITHERM

Type	*Description*	*Connections*	*Art. No.*	*Cat. No.*
MINITHERM handle	Valves V-positioned	with 3,2 mm hose connection	716.06109	024
MINITHERM-CVR with check valves	Valves V-positioned	with 3,2 mm hose connection	716.07180	024

Length: approx.120 mm (without hose connection), shaft diameter: 10 mm, weight approx. 90 g (without hoses and check valves)

Small handle with high flow efficiency, for welding, brazing heating and cutting, cpl. with 3m hoses — MINITHERM

Type	*Description*	*Connections*	*Art. No.*	*Cat. No.*
MINITHERM EH	Valves V-positioned	G 1/4“ RH - G 3/8” LH	716.06111	024
MINITHERM BH	Valves V-positioned	G 3/8“ RH - G 3/8” LH	716.06112	024
MINITHERM BH-CVR	-with check valves-	G 3/8“ RH - G 3/8” LH	716.07184	024
MINITHERM UH	Valves V-positioned	9/16“ RH - 9/16“ LH	716.06113	024
MINITHERM FH	Valves V-positioned	M16x1,5 RH - M16x1,5 LH	716.06114	024
MINITHERM ASH	Valves V-positioned	5/8 UNF-RH - 5/8 UNF-LH	716.06156	024

Length: 120 mm (without hose connection), shaft diameter: 10 mm, weight approx. 90 g (without hoses)
Hose length: 3 m
The MINITHERM small handle provides the basis for particularly difficult and sensitive applications when using the oxyfuel flame constantly, in extremely small areas, and in places that are not accessible with conventional torches.

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CUTTING INSERTS, WELDING, BRAZING AND HEATING TIPS

CUTTING ATTACHMENT MINITHERM

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

Description	*Nozzle type*	*Art. No. Type A*	*Art. No. Type PMY*	*Cat. No.*
MINITHERM 2207	Block nozzle	716.07090	716.07110	024

For cutting nozzles : A-BF and A-BK, PB-K/PMY

Cutting range up to 25 mm

TIPS TYPE Z

Welding, brazing and heating tips with central flame outlet, replaceable mouthpiece

Size	*O_2-Consumption*	*Welding range*	*Art. No. Type Z-A*	*Art. No. Type Z-PM*	*Cat. No.*
00	20-55 l/h	to 0,3 mm	716.00978	716.00988	024
0	28-72 l/h	0,2-0,5 mm	716.00979	716.00989	024
1	58-150 l/h	0,5-1,0 mm	716.00980	716.00990	024
2	150-285 l/h	1,0-2,0 mm	716.00981	716.00991	024
3	215-440 l/h	2,0-4,0 mm	716.00982	716.00992	024

MINITHERM Z-A tips for welding, brazing and heating with acetylene
MINITHERM Z-PM tips for brazing and heating with propane, methane

TIPS TYPE FKZ

Brazing, heating and melting tips with laminar flame outlet, nozzles replaceable

Size	*O_2-Consumption*	*Art. No. Type AH*	*Art. No. Type PMY*	*Cat. No.*
FKZ 1	210-350 l/h	716.50808	716.50804	024
FKZ 2	210-420 l/h	716.50809	716.50805	024
FK 3	270-540 l/h	716.50810	--	039

MINITHERM FK/FKZ-AH tips for brazing, heating and melting with acetylene, hydrogen
MINITHERM FKZ-PMY tips for brazing, heating and melting with propane, methane, MAPP

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✱ on request | picture may differ | subject to change

FORKED TORCHES

For heating and brazing, with central flame outlet

FORKED TORCH TYPE Z

Size	*O_2-Consumption*	*Art. No. Type Z-A*	*Art. No. Type Z-PM*	*Cat. No.*
Z 0	56-140 l/h	716.50464	716.50469	039
Z 1	210-300 l/h	716.50465	716.50470	039
Z 2	310-570 l/h	716.02560	716.50471	039
Z 3	430-880 l/h	716.50466	716.50472	039

Forked torch MINITHERM Z-A for heating and brazing with acetylene
Forked torch MINITHERM Z-PM for heating and brazing with propane, methane

Length: approx. 210 mm, weight: approx. 90 g, nozzle distance: 30 mm

For heating and brazing, with laminar flame outlet

FORKED TORCH TYPE FKZ

Size	*O_2-Consumption*	*Art. No. Type FKZ-AH*	*Art. No. Type FKZ-PMY*	*Cat. No.*
FKZ 1	420-700 l/h	716.50820	716.50828	039
FKZ 2	550-840 l/h	716.50821	716.50829	039

Forked torch MINITHERM FKZ-AH for heating and brazing with acetylene, hydrogen
Forked torch MINITHERM FKZ-PMY for heating and brazing with propane, methane, MAPP

Length: approx. 210 mm, weight: approx. 130 g, nozzle distance: 30 mm

Replaceable nozzles for brazing, heating and melting tips and forked torches type FK and FKZ

HEATING NOZZLE TYPE FKZ & FK

Size	*Art. No. Type AH*	*Art. No. Type PMY*	*Cat. No.*
FKZ 1	716.50798	716.50800	039
FKZ 2	716.50799	716.50801	039
FK 3	716.03008	--	039

Heating nozzles FK/FKZ-AH, for brazing, heating and melting tips and forked torch MINITHERM FK/FKZ-AH
Heating nozzles FKZ-PMY, for brazing, heating and melting tips and forked torch MINITHERM FKZ-PMY

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MICRO TIPS

MICRO-TIPS MG-HA — Small tips curved

Size	O_2- Consumption	O_2-Pressure	Injector	Art. No.	Cat. No.
2	6 -9 l/h	0,2 - 0,5 bar	716.50813	716.05783	004
3	9 - 15 l/h	0,5 - 1,5 bar	716.50813	716.05784	004
4	32-39 l/h	0,5-0,8 bar	716.50814	716.05785	004
5	39-43 l/h	0,8-1,0 bar	716.50814	716.05786	004
6	43-54 l/h	1,0-1,5 bar	716.50814	716.05787	004
7	54-76 l/h	1,5-2,5 bar	716.50814	716.05788	004

Tips MINITHERM MG-HA supplied without injector

MICRO-TIPS MG-PMY — Small tips curved

Size	O_2- Consumption	O_2-Pressure	Injector	Art. No.	Cat. No.
4	12-21 l/h	1,5-2,5 bar	716.50814	716.05785	004
5	18-30 l/h	2,0-4,0 bar	716.50814	716.05786	004
6	43-76 l/h	1,0-2,5 bar	716.50814	716.05787	004
7	65-98 l/h	2,0-3,5 bar	716.50814	716.05788	004

Tips MINITHERM MG-PMY supplied without injector

INJECTOR — Injector for Micro-Tips

Size	Art. No. Type HA	Art. No. Type PMY	Cat. No.
000	716.50813	-	004
0	716.50814	716.50814	004

Injector attribution: see micro tip sizes above

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✱ on request | picture may differ | subject to change

MESSER Cutting Systems

NEEDLE INSERTS

Needle inserts straight

MICRO- NEEDLE INSERTS G-H

Size	*O_2- Consumption*	*O_2-Pressure*	*Injector*	*Art. No.*	*Cat. No.*
1	9-15 l/h	0,5-1,5 bar	716.50811	716.05795	004
2	9-15 l/h	0,5-1,5 bar	716.50811	716.05796	004
3	9-21 l/h	0,5-2,0 bar	716.50811	716.05797	004
4	9-24 l/h	0,5-3,0 bar	716.50811	716.05798	004

Tips MINITHERM MG-H supplied without injector

Needle inserts straight

MICRO- NEEDLE INSERTS G-PMY

Size	*O_2- Consumption*	*O_2-Pressure*	*Injector*	*Art. No.*	*Cat. No.*
2	9-15 l/h	0,5-1,5 bar	716.50811	716.05796	004
3	9-21 l/h	0,5-2,0 bar	716.50811	716.05797	004
4	9-24 l/h	0,5-3,0 bar	716.50811	716.05798	004
5	9-27 l/h	0,5-3,5 bar	716.50811	716.05799	004

Tips MINITHERM MG-PMY supplied without injector

Injector for Micro - Needle inserts

INJECTOR

Size	*Art. No. Type H*	*Art. No. Type PMY*	*Cat. No.*
0	716.50811	716.50811	004

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TORCH HOLDERS

TABLE TORCH HOLDER — for MINITHERM handle

Description	*Art. No.*	*Cat. No.*
Holder for handle Minitherm	716.05781	039
Knurled-head screw, for mounting on the standard handle	716.06336	024
Alternatively:		
Handle Minitherm with knurled-head screw (hang-in knob) mounted	716.05750	024

For Minitherm handle with hang-in knob, for convenient resting of the torch in sloped position, readily to hand. Especially suitable when using larger Minitherm welding-brazing-heating inserts or forked torch inserts

TABLE TORCH HOLDER MAGNETIC — for MINITHERM handle

Description	*Art. No.*	*Cat. No.*
Magnetic Holder for handle Minitherm,	716.05782	039
with chromed holder plate for mounting on the standard handle		
Steel cast stand base with 7 numbered storage holes for all Minitherm micro inserts, 45° holder bar with screwed-in disc magnets (without micro inserts)		

ELECTRICAL AUTOMATIC TABLE IGNITER — for MINITHERM handle

Description	*Art. No.*	*Cat. No.*
Electrical automatic table igniter	716.05780	039
Battery powered one handed ignition box with easily operated ignition spark button and main on/off switch Batteries required: 2x Monocell 1,5V (not included in supply)		

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

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

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
Kit STARLET *A* ME	G 1/4” RH	G 3/8“ LH	716.18036	010
Kit STARLET *A* MB	G 3/8“ RH	G 3/8“ LH	716.06717	010
Kit STARLET *A* MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	✱	010
Kit STARLET *A* MF	M16x1,5-RH (M)	M16x1,5-LH (M)	✱	010
Kit STARLET *A* MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	✱	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 ranges 3 to 75 mm
7 welding tips type 321-A with hammered welding and heating mouthpieces, welding range 0,2 – 14 mm; torch carriage for cutting attachment, torch spanner, gas igniter, protection goggles, set of nozzle cleaners, operating instructions

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

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
Kit STARLET *PMYE* ME	G 1/4” RH	G 3/8“ LH	716.06711	010
Kit STARLET *PMYE* MB	G 3/8“ RH	G 3/8“ LH	716.06718	010
Kit STARLET *PMYE* MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	✱	010
Kit STARLET *PMYE* MF	M16x1,5-RH (M)	M16x1,5-LH (M)	✱	010
Kit STARLET *PMYE* MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	✱	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 brazing and heating mouthpieces sizes 1 to 6 mm, torch carriage for cutting attachment, torch spanner, gas igniter, protection goggles, set of nozzle cleaners, operating instructions

Other compositions of complete sets available

Version: 01/2022

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

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

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
Kit STARLET *WS* 1302 ME	G 1/4” RH	G 3/8“ LH	716.06345	010
Kit STARLET *WS* 1302 MB	G 3/8“ RH	G 3/8“ LH	716.06343	010
Kit STARLET *WS* 1302 MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	✱	010
Kit STARLET *WS* 1302 MF	M16x1,5-RH (M)	M16x1,5-LH (M)	✱	010
Kit Starlet *WS* 1302 MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	✱	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 ranges 3 to 75 mm
3 welding tips type 321-A with hammered welding and heating mouthpieces sizes 1 to 6 mm,
operating instructions

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

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	M16x1,5-RH (M)	M16x1,5-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 flashback 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,
twin hoses Oxygen/fuel gas 6/6 mm, length 4,5 m, multi-flame heating insert STARLET F-A 6, cutting inserts STARLET 8702-A/PMYE for all fuel gases, gas lighter, 10 spare flints, protective goggles, adjustable torch spanner, set of nozzle cleaners, operating instructions

Other compositions of complete sets available.

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

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

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

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
Kit STARLET *KS* ME	G 1/4” RH	G 3/8“ LH	716.04493	010
Kit STARLET *KS* MB	G 3/8“ RH	G 3/8“ LH	716.05613	010
Kit STARLET *KS* MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	❋	010
Kit STARLET *KS* MF	M16x1,5-RH (M)	M16x1,5-LH (M)	❋	010
Kit STARLET *KS* MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	❋	010

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 and operating instructions

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

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
Kit STARLET *N* ME	G 1/4” RH	G 3/8“ LH	716.01786	010
Kit STARLET *N* MB	G 3/8“ RH	G 3/8“ LH	716.05614	010
Kit STARLET *N* MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	❋	010
Kit STARLET *N* MF	M16x1,5-RH (M)	M16x1,5-LH (M)	❋	010
Kit STARLET *N* MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	❋	010

Consisting of:
1 handle type 2221, 1 spring lever cutting attachment type 2711-A for acetylene
2 block nozzles type A-BK, for cutting ranges 3 to 25 mm
4 welding tips type 111-A, for welding ranges 1 to 9 mm
torch carriage, torch spanner, set of nozzle cleaners, operating instructions

Other compositions of complete sets available.

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

STARLET *WS*

Powerful complete sets for welding, brazing and heating

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
Kit STARLET *WS* ME	G 1/4” RH	G 3/8“ LH	716.02262	010
Kit STARLET *WS* MB	G 3/8“ RH	G 3/8“ LH	716.05615	010
Kit STARLET *WS* MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	✱	010
Kit STARLET *WS* MF	M16x1,5-RH (M)	M16x1,5-LH (M)	✱	010
Kit STARLET *WS* MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	✱	010

Consisting of:
1 handle type 2221, 1 spring lever cutting attachment type 1711-A for acetylene
3 ring-/slot 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 instructions

Other compositions of complete sets available

✱✱ OxyCon: see page 159 “Accessories”

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Handle shells replaceable, maintenance-free and easy to repair **STARLET 1302**

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

Type	*Description*	*Connections*	*Art. No.*	*Cat. No.*
STARLET 1302 ME	Valves V-positioned	G 1/4“ RH - G 3/8” LH	716.05978	024
STARLET 1302 MB	Valves V-positioned	G 3/8“ RH - G 3/8” LH	716.05976	024
STARLET 1302 MU	Valves V-positioned	9/16“ RH - 9/16“ LH	716.05977	050
STARLET 1302 MF	Valves V-positioned	M16x1,5 RH - M16x1,5 LH	716.05979	050
STARLET 1302 MAS	Valves V-positioned	5/8 UNF-RH - 5/8 UNF-LH	716.06136	050

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

The ergonomic design of the STARLET handles allows easy handling, fatigue-free working and high ease of use. 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.

Handle shells replaceable, maintenance-free and easy to repair — STARLET 1302 S

Type	*Description*	*Connections*	*Art. No.*	*Cat. No.*
STARLET 1302 S ME	Valves V-positioned with built-in flashback arrestors	G 1/4“ RH - G 3/8” LH	716.06712	024

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

The ergonomic design of the STARLET handles allows easy handling, fatigue-free working and high ease of use. 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.

Version: 01/2022

STARLET 2221

Handle shells replaceable, maintenance-free and easy to repair

Type	*Description*	*Connections*	*Art. No.*	*Cat. No.*
STARLET 2221 ME	Valve arrangement lateral	G 1/4“ RH - G 3/8” LH	716.06815	024
STARLET 2221 MB	Valve arrangement lateral	G 3/8“ RH - G 3/8” LH	716.07120	024
STARLET 2221 MU	Valve arrangement lateral	9/16“ RH - 9/16“ LH	716.07121	024
STARLET 2221 MF	Valve arrangement lateral	M16x1,5 RH - M16x1,5 LH	716.07122	024
STARLET 1302 MAS	Valve arrangement lateral	5/8 UNF-RH - 5/8 UNF-LH	716.07123	024

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

The ergonomic design of the STARLET handles allows easy handling, fatigue-free working and high ease of use. 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.

Version: 01/2022

WELDING, BRAZING AND HEATING TIPS

For standard applications, nozzles replaceable — 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 welding and heating nozzles

For high thermal load, nozzles replaceable — STARLET 211-A

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

Mixing tube with hammered welding and heating mouthpiece, replaceable — STARLET 321-A

Size	O_2-Consumption	Welding range	Art. No. tip complete	Art. No. mouthpiece	Cat. No.
0	40 l/h	0,2 - 0,5 mm	716.06257	716.06258	024/007
1	80 l/h	0,5 - 1,0 mm	716.05051	716.05041	024/007
2	160 l/h	1,0 - 2,0 mm	716.05052	716.05042	024/007
3	315 l/h	2,0 - 4,0 mm	716.05053	716.05043	024/007
4	500 l/h	4,0 - 6,0 mm	716.05054	716.05044	024/007
5	800 l/h	6,0 - 9,0 mm	716.05055	716.05045	024/007
6	1.250 l/h	9,0 - 14,0 mm	716.05056	716.05046	024/007

Tips for welding, brazing and heating with acetylene

Version: 01/2022

WELDING, BRAZING AND HEATING TIPS

STARLET 411-A — Bendable mixing tube with brazed-on welding nozzle, replaceable

Size	O_2-Consumption	Welding range	Art. No. tip complete	Art. No. welding nozzle	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 hard to reach locations, fuel gas acetylene

STARLET Z-A — Central flame outlet, nozzles replaceable

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. welding nozzle	Cat. No.
7	max. 1,8 m^3/h	355 mm	716.01837	242.34710	004/007
8	max. 2,5 m^3/h	380 mm	716.01838	242.34810	004/007

Tips for spot welding, brazing and heating with acetylene

STARLET Z-A ES — Central flame outlet, nozzles replaceable, Stainless Steel mixing tube

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. welding nozzle	Cat. No.
7 ES	1,2 - 4,2 m^3/h	430 mm	716.51805	242.34710	024
8 ES	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

STARLET F-A — Laminar flame outlet, nozzles replaceable

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

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

Laminar flame outlet, nozzles replaceable, particularly low noise (85 dB(A) up to size 8) Stainless Steel mixing tube

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

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

Version: 01/2022

BRAZING AND HEATING TIPS

STARLET Z-PMY

Mixing tube with hammered brazing and heating mouthpiece, replaceable, central 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, 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

Version: 01/2022

✱ on request | picture may differ | subject to change

BRAZING AND HEATING TIPS

Central flame outlet, stabilized flame, Stainless Steel mixing tube, nozzles replaceable — STARLET Z-PMYE

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

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, Stainless Steel mixing tube, nozzles replaceable — STARLET F-PMYE

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, Stainless Steel mixing tube, 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	004/039
13	8 - 23 m^3/h	580	716.51723	716.05647	004/039

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

Chrome-plated, for brazing and heating tips with Stainless Steel mixing tubes — 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,
for stainless steel mixing tubes only

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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	716.52883	--	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

Version: 01/2022

✱ on request | picture may differ | subject to change

Central flame outlet, nozzles replaceable (Z-PM only)

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	--	716.03012	039
ZK 3	--	716.03013	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 PMY*	*Cat. No.*
STARLET 1711 with spring lever	Ring/ slot nozzles	716.05168	716.05337	024
STARLET 1211 with hand wheel	Ring/ slot nozzles	716.05338	716.05333	024
STARLET 2711 with spring lever	Block nozzles, 45°	716.05329	--	024
STARLET 8702-A/PMYE with spring lever	Gas-mixing nozzles 30°	716.05960	716.05960	024
STARLET 8711-A/PMYE with spring lever	Gas-mixing nozzles 30°	716.05335	716.05335	024

Cutting attachments for ethylene available on request

Calculation of fuel gas consumption

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

Version: 01/2022

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

Professional kit for acetylene with ring/slot nozzles — STAR *A*

Description	*Inlet connections Handle: Oxygen*	*Inlet connections Handle: Fuelgas*	*Art. No.*	*Cat. No.*
STAR *A* ME	G 1/4” RH	G 3/8“ LH	716.01800	010
STAR *A* MB	G 3/8“ RH	G 3/8“ LH	❋	010
STAR *A* MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	❋	010
STAR *A* MF	M16x1,5-RH (M)	M16x1,5-LH (M)	❋	010
STAR *A* MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	❋	010

Consisting of:
1 handle type 2020, 1 spring lever cutting attachment type 1730-A for acetylene
5 cutting nozzles and 1 heating nozzle type A-RS for cutting ranges 3 to 100 mm
6 welding tips type 210-A, for welding ranges 0,5 to 14 mm
Torch carriage, radius bar, torch spanner, set of nozzle cleaners, operating instructions

Professional kit for acetylene with block nozzles — STAR *B*

Description	*Inlet connections Handle Oxygen*	*Inlet connections Handle fuel gas*	*Art. No.*	*Cat. No.*
STAR *B* ME	G 1/4” RH	G 3/8“ LH	716.01801	010
STAR *B* MB	G 3/8“ RH	G 3/8“ LH	❋	010
STAR *B* MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	❋	010
STAR *B* MF	M16x1,5-RH (M)	M16x1,5-LH (M)	❋	010
STAR *B* MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	❋	010

Consisting of:
1 handle type 2020, 1 spring lever cutting attachment type 2730-A for acetylene
5 block nozzles type A-B, for cutting ranges 3 to 100 mm
6 welding tips type 210-A, for welding ranges 0,5 to 14 mm
Torch carriage, radius bar, torch spanner, set of nozzle cleaners, operating instructions

Other compositions of complete sets available.

Version: 01/2022

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

ASSEMBLY KIT STAR

Assembly kit for welding, brazing, heating and flame cutting, for acetylene

Description	*Inlet connections Handle: Oxygen*	*Inlet connections Handle: Fuelgas*	*Art. No.*	*Cat. No.*
Assembly kit STAR ME	G 1/4” RH	G 3/8“ LH	716.55375	010
Assembly kit STAR MB	G 3/8“ RH	G 3/8“ LH	❋	010
Assembly kit STAR MU	9/16“ NF-RH (M)	9/16“ NF-LH (M)	❋	010
Assembly kit STAR MF	M16x1,5-RH (M)	M16x1,5-LH (M)	❋	010
Assembly kit STAR MAS	5/8 UNF-RH (M)	5/8 UNF-LH (M)	❋	010

Consisting of:
1 handle type 2020, 1 spring lever cutting attachment type 1730-A for acetylene
6 cutting nozzles and 2 heating nozzles type A-RS, for cutting ranges 3 to 200 mm
8 welding tips type 210-A, for welding ranges 0,5 to 30 mm
2 pressure regulators CONSTANT 2000 each for oxygen and acetylene (German DIN connection; when ordering, select your national standard, please)
5 m twin-hose for oxygen and fuel gas with pressed connections
Torch carriage, torch spanner, set of nozzle cleaners, gas igniter, protection goggles, operating instructions

Other compositions of complete sets available.

- STAR - FLAME STRAIGHTENING KIT

High-performance kit for flame straightening

Description	*Inlet connections Handle: Oxygen*	*Inlet connections Handle: Fuelgas*	*Art. No.*	*Cat. No.*
Kit: for fuel gas Acetylene	G 1/4” RH	G 3/8“ LH	716.07662	010
Kit: for fuel gases Propane, Natural Gas	G 1/4” RH	G 3/8“ LH	716.07663	010

Consisting of:
1 handle type STAR 2020, set of nozzle cleaners; gas igniter; aluminum case 62x43x22cm; operating instructions.
For Acetylene:
1 Flame Straightening Attachment type STAR-Z-A-3 with 3 heating nozzles size: 2-4, with bogie wheels;
5 Heating Attachments:
type STAR-210-A_sizes: 2+3+6+7;
type STAR-FB-A size: 7
For Propane:
1 Flame Straightening Attachment type STAR-PMY with 3 heating nozzles size: 4-6, with bogie wheels;
4 Heating Attachments:
type STAR-Z-PMY sizes: 6+10;
type STAR-F-PM sizes: 8+12

Other compositions of complete sets available.

