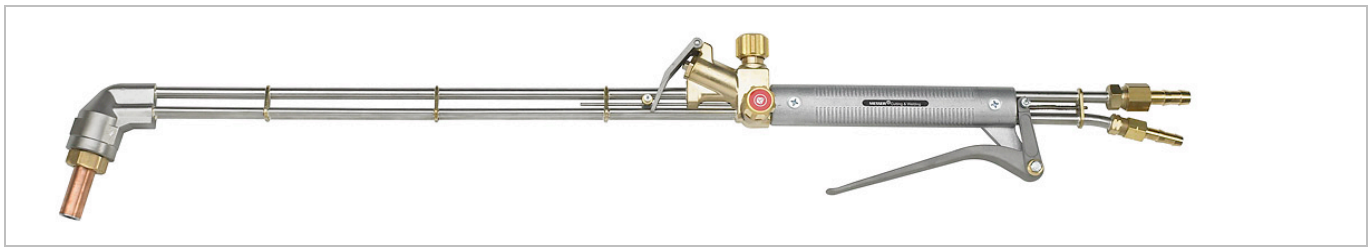
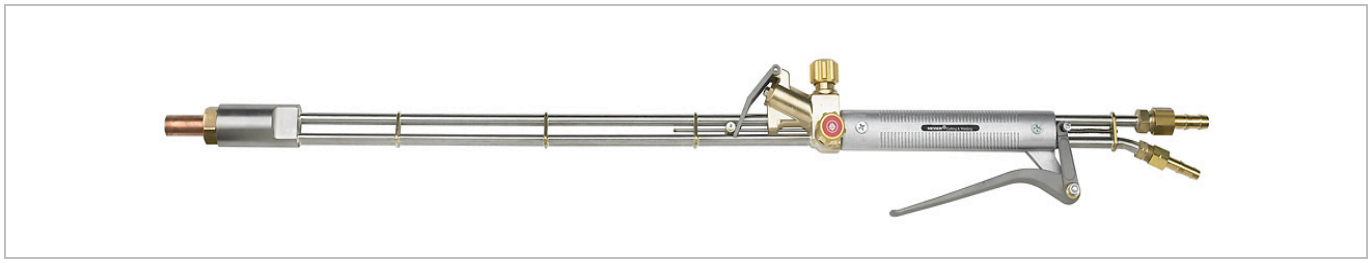


SMB 600 with angled torch head



SMB 600 with straight torch

HEAVY-DUTY HAND CUTTING TORCH SMB 600

With spring lever for cutting oxygen (version with handwheel valve available upon request), for cutting of slabs, ingots, billets, non-alloy and low-alloy steel castings and forgings, and for cutting of steel scrap, Cutting range see table.

Fuel gases: A = Acetylene
PM = Propane, methane (natural gas)
Y = Methyl acetylene propadiene mixtures (Mapp a.o.)

Hose connections according to EN 560, G 1/2“ RH-11 for oxygen and G 3/8“ LH-9 for fuel gas

Operating data see pages 6 and 7

Heavy-duty hand cutting torch without accessories			SMB 600
Description		*Art. No.*	*Cat. No.*
Version with angled torch head	length 1000 mm	716.50083	006
	length 1500 mm	716.50318	006
Version with straight torch	length 1000 mm	716.50084	006
	length 1500 mm	716.50318	006
other torch lengths available upon request			

Gas-mixing cutting nozzles			GRICUT® 5310-A
Description	*Cutting range*	*Art. No.*	*Cat. No.*
GRICUT® 5310-A	100 - 300 mm	716.50103	006
	300 - 500 mm	716.50104	006

Stand: 04/2013

GRICUT® 5281-PMY	Heavy-duty hand cutting torch without accessories		

Description	*Cutting range*	*Art. No.*	*Cat. No.*
Cutting nozzles	100 - 300 mm	716.50100	006
GRICUT® 5281-PMY	300 - 500 mm	716.50101	006
	450 - 600 mm	716.50209	006
Heating nozzle	100 - 450 mm	716.50209	006
GRICUT® 5281-PMY	450 - 600 mm	716.50211	006

Torch head skid attachment

Torch head with torch carriage

SMB 600	Accessories	
Description	*Art. No.*	*Cat. No.*
Torch carriage	716.50260	006
Skid	716.50275	006
Pressure screw	552.10220	006
Nozzle cleaners in case	052.29201	038
Oxygen hose 11 mm	051.01200 ✱	043
Fuel gas hose 9 mm	051.00040	043
Handwheel valve insert	716.50307 ✱	043

Stand: 04/2013

✱ **on request**

MESSER Cutting Systems

Torch head SMB 600 with cutting nozzle and powder head

Torch head SMB 663 with cutting nozzle and powder nozzle

Cutting nozzle GRICUT® 5281-PMY-PV

Heating nozzle GHRICUT® 5281-PMY-PV

Powder additional equipment			SMB 600
Description		*Art. No.*	*Cat. No.*
Powder additional equipment powder nozzle complete for length 1000 mm		716.50333 ✱	006
Powder additional equipment powder nozzle complete for length 1500 mm		✱	006
Powder additional equipment powder nozzle complete for length 1000 mm		✱	006
Powder additional equipment powder nozzle complete for length 1500 mm		✱	006
Cutting nozzle GRICUT® 5310-A-PV	100 - 300 mm	716.50295 ✱	006
	300 - 500 mm	716.50296 ✱	006
Cutting nozzle GRICUT® 5281-PMY	100 - 300 mm	716.50100	006
	300 - 450 mm	716.50101	006
	450 - 600 mm	716.50209	006
Heating nozzle GRICUT® 5281-PMY-PV	100 - 450 mm	716.50297 ✱	006
	450 - 600 mm	716.50298 ✱	006
Powder distributor P75 see page 12		731.29840	006
Version of hand cutting torch complete mounted with Powder additional equipment on request			

Stand: 04/2013

CUTTING NOZZLES GRICUT® 5310-A

Cutting thickness [mm]	Cutting nozzle	Art. No.	Nozzle clearance [mm]	Oxygen pressure [bar]	Acetylene pressure [bar]	Cutting kerf width [mm]	Oxygen consumption [m³/h]	Acetylene consumption [m³/h]
Fuel gas acetylene								
100			30	3,0	0,5	5	22,0	0,8
150			30	4,0	0,5	7	27,0	1,2
200	100 - 300	716.50103	30	5,0	0,5	8	32,2	1,6
250			30	6,0	0,5	9	37,3	1,9
300			30	7,0	0,5	10	42,0	2,7
300			30	7,0	0,8	10	52,0	2,7
350			30	8,0	0,8	15	55,1	3,4
400	300 - 500	716.50104	30	9,0	0,8	20	58,3	4,2
450			30	9,5	0,8	20	65,9	4,9
500			30	10,0	0,8	25	66,5	5,5