Version: 01/2022

❋ on request | picture may differ | subject to change

HANDLES

Sturdy handle made of aluminum, particularly robust, maintenance free and easy to repair — **HANDLES**

Type	*Description*	*Connections*	*Art. No.*	*Cat. No.*
STAR 2020 ME	Valve arrangement lateral	G 1/4“ RH - G 3/8” LH	716.06820	024
STAR 2020 MB	Valve arrangement lateral	G 3/8“ RH - G 3/8” LH	716.07230	024
STAR 2020 MU	Valve arrangement lateral	9/16“ RH - 9/16“ LH	716.07231	024
STAR 2020 MF	Valve arrangement lateral	M16x1,5 RH - M16x1,5 LH	716.07232	024
STAR 2020 MAS	Valve arrangement lateral	5/8 UNF-RH - 5/8 UNF-LH	716.07233	024

Length: approx. 230 mm, shaft diameter: 20 mm, weight: approx. 550 g

The ergonomic, especially sturdy design of our STAR handles allows easy handling, fatigue-free working and high operation comfort. Self-tensioning radial seals enable fast and safe sealing; the union nut can easily be tightened by hand.

Sturdy handle made of aluminum, particularly robust, maintenance free and easy to repair — **HANDLES**

Type	*Description*	*Connections*	*Art. No.*	*Cat. No.*
STAR 1010 ME	Valves V-positioned	G 1/4“ RH - G 3/8” LH	716.07725	024
STAR 1010 MB	Valves V-positioned	G 3/8“ RH - G 3/8” LH	❋	024
STAR 1010 MU	Valves V-positioned	9/16“ RH - 9/16“ LH	❋	024
STAR 1010 MF	Valves V-positioned	M16x1,5 RH - M16x1,5 LH	❋	024
STAR 1010 MAS	Valves V-positioned	5/8 UNF-RH - 5/8 UNF-LH	❋	024

Length: approx. 230 mm, shaft diameter: 20 mm, weight: approx. 550 g

The ergonomic, especially sturdy design of our STAR handles allows easy handling, fatigue-free working and high operation comfort. Self-tensioning radial seals enable fast and safe sealing; the union nut can easily be tightened by hand.

Version: 01/2022

WELDING, BRAZING AND HEATING TIPS

STAR 210-A — For standard applications, 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	716.01621	242.34110	024/007
2	approx. 160 l/h	1,0 - 2,0 mm	716.01622	242.34210	024/007
3	approx. 315 l/h	2,0 - 4,0 mm	716.01623	242.34310	024/007
4	approx. 500 l/h	4,0 - 6,0 mm	716.01624	242.34410	024/007
5	approx. 800 l/h	6,0 - 9,0 mm	716.01625	242.34510	024/007
6	approx. 1.250 l/h	9,0 - 14,0 mm	716.01626	242.34610	024/007
7	approx. 1.800 l/h	14,0 - 20,0 mm	716.01627	242.34710	024/007
8	approx. 2.500 l/h	20,0 - 30,0 mm	716.01628	242.34810	024/007

Tips for welding, brazing and heating, with hammered welding and heating nozzles, fuel gas acetylene

STAR 410-A — Flexible, mixing tube with brazed-on nozzle replaceable

Size	O_2-Consumption	Welding range	Art. No. tip complete	Art. No. mixing tube with nozzle	Cat. No.
2	approx. 160 l/h	1,0 - 2,0 mm	716.01712	716.01752	024/007
3	approx. 315 l/h	2,0 - 4,0 mm	716.01713	716.01753	024/007
4	approx. 500 l/h	4,0 - 6,0 mm	716.01714	716.01544	024/007
5	approx. 800 l/h	6,0 - 9,0 mm	716.01715	716.01755	024/007
7	approx. 1.800 l/h	14,0 – 20,0 mm	716.54280	716.54279	039/007

Size 7 = special size

Pipe welding tips for welding, brazing and heating in hard to reach locations, fuel gas acetylene

STAR Z-A — Central flame outlet, nozzles replaceable

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
9	max. 4,7 m^3/h	695 mm	716.00863	716.00170	004
9 ES	max. 4,7 m^3/h	950 mm	716.07296	716.00170	024
10	max. 5,8 m^3/h	695 mm	716.00865	716.00171	004
10 ES	max. 5,8 m^3/h	1155 mm	716.07297	716.00171	024

Tips for brazing and spot heating with acetylene
ES = Stainless steel mixing tube

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

WELDING, BRAZING AND HEATING TIPS

Laminar flame outlet, nozzles replaceable, particularly low noise — STAR FB-A

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
5	max. 1,1 m³/h	310 mm	716.01915	716.00725	004
5 ES	max. 1,1 m³/h	370 mm*	716.07845	716.00725	004
6	max. 1,9 m³/h	340 mm	716.01916	716.00726	004
6 ES	max. 1,9 m³/h	390 mm*	716.07846	716.00726	004
7	max. 2,3 m³/h	390 mm	716.00757	716.00727	004
7 ES	max. 2,3 m³/h	425 mm*	716.07847	716.00727	004
8	max. 3,3 m³/h	410 mm	716.00758	716.00728	004
8 ES	max. 3,3 m³/h	435 mm*	716.07848	716.00728	004
9	max. 5,5 m³/h	675 mm	716.00759	716.00779	004
9 ES	max. 5,5 m³/h	940 mm	716.07298	716.00779	024/004
10	max. 6,1 m³/h	675 mm	716.00772	716.00780	004
10 ES	max. 6,1 m³/h	1140 mm	716.07299	716.00780	024/004

Tips for laminar brazing and heating with acetylene, noise level below 85 dB(A) up to size 8
ES = stainless steel mixing tube
* = Mixing tube 716.51708 used. Different length as shown on page 96 can be ordered optional

Laminar flame outlet, nozzles replaceable — STAR F-A

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
8	max. 2,7 m³/h	415 mm	242.54800	242.13811	004
8 ES	max. 2,7 m³/h	440 mm*	716.07839	242.13811	004
9	max. 4,2 m³/h	685 mm	716.00864	716.00422 (with mixing tube)	004

Tips for laminar brazing and heating with acetylene
ES = stainless steel mixing tube
* = Mixing tube 716.51708 used. Different length as shown on page 96 can be ordered optional

Central flame outlet, protection sleeve replaceable — STAR KONSTANTHERM

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. protection sleeve	Cat. No.
6	1,25 m³/h	9,0 - 14,0 m³/h	242.56600	677.51963	004
8	2,50 m³/h	20,0 - 30,0 m³/h	242.56800	677.51965	004

Special tips for welding and heating under high thermal load, fuel gas acetylene

Version: 01/2022

WELDING, BRAZING AND HEATING TIPS

STAR Z-PM — Central flame outlet, nozzles replaceable

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
8	max. 6,0 m³/h	430 mm	716.00042	716.00032	004
8 ES	max. 6,0 m³/h	445 mm*	716.07842	716.00032	004
10	max. 14,0 m³/h	430 mm	716.00043	716.00033	004
10 ES	max. 14,0 m³/h	450 mm*	716.07843	716.00033	004
12	max. 33,0 m³/h	430 mm	716.00044	716.00034	004
12 ES	max. 33,0 m³/h	450 mm*	716.07844	716.00034	004

Tips for spot brazing and heating, fuel gases propane, methane
ES = stainless steel mixing tube
* = Mixing tube 716.51708 used. Different length as shown on page 96 can be ordered optional

STAR Z-PMY — Central flame outlet, nozzles replaceable

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
6	max. 3,0 m³/h	325 mm	716.01926	716.01233	004
6 ES	max. 3,0 m³/h	395 mm*	716.07836	716.01233	004
8	max. 6,0 m³/h	425 mm	716.01251	716.01234	004
8 ES	max. 6,0 m³/h	440 mm*	716.07837	716.01234	004
10	max. 14,0 m³/h	425 mm	716.01252	716.01235	004
10 ES	max. 14,0 m³/h	440 mm*	716.07838	716.01235	004
12	max. 35,0 m³/h	425 mm	716.01253	716.01236	004
12 ES	max. 35,0 m³/h	890 mm	716.07290	716.01236	004
14 ES	max. 45,0 m³/h	1095 mm	716.07291	716.01241	004

Tips for brazing and spot heating, fuel gases propane, methane, MAPP
ES = stainless steel mixing tube
* = Mixing tube 716.51708 used. Different length as shown on page 96 can be ordered optional

STAR F-PMY — Laminar flame outlet, nozzles replaceable

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
8	max. 6,0 m³/h	420 mm	716.01254	716.01237	004
8 ES	max. 6,0 m³/h	435 mm*	716.07854	716.01237	004
10	max. 14,0 m³/h	420 mm	716.01255	716.01238	004
10 ES	max. 14,0 m³/h	440 mm*	716.07855	716.01238	004
12	max. 33,0 m³/h	420 mm	716.01256	716.01239	004
12 ES	max. 33,0 m³/h	440 mm*	716.07856	716.01239	004
14 ES	max. 45,0 m³/h	885 mm	716.07292	716.01154	004
16 ES	max. 52,0 m³/h	1090 mm	716.07293	716.01155	004

Tips for laminar brazing and heating, fuel gases propane, methane, MAPP
ES = stainless steel mixing tube
* = Mixing tube 716.51708 used. Different length as shown on page 96 can be ordered optional

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

Central flame outlet, stabilized flame, nozzles replaceable, for ethylene — STAR Z-E

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
8	max. 3,6 m³/h	425 mm	716.05364	716.01234	004
8 ES	max. 3,6 m³/h	440 mm*	716.07857	716.01234	004
10	max. 5,0 m³/h	425 mm	716.05365	716.01235	004
10 ES	max. 5,0 m³/h	440 mm*	716.07858	716.01235	004
12	max. 6,0 m³/h	425 mm	716.05366	716.01236	004
12 ES	max. 6,0 m³/h	440 mm*	716.07859	716.01236	004

Tips for laminar brazing and heating, fuel gas ethylene
ES = stainless steel mixing tube
* = Mixing tube 716.51708 used. Different length as shown on page xx can be ordered optional

Laminar flame outlet, nozzles replaceable, for ethylene — STAR F-E

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
10	max. 5,0 m³/h	420 mm	716.05361	716.01238	004
10 ES	max. 5,0 m³/h	440 mm*	716.07851	716.01238	004
12	max. 6,0 m³/h	420 mm	716.05362	716.01239	004
12 ES	max. 6,0 m³/h	440 mm*	716.07852	716.01239	004

Tips for laminar brazing and heating, fuel gas ethylene
ES = stainless steel mixing tube
* = Mixing tube 716.51708 used. Different length as shown on page xx can be ordered optional

Laminar flame outlet, nozzles replaceable — STAR HF-PMY

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
12	max. 12,0 m³/h	420 mm	716.05642	716.05646	039
12 ES	max. 12,0 m³/h	440 mm*	716.07849	716.05646	039
13	max. 23,0 m³/h	510 mm	716.05643	716.05647	039
13 ES	max. 23,0 m³/h	435 mm*	716.07850	716.05647	039
14	max. 35,3 m³/h	720 mm	716.05644	716.05648	039
14 ES	max. 35,3 m³/h	880 mm	716.07294	716.05648	004
15	max. 54,2 m³/h	830 mm	716.05645	716.05649	039
15 ES	max. 54,2 m³/h	1085 mm	716.07295	716.05649	024

Tips for laminar heating, fuel gases propane, methane, MAPP, ethylene
ES = stainless steel mixing tube
* = Mixing tube 716.51708 used. Different length as shown on page 96 can be ordered optional

Version: 01/2022

CUTTING ATTACHMENTS
STAINLESS-STEEL MIXING TUBE

STAR CUTTING ATTACHMENTS

For manual flame cutting, fuel gases acetylene or propane / methane / MAPP / ethylene

	Description	*Nozzle type*	*Art. No. Type A*	*Art. No. Type PMY*	*Cat. No.*
	STAR 1730 with spring lever	Ring-/slot nozzles	716.05137	716.05294	024
	STAR 1730-F with spring lever only for fuel gas ethylene	Ring-/slot nozzles	--	716.05367	024
	STAR 1230 with hand knob	Ring-/slot nozzles	716.05284	716.05295	024
	STAR 2730 with spring lever	Block nozzles	716.05288	--	024
	STAR 2230 with hand knob	Block nozzles	716.05292	--	024
	STAR 8730 with spring lever	Gas mixing nozzles	716.05165	716.05165	024
	STAR 9230 with hand knob straight torch head	Gas mixing nozzles	716.05286	716.05286	024

STAINLESS-STEEL MIXING TUBE

Both sides thread ½“ x 25 Gg.
To assembly at with * marked inserts on pages 93-97

Overall length	*Extension oft he Standard-Heating-Inserts in mm*	*Art. No. Mixing tube*	*Cat. No.*
267 (Standard)	0	716.51708	039
406 mm	+ 139	716.51709	039
711 mm	+ 444	716.51710	039
914 mm	+ 647	716.51711	039

The stainless steel mixing tubes can optionally be ordered in addition to the standard heating inserts and installed independently. This allows the heating inserts to be converted to different lengths without having to order a complete burner every time.

Version: 01/2022

FLAME STRAIGHTENING + FLAME CLEANING ATTACHMENTS

For flame straightening, reversible for 3/2" or 5/3" flames
Fuel gas: acetylene

FLAME STRAIGHTENING ATTACHMENT STAR

Type	Overall length approx.	Size	Art. No.	Cat. No.
STAR 3/2"	505 mm	2 - 4 mm	716.01760	004
reversible for 3/2" flames	540 mm	4 - 6 mm	716.01761	004
reversible for 5/3" flames	550 mm	2 - 4 mm	716.01762	004
reversible for 5/3" flames	550 mm	4 - 6 mm	716.01763	004

For flame straightening, 3 flames
Fuel gases: acetylene or propane / natural gas

FLAME STRAIGHTENING ATTACHMENT STAR

Type	Overall length approx.	Size	Art. No.	Cat. No.
STAR Z-A - 3 flames	540 mm	2 - 4 mm	716.07664	004
STAR PMY- 3 flames	540 mm	4 - 6 mm	716.07665	004

Replaceable nozzles for flame straightening attachments
Fuel gases: acetylene or propane / natural gas

HEATING NOZZLE STAR

Type	Size	Art. No.	Cat. No.
STAR - A	2 - 4 mm	242.34310	007
STAR - A	4 - 6 mm	242.34410	007
STAR - PMY	4 - 6 mm	716.16714	007

Laminar flame outlet, nozzles replaceable
Fuel gases: propane / natural gas

STAR F-PM

Size	Overall length approx.	O_2-Consumption	Art. No. tip complete	Art. No. heating nozzle	Cat. No.
8	420 mm	2,5 - 5,0 m³/h	716.00045	716.00035	004
8 ES	430 mm*	2,5 - 5,0 m³/h	716.07860	716.00035	004
10	430 mm	5,7 - 11,0 m³/h	716.00046	716.00036	004
10 ES	430 mm*	5,7 - 11,0 m³/h	716.07861	716.00036	004
12	430 mm	11,0 – 21,0 m³/h	716.00047	716.00037	004
12 ES	440 mm*	11,0 – 21,0 m³/h	716.07862	716.00037	004

ES = stainless steel mixing tube
* = Mixing tube 716.51708 used. Different length as shown on page 96 can be ordered optional

For flame cleaning, fuel gases: acetylene or propane / natural gas

FLAME WASHING ATTACHMENT STAR

Torch width	Overall length approx.	O_2-Consumption T-A / T-PM	Art. No. type T-A	Art. No. type T-PM	Cat. No.
50 mm	505 mm	0,7 / 2,5 m³/h	716.00520	716.00523	004
100 mm	525 mm	1,7 / 3,9 m³/h	716.00521	716.00524	004
150 mm	535 mm	2,5 / 10,8 m³/h	716.00522	716.00525	004

Version: 01/2022

Usage of mixed brands

The demand for suitable spare parts for fuel gas carrying equipment,

e.g. welding-, cutting-, brazing-, heating torches

is met by the usage of…

- **Original spare parts from manufacturer**
- **Spare parts produced acc. to complete engineering data of the manufacturer**
- **Other spare parts and subsequent examination by a qualified person, according to the standards of the respective device type, and certification of test result**

Version: 01/2022

HANDLES, HEATING TIPS

Maintenance free, easy to repair — SUPERTHERM HANDLE

Type	*Description*	*DIN Connections*	*Art. No.*	*Cat. No.*
SUPERTHERM	Valve arrangement rectangular	Oxygen: G 3/8“/DN 9 Fuel gas: G 1/2“LH / DN 11 mm	716.01818	004

Other inlet connections on request

Length: approx. 300 mm, shaft diameter: 22 mm, weight: approx. 915 g

The rectangular valve arrangement of the robust designed SUPERTHERM handle enables easy medium control; the monoblock valves do not require maintenance and guarantee long service life.
The handle body is made of light metal with hard coating and is thus resistant against corrosion from sea water and other aggressive substances at the workplace.
Inlet connections, monoblock valves and shaft connections are easy to replace.

Laminar flame outlet, nozzles replaceable, fuel gas acetylene — SUPERTHERM F-A

Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
9	max. 4,8 m^3/h	650 mm	716.02090	716.00422	004
11	max. 9,4 m^3/h	650 mm	716.02091	716.00423	004

Tips for laminar heating

Central flame outlet, nozzles replaceable, fuel gas acetylene — SUPERTHERM Z-A

Size	*O_2-Consumption*	*Overall length approx.*	*Art. No. tip complete*	*Art. No. heating nozzle*	*Cat. No.*
9	max. 4,4 m^3/h	670 mm	716.02092	716.00170	004
10	max. 5,9 m^3/h	670 mm	716.02093	716.00171	004

Tips for spot heating

Version: 01/2022

SUPERTHERM F-PMY — Laminar flame outlet, nozzles replaceable, fuel gases propane, methane, MAPP

Size	O_2-Consumption	Overall length approx.	Art. No. tip complete	Art. No. heating nozzle	Cat.No.
12	max. 18,0 m³/h	680 mm	716.02100	716.01153	004
	max. 18,0 m³/h	805 mm	716.03577 ✱	716.01153	004
	max. 18,0 m³/h	930 mm	716.03582 ✱	716.01153	004
14	max. 40,0 m³/h	680 mm	716.02101	716.01154	004
	max. 40,0 m³/h	805 mm	716.03578 ✱	716.01154	004
	max. 40,0 m³/h	930 mm	716.03583 ✱	716.01154	004
16	max. 52,0 m³/h	680 mm	716.02102	716.01155	004
	max. 52,0 m³/h	805 mm	716.03579 ✱	716.01155	004
	max. 52,0 m³/h	930 mm	716.03584 ✱	716.01155	004

Tips for laminar heating

SUPERTHERM T-A / T-PM — Flame washing attachment for fuel gases acetylene or propane, methane

Torch width	Overall length	Art. No. Type T-A	Art. No. Type T-PMY	Cat. No.
200 mm	1.300/650 mm	716.02105 ✱	716.02107 ✱	004
250 mm	1.300/650 mm	716.02106 ✱	716.02108 ✱	004

Overall lengths: SUPERTHERM T-A approx. 1.300 mm, SUPERTHERM T-PM: approx. 650 mm

Tip SUPERTHERM T-A for flame washing with acetylene
Tip SUPERTHERM T-PM for flame washing with propane, methane

Version: 01/2022

✱ on request | picture may differ | subject to change

H 8607 & HB 8607 – A/PMYE / L 8707 – A/PMYE
CUTTING UP TO 300 MM / 200 MM

***PROFI*CUT H 8607 -A/PMYE**

***PROFI*CUT HB 8607 -A/PMYE**

***PROFI*CUT H AND HB 8607 -A/PMYE**

The new range of ***Profi*Cut H and HB** heavy duty hand cutting torches for nozzle-mix (3-seat) nozzles continues the tradition of Messer torches with the quality and reliability which is synonymous with Messer. ***Profi*Cut H and HB** is a proven design incorporating the latest technical features necessary to meet the ever-changing applications and requirements of the hand cutting market.
Its ergonomic and modern functional design permits steady, effortless control by hand and its balanced weight enables the operator positive and comfortable working conditions for a continuous operation.

The cutting and gouging torch range ***Profi*Cut H and HB** for high quality value.

- Designed in accordance with the most current internationally recognized standards EN ISO, AS, BSP, CGA and NFE.
- Manufactured under the quality management system of EN ISO 9001
- 100% tested before dispatch.
- Principally designed for general workshop cutting up to **300 mm** / 14 inches capacity.
- Torch length of 510 mm / 20 inches ensures optimal balanced weight distribution increasing operator efficiency and comfort.
- 1050 g / 2.3 lbs weight enables controlled movements and makes it ideally suited for a wide range of industrial applications.
- 90° solid forged head withstands toughest working conditions.
- Large cross-sectional areas enable high gas flow and ensure that the required oxygen and fuel flow rates, even on heavy duty applications with low gas pressure, are still maintained.
- In-plane parallel arranged stainless steel tube and rugged design ensures maximum strength.
- Suitable for use with all types of fuel gases simply by changing the cutting nozzle.
- Adjustable gland packed gas valves allow precise and sensitive adjusting as well as accurate control of the flame.
- Colour coded adjusting valves for easy identification.
- Top mounted stainless steel lever with the benefit of a unique cutting oxygen flow valve operated by the cutting lever acts indirectly to bring in the oxygen stream. This important feature gives a true “bleed characteristic” to create splash free starts and progressive, controlled piercing and the smoothest possible cutting conditions.
- Cutting oxygen lever incorporates a locking lug for maximum operator comfort.
- Modular design reduces maintenance cost and downtime.