CUTTING NOZZLES GRICUT® 5281-PMY

Cutting thick-ness [mm]	Cutting nozzle	Heating nozzle	Art. No. Cutting nozzle	Art. No. Heating nozzle	Nozzle clearance [mm]	Oxygen pressure [bar]	Propane pressure [bar]	Cutting kerf width [mm]	Oxygen con-sumption [m³/h]	Propane con-sumption [m³/h]
Fuel gas propane										
100					30	3,0	0,5	5	23,0	0,5
150					30	4,0	0,5	7	28,5	0,7
200	100 - 300	100 - 450	716.05100	716.50236	30	5,0	0,5	8	34,0	0,9
250					30	6,0	0,5	9	39,5	1,1
300					30	7,0	0,5	10	45,0	1,6
300					30	7,0	1,0	10	55,0	1,6
350	300 - 450	100 - 450	716.50101	716.50236	30	7,5	1,0	15	59,0	2,0
400					30	8,0	1,0	20	63,0	2,4
450					30	9,0	1,0	20	71,5	2,8
450					30	8,0	1,5	20	99,0	3,1
500	450 - 600	450 - 600	716.50209	716.50211	30	9,0	1,5	20	114,5	3,4
550					30	10,0	1,5	25	130,0	3,8
600					30	12,0	1,5	25	161,5	4,4

The tables indicate standard values based on the use of plain steel with a carbon content of up to 0,3 % and oxygen with a minimum purity of 99.5 %. The pressure stated are gauge pressure measured at the torch inlet. The consumption data indicated in m3/h apply to the standard condition as per DIN 1343.

- Use only clean, undamaged nozzles.

Stand: 04/2013

✱ **on request**

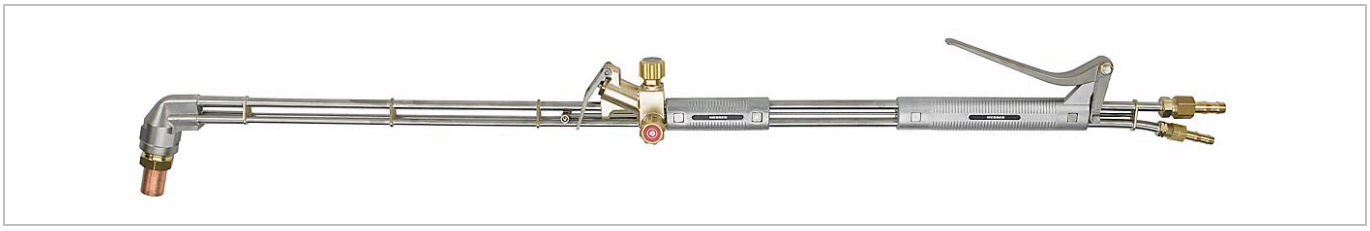
CUTTING NOZZLE GRICUT® 5281-PMY

Cutting thick-ness [mm]	Cutting nozzle	Heating nozzle	Art. No. Cutting nozzle	Art. No. Heating nozzle	Nozzle clearance [mm]	Oxygen pressure [bar]	Methane pressure [bar]	Cutting kerf width [mm]	Oxygen con-sumption [m³/h]	Methane con-sumption [m³/h]
Fuel gas methan (natural gas)										
100					30	3,0	0,5	5	23,0	1,3
150					30	4,0	0,5	7	28,5	1,9
200	100 - 300	100 - 450	716.05100	716.50236	30	5,0	0,5	8	34,0	2,5
250					30	6,0	0,5	9	40,0	3,1
300					30	7,0	0,5	10	46,6	4,3
300					30	7,0	1,2	10	55,8	4,3
350	300 - 450	100 - 450	716.50101	716.50236	30	7,5	1,2	15	59,9	5,5
400					30	8,0	1,2	20	64,1	6,7
450					30	9,0	1,2	20	72,8	7,9
450					30	8,0	1,7	20	103,2	10,4
500	450 - 600	450 - 600	716.50209	716.50211	30	9,0	1,7	20	119,0	11,3
550					30	10,0	1,7	25	135,0	12,2
600					30	12,0	1,7	25	164,0	12,2

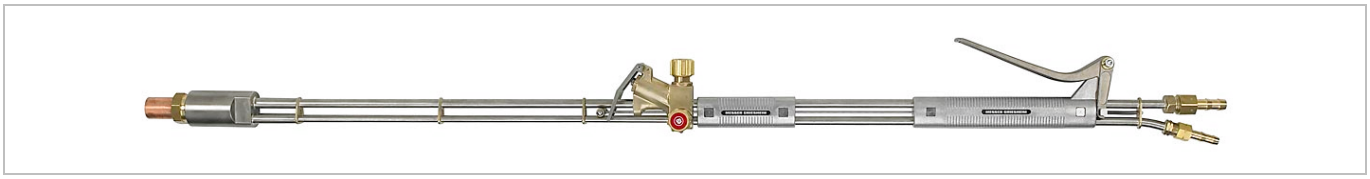
CUTTING NOZZLE GRICUT® 5281-PMY

Cutting thick-ness [mm]	Cutting nozzle	Heating nozzle	Art. No. Cutting nozzle	Art. No. Heating nozzle	Nozzle clearanc e [mm]	Oxygen pressure [bar]	Mapp pressure [bar]	Cutting kerf width [mm]	Oxygen con-sumption [m³/h]	Mapp con-sumption [m³/h]
Fuel gas Mapp										
100					30	3,0	0,5	5	22,5	0,5
150					30	4,0	0,5	7	27,9	0,7
200	100 - 300	100 - 450	716.05100	716.50236	30	5,0	0,5	8	33,2	1,0
250					30	6,0	0,5	9	38,5	1,2
300					30	7,0	0,5	10	43,6	1,6
300					30	7,0	1,0	10	53,6	1,6
350	300 - 450	100 - 450	716.50101	716.50236	30	7,5	1,0	15	57,3	2,1
400					30	8,0	1,0	20	60,9	2,5
450					30	9,0	1,0	20	69,0	3,0
450					30	8,0	1,5	20	96,5	3,2
500	450 - 600	450 - 600	716.50209	716.50211	30	9,0	1,5	20	111,7	3,6
550					30	10,0	1,5	25	126,9	3,9
600					30	12,0	1,5	25	157,5	4,6

Stand: 04/2013



SMB 663 with angled torch head



SMB 663 with straight torch head

HEAVY DUTY HAND CUTTING TORCH SMB 663

with spring lever for cutting oxygen (version with handwheel valve available upon request), for cutting of slabs, ingots, billets, non-alloy and low-alloy steel castings and forgings, and for cutting of steel scrap.

Fuel gas:
A = Acetylene
PM = Propane, methane (natural gas)
Y = Methyl acetylene propadien mixtures (Mapp a.o.)

Hose connections according to EN 560, G 1/2“ RH-11 for oxygen and G 3/8“ LH-9 for fuel gas

Operating data see pages 10 und 11

SMB 663	Heavy-duty hand cutting torch		
Description		*Art. No.*	*Cat. No.*
Version with angled torch head	length 1260 mm	716.50265	006
	length 1500 mm	716.50319	006
	length 3000 mm	716.14050 ✱	006
	length 4000 mm	716.14051 ✱	006
Version with straight torch head	length 1260 mm	716.50277	006
	length 1500 mm	716.50320	006
other torch lengths available upon request			

BLOCK CUTTING NOZZLES

Gas-mixing cutting nozzles

Description	*Cutting range*	*Art. No.*	*Cat. No.*
DPC-A	50 - 300 mm	731.07433	006
	300 - 600 mm	731.07434	006
DBH-PMY	100 - 300 mm	731.17353	006
	300 - 500 mm	731.17315	006
	500 - 700 mm	731.17317	006

Stand: 04/2013

✱ **on request**

MESSER Cutting Systems

Torch head with skid

Torch head with torch carriage

Accessories		SMB 603
Description	*Art. No.*	*Cat. No.*
Torch carriage	716.50260	006
Skid	716.50275	006
Pressure screw	552.10220	006
Nozzle cleaners in case	052.29201	038
Oxygen hose 11 mm	051.01200 ✱	043
Fuel gas hose 9 mm	051.00040	043
Handwheel valve insert	716.50307 ✱	043

Torch head with powder nozzle

Powder additional equipment		SMB 603
Description	*Art. No.*	*Cat. No.*
Powder additional equipment powder nozzle complete for length 1260 mm	716.14145 ✱	006
Powder additional equipment powder nozzle complete for length 1500 mm	716.50339 ✱	006
Standard cutting nozzles are used		
Powder distributor P75 see page 12		
Version of complete mounted with Powder additional equipment on request		

Stand: 04/2013

CUTTING NOZZLES DPC-A

Cutting thickness [mm]	Cutting nozzle	Art. No.	Nozzle clearance [mm]	Oxygen pressure [bar]	Acetylene pressure [bar]	Cutting kerf width [mm]	Oxygen consumption [m³/h]	Acetylene consumption [m³/h]
Fuel gas acetylen								
50			20	6,0	0,5	5 - 7	36,0	3,0
100				7,5		5 - 7	43,0	3,0
150	50 - 300	731.07433	to	8,0	to	6 - 7	46,0	3,5
200				8,5		7 - 8	48,0	4,0
250				9,0		8 - 9	51,0	4,0
300			25	9,5	1,0	9 - 10	54,0	4,0
300			25	8,5	0,8	12	65,0	5,0
350				9,5		14	73,0	5,0
400	300 - 600	731.07434	to	10,5	to	17	80,0	5,0
450				11,5		18	85,0	6,0
500			30	12,0	1,2	19	90,0	6,0

CUTTING NOZZLES DBH-PMY

Cutting thickness [mm]	Cutting nozzle	Art. No.	Nozzle clearance [mm]	Oxygen pressure [bar]	Propane pressure [bar]	Cutting kerf width [mm]	Oxygen consumption [m³/h]	Propane consumption [m³/h]
Fuel gas propane								
100			30	2,5	0,6	6	16,3	0,3
150			30	5,0	0,6	7	25,3	0,7
200	100 - 300	731.17353	30	7,0	0,6	8	34,0	1,0
250			30	8,5	0,6	9	42,6	1,3
300			30	10,5	0,6	10	51,7	1,7
300			30	6,5	1,1	13	60,4	1,7
350			30	8,0	1,1	14	71,8	2,3
400	300 - 500	731.17315	30	9,0	1,1	17	83,3	2,9
450			30	10,5	1,1	19	95,0	3,6
500			30	12,0	1,1	21	107,2	4,4
500			50	9,5	1,6	21	113,0	4,4
550	500 - 700	731.17317	50	10,5	1,6	23	126,5	4,9
600			50	12,0	1,6	25	141,0	5,4
650			50	13,5	1,6	27	154,7	6,3
700			50	15,0	1,6	28	168,7	7,4

Stand: 04/2013

✱ **on request**

MESSER Cutting Systems

CUTTING NOZZLES DBH-PMY

Cutting thickness [mm]	Cutting nozzle	Art. No.	Nozzle clearance [mm]	Oxygen pressure [bar]	Methane pressure [bar]	Cutting kerf width [mm]	Oxygen consumption [m³/h]	Methane consumption [m³/h]
Fuel gas methane (natural gas)								
100			30	2,5	0,8	6	16,5	0,9
150			30	5,0	0,8	7	25,6	1,9
200	100 - 300	731.17353	30	7,0	0,8	8	34,3	2,7
250			30	8,5	0,8	9	43,0	3,4
300			30	10,5	0,8	10	52,2	4,5
300			30	6,5	1,4	13	61,0	4,5
350			30	8,0	1,4	14	72,5	5,9
400	300 - 500	731.17315	30	9,0	1,4	17	84,1	7,6
450			30	10,5	1,4	19	96,0	9,4
500			30	12,0	1,4	21	108,3	11,4
500			50	9,5	2,0	21	114,1	11,4
550	500 - 700	731.17317	50	10,5	2,0	23	127,8	12,7
600			50	12,0	2,0	25	142,4	14,0
650			50	13,5	2,0	27	156,2	16,4
700			50	15,0	2,0	28	170,4	19,0

CUTTING NOZZLES DBH-PMY

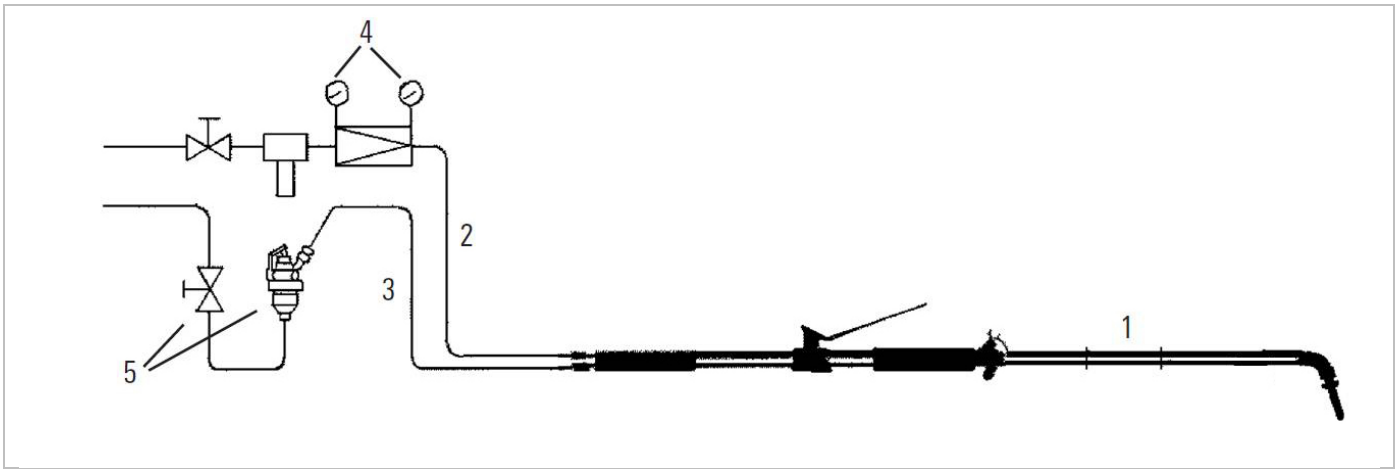
Cutting thickness [mm]	Cutting nozzle	Art. No.	Nozzle clearance [mm]	Oxygen pressure [bar]	Methane pressure [bar]	Cutting kerf width [mm]	Oxygen consumption [m³/h]	Methane consumption [m³/h]
Fuel gas Mapp								
100			30	2,5	0,6	6	16,1	0,3
150			30	5,0	0,6	7	25,0	0,7
200	100 - 300	731.17353	30	7,0	0,6	8	33,7	1,1
250			30	8,5	0,6	9	42,6	1,3
300			30	10,5	0,6	10	51,2	1,8
300			30	6,5	1,1	13	59,8	1,8
350			30	8,0	1,1	14	71,1	2,3
400	300 - 500	731.17315	30	9,0	1,1	17	82,5	3,0
450			30	10,5	1,1	19	94,1	3,7
500			30	12,0	1,1	21	106,1	4,6
500			50	9,5	1,6	21	111,9	4,6
550	500 - 700	731.17317	50	10,5	1,6	23	125,2	5,1
600			50	12,0	1,6	25	139,6	5,6
650			50	13,5	1,6	27	153,2	6,4
700			50	15,0	1,6	28	167,0	7,7