Version: 01/2022

❋ on request | picture may differ | subject to change

MESSER Cutting Systems

H 8607 & HB 8607 – A/PMYE / L 8707 – A/PMYE
CUTTING UP TO 300 MM / 200 MM

PROFICUT H

For gas-mixing cutting nozzles, cutting oxygen regulation with spring lever

Model	*Standard*	*Nozzle Connection*	*Hose Connection*	*Art. No. Type A/PMYE*	*Cat. No.*
H 8607E	DIN	Internat. 30°	G 1/4”-RH / G 3/8” LH	716.06004	050
H 8607B	BSP	Internat. 30°	G 3/8”-RH / G 3/8” LH	716.06005	050
H 8607U	CGA	Internat. 30°	9/16“NF-RH / 9/16“NF-LH	716.06006	050
H 8607F	NFE	Internat. 30°	M 16x1,5-RH / M 16x1,5-LH	716.06007	050
H 8607FG	NFE	G1	M 16x1,5-RH / M 16x1,5-LH	716.06008	050
H 8607AS	AS	Internat. 30°	5/8 UNF-RH / 5/8 UNF-LH	716.06135	050

Cutting oxygen lever on top side

PROFICUT HB

For gas-mixing cutting nozzles, cutting oxygen regulation with spring lever

Model	*Standard*	*Nozzle Connection*	*Hose Connection*	*Art. No. Type A/PMYE*	*Cat. No.*
HB 8607E	DIN	Internat. 30°	G 1/4”-RH / G 3/8” LH	716.07124	050
HB 8607B	BSP	Internat. 30°	G 3/8”-RH / G 3/8” LH	716.07125	050
HB 8607U	CGA	Internat. 30°	9/16“NF-RH / 9/16“NF-LH	716.07126	050
HB 8607F	NFE	Internat. 30°	M 16x1,5-RH / M 16x1,5-LH	716.07127	050
HB 8607FG	NFE	G1	M 16x1,5-RH / M 16x1,5-LH	716.07128	050
HB 8607AS	AS	Internat. 30°	5/8 UNF-RH / 5/8 UNF-LH	716.07129	050

Cutting oxygen lever on bottom side

PRESSURE SCREW

Spare pressure screw

Pressure screw for	*Thread*	*Inner diameter*	*Art. No. Typ A/PMYE*	*Cat. No.*
Gas-mixing nozzles	M22 x 1,25	16,3 mm	716.06963	000

Version: 01/2022

H 8607 & HB 8607 – A/PMYE / L 8707 – A/PMYE
CUTTING UP TO 300 MM / 200 MM

***PROFI*CUT L 8707 -A/PMYE**

***PROFI*CUT L 8707 -A/PMY**

The new range of ***Profi*Cut L** hand cutting torches for nozzle-mix (3-seat) nozzles continues the tradition of Messer torches with the quality and reliability which is synonymous with Messer. ***Profi*Cut L** is a proven design incorporating the latest technical features necessary to meet the ever-changing applications and requirements of the hand cutting market.
Its ergonomic and modern functional design permits steady, effortless control by hand and its balanced weight enables the operator positive and comfortable working conditions for a continuous operation.

The cutting and gouging torch range ***Profi*Cut L** is the low cost alternative for high quality value.

- Designed in accordance to the most current internationally recognized standards EN ISO, AS, BSP, CGA and NFE.
- Manufactured under the quality management system of EN ISO 9001
- 100% tested before dispatch.
- Principally designed for general workshop cutting up to **200 mm** / 8 inches capacity.
- Torch length of 460 mm / 18 inches ensures optimal balanced weight distribution increasing operator efficiency and comfort.
- 900 g / 2 lbs weight enables controlled movements and makes it ideally suited for a wide range of industrial applications.
- 90° solid forged head withstands toughest working conditions.
- Large cross-sectional areas enable high gas flow and ensure(s) that the required oxygen and fuel flow gas rates, even on heavy duty applications with low gas pressure, are still maintained.
- In-plane parallel arranged stainless steel tube and rugged design ensures maximum strength.
- Suitable for use with all types of fuel gases simply by changing the cutting nozzle.
- Adjustable gland packed gas valves allow precise and sensitive adjusting as well as accurate control of the flame.
- Colour coded adjusting valves for easy identification.
- Top mounted stainless steel lever with the benefit of a unique cutting oxygen flow valve operated by the cutting lever acts indirectly to bring in the oxygen stream. This important features gives a true “bleed characteristic” to create splash free starts and progressive, controlled piercing and the smoothest possible cutting conditions.
- Modular design reduces maintenance cost and downtime.

Version: 01/2022

H 8607 & HB 8607 – A/PMYE / L 8707 – A/PMYE
CUTTING UP TO 300 MM / 200 MM

PROFICUT L

For gas-mixing cutting nozzles, cutting oxygen regulation with spring lever

Model	*Standard*	*Nozzle Connection*	*Hose Connection*	*Art.No. Type A/PMYE*	*Cat. No.*
L 8707E	DIN	Internat. 30°	G 1/4”-RH / G 3/8” LH	716.06126	050
L 8707B	BSP	Internat. 30°	G 3/8”-RH / G 3/8” LH	716.06000	050
L 8707U	CGA	Internat. 30°	9/16“NF-RH / 9/16“NF-LH	716.06001	050
L 8707F	NFE	Internat. 30°	M 16x1,5-RH / M 16x1,5-LH	716.06002	050
L 8707FG	NFE	G1	M 16x1,5-RH / M 16x1,5-LH	716.06003	050
L 8707AS	AS	Internat. 30°	5/8 UNF-RH / 5/8 UNF-LH	716.06133	050

Cutting oxygen lever on top side

PRESSURE SCREW

Spare pressure screw

Pressure screw for	*Thread*	*Inner diameter*	*Art. No. Typ A/PMYE*	*Cat. No.*
Gas-mixing nozzles	M22 x 1,25	16,3 mm	716.06963	000

Version: 01/2022

OVERVIEW OF STARCUT FAMILY

STARCUT family involves several kinds of nozzle-/torch head systems.

- **RING/SLOT NOZZLES**

STARCUT 1222	95°, Hand knob
STARCUT 1622	95°, 135°, Spring lever
STARCUT 3622	180°, Spring lever

- **CYLINDRICAL NOZZLES**

STARCUT 4622	95°, 135°, Spring lever
STARCUT 5622	95°, 135°, Spring lever

- **BLOCK NOZZLES**

STARCUT 2222	95°, Hand knob
STARCUT 2622	95°, Spring lever
STARCUT 7628	180°, Spring lever, Gouging torch

- **GAS MIXING NOZZLES**

STARCUT 8222	95°, 135°, Hand knob
STARCUT 8622	95°, 135°, Spring lever
STARCUT 9222	180°, Hand knob
STARCUT 9622	180°, Spring lever
STARCUT 8622-G1	95°, G1 Torch head, Spring lever (NFE standard only)

NOMENCLATURE OF STARCUT:

Example: STARCUT 1622:
1 = Torch head for ring slot nozzles
6 = cutting oxygen lever
2 = technical revision
2 = STARCUT family

First digit
1 ring slot nozzle
2 block nozzle
3 ring slot nozzle ; straight torch head
4 Cylindrical ALFA nozzle
5 Cylindrical MS 932 nozzle
7 block nozzle ; straight torch head
8 gas-mixing nozzle
9 gas-mixing nozzle ; straight torch head
G1 French gas-mixing nozzle

Second digit
2 hand knob for cutting oxygen
6 spring lever for cutting oxygen

Third digit
technical revision

Fourth digit
2 STARCUT family

INTERNATIONAL INLET CONNECTION THREADS:

STANDARDS	Inlet connection threads	
Standard	Oxygen	Fuel gas
DIN	1/4"	3/8” LH
BSP	3/8”	3/8” LH
CGA	9/16” NF	9/16” NF LH
NFE	M 16x1,5	M 16x1,5 LH

Other connections available.

Version: 01/2022

Notes:

Version: 01/2022

CUTTING RANGE UP TO 500 MM FOR RING/SLOT NOZZLES

For ring/slot nozzles, cutting oxygen regulation with hand knob — STARCUT 1222

Description	Standard	Length	Torch head	Art. No. Type A	Art. No. Type PMYE	Cat. No.
STARCUT 1222	DIN	500 mm	95°	716.06881	716.06885	003
STARCUT 1222	BSP	500 mm	95°	✱	✱	003
STARCUT 1222	CGA	500 mm	95°	✱	✱	003
STARCUT 1222	NFE	500 mm	95°	✱	✱	003

Hand cutting torch STARCUT type A for acetylene
Hand cutting torch STARCUT type PMYE for propane, methane, MAPP, ethylene

For ring/slot nozzles, cutting oxygen regulation with spring lever — STARCUT 1622

Description	Standard	Length	Torch head	Art. No. Type A	Art. No. Type PMYE	Cat. No.
STARCUT 1622	DIN	500 mm	95°	716.06880	716.06882	003
STARCUT 1622-A/ATEX	DIN	500 mm	95°	716.07308	--	003
STARCUT 1622	BSP	500 mm	95°	716.06895	716.06897	003
STARCUT 1622	CGA	500 mm	95°	716.06898	716.06899	003
STARCUT 1622	NFE	500 mm	95°	716.06907	716.06908	003
STARCUT 1622	DIN	1.000 mm	135°	✱	716.06893	003
STARCUT 1622	BSP	1.000 mm	135°	716.07981	716.06944	003
STARCUT 1622	CGA	1.000 mm	135°	✱	✱	003
STARCUT 1622	NFE	1.000 mm	135°	✱	✱	003

Hand cutting torch STARCUT type A for acetylene
Hand cutting torch STARCUT type PMYE for propane, methane, MAPP, ethylene
Hand cutting torch STARCUT type A for acetylene. Required for operating the STARCUT with an ATEX safety device with acetylene in hazardous areas.

Other options available !

For cylindrical nozzles with O-ring sealings, nozzle quick change, cutting oxygen regulation with spring lever — STARCUT 4622

Description	Standard	Length	Torch head	Art. No. Type A	Art. No. Type PMY	Cat. No.
STARCUT 4622	DIN	500 mm	95°	716.07899	716.07898	003
STARCUT 4622	BSP	500 mm	95°	716.07901	716.07900	003

Hand cutting torch STARCUT type A for acetylene
Hand cutting torch STARCUT type PMY for propane, methane, MAPP
Other options available !

Torch head for our patented machine cutting nozzles for ALFA-Machine torches:

- VADURA 1217-A for acetylene
- GRICUT 1232-PMYE for propane, methane, Mapp, ethylene
- Additional use of machine cutting nozzles VADURA 1217-A and GRICUT 1232-PMYE for manual cutting after application on a flame cutting machine
- Patented nozzle quick change system, cutting nozzle and heating cap are changed by hand without tools
- Identical heating caps for all gases
  Optimised stockkeeping by using one nozzle type for machine cutting torches and hand torches

Version: 01/2022

CUTTING RANGE UP TO 500 MM FOR RING/SLOT NOZZLES

STARCUT 1622-PMY FOR SCRAP YARDS

For ring/slot cutting nozzles, cutting oxygen regulation with spring lever
Cutting oxygen valve spindle and tube supports reinforced

Description	Standard	Length	Torch head	Art. No. Type PMY	Cat. No.
STARCUT 1622	DIN	1.000 mm	135°	716.07186	003

Hand cutting torch STARCUT type PMY for propane, methane, MAPP

Robust construction, 4 extra tube supports, for scrap cutting with GRICUT 1233-PMY, page 126

STARCUT 3622

For ring/slot cutting nozzles, cutting oxygen regulation with spring lever

Description	Standard	Length	Torch head	Art. No. Type A	Cat. No.
STARCUT 3622	DIN	500 mm	180°	716.06894	003
STARCUT 3622	BSP	500 mm	180°	✱	003
STARCUT 3622	CGA	500 mm	180°	✱	003
STARCUT 3622	NFE	500 mm	180°	✱	003

Hand cutting torch STARCUT type A for acetylene
Hand cutting torch STARCUT type PMYE for propane, methane, MAPP, ethylene

STARCUT 4622-PMY FOR SCRAP YARDS

For cylindrical nozzles with O-ring sealings, nozzle quick change,
Cutting oxygen valve spindle and tube supports reinforced

Description	Standard	Length	Torch head	Art. No. Type A	Art. No. Type PMY	Cat. No.
STARCUT 4622	DIN	1.200 mm	135°	716.07885	716.07880	003
STARCUT 4622	BSP	1.200 mm	135°	716.07896	716.07895	003

Hand cutting torch STARCUT type PMY for propane, methane, MAPP

Robust construction, 4 extra tube supports, for scrap cutting

Hand cutting torch STARCUT type A for acetylene
Hand cutting torch STARCUT type PMY for propane, methane, MAPP
Other options available !

Torch head for our patented machine cutting nozzles for ALFA-Machine torches:

- VADURA 1217-A for acetylene
- GRICUT 1232-PMYE for propane, methane, Mapp, ethylene
- Additional use of machine cutting nozzles VADURA 1217-A and GRICUT 1232-PMYE for manual cutting after application on a flame cutting machine
- Patented nozzle quick change system, cutting nozzle and heating cap are changed by hand without tools
- Identical heating caps for all gases
  Optimised stockkeeping by using one nozzle type for machine cutting torches and hand torches

SLIDING SKID

Skid for mounting on torch head
Allows to place on the work piece for arm protection

w/o picture

Description	Skit width.	Art-No..	Cat.-No.
Sliding Skit ESSEN / STARCUT	138 mm	716.07904	038

Other options available !

Version: 01/2022

✱ **on request | picture may differ | subject to change**

MESSER Cutting Systems

CUTTING RANGE UP TO 500 MM FOR BLOCK NOZZLES

For block nozzles, cutting oxygen regulation with hand knob — STARCUT 2222

Description	Standard	Length	Torch head	Art. No. Type A	Art. No. Type PMYE	Cat. No.
STARCUT 2222	DIN	500 mm	95°	716.06886	716.06911	003
STARCUT 2222	BSP	500 mm	95°	✱	✱	003
STARCUT 2222	CGA	500 mm	95°	✱	✱	003
STARCUT 2222	NFE	500 mm	95°	✱	✱	003

Hand cutting torch STARCUT type A for acetylene
Hand cutting torch STARCUT type PMYE for propane, methane, MAPP, ethylene

For block nozzles, cutting oxygen regulation with spring lever — STARCUT 2622

Description	Standard	Length	Torch head	Art. No. Type A	Art. No. Type PMYE	Cat. No.
STARCUT 2622	DIN	500 mm	95°	716.06883	716.06910	003
STARCUT 2622	BSP	500 mm	95°	✱	✱	003
STARCUT 2622	CGA	500 mm	95°	✱	✱	003
STARCUT 2622	NFE	500 mm	95°	✱	✱	003

Hand cutting torch STARCUT type A for acetylene
Hand cutting torch STARCUT type PMYE for propane, methane, MAPP, ethylene

For cylindrical nozzles with O-ring sealings, nozzle quick change, cutting oxygen regulation with spring lever — STARCUT 5622

Description	Standard	Length	Torch head	Art. No. Type A	Art. No. Type PMY	Cat. No.
STARCUT 5622	DIN	500 mm	95°	716.07956	716.07955	003
STARCUT 5622	BSP	500 mm	95°	716.07958	716.07957	003

Hand cutting torch STARCUT type A for acetylene
Hand cutting torch STARCUT type PMY for propane, methane, MAPP
Other options available !

Torch head for our patented machine cutting nozzles for MS 932 & MSZ 932-Machine torches:

- VADURA 9215-A for acetylene
- GRICUT 9230-PMYE for propane, methane, Mapp, ethylene
- Additional use of machine cutting nozzles VADURA 9215-A and GRICUT 9230-PMYE for manual cutting after application on a flame cutting machine
- Patented nozzle quick change system, cutting nozzle and heating cap are changed by hand without tools
- Identical heating caps for all gases
- Optimised stockkeeping by using one nozzle type for machine cutting torches (MS 932) and hand torches

Other options available !

Version: 01/2022

CUTTING RANGE UP TO 500 MM FOR BLOCK NOZZLES

STARCUT 2628

For block gouging nozzles, cutting oxygen regulation with spring lever
Injector reinforced

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A*	*Cat. No.*
STARCUT 2628	DIN	500 mm	95°	716.06905	003
STARCUT 2628	BSP	500 mm	95°	✱	003
STARCUT 2628	CGA	500 mm	95°	✱	003
STARCUT 2628	NFE	500 mm	95°	✱	003

Hand cutting torch STARCUT type A for acetylene.
With reinforced injector

STARCUT 7628

For block gouging nozzles, cutting oxygen regulation with spring lever
Injector reinforced

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A*	*Cat. No.*
STARCUT 7628	DIN	500 mm	180°	716.06906	003
STARCUT 7628	BSP	500 mm	180°	✱	003
STARCUT 7628	CGA	500 mm	180°	✱	003
STARCUT 7628	NFE	500 mm	180°	✱	003

Hand cutting torch STARCUT type A for acetylene.
With reinforced injector

STARCUT 5622-PMY FOR SCRAP YARDS

For cylindrical nozzles with O-ring sealings, nozzle quick change,
Cutting oxygen valve spindle and tube supports reinforced

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A*	*Art. No. Type PMY*	*Cat. No.*
STARCUT 5622	DIN	1.200 mm	135°	716.07951	716.07950	003
STARCUT 5622	BSP	1.200 mm	135°	716.07953	716.07952	003

Hand cutting torch STARCUT type PMY for propane, methane, MAPP

Robust construction, 4 extra tube supports, for scrap cutting

Hand cutting torch STARCUT type A for acetylene
Hand cutting torch STARCUT type PMY for propane, methane, MAPP
Other options available !

Torch head for our patented machine cutting nozzles for MS 932 & MSZ 932-Machine torches:

- VADURA 9215-A for acetylene
- GRICUT 9230-PMYE for propane, methane, Mapp, ethylene
- Additional use of machine cutting nozzles VADURA 9215-A and GRICUT 9230-PMYE for manual cutting after application on a flame cutting machine
- Patented nozzle quick change system, cutting nozzle and heating cap are changed by hand without tools
- Identical heating caps for all gases
- Optimised stockkeeping by using one nozzle type for machine cutting torches (MS 932) and hand torches

Other options available !

Version: 01/2022

✱ **on request | picture may differ | subject to change**

MESSER Cutting Systems

CUTTING RANGE UP TO 500 MM
FOR GAS-MIXING NOZZLES

For gas-mixing nozzles, cutting oxygen regulation with hand knob **STARCUT 8222**

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PMYE*	*Cat. No.*
STARCUT 8222	DIN	500 mm	95°	716.06887	003
STARCUT 8222	BSP	500 mm	95°	✱	003
STARCUT 8222	CGA	500 mm	95°	✱	003
STARCUT 8222	NFE	500 mm	95°	✱	003
STARCUT 8222	DIN	800 mm	95°	✱	003
STARCUT 8222	BSP	800 mm	95°	✱	003
STARCUT 8222	CGA	800 mm	95°	✱	003
STARCUT 8222	NFE	800 mm	95°	✱	003
STARCUT 8222	DIN	1.000 mm	95°	✱	003
STARCUT 8222	BSP	1.000 mm	95°	✱	003
STARCUT 8222	CGA	1.000 mm	95°	✱	003
STARCUT 8222	NFE	1.000 mm	95°	✱	003

Hand cutting torch STARCUT type A/PMYE for acetylene or propane, methane, MAPP, ethylene

Other options available !

Version: 01/2022

CUTTING RANGE UP TO 500 MM
FOR GAS-MIXING NOZZLES

STARCUT 8222

For gas-mixing cutting nozzles, cutting oxygen regulation with hand knob

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PMYE*	*Cat. No.*
STARCUT 8222	DIN	1.000 mm	135°	716.06889	003
STARCUT 8222	BSP	1.000 mm	135°	✱	003
STARCUT 8222	CGA	1.000 mm	135°	✱	003
STARCUT 8222	NFE	1.000 mm	135°	✱	003
STARCUT 8222	DIN	1.500 mm	135°	716.06890	003
STARCUT 8222	BSP	1.500 mm	135°	✱	003
STARCUT 8222	CGA	1.500 mm	135°	✱	003
STARCUT 8222	NFE	1.500 mm	135°	✱	003

Hand cutting torch STARCUT type A/PMYE for acetylene or propane, methane, MAPP, ethylene

Other options available !

Version: 01/2022

✱ **on request | picture may differ | subject to change**

MESSER Cutting Systems

CUTTING RANGE UP TO 500 MM
FOR GAS-MIXING NOZZLES

For gas-mixing cutting nozzles, cutting oxygen regulation with spring lever **STARCUT 8622**

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PMYE*	*Cat. No.*
STARCUT 8622	DIN	530 mm	95°	716.06884	003
STARCUT 8622	BSP	530 mm	95°	716.06896	003
STARCUT 8622	CGA	530 mm	95°	716.06900	003
STARCUT 8622	NFE	530 mm	95°	716.06914	003
STARCUT 8622	NFE / G1	530 mm	95°	716.06909	003
STARCUT 8622	DIN	800 mm	95°	716.06913	003
STARCUT 8622	BSP	800 mm	95°	✱	003
STARCUT 8622	CGA	800 mm	95°	✱	003
STARCUT 8622	NFE	800 mm	95°	✱	003
STARCUT 8622	DIN	1.000 mm	95°	716.06892	003
STARCUT 8622	BSP	1.000 mm	95°	716.06902	003
STARCUT 8622	CGA	1.000 mm	95°	716.06901	
STARCUT 8622	NFE	1.000 mm	95°	✱	003

Hand cutting torch STARCUT type A/PMYE for acetylene or propane, methane, MAPP, ethylene

Other options available !

Version: 01/2022

CUTTING RANGE UP TO 500 MM
FOR GAS-MIXING NOZZLES

STARCUT 8622

For gas-mixing cutting nozzles, cutting oxygen regulation with spring lever

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PMYE*	*Cat. No.*
STARCUT 8622	DIN	1.000 mm	135°	716.06888	003
STARCUT 8622	BSP	1.000 mm	135°	716.06903	003
STARCUT 8622	CGA	1.000 mm	135°	716.06904	003
STARCUT 8622	NFE	1.000 mm	135°	✱	003

Hand cutting torch STARCUT type A/PMYE for acetylene or propane, methane, MAPP, ethylene

STARCUT 8622-A/PMY FOR SCRAP YARDS

For gas-mixing cutting nozzles, cutting oxygen regulation with spring lever
Cutting oxygen valve spindle and tube supports reinforced

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PMY*	*Cat. No.*
STARCUT 8622	DIN	1.000 mm	135°	716.07187	003

Hand cutting torch STARCUT type PMY for propane, methane, MAPP

Robust construction, 4 extra tube supports

Other options available !

Version: 01/2022

✱ **on request | picture may differ | subject to change**

MESSER Cutting Systems

CUTTING RANGE UP TO 500 MM
FOR GAS-MIXING NOZZLES

For gas-mixing cutting nozzles, cutting oxygen regulation with hand knob — STARCUT 9222

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PMYE*	*Cat. No.*
STARCUT 9222	DIN	1.000 mm	180°	716.06891	003
STARCUT 9222	BSP	1.000 mm	180°	✱	003
STARCUT 9222	CGA	1.000 mm	180°	✱	003
STARCUT 9222	NFE	1.000 mm	180°	✱	003

Hand cutting torch STARCUT type A/PMYE for acetylene or propane, methane, MAPP, ethylene

For gas-mixing cutting nozzles, cutting oxygen regulation with spring lever — STARCUT 9622

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PMYE*	*Cat. No.*
STARCUT 9622	DIN	540 mm	180°	716.06912	003
STARCUT 9622	BSP	540 mm	180°	716.06946	003
STARCUT 9622	CGA	540 mm	180°	✱	003
STARCUT 9622	NFE	540 mm	180°	✱	003

Hand cutting torch STARCUT type A/PMYE for acetylene or propane, methane, MAPP, ethylene

Other options available !