Stand: 04/2013

Cutting values for heavy duty hand torch type SMB 663 with Fe powder unit

Oxygen purity:	min. 99,5 %
Test material:	CrNi 18/8 N
Fuel gas:	propane
Torch adjustment:	according to operating data for cutting nozzle type DBH-PMY (page XX)
Used powder:	GRISINT® (Art. No. 0462.004), the values are approximate
Cutting speed tolerances:	approx. 20 %
Cut quality:	Oxyfuel hand cuts with FE powder addition depend heavily upon the skill of the operator. Without mechanical guidance only scrap quality can be achieved.
Note:	All data and especiall the low wear with powder nozzles and valves can only be achieved if using the iron powder GRISINT® in combination powder distributor P75, as well as original Messer CS connecting parts.

Cutting values			SMB 663
Material thickness [mm]	*Used nozzle*	*Cutting speed [mm/min]*	*Powder consumption [kg/h]*
50	731.17353	400	6 - 7
100	731.17353	350	7 - 8
150	731.17353	300	8 - 10
200	731.17353	280	10 - 12
250	731.17353	210	10 - 12
300	731.17353	170	12 - 15
350 - 500	731.17315	120 - 60	20 - 25
500 - 700	731.17317	60 - 30	25 - 30



1. Hand cutting torch SMB
2. Oxygen hose DIN EN ISO 3821
3. Fuel gas hose DIN EN ISO 3821 resp. DIN 4815-1
4. Oxygen pressure regulatpr U 13 with filter and shut-off valve
5. Tapping point flashback arrestor with shut-off valve for acetylene or propane, methane (natural gas), Mapp

Stand: 04/2013

MESSER Cutting Systems

Powder hand cutting torch AC 41 with torch carriage

Powder cutting nozzles

Powder sleeve

Powder hand cutting torch AC 41

With spring lever valve for simultaneous control of oxygen and powder, for cutting of stainless steel, high-carbon steels, non-ferrous materials and cast iron approx. 150 mm material thickness.

Fuel gas: acetylene or propane, methane (natural gas), Mapp.

Hose connections acc. to DIN 8542: G 3/8“ RH-9 fuel gas G 3/8“ LH-9, powder G 1/4“ RH-6.

Operating date see page 5

AC 41	Powder hand cutting torch AC 41 without accessories		
Description		*Art. No.*	*Cat. No.*
for acetylene, propane, methane	length 750 mm	716.01055	006
(natural gas), Mapp	length 1050 mm	716.01070	006

AC 41	Powder cutting nozzles		
Description	*Cutting range*	*Art. No.*	*Cat. No.*
for acetylene	25 - 40 mm	716.00382	006
	40 - 60 mm	716.00383	006
	60 - 100 mm	716.00384	006
	100 - 200 mm	716.00385	006
	200 - 300 mm	716.00386	006
for propane	125 - 175 mm	552.01050	006
methane (natural gas), Mapp	175 - 225 mm	552.01060	006
	225 - 300 mm	552.01090	006
Powder seelve		703.04032	006

Stand: 04/2013

Circle rod complete

Torch carriage

AC 41	Zubehör		
Description		*Art. No.*	*Cat. No.*
Torch carriage		553.02101	006
Radius bar complete		716.00699	038
Nozzle cleaners in case		052.29201	038
Rubber ring		162.05430	006
Torch spanner		186.58074	038
Oxygen hose	9 mm	051.01060	043
Fuel gas hose	9 mm	051.00040	043
Powder/compressed air hose	6 mm	051.01070	043

Stand: 04/2013

✱ **on request**

MESSER Cutting Systems

POWDER HAND CUTTING TORCH AC 41									
Material thickness [mm]	Art. No. Cutting nozzle	Fuel gas pressure [bar]	Oxygen pressure [bar]	Cutting speed [mm/min]	Nozzle clearance [mm]	Cutting kef width [mm]	Fuel gas consump. [m^3/h]	Oxygen consump. [m^3/h]	Powder consump. [kg/h]
Fuel gas acteylene									
25 - 40	716.00382	30 - 40	4,0	0,5	6,0	9,7	0,8	320 - 230	6 - 8
40 - 60	716.00383	30 - 40	4,0	0,5	8,0	14,3	1,0	190 - 140	8 - 10
60 - 100	716.00384	30 - 40	4,0	0,5	9,0	21,6	1,2	120 - 100	8 - 10
100 - 200	716.00385	30 - 40	5,0	0,5	12,0	31,0	1,4	80 - 70	10 - 12
200 - 300	716.00386	30 - 40	6,0	0,5	17,0	42,0	1,8	60 - 40	12 - 15

POWDER HAND CUTTING TORCH AC 41									
Material thickness [mm]	Art. No. Cutting nozzle	Fuel gas pressure [bar]	Oxygen pressure [bar]	Cutting speed [mm/min]	Nozzle clearance [mm]	Cutting kef width [mm]	Fuel gas consump. [m^3/h]	Oxygen consump. [m^3/h]	Powder consump. [kg/h]
Fuel gas propane									
125 - 175	552.01050	30 - 40	4,0	0,3	9,0	21,0	0,5	120 - 100	8 - 10
175 - 225	552.01060	30 - 40	5,5	0,3	12,0	31,0	0,6	80 - 70	10 - 12
225 - 300	552.01090	30 - 40	6,0	0,3	17,0	46,0	0,7	60 - 40	12 - 15

POWDER HAND CUTTING TORCH AC 41									
Material thickness [mm]	Art. No. Cutting nozzle	Fuel gas pressure [bar]	Oxygen pressure [bar]	Cutting speed [mm/min]	Nozzle clearance [mm]	Cutting kef width [mm]	Fuel gas consump. [m^3/h]	Oxygen consump. [m^3/h]	Powder consump. [kg/h]
Fuel gas methane (natural gas)									
125 - 175	552.01050	30 - 40	4,0	0,3	9,0	21,0	1,5	120 - 100	8 - 10
175 - 225	552.01060	30 - 40	5,5	0,3	12,0	31,0	1,7	80 - 70	10 - 12
225 - 300	552.01090	30 - 40	6,0	0,3	17,0	46,0	2,0	60 - 40	12 - 15

The tables indicate standard values based on the use of plain steel with a carbon content of up to 0,3 % and oxygen with a minimum purity of 99.5 %. The pressure stated are gauge pressure measured at the torch inlet. The consumption data indicated in m^3/h apply to the standard condition as per DIN 1343.

- Use only clean, undamaged nozzles.

Stand: 04/2013

AC 41

POWDER HAND CUTTING TORCH

Stand: 04/2013

✱ on request

MESSER Cutting Systems

POWDER DISTRIBUTOR P75

Powder distributor P75

Powder distributors serve to feed iron powder or iron/aluminum powder mixtures to the powder cutting units. The powder mixtures to the powder cutting/scarfing oxygen stream, thus providing increased heat-resistant steels, cast iron and a number of non-ferrous metals can be cut.

The powder distributor P 75 with “cyclonic” powder mixing system, pressure regulator, oil trap and air drying unit are used to supply our SMB 600/663 hand cutting torches with powder attachment, AC 41 powder hand cutting torches and MSP 3320/200 machine cutting torches.

Connections:

Inlet G 3/8“ - 6 for compressed air, oil-free and dry
Outlet G 1/4“ - 6 for powder

P75	Powder distributor and Cutting powder		
Description		*Art. No.*	*Cat. No.*
Powder distributor Inlet pressure 10 bar max., Container pressure 1,5 bar max., Powder charge 75 kg max.		731.29840	006
Cutting powder GRISINT® for use with powder cutting equipment, 25 kg package		0.462.004	013

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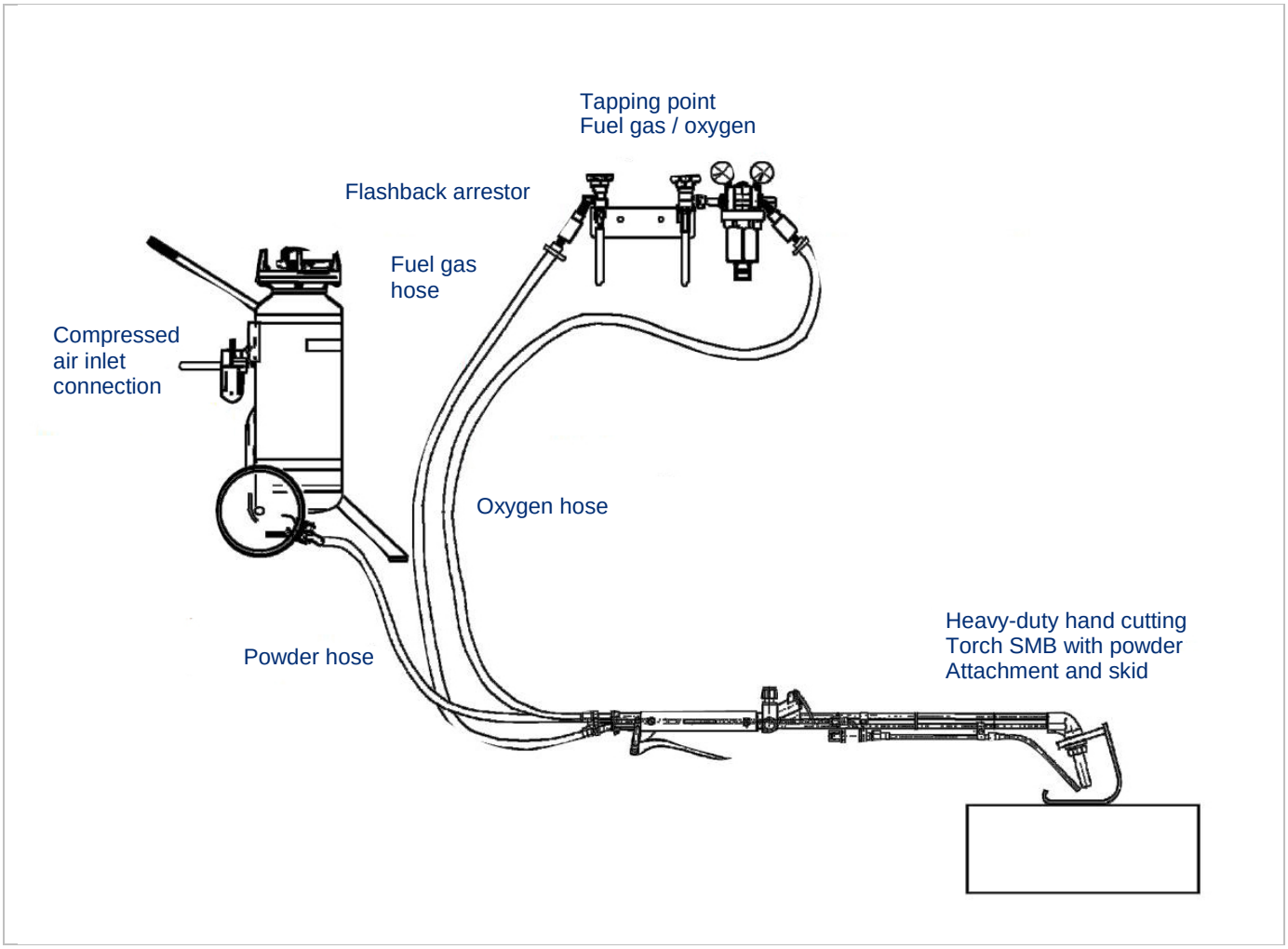
POWDER DISTRIBUTOR P75



Cutting values for heavy duty hand torch type SMB 663 with Fe powder unit

Oxygen purity:	min. 99,5 %
Test material:	CrNi 18/8 N
Fuel gas:	propane
Torch adjustment:	according to operating data for cutting nozzle type DBH-PMY (page XX)
Used powder:	GRISINT® (Art. No. 0462.004), the values are approximate
Cutting speed tolerances:	approx. 20 %
Cut quality:	Oxyfuel hand cuts with FE powder addition depend heavily upon the skill of the operator. Without mechanical guidance only scrap quality can be achieved.
Note:	All data and especiall the low wear with powder nozzles and valves can only be achieved if using the iron powder GRISINT® in combination powder distributor P75, as well as original Messer CS connecting parts.