Version: 01/2022

CUTTING RANGE UP TO 500 MM
SPARE PARTS

PRESSURE SCREW

Spare pressure screw

Pressure screw for	*Thread*	*Inner diameter*	*Art. No. Typ A/PMYE*	*Cat. No.*
Gas-mixing nozzles	M22 x 1,5	15,3 mm	716.05359	008
Gas-mixing gouging nozzles and NK-8310	M22 x 1,5	16,3 mm	677.13036	008
Block gouging nozzles	M23 x 1,5	17,2 mm	549.00553	008

Version: 01/2022

✱ on request | picture may differ | subject to change

CUTTING RANGE UP TO 500 MM
FOR RING/SLOT NOZZLES & BLOCK NOZZLES

For ring/slot nozzles, cutting oxygen regulation with spring lever — ESSEN 1625

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
ESSEN 1625	DIN	530 mm	95°	716.06601	716.06602	003
ESSEN 1625	BSP	530 mm	95°	716.06830	716.06834	003
ESSEN 1625	CGA	530 mm	95°	716.06831	716.06835	003
ESSEN 1625	NFE	530 mm	95°	716.06832	716.06836	003
ESSEN 1625	AS	530 mm	95°	716.06833	716.06837	003

Hand cutting torch ESSEN type A for acetylene
Hand cutting torch ESSEN type PMYE for propane, methane, MAPP, ethylene

For block nozzles, cutting oxygen regulation with spring lever — ESSEN 2625

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
ESSEN 2625	DIN	530 mm	95°	716.06802	716.06803	003
ESSEN 2625	BSP	530 mm	95°	716.06838	716.06842	003
ESSEN 2625	CGA	530 mm	95°	716.06839	716.06843	003
ESSEN 2625	NFE	530 mm	95°	716.06840	716.06844	003
ESSEN 2625	AS	530 mm	95°	716.06841	716.06845	003

Hand cutting torch ESSEN type A for acetylene
Hand cutting torch ESSEN type PMYE for propane, methane, MAPP, ethylene

Other options available !

Version: 01/2022

CUTTING RANGE UP TO 500 MM
FOR GAS-MIXING NOZZLES

ESSEN 8625 — For gas-mixing nozzles, cutting oxygen regulation with spring lever

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PME*	*Cat. No.*
ESSEN 8625	DIN	530 mm	95°	716.06600	003
ESSEN 8625	DIN	800 mm	95°	716.06800	003
ESSEN 8625	BSP	530 mm	95°	716.06846	003
ESSEN 8625	CGA	530 mm	95°	716.06847	003
ESSEN 8625	NFE	530 mm	95°	716.06848	003
ESSEN 8625	AS	530 mm	95°	716.06849	003

Hand cutting torch ESSEN type A/PMYE for acetylene or propane, methane, MAPP, ethylene

ESSEN 9625 — For gas-mixing nozzles, cutting oxygen regulation with spring lever

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PME*	*Cat. No.*
ESSEN 9625	DIN	530 mm	180°	716.06638	003
ESSEN 9625	DIN	800 mm	180°	716.06801	003
ESSEN 9625	BSP	530 mm	180°	716.06850	003
ESSEN 9625	CGA	530 mm	180°	716.06851	003
ESSEN 9625	NFE	530 mm	180°	716.06852	003
ESSEN 9625	AS	530 mm	180°	716.06853	003

Hand cutting torch ESSEN type A/PMYE for acetylene or propane, methane, MAPP, ethylene

Other options available !

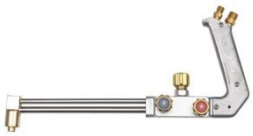
Version: 01/2022

CUTTING RANGE UP TO 500 MM
SPECIAL VERSION

For ring/slot nozzles, with angled handle, cutting oxygen regulation with hand knob

ESSEN 1216

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
ESSEN 1216	DIN	450 mm	95°	716.00712	716.00713	003
ESSEN 1216	BSP	450 mm	95°	❋	❋	003
ESSEN 1216	CGA	450 mm	95°	❋	❋	003
ESSEN 1216	NFE	450 mm	95°	❋	❋	003
ESSEN 1216	AS	450 mm	95°	❋	❋	003

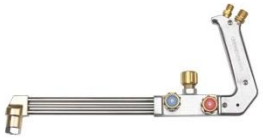


Hand cutting torch ESSEN type A for acetylene
Hand cutting torch ESSEN type PMYE for propane, methane, MAPP, ethylene

For gas-mixing nozzles, with angled handle, cutting oxygen regulation with hand knob

ESSEN 8216

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A/PM*	*Cat. No.*
ESSEN 8216	DIN	450 mm	95°	716.00709	003
ESSEN 8216	BSP	450 mm	95°	❋	003
ESSEN 8216	CGA	450 mm	95°	❋	003
ESSEN 8216	NFE	450 mm	95°	❋	003
ESSEN 8216	AS	450 mm	95°	❋	003



Hand cutting torch ESSEN type A/PMYE for acetylene or propane, methane

Other options available !

Version: 01/2022

CUTTING RANGE UP TO 500 MM
FOR CYLINDRICAL NOZZLES

ESSEN 5625

For cylindrical nozzles with O-ring sealings, nozzle quick change, cutting oxygen regulation with spring lever

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
ESSEN 5625	DIN	520 mm	95°	716.07432	716.07433	003
ESSEN 5625	BSP	520 mm	95°	716.07960	716.07961	003

Hand cutting torch ESSEN type A for acetylene
Hand cutting torch ESSEN type PMYE for propane, methane, Mapp, ethylene

Torch head for our patented machine cutting nozzles for MS 932 and MSZ 932:

- VADURA 9215-A for acetylene
- GRICUT 9230-PMYE for propane, methane, Mapp, ethylene
- Additional use of machine cutting nozzles VADURA 9215-A and GRICUT 9230-PMYE for manual cutting after application on a flame cutting machine
- Patented nozzle quick change system, cutting nozzle and heating cap are changed by hand without tools
- Identical heating caps for all gases
- Optimised stockkeeping by using one nozzle type for machine cutting torches (MS 932) and hand torches

ESSEN 4625

For cylindrical nozzles with O-ring sealings, nozzle quick change, cutting oxygen regulation with spring lever

Description	*Standard*	*Length*	*Torch head*	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
ESSEN 4625	DIN	520 mm	95°	716.07755	716.07756	003
ESSEN 4625	BSP	520 mm	95°	716.07779	716.07780	003

Hand cutting torch ESSEN type A for acetylene
Hand cutting torch ESSEN type PMYE for propane, methane, Mapp, ethylene

Torch head for our patented machine cutting nozzles for ALFA-Machine torches:

- VADURA 1217-A for acetylene
- GRICUT 1232-PMYE for propane, methane, Mapp, ethylene
- Additional use of machine cutting nozzles VADURA 1217-A and GRICUT 1232-PMYE for manual cutting after application on a flame cutting machine
- Patented nozzle quick change system, cutting nozzle and heating cap are changed by hand without tools
- Identical heating caps for all gases
  Optimised stockkeeping by using one nozzle type for machine cutting torches and hand torches

Other options available

Version: 01/2022

APPLICATION OVERVIEW

Cutting nozzles for fuel gas: Acetylene	A-RS	A-R	A-BF /A-BK	A-B	ANME	VADURA 8317 A-GN	NK-Block	NK 8310-A
Cutting nozzles for fast burning gases								
Torch system: MINITHERM								
2207-A			●					
STARLET								
1711-A / 1211-A	●	●						
2711-A			●				●	
8711-A/PMYE					●	●		●
8702-A/PMYE					●	●		●
STAR								
1730-A / 1230-A	●	●						
2730-A / 2230-A				●			●	
8730-A/PMY / 9230-A/PMY					●	●		●
PROFICUT- L/H/HB -A/PMYE					●	●		●
STARCUT								
1622-A / 1222-A / 3622-A	●	●						
2622-A / 2222-A				●			●	
8622-A/PMYE / 9622-A/PMYE					●	●		●
8222-A/PMYE / 9222-A/PMYE					●	●		●
ESSEN								
1625-A / 1216-A	●	●						
2625-A				●			●	
8625-A/PMY / 8216-A/PMY					●	●		●

Cutting nozzles for fuel gases: Propane, Methane, Mapp, Ethylene	PL-RC	L-PN	PB-K / PMY	PNME	GRICUT 1230 PMYE	GRICUT 1233 PMY	GRICUT 1280 PMYE	GRICUT 2280 PMYE	GRICUT 8281 PMY
Cutting nozzles for slow burning gases									
Torch system: MINITHERM									
2207-PMY			●						
STARLET									
1711-PMY / 1211-PMY	●	●			●				
8711-A/PMYE				●					●
8702-A/PMYE				●					●
STAR									
1730-PMY / 1230-PMY	●	●			●	●			
1730-F	●				●		●		
8730-A/PMY / 9230-A/PMY				●					●
PROFICUT- L/H/HB -A/PMYE				●					●
STARCUT									
1622-PMY / 1222-PMYE	●	●			●	●	●		
2622-PMYE / 2222-PMYE								●	
8622-A/PMYE / 9622-APMYE				●					●
8222-A/PMYE / 9222-APMYE				●					●
ESSEN									
1625-PMY / 1216-PMY	●	●			●	●	●		
8625-A/PMY / 8216-A/PMY				●					●

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CUTTING NOZZLES ACETYLENE

CUTTING NOZZLES A-RS — Ring/Slot nozzles for cutting attachments and hand cutting torches

Type	Cutting range	Art. No.	Cat. No.
A-RS	2 - 8 mm	666.17101	007
	3 – 10 mm	666.17102	007
	10 - 25 mm	666.17103	007
	25 - 40 mm	666.17104	007
	40 - 60 mm	666.17105	007
	60 - 100 mm	666.17106	007
	100 - 200 mm	666.17107	007
	200 - 300 mm	666.17108	007
Heating nozzles	2-100 mm	666.17115	007
	100-300 mm	666.17116	007

CUTTING NOZZLES A-R — Ring nozzles for cutting attachments and hand cutting torches

Type	Cutting range	Art. No.	Cat. No.
A-R	3 - 10 mm	540.02710	007
	10 - 25 mm	540.02720	007
	25 - 40 mm	540.02730	007
	40 - 60 mm	540.02740	007
	60 - 100 mm	540.02750	007
Heating nozzles	3-100 mm	540.02780	007
Cam heating nozzles A-NR	3-100 mm	716.15751	007

CUTTING NOZZLES A-BF / A-BK — Block nozzles for MINITHERM-2207 and STARLET-2711 cutting attachments

Type	Cutting range	Art. No.	Cat. No.
A-BF	0,5 - 3 mm	716.00291	024
A-BK	3 - 10 mm	716.00503	024
	10 - 25 mm	716.00504	024

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✱ on request | picture may differ | subject to change

MESSER Cutting Systems

CUTTING NOZZLES ACETYLENE

Block nozzles for cutting attachments and hand cutting torches — BLOCK NOZZLES A-B

Type	Cutting range	Art. No.	Cat. No.
A-B	3 - 10 mm	540.01312	007
	10 - 25 mm	540.01322	007
	25 - 40 mm	540.01300	007
	40 - 60 mm	540.01332	007
	60 - 100 mm	540.01342	007
	100 - 200 mm	540.01352	007
	200 - 300 mm	540.01362	007

Gas-mixing nozzles for cutting attachments and cutting torches — CUTTING NOZZLES ANME

Type	Cutting range	Art. No.	Cat. No.
ANME	3 - 6 mm	716.16122	007
	6 - 20 mm	716.16123	007
	20 - 75 mm	716.16124	007
	75 - 125 mm	716.16125	007
	125 - 175 mm	716.16126	007
	175 - 225 mm	716.16128	007
	225 - 300 mm	716.16127	007

Gas-mixing nozzles for cutting attachments and hand cutting torches — VADURA 8317 A-GN

Type	Cutting range	Art. No.	Cat. No.
VADURA 8317 A-GN	0,5 - 3 mm	540.07490	007
	3 - 10 mm	716.16001	007
	10 - 25 mm	716.16002	007
	25 - 40 mm	716.16003	007
	40 – 60 mm	716.16004	007
	60 – 100 mm	716.16005	007
	100 - 200 mm	716.16006	007
	200 - 300 mm	716.16007	007
	300 - 500 mm	716.16010	007

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CUTTING NOZZLES ACETYLENE

CUTTING NOZZLE NK-BLOCK

Special block nozzle for flame cutting of rivet heads, screws and profile webs

Type	*Cutting range*	*Art. No.*	*Cat. No.*
NK-BLOCK (3-hole)	10 – 25 mm	540.04001 ✱	007
NK-BLOCK (5-hole)	10 – 25 mm	716.11219	007

CUTTING NOZZLE NK-8310-A

Special gas-mixing nozzle for flame cutting of rivet heads, screws and profile webs

Type	*Cutting range*	*Art. No.*	*Cat. No.*
NK-8310-A	up to 40 mm	716.16102	007
Presssure screw Ø 16,3mm		677.13036	008

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

CUTTING NOZZLES
PROPANE / METHANE / MAPP / ETHYLENE

Ring/Slot nozzles for cutting attachments and hand cutting torches — CUTTING NOZZLES PL-RC

Type	*Cutting range*	*Art. No.*	*Cat. No.*
PL-RC	3 - 10 mm	666.17226	007
	10 - 25 mm	666.17227	007
	25 - 40 mm	666.17228	007
	40 - 60 mm	666.17229	007
	60 – 100 mm	666.17230	007
	100 – 200 mm	666.17231	007
	200 - 300 mm	666.17232	007
Heating nozzles	3 - 100 mm	666.17235	007
	100 - 300 mm	666.17236	007
for fuel gases: propane, methane, Mapp, ethylene			
GRICUT 1283 PMY Scrap cutting nozzle	10 – 60 mm	716.15952 ✱	007
	60 – 200 mm	716.15953	007
Heating nozzles	10 – 200 mm	716.15954	007
for fuel gases: propane, methane, Mapp			

Ring/Slot nozzles for low fuel gas pressures, for cutting attachments and hand cutting torches — CUTTING NOZZLES LP-N

Type	*Cutting range*	*Art. No.*	*Cat. No.*
LP-N	3 - 10 mm	666.17202	007
	10 - 25 mm	666.17203	007
	25 - 40 mm	666.17204	007
	40 - 60 mm	666.17205	007
	60 – 100 mm	666.17206	007
	100 – 200 mm	666.17207	007
	200 - 300 mm	666.17208	007
Heating nozzles	3 - 100 mm	666.17215	007
	100 - 300 mm	666.17216	007
for fuel gases: propane, methane, Mapp			

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CUTTING NOZZLES
PROPANE / METHANE / MAPP / ETHYLENE

GRICUT 1230-PMYE — High efficiency ring/slot nozzles for hand cutting torches

Type	Cutting range	Art. No.	Cat. No.
GRICUT 1230-PMYE	3 - 10 mm	716.15901	032
	7 - 15 mm	716.15902	032
	15 - 25 mm	716.15903	032
	25 - 40 mm	716.15904	032
	40 - 60 mm	716.15905	032
	60 - 100 mm	716.15906	032
Heating nozzles	3 - 100 mm	716.15900	032

for fuel gases: propane, methane, Mapp, ethylene

GRICUT 1280-PMYE — High-speed ring/slot nozzles for hand cutting torches

Type	Cutting range	Art. No.	Cat. No.
GRICUT 1280-PMYE	100 - 200 mm	716.15927	032
	200 - 250 mm	716.15928	032
	250 - 300 mm	716.15929	032
Heating nozzles	100 - 300 mm	716.15931	032

for fuel gases: propane, methane, Mapp, ethylene

GRICUT 1233-PMY — Special Scrap cutting nozzles, ring/slot design, for hand cutting torches

Type	Cutting range	Art. No.	Cat. No.
GRICUT 1233-PMY	10 - 60 mm	716.15968	032
	60 - 200 mm	716.15969	032
Heating nozzles	10 - 200 mm	716.15970	032

for fuel gases: propane, methane, Mapp

Can be used with STARCUT 1622-PMY for scrap yards, p.n. 716.07186, page 108

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CUTTING NOZZLES
PROPANE / METHANE / MAPP / ETHYLENE

Block nozzles for hand cutting torches — GRICUT 2280-PMY

Type	*Cutting range*	*Art. No.*	*Cat. No.*
GRICUT 2280-PMY	3 - 7 mm	716.15911	007
	7 - 15 mm	716.15912	007
	15 - 25 mm	716.15913	007
	25 - 40 mm	716.15914	007
	40 - 60 mm	716.15915	007
	60 - 100 mm	716.15916	007
	100 - 200 mm	716.15934	007
	200 – 250 mm	716.15935	007
	250 – 300 mm	716.15936	007
Heating nozzles	3 - 100 mm	716.15909	007
	100 - 300 mm	716.15917	007

for fuel gases: propane, methane, Mapp

Block nozzles for cutting attachments MINITHERM-2207 — PB-K -PMY

Type	*Cutting range*	*Art. No.*	*Cat. No.*
PB-K-PMY	3 - 10 mm	716.16741	007
	10 – 25 mm	716.16742	007
Heating nozzles	3 – 25 mm	716.16743	007

for fuel gases: propane, methane, Mapp

Gas-mixing nozzles for cutting attachments and hand cutting torches — PNME, TWO-PIECE

Type	*Cutting range*	*Art. No.*	*Cat. No.*
PNME	3 - 6 mm	716.16140	007
	6 - 20 mm	716.16141	007
	20 - 75 mm	716.16142	007
	75 - 125 mm	716.16143	007
	125 - 175 mm	716.16144	007
	175 - 225 mm	716.16145	007
	225 - 300 mm	716.16146	007

for fuel gases: propane, methane, Mapp, ethylene

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CUTTING NOZZLES
PROPANE / METHANE / MAPP

GRICUT 8281-PMY

Gas-mixing nozzles for cutting attachments and hand cutting torches

Type	*Cutting range*	*Art. No.*	*Cat. No.*
GRICUT 8281-PMYE	3 - 10 mm	716.16038	007
	10 - 25 mm	716.16039	007
	25 - 40 mm	716.16040	007
	40 - 60 mm	716.16041	007
	60 – 100 mm	716.16042	007
	100 – 200 mm	716.16043	007
	200 - 300 mm	716.16044	007
Heating nozzles	3 - 100 mm	716.15988	007
	100 – 300 mm	716.15989	007
for fuel gases: propane, methane			
Heating nozzles	3 - 100 mm	716.15978	007
	100 – 300 mm	716.15979	007
for fuel gases: Mapp			

GRICUT 8281-PM

Gas-mixing nozzles for hand cutting torches

Type	*Cutting range*	*Art. No.*	*Cat. No.*
GRICUT 8281-PM	200 - 500 mm	716.16400	006
Heating nozzle	200 - 500 mm	546.12340	006

for fuel gases: propane, methane

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MESSER Cutting Systems

GOUGING NOZZLES
ACETYLENE / PROPANE / METHANE / MAPP / ETHYLENE

GOUGING nozzles	Acetylene				Propane / Methane	
	FD-A	Block-A	A-FG	AGNM	FD-PM	Block-PM
STARCUT Cutting Torches						
1622-A / 3622-A	●					
1622-PMYE					●	
2628-A / 7628-A		●				
2622-PMYE						●
8622-A/PMYE / 9622-A/PMYE			●	●		
ESSEN Cutting Torches						
8625-A/PMYE			●	●		
9625-A/PMYE			●	●		

Ring/Slot nozzles for STARCUT 1622-A / 3622-A and STARCUT 1622-PMYE — **GOUGING NOZZLES FD**

Type	*Size*	*Art. No. Type A*	*Art. No. Type PM*	*Cat. No.*
FD	1	666.17722	666.17727 ✳	007
	2	666.17723	666.17728 ✳	007
	3	666.17724	666.17729	007
Heating nozzles	0/1	666.17731	666.17731	007
	2/3	666.17732	666.17732	007

Type FD-A for fuel gas: acetylene

Type FD-PM for fuel gases: propane, methane

Block gouging nozzles for STARCUT 2628-A / 7628-A , STARCUT 2622-PMYE — **BLOCK GOUGING NOZZLES**

Type	*Size*	*Art. No. Type A*	*Art. No. Type PM*	*Cat. No.*
Block straight	1	702.05102	--	007
	2	702.05202	--	007
	3	702.05302	--	007
Block curved	1	702.05602	702.06202	007
	2	702.05702	702.06302	007
	3	702.05802	702.06402	007
Block GR 25	5	703.01301	--	006
Powder Cleaning Nozzle				

Special gouging nozzle for higher working ranges

Type Block-A for fuel gas: acetylene

Type Block-PM for fuel gas: propane, methane

Pressure Screw	Ø 17,2 mm	549.00553	008

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GOUGING NOZZLES ACETYLENE

GOUGING NOZZLES A-FG

Gas-mixing gouging nozzles for STARCUT 8622 / 9622-A/PMYE / ESSEN 8625-A/PMYE

Type	*Size*	Joint width / -depth (mm)	*Art. No.*	*Cat. No.*
A-FG straight	1	7-8 / 6	540.07270	007
	2	9-10 / 8	540.07280	007
	3	11-12 / 10	540.07290	007
A-FG curved	1	7-8 / 6	540.07070	007
	2	9-10 / 8	540.07080	007
	3	11-12 / 10	540.07090	007
Pressure screw Ø 16,3 mm			677.13036	008
for fuel gases: acetylene				

GOUGING NOZZLES AGNM

Gas-mixing gouging nozzles for STARCUT 8622 / 9622-A/PMYE / ESSEN 8625-A/PMYE

Type	*Size*	Joint width / -depth (mm)	*Art. No.*	*Cat. No.*
AGNM-S straight	1	7-8 / 6	716.16230	007
	2	9-10 / 8	716.16231	007
	3	11-12 / 10	716.16232	007
AGNM-C curved	1	7-8 / 6	716.16233	007
	2	9-10 / 8	716.16234	007
	3	11-12 / 10	716.16235	007
Pressure screw Ø 16,3 mm			677.13036	008
for fuel gases: acetylene				

Version: 01/2022

MACHINE CUTTING TORCHES

FOR AUTOMATED CUTTING PROCESSES IN FLAME CUTTING PLANTS

Three-hose machine cutting torch, for ring/slot nozzles — MS 832

Type	*Shaft length*	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
MS 832 / 110	110 mm	716.11147	716.11148	005
MS 832 / 160	160 mm	716.11149	716.11150	005
MS 832 / 250	250 mm	716.11127	716.11142	005

Shaft diameter: 32 mm / Cutting range: up to 300 mm

for flame cutting machines of series
MINISEC, SECATOR, CORTA, STATOSEC, MULTISEC, OMNIMAT, SICOMAT, CORTINA, SANCUT, COMCUT, EASYTHERM

Type A for acetylene / Type PMYE for propane, methane, MAPP, ethylene

Three-hose machine cutting torch with toothed rack, for ring/slot nozzles — MSZ 832

Type	*Shaft length*	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
MSZ 832 / 320 *	320 mm	716.11170	716.11171	005
MSZ 832 / 110 **	110 mm	716.51787	716.51788	005

Shaft diameter: 32 mm / Cutting range: up to 300 mm

*** for flame cutting machine CORTA SM**
**** for hand cutting machine PORTACUT, TURBOCUT**

Type A for acetylene / Type PMYE for propane, methane, MAPP, ethylene

Three-hose machine cutting torch, for cylindrical nozzles Nozzle Quick Change system — MS 932

Type	*Shaft length*	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
MS 932 / 110	110 mm	716.11412	716.11413	005
MS 932 / 160	160 mm	716.11414	716.11415	005
MS 932 / 250	250 mm	716.11315	716.11317	005

Shaft diameter: 32 mm / Cutting range: up to 300 mm
Patented nozzle quick change system, cutting nozzle and heating cap are changed by hand without tools

for flame cutting machines of series
MINISEC, SECATOR, CORTA, STATOSEC, MULTISEC, OMNIMAT, SICOMAT, CORTINA, SANCUT, COMCUT, EASYTHERM

Type A for Fuel gas acetylene / Type PMYE for Fuel gas propane, methane, MAPP, ethylene

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MACHINE CUTTING TORCHES

FOR AUTOMATED CUTTING PROCESSES IN FLAME CUTTING PLANTS

MSZ 932

Three-hose machine cutting torch with toothed rack, for cylindrical nozzles
Nozzle Quick Change system

Type	*Shaft length*	*Art. No. type A*	*Art. No. type PMYE*	*Cat. No.*
MSZ 932 / 320 *	320 mm	716.11410	716.11411	005
MSZ 932 / 110 **	110 mm	716.55538	716.55539	005

Shaft diameter: 32 mm / Cutting range: up to 300 mm
Patented nozzle quick change system, cutting nozzle and heating cap are changed by hand without tools

***for flame cutting machines of series:**
MINISEC, SECATOR, CORTA, STATOSEC, MULTISEC, OMNIMAT, SICOMAT, CORTINA, SANCUT, COMCUT, EASYTHERM
**** for hand cutting machine PORTACUT, TURBOCUT**

Type A for acetylene / Type PMYE for propane, methane, MAPP, ethylene

MS 3450 / 250

Four-hose machine cutting torch with internal electrical ignition, for ring/slot nozzles

Type	*Shaft length*	*Art. No. type A*	*Art. No. type PMYE*	*Cat. No.*
MS 3450 / 250	220 mm	716.51310 ✱	716.51320 ✱	005

SERVICE part only (new design: MS 3452)

Shaft diameter: 45 mm / Cutting range: up to 300 mm

for flame cutting machines of series:
CORTA, STATOSEC, OMNIMAT

Torch cannot be fitted to swivel-type and rotating triple-type torch assemblies!