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MESSER Cutting Systems

PRESTOCUT® M 651 / M 655

HEAVY-DUTY MACHINE CUTTING TORCHES

PRESTOCUT® M 651 / M 655

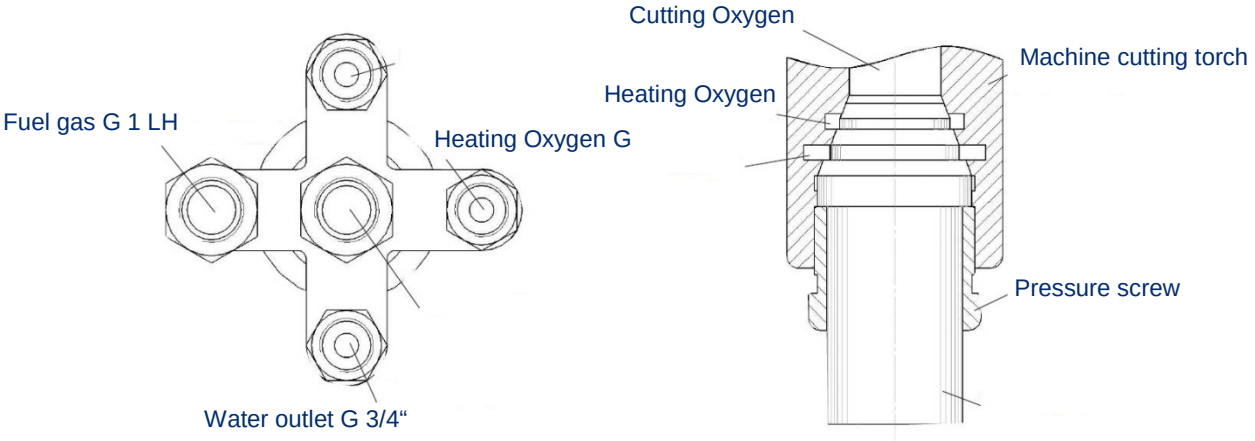
Cutting nozzle DB 318-PM

PRESTOCUT® M 651 / M 655

Water-cooled, with 3-seat nozzle connection, for cold cuts and hot cuts of non-alloyed material (with powder attachment) up to 600 mm thickness

Characteristics:

- High cutting speed through special design
- Economical media consumption through low Oxygen metal factor
- Long life through large nozzle stand-off
- “Flying“ start of cut thanks to high heat input
- High operational safety through conical seals
- Highly economical thanks to narrow cut width
- Long life through easy maintenance
- Flexible use, both on hot and cold materials
- Suitable for all common fuel gasses (with the exception of Acetylene)
- Smooth cut surface with little top edge melting
- Universal version for both nozzle mixing and outer mixing cutting nozzles
- Robust design appropriate for the steel industry
- Solig hose connection block and torch head of brass
- Torch pipes of Stainless Steel
- Complete water cooling including torch head
- Torch lengths 500 and 1000 mm
- Torch shaft diameter 50 mm
- Connections to DIN EN 560 (G 1/2“ RH for heating Oxygen, G 3/4“ LH for fuel gas, G 3/4“ RH for cutting Oxygen, G ½ RH for cooling water inlet and outlet)
- Quality guarantee through 100 % testing not only of the torch but also of the nozzles
- Front surface of the nozzle can be machined up to 3 mm
- Cutting range 50 - 600 mm



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PRESTOCUT® M 651 / M 655

HEAVY-DUTY MACHINE CUTTING TORCHES

Heavy-duty machine cutting torches		PRESTOCUT® M 651 / M 655	
Description		*Art. No.*	*Cat. No.*
PRESTOCUT® M 655	length 500 mm	731.29790 ✱	006
PRESTOCUT® M 651	length 1000 mm	731.30530 ✱	006

Heavy-duty machine cutting nozzles			PRESTOCUT® DB-PM 218 + 318, PB 318 + 618
Description	*Cutting range*	*Art. No.*	*Cat. No.*
DB 318-PM (nozzle mixing)	50 - 300 mm	731.26594	006
DB 618-PM (nozzle mixing)	300 - 600 mm	731.25507	006
PB 318-PM (outer mixing)	50 - 300 mm	731.29417	006
PB 618-PM (outer mixing)	300 - 600 mm	731.25508	006

OPERATING DATA FOR NOZZLE-MIXING MACHINE CUTTING NOZZLE TYPE PRESTOCUT® DB-PM

Material thickness [mm]	Cutting nozzle	Heating oxygen [bar]	Cutting oxygen [bar]	Fuel gas propane [bar]	Fuel gas methane [bar]	Cutting speed [mm/min]	Cutting kerf width [mm]	Total oxygen consump. [m^3/h]	Fuel gas consump. [m^3/h]
Fuel gas propane									
50					130	360	6 - 7	60	4,5
100	731.26594	1,0	10	≤ 0,3	130	320	6 - 7	60	4,5
200					130	200	6 - 7	60	4,5
300					130	150	6 - 7	60	4,5
Fuel gas methane (natural gas)									
50					130	360	6 - 7	62,5	17,0
100	731.26594	1,0	10	0,3 - 0,5	130	320	6 - 7	62,5	17,0
200					130	200	6 - 7	62,5	17,0
300					130	150	6 - 7	62,5	17,0

OPERATING DATA FOR NOZZLE-MIXING MACHINE CUTTING NOZZLE TYPE PRESTOCUT® DB 618-PM

Material thickness [mm]	Cutting nozzle	Heating oxygen [bar]	Cutting oxygen [bar]	Fuel gas propane [bar]	Fuel gas methane [bar]	Cutting speed [mm/min]	Cutting kerf width [mm]	Total oxygen consump. [m^3/h]	Fuel gas consump. [m^3/h]
Fuel gas propane									
300					130	150	8 - 10	114	8,0
400	731.25507	1,4	10	≤ 0,3	130	110	8- 10	114	8,0
500					130	90	8- 10	114	8,0
600					130	60	8- 10	114	8,0
Fuel gas methane (natural gas)									
300					130	150	8 - 10	116	23,0
400	731.25507	1,8	10	0,7	130	110	8 - 10	116	23,0
500					130	90	8 - 10	116	23,0
600					130	60	8 - 10	116	23,0

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MESSER Cutting Systems

OPERATING DATA FOR POST-MIXING MACHINE CUTTING NOZZLE TYPE PRESTOCUT® PB 318-PM									
Material thickness [mm]	Cutting nozzle	Heating oxygen [bar]	Cutting oxygen [bar]	Fuel gas propane [bar]	Fuel gas methane [bar]	Cutting speed [mm/min]	Cutting kerf width [mm]	Total oxygen consump. [m^3/h]	Fuel gas consump. [m^3/h]
Fuel gas propane									
50					130	360	6 - 7	55,0	3,8
100	731.29417	0,2 - 0,5	10	0,08	130	320	6 - 7	55,0	3,8
200					130	200	6 - 7	55,0	3,8
300					130	150	6 - 7	55,0	3,8
Fuel gas methane (natural gas)									
50					130	360	6 - 7	54,0	10,0
100	731.29417	0,2	10	0,25	130	320	6 - 7	54,0	10,0
200					130	200	6 - 7	54,0	10,0
300					130	150	6 - 7	54,0	10,0