Type A for acetylene / Type PMYE for propane, methane, MAPP, ethylene

MS 3452 / 250

Four-hose machine cutting torch with internal electrical ignition, for ring/slot nozzles

Type	*Shaft length*	*Art. No. type A*	*Art. No. type PMYE*	*Cat. No.*
MS 3452 / 250	220 mm	716.11010	716.11011	005

Shaft diameter: 45 mm / Cutting range: up to 300 mm

for flame cutting machines of series:
CORTA, STATOSEC, OMNIMAT, CORTINA, COMCUT, EASYTHERM

Torch cannot be fitted to swivel-type and rotating triple-type torch assemblies!

Dosing unit for machine cutting torch MS 3452 A / PMYE

for MS 3452 / 60 Hz		716.11489	005

Type A for acetylene / Type PMYE for propane, methane, MAPP, ethylene

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

MACHINE CUTTING TORCHES

FOR AUTOMATED CUTTING PROCESSES IN FLAME CUTTING PLANTS

Three-hose machine cutting torch for gas-mixing nozzles with 30° sealing cone — MSID 100 K

Type	*Shaft length*	*Art. No.*	*Cat. No.*
MSID 100 K- A/PMYE	100 mm	716.51356	005

Shaft diameter: 14 mm / Cutting range: up to 300 mm

for flame cutting machines OMNIMAT, with automatic bevel-angel adjustment or rotating triple-type torch assembly DAFL

for fuel gases: acetylene or propane, methane, MAPP, ethylene

Three-hose machine cutting torch for gas-mixing nozzles with 30° sealing cone — MSID 100 - 450

Type	*Shaft length*	*Art. No.*	*Cat. No.*
MSID 110-A/PMYE	110 mm	554.90230	005
MSID 160-A/PMYE	160 mm	554.90210	005
MSID 180-A/PMYE	180 mm	716.11533	005
MSID 250-A/PMYE	250 mm	716.11536	005
MSID 450-A/PMYE	450 mm	716.11537	005

Shaft diameter: 32 mm / Cutting range: up to 300 mm (MSID 450: up to 500 mm)

for flame cutting machines of series:
MULTISEC, OMNIMAT, SICOMAT

for acetylene or propane, methane, MAPP, ethylene

Three-hose machine cutting torch with toothed rack, for gas-mixing nozzles with 30° sealing cone — MSIDZ 100 - 160

Type	*Shaft length*	*Art. No.*	*Cat. No.*
MSIDZ 110-A/PMY *	110 mm	716.51789	005
MSIDZ 160-A/PMYE	160 mm	554.90220	005

*** for portable flame cutting machines of series PORTACUT, TURBOCUT**

Shaft diameter: 32 mm / Cutting range: up to 300 mm

for flame cutting machines of series:
MULTISEC, OMNIMAT, SICOMAT

for acetylene or propane, methane, MAPP, ethylene

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MACHINE CUTTING TORCHES

FOR AUTOMATED CUTTING PROCESSES IN FLAME CUTTING PLANTS

MSAP 6321

Three-hose heavy-duty machine cutting torch for outer-mixing nozzles with 30° sealing cone

Type	*Shaft length*	*Art. No.*	*Cat. No.*
MSAP 6321- PMY	180 mm	716.11541	005

Shaft diameter: 32 mm / Cutting range: up to 600mm

for flame cutting machines of series:
SECATOR, CORTA, CORTINA, STATOSEC, MULTISEC, OMNIMAT, SICOMAT, SCANCUT, COMCUT, EASYTHERM

for propane, methane, MAPP

MSD 250

Three-hose heavy-duty machine cutting torch, for gas-mixing nozzles

Type	*Shaft length*	*Art. No.*	*Cat. No.*
MSD 250-A/PMY	250 mm	716.01365	005

Shaft diameter: 32 mm
Cutting range: 100 to 500 mm with acetylene
Cutting range: 100 to 600 mm with propane, methane, MAPP

for flame cutting machines of series:
SECATOR, CORTA, CORTINA, STATOSEC, MULTISEC, OMNIMAT, SICOMAT, SCANCUT, COMCUT, EASYTHERM

for acetylene, propane, methane, MAPP

QUICKY

Three-hose heavy-duty machine cutting torch, for gas-mixing nozzles

Type	*Art. No. Type A*	*Art. No. Type PMYE*	*Cat. No.*
Quicky with ring / slot nozzles	540.93330	545.93330	005
Quicky with gas-mixing nozzles	716.11040	716.11040	005

Torch head diameter: 27 mm
Cutting range: up to 100 mm / with adjusting valves, flashback arrestors and connecting hoses

for hand cutting machine QUICKY

Type A acetylene / Type PMYE for propane, methane, MAPP, ethylene

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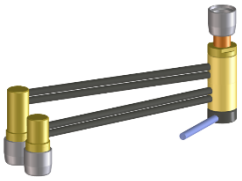
MACHINE CUTTING TORCHES

FOR AUTOMATED CUTTING PROCESSES IN FLAME CUTTING PLANTS

Accessories for machine cutting torches series MS 832 / MS 932

STRIP CUTTING TORCH

Description	*Working radius*	*Cutting range*	*Art. No.*	*Cat. No.*
Strip cutting torch MS 832	30-400 mm	3-60 mm	716.51155	005
Strip cutting torch MS 932	30-450 mm	3-60 mm	716.11600	005



Additional devices for increased cutting efficiency and reduced warping when cutting sheet strips

for fuel gases: acetylene or propane, methane, MAPP, ethylene

Accessories for machine cutting torches series MS 832 / MS 932

SWIVELLING TORCH HEAD

Description	*Swivel range*	*Cutting range*	*Art. No.*	*Cat. No.*
Swivelling torch head MS 832	± 90°	3-300 mm	716.51295	005
Swivelling torch head MS 832, with preheating	± 90°	3-300 mm	716.52032	005
Swivelling torch head MS 932	± 90°	3-300 mm	716.11425	005

Additional devices for carrying out bevel cuts in length and cross directions

for fuel gases: acetylene or propane, methane, MAPP, ethylene

Accessories for machine cutting torches series MS

AIR COOLING ATTACHMENT

Description	*Art. No.*	*Cat. No.*
Air cooling attachment	716.51251	005
Air shut-off valve G 1/4” for compressed air	718.00668	005

Additional devices for cutting of thin sheets

for fuel gases: acetylene or propane, methane, MAPP, ethylene

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MACHINE CUTTING TORCHES

FOR AUTOMATED CUTTING PROCESSES IN FLAME CUTTING PLANTS

ADJUSTING VALVES

Accessories for machine cutting torches

Description	*Connection/hose tail*	*Art. No.*	*Cat. No.*
Heating oxygen	G 1/4“, DN 6	718.00500	005
Cutting oxygen	G 3/8“, DN 9	718.00501	005
Fuel gas	G 3/8“ LH, DN 9	718.00502	005
Heating oxygen	G 1/2“, DN 8	718.04290	000
Cutting oxygen	G 1/2“, DN 11	718.03691	148
Fuel gas	G 1/2“ LH, DN 8	718.00855	005
Adjusting valves for machine cutting torches MS / MSID / MSAP			

ACCESSORIES

Optional: for machine cutting torches MS / MSID / MSAP / MSD
Cutting oxygen supply without pressure-drop, above 100 mm cutting thickness

Description	*Torch inlet conn.*	*Art. No.*	*Cat. No.*
Ball valve	G 3/8” – DN 10 - Oxygen	722.44775	000
Non-return valve GRV 91 UA	G 1/2” (M) – G 3/8” (F) - Oxygen	770.05116	043

Safety units: FA, NV

FA = Flame arrestor

NV = Non-return valve

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

T-fitting for machine cutting torches MS / MSID / MSAP / MSD — TEST ADAPTERS

Description	*Torch inlet connection*	*Art. No.*	*Cat. No.*
Heating oxygen	G 1/4“	718.25530	004
Cutting oxygen	G 3/8“	718.25532	004
Fuel gas	G 3/8“ LH	718.25534	004

To be used with test pressure gauges, for machine torches MS / MSID / MSAP / MSD

Test pressure gauges for machine cutting torches MS / MSID / MSAP / MSD Acc. to ISO 5171 — TEST GAUGES

Description		*Art. No.*	*Cat. No.*
Oxygen	Scale 0 - 16 bar / working range 10 bar	0.640.477	008
	Scale 0 - 25 bar / working range 16 bar	0.640.109	008
Acetylene	Scale 0 - 2,5 bar / working range 1,5 bar	0.640.479	008
MAPP / propane / methane	Scale 0 - 4 bar / working range 2,5 bar	0.640.069	004
Propane / methane / MAPP	Scale 0 - 2,5 bar / working range 1,5 bar	0.640.070	004
Ø 63mm , conn. thread G1/4” **-To be mounted in centre of test adapter-**			
Gauge seal		452.08020	008

Torch head rework for machine cutting torches — MILLING TOOLS

Description	*Type of cutting nozzle*	*For machine cutting torch*	*Art. No.*	*Cat. No.*
Nozzle seat milling tool WSF 7521	Ring/slot nozzles	MS / MSZ	0.939.005	000
Nozzle seat milling tool WSF 7019	Gas-mixing nozzles 30°	MSID	0.912.001	000

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MACHINE CUTTING TORCHES

FOR AUTOMATED CUTTING PROCESSES IN FLAME CUTTING PLANTS

QUICKY — Safety devices for machine cutting torch QUICKY

Gas type	Connection	Operating pressure (max.)	Art. No.	Cat. No.
Oxygen	M 7 x 0,75	15	716.11130	041
Fuel gas	M 7 x 0,75	5,0	716.11129	041

Safety units: FA, NV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, Hydrogen 3,5 bar

MS / MSID / MSAP — Non-return valves for machine cutting torches MS / MSID / MSAP

Gas type	Connection	Operating pressure (max.)	Art. No.	Cat. No.
Heating oxygen	G 1/4“	15	0.647.583	041
Cutting oxygen	G 3/8“	15	0.647.584	041
Fuel gas	G 3/8“ LH	5,0	0.346.364	041
Ignition gas mixture for MS 3450	G 1/4“ LH	5,0	716.51362	041
Ignition gas mixture for MS 3452	G 3/8“ LH	5,0	716.11048	041
Ignition gas mixture for MS 3452	G 1/4“ LH	5,0	716.11173	041

Safety units: NV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, Hydrogen 3,5 bar

MSD — Non-return valves for machine cutting torch MSD

Gas type	Connection	Operating pressure (max.)	Art. No.	Cat. No.
Heiz-Oxygen	G 3/8“	15	0.647.584	041
Schneid-Oxygen	G 1/2“	15	0.346.020	041
Fuel gas	G 3/8“ LH	5,0	0.346.364	041

Safety units: NV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, Hydrogen 3,5 bar

DG 91 UA — Safety devices for machine cutting torches

Gas type	Connection	Operating pressure (max.)	Art. No.	Cat. No.
Oxygen	G 1/4“ RH	15	0.463.372	041
Oxygen	G 3/8“ RH	15	0.463.373	041
Oxygen	G 1/2“ RH	15	0.463.374	041
Fuel gas	G 3/8“ LH	5,0	0.463.857	041
Fuel gas	G 1/2“ LH	5,0	0.463.858	041

Safety units: FA, NV **-reverse flow direction-**

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, Hydrogen 3,5 bar

FA = Flame arrestor, **NV** = Non-return valve, **SV** = Gas shut-off
TV = Thermal-sensitive cut-off, **PV** = Pressure-sensitive gas shut-off

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MACHINE CUTTING NOZZLES

APPLICATION OVERVIEW

Torch system	QUICKY	MS / MSZ 832	MS / MSZ 932	MS 3450 / MS 3452	MSID / MSIDZ	MSAP 6321	MSD 250
Machine cutting nozzles for Acetylene (fast burning gases)							
A-RS	●	●		●			
VADURA 1210-A / +PLUS+ 1210-A	●	●		●			
VADURA 1215-A / +PLUS+ 1215-A	●	●		●			
VADURA 1090-A	●	●		●			
VADURA 9215-A			●				
VADURA 9090-A			●				
A-CID	●				●		
GRICUT 5310-A							●

Torch system	QUICKY	MS / MSZ 832	MS / MSZ 932	MS 3450 / MS 3452	MSID / MSIDZ	MSAP 6321	MSD 250
Machine cutting nozzles for Propane, Methane, Mapp, Ethylene (slow burning gases)							
PL-RC	●	●		●			
GRICUT 1230-PMYE / +PLUS+ 1230 PMYE	●	●		●			
GRICUT 1090-PMYE	●	●		●			
GRICUT 1270-PY / +PLUS+ / 1270-PY	●	●		●			
GRICUT 1280-PMYE / +PLUS+ 1280-PMYE		●		●			
GRICUT 5281-PMY							●
GRICUT 8281-PMYE	●				●		
GRICUT 8281-PM					●		
GRICUT 8280-PMYE					●		
GRICUT 8480-PMYE						●	
GRICUT 9230-PMYE			●				
GRICUT 9280-PMYE			●				
GRICUT 9090-PMYE			●				

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CUTTING NOZZLES ACETYLENE

A-RS — Standard ring/slot nozzles for machine cutting torches QUICKY and MS/MSZ

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
A-RS	2 - 8 mm	2,0 - 2,5 bar	666.17101	007
	3 - 10 mm	2,0 - 2,5 bar	666.17102	007
	10 - 25 mm	2,0 - 2,5 bar	666.17103	007
	25 - 40 mm	4,0 - 5,0 bar	666.17104	007
	40 - 60 mm	4,0 - 5,0 bar	666.17105	007
	60 - 100 mm	4,0 - 5,0 bar	666.17106	007
	100 - 200 mm	5,0 - 6,0 bar	666.17107	007
	200 - 300 mm	5,0 - 6,0 bar	666.17108	007
Heating nozzles	2 - 100 mm		666.17115	007
	100 - 300 mm		666.17116	007

VADURA 1215-A — High-speed ring/slot nozzles for machine cutting torches QUICKY and MS/MSZ

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
VADURA 1215-A	3 - 5 mm	2,0 - 3,0 bar	716.15941	032
	6 - 10 mm	4,0 - 5,0 bar	716.15942	032
	10 - 25 mm	6,5 - 7,5 bar	716.15943	032
	25 - 40 mm	6,5 - 8,0 bar	716.15944	032
	40 - 60 mm	6,5 - 8,5 bar	716.15945	032
	60 - 100 mm	6,5 - 8,0 bar	716.15946	032
	100 - 150 mm	6,5 - 7,0 bar	716.15947	032
VADURA 1210/1215-A	150 - 230 mm	6,0 - 7,5 bar	716.15948	032
	230 - 300 mm	7,0 - 8,5 bar	716.15949	032
Heating nozzles	3 - 150 mm		716.15950	032
	150 - 300 mm		716.15951	032

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CUTTING NOZZLES ACETYLENE

High-speed ring/slot nozzles for machine cutting torches QUICKY and MS/MSZ — VADURA +PLUS+ 1215-A

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
VADURA +PLUS+ 1215-A	3 - 5 mm	2,0 - 3,0 bar	716.16161 ✳	032
	6 - 10 mm	4,0 - 5,0 bar	716.16162 ✳	032
	10 - 25 mm	6,5 - 7,5 bar	716.16163 ✳	032
	25 - 40 mm	6,5 - 8,0 bar	716.16164 ✳	032
	40 - 60 mm	6,5 - 8,5 bar	716.16165 ✳	032
	60 - 100 mm	6,5 - 8,0 bar	716.16166 ✳	032
	100 - 150 mm	6,5 - 7,0 bar	716.16167 ✳	032
	150 - 230 mm	6,0 - 7,5 bar	716.16179 ✳	032
	230 - 300 mm	7,0 - 8,5 bar	716.16180 ✳	032
Heating nozzles	3 - 150 mm		716.16170 ✳	032
	150 - 300 mm		716.16182 ✳	032

High-speed ring/slot nozzles for machine cutting torches QUICKY and MS / MSZ Optimised cutting to meet requirements of DIN EN 1090-2-6.3 — VADURA 1090-A

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
VADURA 1090-A	10 - 25 mm	4,0 - 5,0 bar	716.16788 ✳	032
	25 - 40 mm	4,0 - 5,0 bar	716.16789 ✳	032
	40 - 60 mm	4,0 - 5,0 bar	716.16790 ✳	032
	60 - 100 mm	4,0 - 5,0 bar	716.16791 ✳	032
Heating nozzles	2 - 100 mm		716.16792 ✳	032

High-efficiency ring/slot nozzles for machine cutting torches QUICKY and MS/MSZ — VADURA 1210-A

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
VADURA 1210-A	2 - 5 mm	2,0 - 3,0 bar	716.15760	032
	3 - 5 mm	2,0 - 3,0 bar	716.15761	032
	6 - 10 mm	4,0 - 5,0 bar	716.15762	032
	10 - 25 mm	9,0 - 12,0 bar	716.15763	032
	25 - 50 mm	7,5 -11,0 bar	716.15764	032
	50 - 80 mm	9,0 - 12,0 bar	716.15765	032
	80 - 100 mm	9,5 - 11,0 bar	716.15766	032
	100 - 150 mm	6,5 - 7,0 bar	716.15769	032
VADURA 1210/1215-A	150 - 230 mm	6,5 - 7,5 bar	716.15948	032
	230 - 300 mm	7,0 - 8,5 bar	716.15949	032
Heating nozzles	3 - 150 mm		716.15770	032
	150 - 300 mm		716.15951	032

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CUTTING NOZZLES ACETYLENE

VADURA +PLUS+ 1210-A

High-efficiency ring/slot nozzles for machine cutting torches QUICKY and MS/MSZ

Type	Cutting range	Cutting O_2-pressure	Art. No.	Cat. No.
VADURA +PLUS+ 1210-A	2 - 5 mm	2,0 - 3,0 bar	716.16171 ✳	032
	3 - 5 mm	2,0 - 3,0 bar	716.16172 ✳	032
	6 - 10 mm	4,0 - 5,0 bar	716.16173 ✳	032
	10 - 25 mm	9,0 - 12,0 bar	716.16174 ✳	032
	25 - 50 mm	7,5 -11,0 bar	716.16175 ✳	032
	50 - 80 mm	9,0 - 12,0 bar	716.16176 ✳	032
	80 - 100 mm	9,5 - 11,0 bar	716.16177 ✳	032
	100 - 150 mm	6,5 - 7,0 bar	716.16178 ✳	032
	150 - 230 mm	6,5 - 7,5 bar	716.16179 ✳	032
	230 - 300 mm	7,0 - 8,5 bar	716.16180 ✳	032
Heating nozzles	3 - 150 mm		716.16181 ✳	032
	150 - 300 mm		716.16182 ✳	032

VADURA 9215-A

Cylindrical high-speed nozzles for machine cutting torches MS 932

Type	Cutting range	Cutting O_2-pressure	Art. No.	Cat. No.
VADURA 9215-A	3 - 5 mm	2,0 - 3,0 bar	716.16561	032
	6 - 10 mm	4,0 - 5,0 bar	716.16562	032
	10 - 25 mm	6,5 - 7,5 bar	716.16563	032
	25 - 40 mm	6,5 - 8,0 bar	716.16564	032
	40 - 60 mm	6,5 - 8,5 bar	716.16565	032
	60 - 100 mm	6,5 - 8,0 bar	716.16566	032
	100 - 150 mm	6,5 - 7,0 bar	716.16567	032
	150 - 230 mm	6,5 - 7,5 bar	716.16568	032
	230 - 300 mm	6,5 - 7,5 bar	716.16569	032
Heating nozzles	3 - 100 mm		716.16550	032
	100 - 300 mm		716.16560	032

VADURA 9090-A

Cylindrical high-speed nozzles for machine cutting torches MS 932
Optimised cutting to meet requirements of DIN EN 1090-2-6.3

Type	Cutting range	Cutting O_2-pressure	Art. No.	Cat. No.
VADURA 9090-A	3 - 10 mm	2,0 - 2,5 bar	716.16752 ✳	032
	10 - 25 mm	6,0 - 7,0 bar	716.16753 ✳	032
	25 - 40 mm	6,0 - 7,5 bar	716.16754 ✳	032
	40 - 60 mm	5,5 - 7,5 bar	716.16755 ✳	032
	60 - 100 mm	6,0 - 8,5 bar	716.16756 ✳	032
Heating nozzles	3 - 100 mm		716.16550	032

Version: 01/2022

✳ on request | picture may differ | subject to change

MESSER Cutting Systems

CUTTING NOZZLES
ACETYLENE

Gas-mixing high-speed nozzles for machine cutting torches QUICKY and MSID/MSIDZ — A-CID

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
A-CID	3 - 5 mm	2,0 - 3,0 bar	716.16020	007
	6 - 10 mm	4,0 - 5,0 bar	716.16021	007
	10 - 25 mm	6,0 - 7,0 bar	716.16022	007
	25 - 40 mm	6,0 - 7,0 bar	716.16023	007
	40 - 60 mm	5,5 - 7,0 bar	716.16024	007
	60 - 80 mm	2,0 - 2,5 bar	716.16025	007
	80 - 100 mm	5,0 - 6,0 bar	716.16026	007
	100 - 200 mm	3,0 - 6,0 bar	716.16027	007
	200 - 300 mm	4,0 - 6,0 bar	716.16028	007

Heavy-duty gas-mixing nozzles for machine cutting torch MSD — GRICUT 5310-A

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
GRICUT 5310-A	100 - 300 mm	3,5 - 7,0 bar	716.50103	006
	300 - 500 mm	3,5 - 10,0 bar	716.50104	006

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CUTTING NOZZLES
PROPANE / METHANE / MAPP / ETHYLENE

PL-RC — Standard ring/slot nozzles for machine cutting torches QUICKY and MS / MSZ

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
PL-RC	2 - 8 mm	2,0 - 2,5 bar	666.17225	007
	3 - 10 mm	2,0 - 3,0 bar	666.17226	007
	10 - 25 mm	4,0 - 5,0 bar	666.17227	007
	25 - 40 mm	4,0 - 5,0 bar	666.17228	007
	40 - 60 mm	4,0 - 5,0 bar	666.17229	007
	60 - 100 mm	5,0 - 6,0 bar	666.17230	007
	100 - 200 mm	5,5 - 6,5 bar	666.17231	007
	200 - 300 mm	6,5 - 8,5 bar	666.17232	007
Heating nozzles propane/methane	2 - 100 mm		666.17235	007
	100 - 300 mm		666.17236	007
Heating nozzles MAPP/ethylene	2 - 100 mm		716.15919	007
	100 - 300 mm		716.15920	007

for fuel gases propane, methane, MAPP, ethylene

GRICUT 1230-PMYE — High-speed ring/slot nozzles for machine cutting torches QUICKY and MS / MSZ

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
GRICUT 1230-PMYE	3 - 10 mm	1,0 - 5,0 bar	716.15901	032
	7 - 15 mm	5,0 - 7,0 bar	716.15902	032
	15 - 25 mm	6,0 - 7,0 bar	716.15903	032
	25 - 40 mm	6,0 - 7,5 bar	716.15904	032
	40 - 60 mm	5,5 - 7,5 bar	716.15905	032
	60 - 100 mm	6,0 - 8,5 bar	716.15906	032
Heating nozzles	3 - 100 mm		716.15900	032

for propane, methane, MAPP, ethylene

GRICUT +PLUS+1230-PMYE — High-speed ring/slot nozzles for machine cutting torches QUICKY and MS / MSZ

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
GRICUT +PLUS+ 123-PMYE	3 - 10 mm	1,0 - 5,0 bar	716.16147 ✱	032
	7 - 15 mm	5,0 - 7,0 bar	716.16148 ✱	032
	15 - 25 mm	6,0 - 7,0 bar	716.16149 ✱	032
	25 - 40 mm	6,0 - 7,5 bar	716.16150 ✱	032
	40 - 60 mm	5,5 - 7,5 bar	716.16151 ✱	032
	60 - 100 mm	6,0 - 8,5 bar	716.16152 ✱	032
Heating nozzles	3 - 100 mm		716.16156 ✱	032

for propane, methane, MAPP, ethylene

Version: 01/2022

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MESSER Cutting Systems

CUTTING NOZZLES
PROPANE / METHANE / MAPP / ETHYLENE

Ring/slot high-speed nozzles for machine cutting torches QUICKY and MS / MSZ
Optimised cutting to meet requirements of DIN EN 1090-2-6.3

GRICUT 1090-PMYE

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
GRICUT 1090-PMYE	10 - 25 mm	4,0 - 5,0 bar	716.16810 ✱	032
	25 - 40 mm	4,0 - 5,0 bar	716.16811 ✱	032
	40 - 60 mm	4,0 - 5,0 bar	716.16812 ✱	032
	60 - 100 mm	5,0 - 6,0 bar	716.16813 ✱	032
Heating nozzle	3 - 100 mm		716.16814 ✱	032

for fuel gases propane, methane, MAPP, ethylene

High-efficiency ring/slot nozzles for machine cutting torches QUICKY and MS / MSZ

GRICUT 1270-PY

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
GRICUT 1270-PY	2 - 5 mm	2,0 - 5,0 bar	716.15910	032
	3 - 5 mm	3,0 - 5, 0 bar	716.15921	032
	6 - 10 mm	4,0 - 5,0 bar	716.15922	032
	10 - 25 mm	9,0 - 12,0 bar	716.15923	032
	25 - 50 mm	7,5 - 11,0 bar	716.15924	032
	50 - 80 mm	9,0 - 12,0 bar	716.15925	032
	80 - 100 mm	9,5 - 11,0 bar	716.15926	032
Heating nozzle propane	2 - 100 mm		716.15930	032
Heating nozzle MAPP	2 - 100 mm		716.15932	032

for fuel gases propane, MAPP

High-efficiency ring/slot nozzles for machine cutting torches QUICKY and MS / MSZ

GRICUT +PLUS+ 1270-PY

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
GRICUT +PLUS+ 1270-PY	3 - 5 mm	2,0 - 5,0 bar	716.16184 ✱	032
	6 - 10 mm	4,0 - 5,0 bar	716.16185 ✱	032
	10 - 25 mm	9,0 - 12,0 bar	716.16186 ✱	032
	25 - 50 mm	7,5 - 11,0 bar	716.16187 ✱	032
	50 - 80 mm	9,0 - 12,0 bar	716.16188 ✱	032
	80 - 100 mm	9,5 - 11,0 bar	716.16189 ✱	032
Heating nozzle propane	2 - 100 mm		716.16190 ✱	032
Heating nozzle MAPP	2 - 100 mm		716.16191 ✱	032

for fuel gases propane, MAPP

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MACHINE CUTTING NOZZLES

CUTTING NOZZLES
PROPANE / METHANE / MAPP / ETHYLENE

GRICUT 1280-PMYE — High-speed ring/slot nozzles for machine cutting torches QUICKY and MS / MSZ

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
GRICUT 1280-PMYE	100 - 200 mm	7,5 - 9,5 bar	716.15927	032
	200 - 250 mm	6,5 - 8,5 bar	716.15928	032
	250 - 300 mm	6,5 - 8,5 bar	716.15929	032
Heating nozzle	100 - 300 mm		716.15931	032
Special nozzles for the cutting of	60 - 100 mm	6,0 - 8,5 bar	716.15938	032
stone moulds	100 - 150 mm	4,0 - 5,5 bar	716.15933	032

for fuel gases: propane, methane, Mapp, ethylene

GRICUT +PLUS+ 1280-PMYE — High-speed ring/slot nozzles for machine cutting torches QUICKY and MS / MSZ

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
GRICUT +PLUS+ 1280-PMYE	100 - 200 mm	7,5 - 9,5 bar	716.16192 ✱	032
	200 - 250 mm	6,5 - 8,5 mm	716.16193 ✱	032
	250 - 300 mm	6,5 - 8,5 mm	716.16194 ✱	032
Heating nozzle	100 - 300 mm		716.16195 ✱	032

for fuel gases: propane, methane, Mapp, ethylene

GRICUT 9230-PMYE / GRICUT 9280-PMYE — Cylindrical high-speed nozzles for machine cutting torches MS 932

Type	Cutting range	Cutting O_2-pressure	Art.No.	Cat.No.
GRICUT 9230-PMYE	3 - 10 mm	1,0 - 5,0 bar	716.16551	032
	7 - 15 mm	5,0 - 7,0 bar	716.16552	032
	15 - 25 mm	6,0 - 7,0 bar	716.16553	032
	25 - 40 mm	6,0 - 7,5 bar	716.16554	032
	40 - 60 mm	5,5 - 7,5 bar	716.16555	032
	60 - 100 mm	6,0 - 8,5 bar	716.16556	032
Heating nozzle	3 - 100 mm		716.16550	032
GRICUT 9280-PMYE	100 - 200 mm	7,5 - 9,5 bar	716.16557	032
	200 - 250 mm	6,5 - 8,5 bar	716.16558	032
	250 - 300 mm	6,5 - 8,5 bar	716.16559	032
Heating nozzle	100 - 300 mm		716.16560	032

for fuel gases: propane, methane, Mapp, ethylene

Version: 01/2022

✱ on request | picture may differ | subject to change

MACHINE CUTTING NOZZLES

CUTTING NOZZLES
PROPANE / METHANE / MAPP / ETHYLENE

Cylindrical high-speed nozzles for machine cutting torches MS 932
Optimised cutting to meet requirements of DIN EN 1090-2-6.3

GRICUT 9090-PMYE

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
GRICUT 9090-PMYE	3 - 10 mm	2,0 - 3,0 bar	716.16761 ✱	032
	10 - 25 mm	4,0 - 5,0 bar	716.16762 ✱	032
	25 - 40 mm	4,0 - 5,0 bar	716.16763 ✱	032
	40 - 60 mm	4,0 - 5,0 bar	716.16764 ✱	032
	60 - 100 mm	5,0 - 6,0 bar	716.16765 ✱	032
Heating nozzle	3 - 100 mm		716.16550	032

for fuel gases: propane, methane, MAPP, ethylene

Standard gas-mixing nozzles with 30° cone, for QUICKY and MSID / MSIDZ

GRICUT 8281-PMYE

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
GRICUT 8281-PMYE	3 - 10 mm	2,0 - 3,0 bar	716.16038	032
	10 - 25 mm	3,0 - 4,5 bar	716.16039	032
	25 - 40 mm	4,0 - 5,0 bar	716.16040	032
	40 - 60 mm	4,5 - 5,5 bar	716.16041	032
	60 - 100 mm	5,0 - 6,0 bar	716.16042	032
	100 - 200 mm	5,5 - 6,5 bar	716.16043	032
	200 - 300 mm	6,5 - 8,5 bar	716.16044	032
Heating nozzles propane / methane	3 - 100 mm		716.15988	032
	100 - 300 mm		716.15989	032
Heating nozzles MAPP / ethylene	3 - 100 mm		716.15978	032
	100 - 300 mm		716.15979	032

for fuel gases: propane, methane, MAPP, ethylene

Gas-mixing nozzles with mixers, for machine cutting torches MSID / MSIDZ

GRICUT 8281-PM

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
GRICUT 8281-PM	200 - 500 mm	6,0 - 12,0 bar	716.16400	006
Heating nozzle	200 - 500 mm		546.12340	006

for fuel gases: propane, methane

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MACHINE CUTTING NOZZLES

CUTTING NOZZLES
PROPANE / METHANE / MAPP / ETHYLENE

GRICUT 8280-PMYE — High-speed gas-mixing nozzles with 30° cone, for machine torches MSID / MSIDZ

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
GRICUT 8280-PMYE	3 - 7 mm	1,0 - 5,0 bar	716.16071	032
	7- 15 mm	5,0 - 7,0 bar	716.16072	032
	15 - 25 mm	5,5 - 7,0 bar	716.16073	032
	25 - 40 mm	5,0 - 7,0 bar	716.16074	032
	40 - 60 mm	6,0 - 7,5 bar	716.16075	032
	60 - 100 mm	6,0 - 8,5 bar	716.16076	032
	100 - 200 mm	7,5 - 9,5 bar	716.16077	032
	200 - 250 mm	6,5 - 8,5 bar	716.16078	032
	250 - 300 mm	6,5 - 8,5 bar	716.16079	032
Heating nozzles	3 - 100 mm		716.16080	032
	100 - 300 mm		716.16100	032

for fuel gases: propane, methane, MAPP, ethylene

GRICUT 8480-PMYE — Heavy-duty outer-mixing nozzles for machine cutting torch MSAP

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
Nozzle body GRICUT 8480-PMYE	100 - 300 mm	8,0 - 9,0 bar	716.16420	032
	300 - 450 mm	8,0 - 9,0 bar	716.16421	032
	450 - 600 mm	8,0 - 9,0 bar	716.16422	032
Heating nozzle GRICUT 8480-PMYE	100 - 600 mm		716.16419	032
SET nozzle body and heating nozzle GRICUT 8480-PMYE	100 - 300 mm	8,0 - 9,0 bar	716.16415	032
	300 - 450 mm	8,0 - 9,0 bar	716.16416	032
	450 - 600 mm	8,0 - 9,0 bar	716.16417	032

for fuel gases: propane, methane, MAPP, ethylene

GRICUT 5281-PMY — Heavy-duty post mixing nozzles with 30° cone, for machine cutting torch MSD

Type	*Cutting range*	*Cutting O_2-pressure*	*Art.No.*	*Cat.No.*
GRICUT 5281-PMY	100 - 300 mm	3,0 - 7,0 bar	716.50100	006
	300 - 450 mm	7,0 - 9,0 bar	716.50101	006
	450 - 600 mm	8,0 - 12,0 bar	716.50209	006
Heating nozzles	100 - 450 mm		716.50236	006
	450 - 600 mm		716.50211	006

for fuel gases: propane, methane, MAPP

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

TRUST IN CERTIFIED SAFETY !

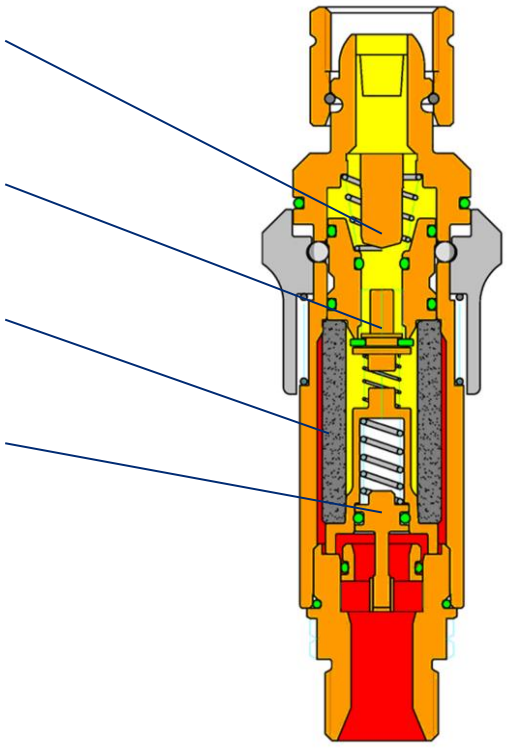
Safety devices for technical gases give reliable protection against reverse flow of gas and flashbacks for pressure regulators, tapping points of pipe line systems and individual cylinders, hoses, oxyfuel equipment and flame cutting machines as well as gas supply stations. They prevent the entry of air or oxygen into supply lines or individual cylinders and prevent flashbacks and continued gas supply in case of a backfire. Built-in filters give protection against impurities and guarantee long operating and service lives.

Our products conform to the requirements of the international standards DIN EN 561, DIN EN ISO 5175 and ISO 7289. They are certified as “BAM certified under monitoring” and have the necessary world-wide approvals. All safety devices and couplings have been design checked and are subjected to 100 % testing.

By using safety devices you fulfil the regulatory requirement to use appropriate equipment when working with gases and meet the accident prevention regulations BGV D1.

SAFETY EQUIPMENT FROM MESSER CUTTING SYSTEMS

- **(PV) Pressure-sensitive gas cut-off system**
  pressure controlled gas cut-off prevents continued gas flow if shock waves arise. The flow of gases can be reinstated manually (type: DS only)
- **(NV) Gas shut-off valve**
  gas shut-off valve allows the gases to flow only in one direction and reliably prevents a creeping or sudden back-flow of air or oxygen into the distribution system or the individual cylinder
- **(FA) Flame arrestor**
  flame arrestor stops any flame coming from the gas outlet side and reduces the flame temperature to get below the ignition point so that the gas in the inlet area cannot be ignited
- **(TV) Thermal gas cut-off system**
  temperature controlled gas cut-off consists of a spring-loaded valve which is held open by a fusible link. If the safety device gets too hot because of a flashback or backfire, the valve is automatically closed by the melting of the link, thus cutting off the gas flow



Conversion table

Gas type	Conversion factor (U)
Air	1
Oxygen	0,95
Hydrogen	2,50
Methane	1,40
Propane	> 1 bis 0,9 *
Acetylene	1,20
Ethylene	1,012
MAPP	0,80

***** 1,0 at pre-pressure Pv = 0,7 bar

Volume oxygen =
Volume air x conversion factor

Volume air (e.g. at 2,5 bar pre- pressure at flashback arrestor inlet) =16 m³/h
Conversion factor (U) = 0,95

Volume oxygen: 16,0 x 0,95 = 15,2m³/h

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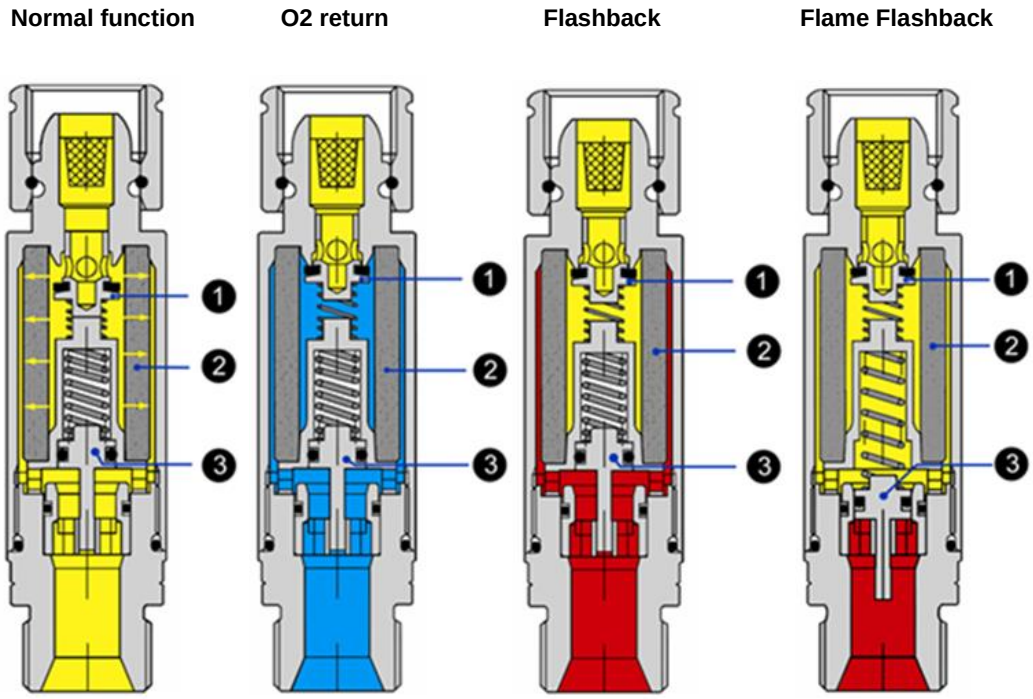
SAFETY DEVICE ACC. TO DIN EN ISO 5157-1 AND -2



1. Gas shut-off valve 2. Flame arrestor 3. Thermal gas cut-off system

APPLICATIONS

BACKFIRE

The penetration of the flame into the nozzle and/or into the mixing tube of the torch with an explosive noise, whereby the flame is extinguished.

FLASHBACK

The penetration of the flame into the torch, where it continues to burn in/around the mixing area.

GAS BACKFLOW

The penetration of the gas (O2) under higher pressure into the supply line of the gas under lower pressure.

FLAME FLASHBACK

The penetration of the flame past the mixing point into the hose and possibly further.

Version: 01/2022

Version: 01/2022

For the protection of cylinder regulators and tapping points — DGN

Gas type	*Connection*	*Operating pressure / flow rate*	*Art. No.*	*Cat. No.*
Oxygen	G 1/4“ RH	25 bar / 11 m³/h	0.463.386	041
Oxygen	G 3/8“ RH	25 bar / 33 m³/h	0.463.387	041
Fuel gas	G 3/8“ LH	5,0 bar / 4 m³/h	0.463.385	041

Safety units: FA, NV, TV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, Hydrogen 3,5 bar

For the protection of cylinder regulators and tapping points — DG 91 N

Gas type	*Connection*	*Operating pressure / flow rate*	*Art. No.*	*Cat. No.*
Oxygen	G 1/4“ RH	15 bar / 52 m³/h	0.463.831	041
Oxygen	G 3/8“ RH	15 bar / 52 m³/h	0.463.832	041
Oxygen	G 1/2“ RH	15 bar / 52 m³/h	0.463.833	041
Fuel gas	G 3/8“ LH	5,0 bar / 6 m³/h	0.463.829	041
Fuel gas	G 1/2“ LH	5,0 bar / 19 m³/h	0.463.830	041

Safety units: FA, NV, TV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 4,0 bar

For the protection of cylinder regulators and tapping points — DS 1000

Gas type	*Connection*	*Operating pressure / flow rate*	*Art. No.*	*Cat. No.*
Oxygen	G 1/4“ RH	15 bar / 8 m³/h	0.463.835	041
Oxygen	G 3/8“ RH	15 bar / 27 m³/h	0.463.836	041
Fuel gas	G 3/8“ LH	5,0 bar / 3 m³/h	0.463.834	041

Safety units: FA, NV, TV, PV
with pressure-sensitive gas cut-off, can be unblocked manually

Fuel gas Operating pressure (max.): Acetylene 1,5 bar; hydrogen 3,5 bar

For the protection of cylinder regulators and tapping points — DS 2000

Gas type	*Connection*	*Operating pressure / flow rate*	*Art. No.*	*Cat. No.*
Oxygen	G 1/4“ RH	15 bar / 16m³/h	0.463.838	041
Oxygen	G 3/8“ RH	15 bar / 42 m³/h	0.463.839	041
Fuel gas	G 3/8“ LH	5,0 bar / 6 m³/h	0.463.837	041

Safety units: FA, NV, TV, PV
with pressure-sensitive gas cut-off, can be unblocked manually

Fuel gas Operating pressure (max.): Acetylene 1,5 bar; hydrogen 4,0 bar

FA = Flame arrestor, **NV** = Non-return valve, **SV** = Gas shut-off
TV = Thermal-sensitive cut-off, **PV** = Pressure-sensitive gas shut-off

Version: 01/2022

SAFETY DEVICES

FOR CYLINDER REGULATORS AND TAPPING POINTS

DEMAX 5

To protect cylinder regulators and tapping points

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	G 1“ RH	15 bar	0.463.841	041
Fuel gas	G 1“ RH	5,0 bar	0.463.840	041

Safety units: FA, NV, TV
for high flow rates

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 4,0 bar

(for connection fittings see next page)

SIMAX 3

To protect cylinder regulators and tapping points

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	G 1“ RH	15 bar	0.463.843	041
Fuel gas	G 1“ RH	5,0 bar	0.463.842	041

Safety units: FA, NV, TV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 4,0 bar

(for connection fittings see next page)

SIMAX 5

To protect cylinder regulators and tapping points

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	G 1“ RH	15 bar	0.463.845	041
Fuel gas	G 1“ RH	5,0 bar	0.463.844	041

Safety units: FA, NV, TV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 4,0 bar

(for connection fittings see next page)

SIMAX 8

To protect cylinder regulators and tapping points

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	G 1“ RH	15 bar	0.463.847	041
Fuel gas	G 1“ RH	5,0 bar	0.463.846	041

Safety units: FA, NV, TV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 4,0 bar

(for connection fittings see next page)

FA = Flame arrestor, **NV** = Non-return valve, **SV** = Gas shut-off
TV = Thermal-sensitive cut-off, **PV** = Pressure-sensitive gas shut-off

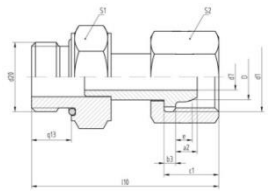
Version: 01/2022

INLET- AND OUTLET CONNECTORS FOR DEMAX AND SIMAX

Inlet connection nipple for non-flammable gases — DEMAX / SIMAX

Connection on DEMAX / SIMAX	*Hose connection*	*Art. No.*	*Cat. No.*
G 1“	G 3/8“ RH	0.463.410	041
G 1“	G 1/2“ RH	0.463.408	041
G 1“	G 3/4“ RH	0.463.380	041
G 1“	G 1“ RH	0.463.339	041

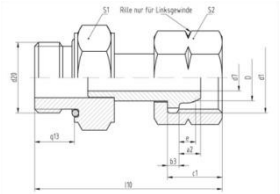
Including O-ring seal between connection nipple and safety unit