OPERATING DATA FOR POST-MIXING MACHINE CUTTING NOZZLE TYPE PRESTOCUT® PB 618-PM									
Material thickness [mm]	Cutting nozzle	Heating oxygen [bar]	Cutting oxygen [bar]	Fuel gas propane [bar]	Fuel gas methane [bar]	Cutting speed [mm/min]	Cutting kerf width [mm]	Total oxygen consump. [m^3/h]	Fuel gas consump. [m^3/h]
Fuel gas propane									
300					130	150	8 - 10	105	6,0
400	731.25508	0,2 - 0,5	10	0,2	130	110	8- 10	105	6,0
500					130	90	8- 10	105	6,0
600					130	60	8- 10	105	6,0
Fuel gas methane (natural gas)									
300					130	150	8 - 10	104	15,0
400	731.25508	0,2	10	0,5	130	110	8 - 10	104	15,0
500					130	90	8 - 10	104	15,0
600					130	60	8 - 10	104	15,0

The table indicate standard values based on the use of plain steel with a carbon content of up to 0,3% and oxygen with a minimum purity of 99,5%. The pressure stated are gauge pressure measured at the torch inlet.

- Satisfactory cuts on clean and crack-free workpieces can be achieved with undamaged nozzles and suitable flame cutting machines. The given cutting speeds are valid for old material and are to increase depending upon the work-piece temperature by hot cuts. The consumption data indicate in m^3/h apply to the standard condition as per DIN 1343.

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PRESTOCUT® M 651 / M 655

HEAVY-DUTY MACHINE CUTTING TORCHES

Stand: 04/2013

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MESSER Cutting Systems

MSP 3320/190

POWDER MACHINE CUTTING TORCH

MSP 3320/200

Powder cutting nozzle

Powder sleeve

Powder machien cutting torch MSP 3320/200

for cutting of stainless steel, high-carbon steels and non-ferrous materials up to 300 mm and of cast iron up to approx. 150 mm material thickness.

Characteristics:

- Shaft diameter 32 mm
- Shaft length 190 mm
- Connections to DIN EN 560 (G 1/2“ RH for heating Oxygen, G 3/4“ LH for fuel gas, G 3/4“ RH for cutting Oxygen, G ½ RH for cooling water inlet and outlet)
- Cutting range 50 - 300 mm

Powder machine cutting torch			MSP 3320/200
Description		*Art. No.*	*Cat. No.*
MSP 3320/190	Shaft length 190 mm	716.51510 ✱	006

Powder cutting nozzles			MSP 3320
Description	*Cutting range*	*Art. No.*	*Cat. No.*
Powder cutting nozzles for acetylene	25 - 40 mm	716.00382	006
	40 - 60 mm	716.00383	006
	60 - 100 mm	716.00384	006
	100 - 200 mm	716.00385	006
	200 - 300 mm	716.00386	006
Powder cutting nozzles for propane	125 - 175 mm	552.01050	006
methane (natural gas), Mapp	175 - 225 mm	552.01060	006
	225 - 300 mm	552.01090	006
Powder sleeve		703.04032	006

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MSP 3320 Accessories			
Description	*Connection*	*Art. No.*	*Cat. No.*
Adjusting valve for heating oxygen	G 1/4“ RH-6	718.00500	005
Adjusting valve for cutting oxygen	G 3/8“-6	718.00501	005
Adjusting valve for Fuel gas	G 3/8“ LH-6	718.00502	005
Powder shut-off valve	G 1/4“ RH-6	716.51375	006
Hose connection	G 1/4“	666.12318	000
Hose connection	G 3/8“	666.12325	000
Hose connection	G 3/8“ LH	666.12320	000
Heating oxygen	G 1/4“	0.647.583	005
Cutting oxygen	G 3/8“	0.647.584	005
Fuel gas	G 3/8“ LH	0.346.364	005

POWDER MACHINE CUTTING TORCH MSP 3320										
Material-thickness [mm]	Art. No. cutting nozzle	Heating oxygen pressure [bar]	Cutting oxygen pressure [bar]	Fuel gas pressure [bar]	Nozzle clearance [mm]	Cutting speed [mm/min]	Cutting kerf width [mm]	Oxygen consump. [m^3/h]	Fuel gas consump. [m^3/h]	Powder consump. [kg/h]
Fuel gas acetylene										
25 - 40	716.00382	0,5	4,0	0,5	30 - 40	320-230	6,0	10,7	1,0	6 - 8
40 - 60	716.00383	0,6	4,0	0,5	30 - 40	190-140	8,0	13,8	1,2	8 - 10
60 - 100	716.00384	0,7	4,8	0,5	30 - 40	120-100	9,0	20,1	1,4	8 - 10
100 - 200	716.00385	1,0	5,5	0,5	30 - 40	80-70	12,0	28,4	1,6	10 - 12
200 - 300	716.00386	1,3	6,0	0,5	30 - 40	60-40	17,0	41,2	1,8	10 - 12
Fuel gas propane										
125 - 175	552.01050	4,5	4,7	0,5	30 - 40	120-100	9,0	20,1	0,5	8 - 10
175 - 225	552.01060	5,5	5,5	0,5	30 - 40	80-70	12,0	28,4	0,6	10 - 12
225 - 300	552.01090	6,0	6,0	0,5	30 - 40	60-40	17,0	41,2	0,7	10 - 12
Fuel gas methane (natural gas)										
125 - 175	552.01050	5,0	4,7	0,5	30 - 40	120-100	9,0	21,5	1,5	8 - 10
175 - 225	552.01060	6,0	5,5	0,5	30 - 40	80-70	12,0	31,0	1,7	10 - 12
225 - 300	552.01090	6,5	6,0	0,5	30 - 40	60-40	17,0	44,0	2,0	10 - 12

The tables indicate standard values based on the use of plain steel with a carbon of up to 0,3% and oxygen with a minimum purity of 99,5%. The pressures stated are gauge pressure measured at the torch inlet. The consumption data indicated in m^3/h apply to the standard condition as per DIN 1343.

- Use only clean, undamaged nozzles.

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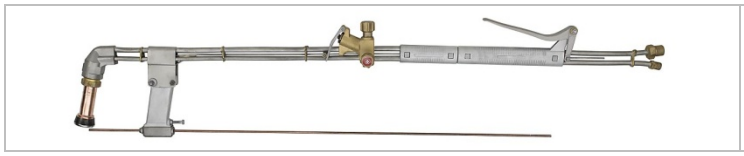
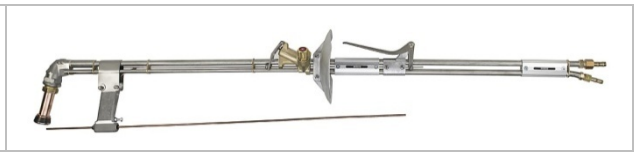
FB + FBK

HAND SCARFING / INGOT MOLD SCARFING TORCHES



FB 1000



FB 1600 / 2000

FBK 1600

GRISCARF® 5360-PM

FD 16

Hand scarfing torch FB 1000 and FB 1600 and Ingot mould scarfing torch FBK 1600
with spring lever for control of scarfing oxygen, on the FB the ignition wire feed is triggered simultaneously. The area of application is the correction of cracks, slag inclusions and defects in blocks, ingots slabs and castings of unalloyed and alloyed steels. The modelling of swrought work and the partial scarfing as well as the scarfing out of burnt, cracked material from the inner surfaces of ingots.