Inlet connection nipple for flammable gases — DEMAX / SIMAX

Connection on DEMAX / SIMAX	*Hose connection*	*Art. No.*	*Cat. No.*
G 1“	G 3/8“ LH	0.463.411	041
G 1”	G 1/2“ LH	0.463.409	041
G 1”	G 3/4“ LH	716.52536	041
G 1”	G 1“ LH	0.463.340	041

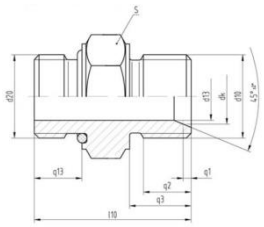
Including O-ring seal between connection nipple and safety unit



Outlet connection nipple for non-flammable gases — DEMAX / SIMAX

Connection on DEMAX / SIMAX	*Hose connection*	*Art. No.*	*Cat. No.*
G 1“	G 3/8“ RH	0.463.414	041
G 1	G 1/2“ RH	0.463.412	041
G 1	G 3/4“ RH	0.463.341	041
G 1	G 1“ RH	0.463.343	041

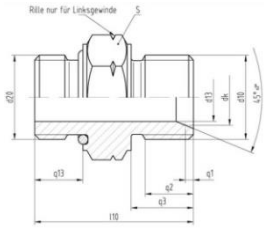
Including O-ring seal between connection nipple and safety unit



Outlet connection nipple for flammable gases — DEMAX / SIMAX

Connection on DEMAX / SIMAX	*Hose connection*	*Art. No.*	*Cat. No.*
G 1“	G 3/8“ LH	0.463.415	041
G 1	G 1/2“ LH	0.463.413	041
G 1	G 3/4“ LH	0.463.342	041
G 1	G 1“ LH	0.463.344	041

Including O-ring seal between connection nipple and safety unit



Version: 01/2022

SAFETY DEVICES

FOR PROTECTION OF WORKING EQUIPMENT / TAPPING POINTS

ATEX

(negative pressure) for individual cylinder regulators and tapping points

Model	*Gas type*	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
ATEX 10	Fuel gas	G 3/8“F LH / G 3/8“ LH“	5,0	0.463.848	041
ATEX 20	Fuel gas	G 3/8“F LH / G 3/8“ LH“	5,0	0.463.849	041

Safety units: FA, NV, TV
Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 3,5 bar
With acetylene, sometimes requires the use of torches with increased suction. See also STARCUT 1622-A/ATEX

IGG

For the protection of working equipment

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	G 1/4“ RH - M 11 x 1 RH	10	770.20114 ❋	041
Fuel gas	G 3/8“ LH - M 14 x 1 LH	5,0	770.20115 ❋	041

Safety units: FA, NV, built-in protection in handle STARLET 1302 S

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 3,5 bar

GT

For the protection of working equipment

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat.No.*
Oxygen	G 1/4” RH / 9,0 mm	20 bar	0.463.856	041
Oxygen	G 3/8” RH / 6,3 mm	20 bar	0.463.394	041
Oxygen	G 3/8” RH / 9,0 mm	20 bar	0.463.382	041
Fuel gas	G 3/8” LH / 6,3 mm	5,0 bar	0.463.628	041
Fuel gas	G 3/8” LH / 9,0 mm	5,0 bar	0.463.391	041

Safety units: FA, NV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 3,5 bar

TT

To be fitted into hose lines

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	3,2	20	0.463.853	041
Oxygen	6,3	20	0.463.854	041
Oxygen	9,0	20	0.463.855	041
Fuel gas	3,2	5,0	0.463.850	041
Fuel gas	6,3	5,0	0.463.851	041
Fuel gas	9,0	5,0	0.463.852	041

Safety units: FA, NV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 3,5 bar

FA = Flame arrestor, **NV** = Non-return valve, **SV** = Gas shut-off
TV = Thermal-sensitive cut-off, **PV** = Pressure-sensitive gas shut-off

Version: 01/2022

❋ **on request** | **picture may differ** | **subject to change**

MESSER Cutting Systems

SAFETY DEVICES

FOR PROTECTION OF CYLINDER REGULATORS, TAPPING POINTS AND WORKING EQUIPMENT. WITH QUICK COUPLING

For the protection of cylinder regulators and tapping points — DGN-DK

Gas type	*Connection*	*Operating pressure / flow rate*	*Art. No.*	*Cat. No.*
Oxygen	G 1/4“ RH	15 bar / 8 m³/h	0.463.827	041
Oxygen	G 3/8“ RH	15 bar / 22 m³/h	0.463.828	041
Fuel gas	G 3/8“ LH	5,0 bar / 3 m³/h	0.463.826	041

Safety units: FA, NV, TV
with hose coupling

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 3,5 bar

For the protection of working equipment — DKST

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	6,3	15	0.463.863	041
Oxygen	9,0	15	0.463.864	041
Fuel gas	9,0	5,0	0.463.862	041

Safety units: FA, NV
-reverse flow direction-

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 3,5 bar

For the protection of working equipment — DKSG

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	G 1/4“ RH	20	0.463.866	041
Oxygen	G 3/8“ RH	20	0.463.867	041
Fuel gas	G 3/8“ LH	5,0	0.463.865	041

Safety units: FA, NV
with hose coupling

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 3,5 bar

For the protection of working equipment — GG

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	G 1/4“ RH	25	0.463.389	041
Oxygen	G 3/8“ RH	25	0.463.390	041
Fuel gas	G 3/8“ LH	5,0	0.463. 388	041

Safety units: FA, NV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, hydrogen 3,5 bar

FA = Flame arrestor, **NV** = Non-return valve, **SV** = Gas shut-off
TV = Thermal-sensitive cut-off, **PV** = Pressure-sensitive gas shut-off

Version: 01/2022

SAFETY DEVICES

FOR MACHINE CUTTING TORCHES

QUICKY

Safety devices for machine cutting torch QUICKY

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	M 7 x 0,75	20	716.11130	041
Fuel gas	M 7 x 0,75	5,0	716.11129	041

Safety units: FA, NV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, Hydrogen 3,5 bar

MS / MSID / MSAP

Non-return valves for machine cutting torches MS / MSID / MSAP

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Heating oxygen	G 1/4“	15	0.647.583	041
Cutting oxygen	G 3/8“	15	0.647.584	041
Fuel gas	G 3/8“ LH	5,0	0.346.364	041
Ignition gas mixture for MS 3450	G 1/4“ LH	5,0	716.51362	041
Ignition gas mixture for MS 3452	G 3/8“ LH	5,0	716.11048	041
Ignition gas mixture for MS 3452	G 1/4“ LH	5,0	716.11173	041

Safety units: NV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, Hydrogen 3,5 bar

MSD

Non-return valves for machine cutting torch MSD

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Heiz-Oxygen	G 3/8“	15	0.647.584	041
Schneid-Oxygen	G 1/2“	15	0.346.020	041
Fuel gas	G 3/8“ LH	5,0	0.346.364	041

Safety units: NV

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, Hydrogen 3,5 bar

DG 91 UA

Safety devices for machine cutting torches

Gas type	*Connection*	*Operating pressure (max.)*	*Art. No.*	*Cat. No.*
Oxygen	G 1/4“ RH	15	0.463.372	041
Oxygen	G 3/8“ RH	15	0.463.373	041
Oxygen	G 1/2“ RH	15	0.463.374	041
Fuel gas	G 3/8“ LH	5,0	0.463.857	041
Fuel gas	G 1/2“ LH	5,0	0.463.858	041

Safety units: FA, NV **-reverse flow direction-**

Fuel gas Operating pressure (max.): Acetylene 1,5 bar, Hydrogen 3,5 bar

FA = Flame arrestor, **NV** = Non-return valve, **SV** = Gas shut-off
TV = Thermal-sensitive cut-off, **PV** = Pressure-sensitive gas shut-off

Version: 01/2022

❋ on request | picture may differ | subject to change

MESSER Cutting Systems

Euro-quick couplings for the connection of hoses to torch handles — DKG

Description	Gas type	Connection	Art. No.	Cat. No.
DKG	Fuel gas	G 3/8“ LH	0.463.305	041
	Oxygen	G 1/4“	0.463.306	041
	Oxygen	G 3/8“	0.463.358	041
	Inert gases	G 1/4“	0.463.307	041
	Inert gases	G 3/8“	0.463.359	041

Safety units: SV = gas shut-off

Euro-quick couplings for the connection of hoses to torch handles — DKT

Description	Gas type	Hose tail	Art. No.	Cat. No.
DKT	Fuel gas	6,3 mm	0.463.360	041
	Fuel gas	9,0 mm	0.463.308	041
	Oxygen	6,3 mm	0.463.309	041
	Oxygen	9,0 mm	0.463.361	041
	Inert gases	6,3 mm	0.463.310	041
	Inert gases	9,0 mm	0.463.362	041

Safety units: SV = gas shut-off

Euro-quick couplings for the connection of hoses to torch handles — DKD

Description	Gas type	Connection	Art. No.	Cat. No.
DKD	Fuel gas	G 3/8“ LH	0.463.311	041
	Oxygen	G 1/4“	0.463.312	041
	Oxygen	G 3/8”	0.463.368	041
	Inert gases	G1/4”	0.463.313	041
	Inert gases	G 3/8”	0.463.369	041

Safety units: SV = gas shut-off

Coupling-pins for working equipment — D1

Description	Gas type	Connection	Art. No. **D1**	Art. No. **D4**	Cat. No.
D1 / D4	Fuel gas	G 3/8“ LH	0.463.299	0.463.432	041
	Oxygen	G 1/4"	0.463.300	0.463.430	041
	Oxygen	G 3/8“	0.463.363	0.463.431	041
	Inert gases	G 1/4"	0.463.301	0.463.433	041
	Inert gases	G 3/8“	0.463.364	0.463.434	041

FA = Flame arrestor, **NV** = Non-return valve, **SV** = Gas shut-off
TV = Thermal-sensitive cut-off, **PV** = Pressure-sensitive gas shut-off

Version: 04/2021

QUICK COUPLING AND TEST DEVICE

D2 — Coupling-pins for working equipment

Description	*Gas type*	Connection	*Art.-No. D2*	*Cat.-No..*
D2	Fuel gas	6,3 mm	*0.463.365*	041
	Fuel gas	9 mm	0.463.302	041
	Oxygen	6,3 mm	0.463.303	041
	Oxygen	9 mm	0.463.366	041
	Inert gases	6,3 mm	0.463.304	041
	Inert gases	9 mm	0.463.367	041

PVGD — Testing equipment for the annual testing of safety devices (DIN EN 561 and DIN EN ISO 5175) by a trained and authorised person.

Description	*Art.-No.*	*Cat.-No.*
PVGD	0.463.825	000

Compact design, integrated clamping device, quick adjustment
Checking of:

- Function of the gas check valve
- Tightness
- Flow capacity

Incl. adapter suitable for safety devices with connection G3/8, UNF, G1/4, 5/8 "BSP and G1/2.
Further adapters available on request to be able to check safety devices with larger diameters or sizes.

Version: 01/2022

ACCESSORIES AND SPARE PARTS FOR MULTI-PURPOSE TORCH SYSTEMS, HAND- / MACHINE TORCHES

Spare parts for multi-purpose torch systems and hand cutting torches

Description	*Torch system*	*Art. No.*	*Cat. No.*
Torch carriage	STARLET / STAR / STARCUT / ESSEN to be fixed at torch head	716.00485	024
Torch carriage	STARLET and cutting nozzles ANME / PNME to be fixed at cutting nozzle	716.06660	024
Radius bar	for circular cuts Ø 140 to 800 mm	716.00699	038
Sliding Skid 138 mm width	For STARCUT & ESSEN to assembly at torch head	716.07904	038
Ball bearing radius bar, for torch head Ø 27 mm	for circular cuts Ø 20 to 120 mm for STARLET cutting attachments (short distance pin)	716.00584	024
Ball bearing radius bar, for torch head Ø 27 mm	for circular cuts Ø 20 to 120 mm for STAR / STARCUT / ESSEN (long distance pin)	320.61000	038
Radius bar, for torch head Ø 27 mm	for straight cutting attachments	551.22300	004
Torch spanner		186.58074	038
Steel case std. (without picture)	for STARLET / STAR	716.01842	038
Steel case *WS* (without picture)	for STARLET *WS* kit	716.02649	038
Steel case *WS* (without picture)	for STARLET *WS* kit (handle type 1302)	716.06344	038
Plastic case without insert	for STARLET assembly kit	716.06446	038
Inlay 1 for plastic case (716.06446)	for STARLET assembly kit	716.07020	999
Inlay 2 for plastic case (716.06446)	for STARLET assembly kit	716.07021	999
10 mm Connecting nut for handle	MINITHERM (shaft Ø 10 mm)	716.05980	008
15 mm Connecting nut for handle	STARLET (shaft Ø 15 mm)	242.49970	008
20 mm Connecting nut for handle	STAR (shaft Ø 20 mm)	242.52020	008








Version: 01/2022

ACCESSORIES AND SPARE PARTS FOR MULTI-PURPOSE TORCH SYSTEMS, HAND- / MACHINE TORCHES

EURO COUPLINGS

Euro-quick couplings for the connection of hoses to torch handles

Description	*Gas type*	*Connection*	*Hose tail*	*Art. No.*	*Cat. No.*
DKG	Fuel gas	G 3/8“ LH		0.463.305	041
	Oxygen	G 1/4“		0.463.306	041
DKT	Fuel gas		9 mm	0.463.308	041
	Fuel gas		6,3 mm	0.463.360	041
	Oxygen		6,3 mm	0.463.309	041
Coupling pin D 1,	Fuel gas	G 3/8“ LH		0.463.299	041
with union nut	Oxygen	G 1/4“		0.463.300	041

EURO COUPLINGS

Euro-quick couplings for the connection of hoses to pressure regulators

Description	*Gas type*	*Connection*	*Hose tail*	*Art. No.*	*Cat. No.*
DKD	Fuel gas	G 3/8“ LH		0.463.311	041
	Oxygen	G 1/4“		0.463.312	041
Coupling pin D 2	Fuel gas		8 mm	0.463.302	041
	Fuel gas		6,3 mm	0.463.365	041
	Oxygen		6,3 mm	0.463.303	041

ADJUSTING VALVES

Accessories for machine cutting torches

Description	*Connection/hose tail*	*Art. No.*	*Cat. No.*
Heating oxygen	G 1/4“, DN 6	718.00500	005
Cutting oxygen	G 3/8“, DN 9	718.00501	005
Fuel gas	G 3/8“ LH, DN 9	718.00502	005
Heating oxygen	G 1/2“, DN 8	718.04290	000
Cutting oxygen	G 1/2“, DN 11	718.03691	148
Fuel gas	G 1/2“ LH, DN 8	718.00855	005
Adjusting valves for machine cutting torches MS / MSID / MSAP			

Version: 01/2022

✱ on request | picture may differ | subject to change

MESSER Cutting Systems

ACCESSORIES AND SPARE PARTS FOR MULTI-PURPOSE TORCH SYSTEMS, HAND / MACHINE TORCHES

OxyCon - Optional adjusting valve for hand/machine torches

MONOBLOCK VALVES

Description	*Comments*	*Art. No.*	*Cat. No.*
Monobloc valve 1953 G	incl. identification markers for oxygen and fuel gas	716.05151	024

T-fitting for machine cutting torches MS / MSID / MSAP / MSD

TEST ADAPTERS

Description	*Torch inlet connection*	*Art. No.*	*Cat. No.*
Heating oxygen	G 1/4“	718.25530	004
Cutting oxygen	G 3/8“	718.25532	004
Fuel gas	G 3/8“ LH	718.25534	004

To be used with test pressure gauges, for machine torches MS / MSID / MSAP / MSD

Test pressure gauges for machine cutting torches MS / MSID / MSAP / MSD Acc. to ISO 5171

TEST GAUGES

Description		*Art. No.*	*Cat. No.*
Oxygen	Scale 0 - 16 bar / working range 10 bar	0.640.477	008
	Scale 0 - 25 bar / working range 16 bar	0.640.109	008
Acetylene	Scale 0 - 2,5 bar / working range 1,5 bar	0.640.479	008
MAPP / propane / methane	Scale 0 - 4 bar / working range 2,5 bar	0.640.069	004
Propane / methane / MAPP	Scale 0 - 2,5 bar / working range 1,5 bar	0.640.070	004
Ø 63mm , conn. thread G1/4” **-To be mounted in centre of test adapter-**			
Gauge seal		452.08020	008

Torch head rework for machine cutting torches

MILLING TOOLS

Description	*Type of cutting nozzle*	*For machine cutting torch*	*Art. No.*	*Cat. No.*
Nozzle seat milling tool WSF 7521	Ring/slot nozzles	MS / MSZ	0.939.005	000
Nozzle seat milling tool WSF 7019	Gas-mixing nozzles 30°	MSID	0.912.001	000

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ACCESSORIES FOR MULTI-PURPOSE TORCH SYSTEMS, HAND / MACHINE TORCHES

ACCESSORIES

Optional: for machine cutting torches MS / MSID / MSAP / MSD
Cutting oxygen supply without pressure-drop, above 100 mm cutting thickness

Description	*Torch inlet conn.*	*Art. No.*	*Cat. No.*
Ball valve	G 3/8" – DN 10 - Oxygen	722.44775	000
Non-return valve GRV 91 UA	G 1/2" (M) – G 3/8" (F) - Oxygen	770.05116	043

Safety units: FA, NV

FA = Flame arrestor

NV = Non-return valve

ACCESSORIES

Accessories for cutting nozzles

Description	*Comments*	*Art. No.*	*Cat. No.*
Nozzle cleaner set cpl. for hand cutting nozzles	with slot cleaners, in box	052.29201	038
Nozzle cleaner set cpl. for machine cutting nozzles	with slot cleaners, in box	716.01085	004
Nozzle cleaning needle conical	for cutting oxygen channel	716.01879	004
Nozzle cleaning brush	Brass	052.04020	004
Nozzle box	for cutting nozzles	666.16243	008
Nozzle support plate (insert)	for ring/slot nozzles	050.02920	008
	for block nozzles	050.02940	008
	for gas-mixing nozzles	050.02950	008
	for VADURA 1210-A / 1215-A	716.02548	008
	for VADURA 9215-A & GRICUT 9230-PMYE	716.07332	999

TOOLS

Torch head rework of hand cutting torches STARCUT, ESSEN, cutting attachments STARLET / STAR

Description	*Type of cutting nozzle*	*Art. No.*	*Cat. No.*
Nozzle seat milling tool WSF 7521	for Ring/slot nozzles	0.939.005	000
Nozzle seat milling tool WSF 7019	for gas-mixing nozzles 30°	0.912.001	000
Nozzle seat milling tool WSF 7267	for Block nozzles 45°	0.939.004	000

Version: 01/2022

❋ on request | picture may differ | subject to change

MESSER Cutting Systems

Oxygen hoses acc. to DIN EN ISO 3821, identification color: blue — OXYGEN

Dimensions	*Marking*	*Torch system*	*Art. No.*	*Cat. No.*
DN 3,2 x 1,8	Messer	MINITHERM	0.140.079	043
DN 6,3 x 3,5	Messer	STARLET	051.00510	043
DN 6 x 5	Messer	STAR / STARCUT / ESSEN	051.01010	043
DN 8 x 3,5	Messer		0.469.033	000
DN 9 x 5,5	Messer	SUPERTHERM	051.01060	043
DN 11 x 5,5	Messer		051.01200	043

Sold by the meter

Acetylene hoses acc. To DIN EN ISO 3821, identification color: red — ACETYLENE

Dimensions	*Marking*	*Torch system*	*Art. No.*	*Cat. No.*
DN 3,2 x 1,8	Messer	MINITHERM	0.140.078	043
DN 6,3 x 3,5	Messer	STARLET	051.00010	043
DN 8 x 3,5	Messer	STARLET / STAR / STARCUT / ESSEN	051.00040	043
DN 11 x 5,5	--	SUPERTHERM	051.00050	043
DN 12 x 5,5	--		051.00130	043

Sold by the meter

Hoses for all fuel gases acc. to DIN EN ISO 3821, identification color: orange / red — ALL FUEL GASES

Dimensions	*Marking*	*Torch system*	*Art. No.*	*Cat. No.*
DN 6,3 x 3,5	Messer	STARLET	0.462.863	043
DN 9 x 3,5	Messer	STARLET / STAR / STARCUT / ESSEN	0.462.859	043
DN 10 x 4	Messer	SUPERTHERM	0.462.860	043

Sold by the meter

Twin oxyfuel hoses-oxygen / fuel gas- acc. to DIN EN ISO 3821, identification colors: blue / red — TWIN HOSES

Dimensions	*Marking*	*Torch system*	*Art. No.*	*Cat. No.*
DN 6,3 x 5 / DN 9 x 3,5	Oxygen blue / fuel gas red	STARLET / STAR / STARCUT / ESSEN	0.462.147	043

Sold by the meter, without fittings

Version: 01/2022

TWIN HOSES

Twin oxyfuel hoses-oxygen / fuel gas- acc. to DIN EN ISO 3821, identification colors: blue / red, cpl. assembled with fittings

Hose length	*Oxygen G 1/4“*	*Fuel gas G 3/8“LH*	*Art. No.*	*Cat. No.*
5 m	DN 6 x 5	DN 8 x 3,5	0.469.013	043
10 m	DN 6 x 5	DN 8 x 3,5	0.469.014	043
20 m	DN 6 x 5	DN 8 x 3,5	0.469.015	043
40 m	DN 6 x 5	DN 8 x 3,5	0.469.016	043
5 m	DN 6 x 3,5	DN 6 x 3,5	0.469.017	043
10 m	DN 6 x 3,5	DN 6 x 3,5	0.469.018	043
20 m	DN 6 x 3,5	DN 6 x 3,5	0.469.019	043
40 m	DN 6 x 3,5	DN 6 x 3,5	0.469.020	043

TWIN HOSES

Twin oxyfuel hoses-oxygen / fuel gas- acc. to DIN EN ISO 3821, identification colors: blue / orange, cpl. assembled with fittings

Hose length	*Oxygen G 1/4“*	*Fuel gas G 3/8“LH*	*Art. No.*	*Cat. No.*
10 m	DN 6 x 5	DN 8 x 3,5	0.469.021	043
20 m	DN 6 x 5	DN 8 x 3,5	0.469.022	043
40 m	DN 6 x 5	DN 8 x 3,5	0.469.023	043

SAFETY

Hose Assembly: Requirements acc. to DIN EN 1256

The fixing of oxyfuel hoses was defined with DIN EN 1256: 2008-3 .
Quote: DIN EN 1256 Pkt. 4.2.3 „Hose Connections“:
„The hose needs to be connected with a matching hose fixing using a hose connecting nipple, to build a re-producible joint. The use of worm screw collars or other loose connections is prohibited“.
This regulation obligates the user to work with adequate connections, e.g. squeezed cartridges.

Furthermore, DGUV 100-500, chapter 2.26, national accident prevention regulations, do apply:
Gas hoses must be prepared in a way, that a slipping off the hose clips is prevented, and that connections and hose fixations meet the requirements of the used gas type.

HOSE REEL

Automatic Hose Reel SARM for Oxyfuel-Twinhoses

Description	*Connections*	*Art.-No.*	*Cat.-No.*
Hose Reel SARM-A-DIN For Twinhose Acetylene/Oxygen	G3/8“LH G1/4“RH	716.55382	043
Hose Reel SARM-PM-DIN For Twinhose Propane, Methane/Oxygen	G3/8“LH G1/4“RH	716.55383	043
Hose Reel SARM-A-BSP For Twinhose Acetylene/Oxygen	G3/8“LH G3/8“RH	716.55384	043
Hose Reel SARM-PM-BSP For Twinhose Propane, Methane/Oxygen	G3/8“LH G3/8“RH	716.55385	043

The SARM automatic hose reel is designed for a maximum hose length of 25 metres of twin hose. The hose is not included in the scope of delivery and can be ordered individually as an add-on.

Version: 01/2022

Union nut for hose tails PN 40, acc. to EN 560

Union nut dimension	*Spanner width*	*For hoses on torch system*	*Art. No.*	*Cat. No.*
G 1/4“	17 mm	ALL (except: SUPERTHERM)	700.50030	008
G 1/4“ LH	17 mm		471.30250	004
G 3/8“	19 mm	ALL (except: MINITHERM)	700.50130	008
G 3/8“ LH	19 mm	ALL (except: SUPERTHERM)	700.50040	008
G 1/2“	24 mm		286.256	008
G 1/2“ LH	24 mm	SUPERTHERM	286.327	008

Hose connection, hose tail with union nut cpl., PN 40, acc. to EN 560

Hose dimension	*Union nut*	*Art. No.*	*Cat. No.*
DN 6	G 1/4“	666.12317	000
DN 8	G 1/4“	471.40751	008
DN 9	G 1/4“	471.41701	008
DN 9	G 3/8“	666.12319	000
DN 9	G 3/8“ LH	666.12320	000
DN 11	G 3/8“	471.42101	008
DN 11	G 3/8“ LH	471.40401	004

Hose connector (double nipple), acc. to EN 560

Hose dimension	*Art. No.*	*Cat. No.*
DN 6	471.41130	043
DN 8	0.462.949	043
DN 9	471.41140	043

Double thread connection (connecting of hoses)

Dimension	*Gas type*	*Art. No.*	*Cat. No.*
G 1/4“ - DN 6	Oxygen	718.26006	043
G 3/8“ LH – DN 9	Fuel gas	718.26008	043
G 3/8“ RH – DN 9	Oxygen	701.01361	043
G 1/2“ LH – DN 11	Fuel gas	723.23165	100101
G 1/2“ RH – DN 11	Oxygen	721.02088	100101
G 3/4“ LH – DN 16	Fuel gas	723.08249	100101
G 3/4“ RH – DN 16	Oxygen	732.03829	100103

Version: 01/2022

Hose clamps for oxyfuel hoses

Type / description	*Clamping range*	*Art. No.*	*Cat. No.*
Mini hose clamp for MINITHERM hoses	7 - 8,2 mm	0.800.487	043
Clamping pliers KL for mini hose clamps		0.994.052	043
ASS hose clamp,	Plastic 2 x 16 mm	052.05341	043
for joining hoses in pairs	Aluminum 2 x 13 mm	0.462.552	043

Hose tail, dimension PN 40, acc. to EN 560

Hose dimension	*Union nut*	*For hoses used with a torch system*	*Art. No.*	*Cat. No.*
DN 3,2	G 1/4“	MINITHERM	716.01160	008
DN 3,2	G 3/8“	MINITHERM	716.01161	008
DN 4	G 1/4“	STARLET	471.40820	008
DN 4	G 3/8“	STARLET	471.40830	008
DN 6	G 1/4“	ALL (except: MINITHERM, SUPERTHERM)	700.50050	008
DN 6	G 3/8“	STARLET	700.50060	008
DN 6	G 1/2“		749.114	039
DN 8	G 3/8“	ALL (except: MINITHERM, SUPERTHERM)	471.40770	008
DN 9	G 3/8“	SUPERTHERM	471.40090	008
DN 9	G 1/2“		749.111	039
DN 11	G 1/2“	SUPERTHERM	471.40230	004
DN 13	G 3/4“		702.03581	006

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Gas economiser with ignition flame and safety suspension device, for MINITHERM

MINITHERM

Type / description	*Gas type*	*Art. No.*	*Cat. No.*
Mechanical gas economiser	acetylene	716.07014	004
	propane / methane / MAPP etc.	716.07015	004
Mechanical gas economizer with safety shutdown	acetylene	716.07587	004
	propane / methane / MAPP etc.	716.07588	004

Gas economiser with ignition flame and safety suspension device, for STARLET / STAR

STARLET / STAR

Type / description	*Gas type*	*Art. No.*	*Cat. No.*
Mechanical gas economiser	acetylene	716.00140	004
	propane / methane / MAPP etc.	716.00139	004
gas economiser with safety shutdown	acetylene	716.07025	004
	propane / methane / MAPP	716.07026	004

Gas supply will be interrupted automatically when the torch is placed onto the hook, and will be switched on automatically when removing the torch from the hook.
Safety shut-down: Thermo-valve stops gas flow in case of extinction of the pilot flame

Ordinary Gas economiser type: IGE for STARLET / STAR

STARLET / STAR

Type / description	*Gas type / connection standard*	*Art. No.*	*Cat. No.*
Mechanical gas economiser	IGE/E-A: DIN	716.06430	050
	IGE/B-A: BSP	716.06431	050
	IGE/U-A: CGA	716.06432	050
	IGE/E-P: DIN	716.06435	050
	IGE/B-P: BSP	716.06436	050
	IGE/U-P: CGA	716.06437	050

For fuel gases: acetylene, propane, methane, Mapp

Gas supply will be interrupted automatically when the torch is placed onto the hook, and will be switched on automatically when removing the torch from the hook.
Other conn. standards available

Version: 01/2022

Gas economiser with electrical ignition, For: MINITHERM / STARLET / STAR

Type / description	*Voltage*	*Art. No.*	*Cat. No.*
Gas economiser staple brass frame, wing nut nickel plated, with friction wheel and guard rail,	24 V, 50 / 60 Hz	716.05756	039
for acetylene / propane / methane / MAPP	230 V, 50 / 60 Hz	716.05755	039

with table stand, electrical switch box with ON/OFF push button, adjustable setting of the ignition time and alterable oxygen flow shut-off time
For fuel gases: acetylene, propane, methane, Mapp etc.

Gas igniter

Type / description	*Art. No.*	*Cat. No.*
Gas igniter staple brass frame, wing nut nickel plated, with friction wheel and guard rail	052.02900	043
Spare flints 3 x 20 mm	052.02710	043

Electrical automatic table igniter

Type / description	*Art. No.*	*Cat. No.*
Electrical automatic table igniter Battery powered one handed ignition box with easily operated ignition spark button and main on/off switch Batteries required: 2x Monocell 1,5V (not included in supply)	716.05780	039

Version: 01/2022

Mechanical Sliding Device for manual gas cutting

For precise straight cuts, horizontal and vertical, bevel cuts up to 60°
Controlled cutting speed by toothed rack guide
Reduced rework required

STABLECUT BASE KIT

Description	*Art.-No.*	*Cat.-No.*
Base Kit (without guide rail)	716.07699	999

Consisting of: Pilot carriage with adjustable support rods, two torch holder Ø 17mm, Ø 27mm, plastic case blue

Guide Rail with strong magnets below

STABLECUT GUIDE RAILS

Description	*Length*	*Art.-No.*	*Cat.-No.*
Guide Rail	380 mm	716.07711	999
Guide Rail	610 mm	716.07712	999
Guide Rail	910 mm	716.07713	999
Guide Rail	1220 mm	716.07714	999
On-Off magnet for optional mounting on any guide rail. At least 2 magnets are required per rail.		716.07770	999

Adapter to use nozzles type ANME/PNME and Essen 4625 or Essen 5625

STABLECUT ADAPTER

Description	*Diameter*	*Art.-No.*	*Cat.-No.*
Adapter D15 for ANME/PNME	15 mm	716.07719	999
Adapter D19 for using Essen 4625/5625 & Starcut 4622	19 mm	716.07769	999

Version: 01/2022

STABLECUT PLASMA BASE KIT

For precise straight cuts, horizontal and vertical, bevel cuts up to 60°
Controlled cutting speed by toothed rack guide
Reduced rework required

Description	*Art.-No.*	*Cat.-No.*
Basic Kit (without guide rail)	716.07787	999

Consisting of: Pilot carriage with adjustable support rods,
torch holder plasma torch Ø 25,5mm, Ø 35,0 mm, plastic case blue

STABLECUT PLASMA ADAPTER

Adapter to convert existing STABLECUT oxyfuel to plasma

Description	*Diameter*	*Art.-No.*	*Cat.-No.*
Adapter STABLECUT Plasma	25,5 / 35,0 mm	716.07786	999

The STABLECUT, for precise cuts on your components. The built-in gear unit allows you to effortlessly guide the torch at a constant speed.
Whether vertical or as a bevel cut for weld seam preparation, the STABLECUT guarantees you the highest, reproducible cutting quality and thanks to the magnetic holder, it can be used in any position.
The STABLECUT can also be supplied with a 2 in 1 adapter, to work with a wide variety of handheld plasma cutters from well-known manufacturers (for diameters 25.5 mm and 35.0 mm). This gives you the option to also cut stainless steel precisely with consistent results.

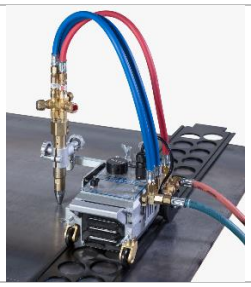
Of course, the adapter also fits our HANDPLASMA cutter 70 CT further back in the catalogue.

Version: 01/2022

PORTABLE FLAME CUTTING MACHINES

PORTACUT

MANUAL FLAME CUTTING MACHINE PORTACUT						
Description	Drive	Connected voltage	Speed range	Cutting thickness	Strip cutting width	Weight
With one cutting torch	Condenser induction motor, 230 V, 50/60Hz	230V, 50/60Hz	50 - 800 mm/min	3 - 300 mm	80 - 300 mm	9,5kg



including one cutting torch

including two cutting torches

PORTACUT manual flame cutting machine		ACETYLENE
Description	*Art.No.*	*Cat.No.*
with one cutting torch MSZ 832 for ring-/slot nozzles	716.51782	006
with two cutting torches MSZ 832 for ring-/slot nozzles	716.11443	006
with one cutting torch MSZ 932 for cylindrical nozzles	716.55540	006
with two cutting torches MSZ 932 for cylindrical nozzles	716.55541	006

without guide rail

PORTACUT manual flame cutting machine		PROPANE OR TOWN GAS
Description	*Art.No.*	*Cat.No.*
with one cutting torch MSZ 832 for ring-/slot nozzles	716.51783	006
with two cutting torches MSZ 832 for ring-/slot nozzles	716.11444	006
with one cutting torch MSZ 932 for cylindrical nozzles	716.55542	006
with two cutting torches MSZ 932 for cylindrical nozzles	716.55543	006

without guide rail

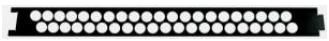
PORTACUT manual flame cutting machine		GAS-MIXING
Description	*Art.No.*	*Cat.No.*
with one cutting torch MSIDZ 110-A/PMY	716.51784	006
with two cutting torches MSIDZ 110-A/PMY	716.11445	006

without guide rail

PORTACUT - scope of delivery
Basic machine with machine cutting torch, hose package, flashback arrestors, adjusting valves, cutting nozzles up to 100mm
(with two machine cutting torches, in addition: 2nd cutting torch with a.m. accessories; extended toothed rack bar, torch holder, counter balance weight)

Version: 01/2022

GUIDE RAIL



Description	Art.No.	Cat.No.
guide rail 1200 mm	716.51790	006
guide rail 1800 mm	716.52018	006

Note: Rails of different lengths cannot be combined with each other, only the same lengths.

CIRCLE RADIUS BAR

Description	Art.No.	Cat.No.
Radius bar for circular cuts Ø 30 - 2400 mm	716.51793	006

EXTENSION KIT FOR 2ND CUTTING TORCH

(without picture)

Description	Art.No.	Cat.No.
Kit PORTACUT – A – 2 torches MSZ 832	716.11446	006
Kit PORTACUT – PMY – 2 torches MSZ 832	716.11447	006
Kit PORTACUT – A/PMY – 2 torches MSIDZ 832	716.11448	006

Content:

2nd cutting torch, hose package, flashback arrestors, adjusting valves, cutting nozzles

(Acetylene: ring/slot nozzles A-RS; Propane: ring/slot nozzles PL-RC;
Gas-mixing: ANME nozzles for acetylene -- depends on gas type)

Extended toothed rack bar, 2nd torch holder, counter balance weight

EXTENSION KIT FOR 2ND CUTTING TORCH

(without picture)

Description	Art.No.	Cat.No.
Kit PORTACUT – A – 2 torches MSZ 932	716.55546	006
Kit PORTACUT – PMYE – 2 torches MSZ 932	716.55548	006

Content:

2nd cutting torch, hose package, flashback arrestors, adjusting valves, cutting nozzles

(Acetylene: cylindrical nozzles VADURA 9215-A; Propane/Methane: cylindrical nozzles GRICUT 9230)

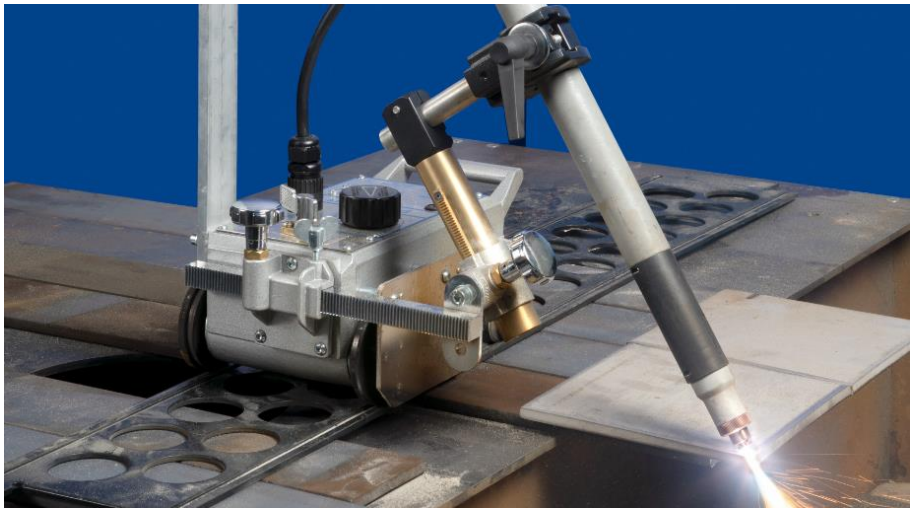
Extended toothed rack bar, 2nd torch holder, counter balance weight

Version: 01/2022

PORTABLE FLAME CUTTING MACHINES

PORTACUT

MANUAL FLAME CUTTING MACHINE PORTACUT					
Description	**Drive**	**Connected voltage**	**Speed range**	**Adapter-connection**	**Weight**
with Adapter for Plasma-Machinencuttingtorch	Condenser induction motor, 230 V, 50/60Hz	230V, 50/60Hz	50 - 800 mm/min	13 - 50 mm	9,5kg



PORTACUT		**BASIC-MACHINE**
Description	*Art.-No.*	*Cat.-No.*
Basic machine PORTACUT, used as cutting tractor	716.51786	000
Universal adapter with height- and angle-adjustment for shaft diameters 13-50 mm	716.55533	006

Without guide rail

While our well-known and proven portable PORTACUT torch cutting machine was previously only available as a pure oxyfuel application, the newly developed universal adapter now also allows the installation of a plasma machine cutting torch. In this way, we combine the PORTACUT's previously known properties, such as constant feed speed and the possibility of bevel cuts for weld seam preparation, with the advantages of a plasma cut. As a result, even stainless steels are no longer an obstacle.

Typical fields of application are metal processing companies, as well as steel constructors or shipyards, where long cuts with simultaneous chamfering are often required. Particularly in the case of recurring tasks, our PORTACUT allows you to achieve a real increase in quality, as the results are reproducible and can be documented.

Purchase our basic machine with a feed speed between 50-800 mm/min, as well as our new universal adapter with height and angle adjustment for shank diameters 13 - 50 mm.
You can then easily mount your existing plasma machine cutting torch on this adapter.

Discover also our plasma torch with option of machine cutting torch.

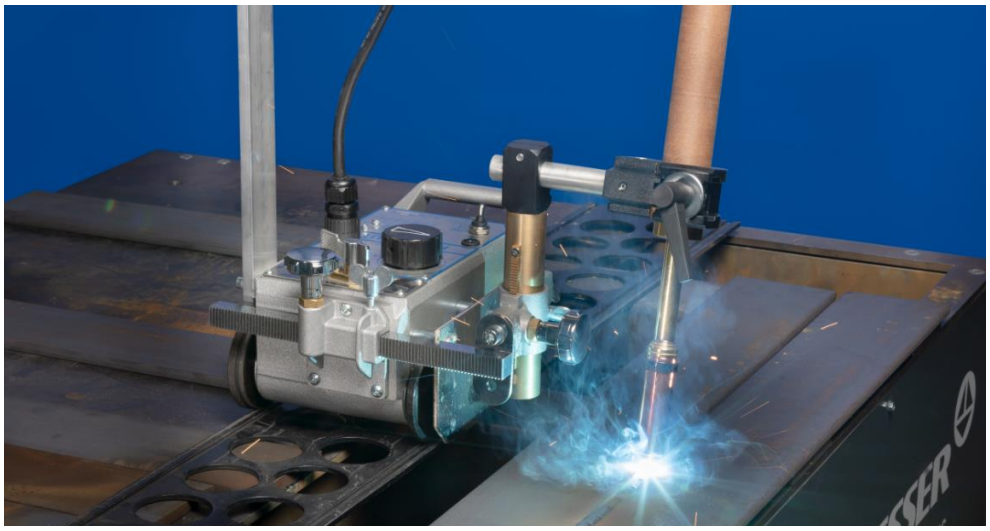
Version: 01/2022

PORTABLE FLAME CUTTING MACHINES

PORTACUT

MANUAL FLAME CUTTING MACHINE PORTACUT

Description	Drive	Connected voltage	Speed range	Adapter-connection	Weight
with MIG/MAG Welding torch	Condenser induction motor, 230 V, 50/60Hz	230V, 50/60Hz	50 - 800 mm/min	13 - 50 mm	9,5kg



PORTACUT		MIG/MAG WELDING TORCH
Description	*Art.-No.*	*Cat.-No.*
PORTACUT MIG/MAG cpl. Consisting of Basic machine, Universaladapter MIG/MAG and a MIG/MAG welding torch	716.55535	006
Universal adapter with height- and angle-adjustment for shaft diameters 13-50 mm	716.55533	006
MIG/MAG welding torch with external switch and Binzel central connection	716.55534	006

Without guide rail

Thanks to the newly developed adapter, the well-known and proven portable PORTACUT flame cutting machine can now also be used as a welding tractor. Typical fields of application are metal processing companies, as well as steel constructors or shipyards, where long welding seams or recurring tasks are often required. Our PORTACUT MIG/MAG offers real added value. Thanks to the constant speed and flexible adjustment, we not only achieve an increase in quality, but also quality assurance through reproducible and documentable results on butt and fillet welds.

The scope of supply includes the basic machine with feed speed between 50-800 mm/min, a universal adapter with height and angle adjustment for shaft diameters 13 - 50 mm, as well as a MIG/MAG welding torch with external water cooling, external switch and Binzel central connection.

Version: 01/2022

PLASMA CUTTER 70 CT

HANDPLASMA-CUTTER 70 CT					
Description	**Connected voltage**	**Weight**	**Cutting**	**Quality Cutting**	**Hole Piercing**
Handplasma-Cutter	400 V, 50/60Hz	22 kg	35 mm	25 mm	15 mm

PLASMA CUTTER 70 CT		HANDPLASMA-CUTTER
Description	*Art.-No.*	*Cat.-No.*
Plasma Cutter 70 CT incl. Handtorch	770.21810	000
Plasma Cutter 70 CT incl. hand torch and additional machine cutting torch with remote starter (10 m connection cable) e.g. for PORTACUT 3-IN-1	770.21877	000

Whether you are looking to cut steel, stainless steel, aluminum or copper, we have the right solution for you. Our latest Plasma Cutter 70 CT, a handheld plasma cutter with 70A amperage for cuts up to 35 mm material thickness.

- High arc stability ensures quality cuts
- Suitable for our STABLECUT Plasma
- Portable and compact design
- Ergonomic torch design for low-fatigue work
- Robust housing and non-slip feet for use on the construction site (suitable for generators)
- Manual compressed air regulation (4.1 to 6.5 bar) with LED display
- Intuitive operation with 3 modes
- No interference with electronic devices due to contact ignition
- Cutting up to 35 mm (scrap cut quality)
- Cutting up to 25 mm (quality cut)
- Hole piercing up to 15 mm

Also available with a large range of accessories, such as our STABLECUT for quality straight line bevel cuts, or if you are looking for a more automated process, our PORTACUT 3-in-1 as a portable plasma torch cutting machine. Whatever your solution, the Cutter 70 CT is your tool for the job

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PLASMA CUTTER 70 CT

CONSUMABLES			PLASMA CUTTER 70 CT
Description	*Qty per Sales Unitt*	*Art.-No.*	*Cat.-No.*
Handle for Plasma Cutter 70 CT incl. 6 Meter Hosepackage	1 pcs. / unit	770.21802	049
Handle for Plasma Cutter 70 CT incl. 12 Meter Hosepackage	1 pcs. / unit	770.21803	049
Diffusor suitable for handle & Machine Cutting Torch for Plasma Cutter 70 CT	2 pcs. / unit	770.21804	049
Electrode suitable for handle & Machine Cutting Torch for Plasma Cutter 70 CT	5 pcs. / unit	770.21805	049
Cutting nozzle suitable for handle & Machine Cutting Torch for Plasma Cutter 70 CT	10 pcs. / unit	770.21807	049
Shield Cap suitable for handle & Machine Cutting Torch for Plasma Cutter 70 CT (Without Ohmic)	1 pcs. / unit	770.21808	049
Shield Cap suitable for handle for Plasma Cutter 70 CT	3 pcs. / unit	770.21809	049
Gouging Nozzle suitable for handle for Plasma Cutter 70 CT	10 pcs. / unit	770.21811	049
Shield Cap (Gouging) suitable for handle for Plasma Cutter 70 CT	3 pcs. / unit	770.21812	049
Machine Cutting Torch for Plasma Cutter 70 CT incl. 6 Meter Hosepackage	1 pcs. / unit	770.21813	049
Machine Cutting Torch for Plasma Cutter 70 CT incl. 12 Meter Hosepackage	1 pcs. / unit	770.21814	049
Shield Cap suitable for Machine Cutting Torch for Plasma Cutter 70 CT	3 pcs. / unit	770.21816	049

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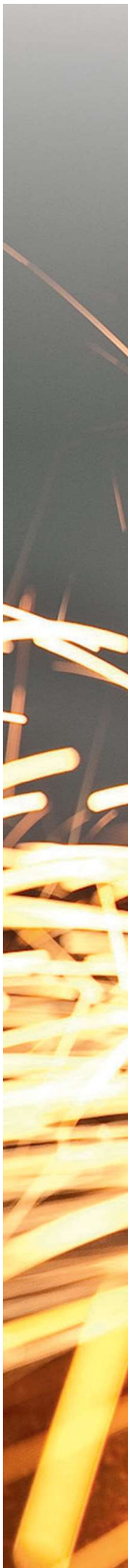
WORLD OF EXCELLENCE



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