Characteristics:

- Scarfing width FB 1000 = 40 mm, FB 1600 + FBK 1600 = 90 mm
- Connections to DIN EN 560 (G 1/2“ RH-11 for oxygen, G 3/8“ LH-9 for fuel gas)
- Fuel gases acetylene (A), propane (P), methane (M) and coal gas

Hand scarfing torch/ Ingot scarfing torch			FB + FBK
Bezeichnung		*Art. Nr.*	*Cat. No.*
FB 1000	Length 1260 mm	716.50051	006
FB 1600	Length 1500 mm	716.50191	006
FB 1600	Length 1325 mm	716.50192	006
FB 1600	Length 1175 mm	716.50180	006
FB 2000	Length 1500 mm	716.50195	006
FB 2000	Length 1390 mm	716.50193	006
FBK 1600	Length 1800 mm	716.50212	006

Scarfing nozzles			GRISCARF® 5310-A + 5360-PM / FD 16
Description	*Scarfing width*	*Art. No.*	*Cat. No.*
Scarfing nozzle GRISCARF® 5310-A for FB 1000	40 mm	716.50089	012
Scarfing nozzle GRISCARF® 5360-PM for FB 1000	40 mm	716.50088	012
Scarfing nozzle FD 16 for FB 1600 and FBK 1600 with wear-resistant stellite ring	90 mm	716.500232	012
Scarfing nozzle FD 20 for FB 2000 with wear-resistant stellite ring	110 mm	716.50231	012

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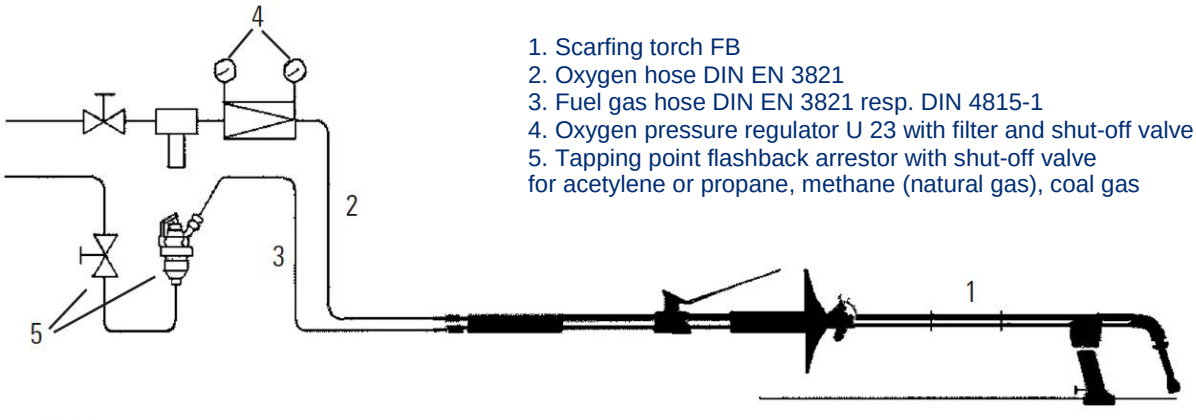
FB 1000 / FB 1600 / FBK 1600	Accessories	
Description	*Art. Nr.*	*Cat. No.*
Heat protective shield	716.50181	006
Nozzle cleaners in case	052.29201	038
Oxygen hose 11 mm	051.01200 ✱	043
Oxygen hose 13 mm	051.02940 ✱	043
Fuel gas hose 9 mm	051.00040	043
Propane hose	051.02130	043

SCARFING NOZZLES GRISCARF® 5310 + 5360 / FD 16 / FD 20

Description	Art. No.	Oxygen pressure [bar]	Fuel gas pressure [bar]	Scarfing oxygen consump. [m³/h]	Scarfing speed [mm/min]	Heating oxygen consump. [m³/h]	Fuel gas consump. [m³/h]
Fuel gas acetylene							
GRISCARF® 5310-A	716.50089	4,0 - 5,0	0,5	70 - 80	8 - 10	3,0	2,3
Fuel gas propane							
GRISCARF® 5360-PM	716.50088	4,0 - 5,0	0,5	70 - 80	8 - 10	5,0	1,3
FD 16	716.50232	2,5 - 3,5	0,3	150 - 190	8 - 10	6,0	1,7
FD 20	716.50231	4,0 - 5,0	0,5	250 - 320	8 - 10	8,0	2,3
Fuel gas methane (natural gas)							
GRISCARF® 5360-PM	716.50088	4,0 - 5,0	0,5	70 - 80	8 - 10	5,0	3,3
FD 16	716.50232	3,0	0,5	150 - 190	8 - 10	8,5	5,8
FD 20	716.50231	4,0 - 5,0	0,7	250 - 320	8 - 10	12,0	8,2
Fuel gas Coal gas							
GRISCARF® 5360-PM	716.50088	4,0 - 5,0	0,5	70 - 80	8 - 10	5,0	7,5
FD 16	716.50232	2,5 - 3,5	0,4 - 0,6	150 - 190	8 - 10	6,0	10,0
FD 20	716.50231	4,0 - 5,0	0,7 - 0,9	250 - 320	8 - 10	8,0	13,3



1. Scarfing torch FB
2. Oxygen hose DIN EN 3821
3. Fuel gas hose DIN EN 3821 resp. DIN 4815-1
4. Oxygen pressure regulator U 23 with filter and shut-off valve
5. Tapping point flashback arrestor with shut-off valve

for acetylene or propane, methane (natural gas), coal gas

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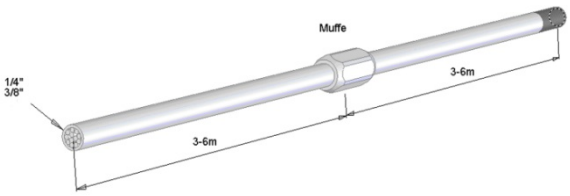
MESSER Cutting Systems

OXYGEN LANCE

Lance holder



Oxygen lances

Oxygen lancing equipment

for lancing of ferrous and non-ferrous alloys, slag and refractory linings.

- Dividing large metal parts (including all alloys and for all material thicknesses)
- Demolition work (concrete and stone)
- Parting of bung plugs
- Piercing out bolts

Lance holder		BRH
Description	*Art. No.*	*Cat. No.*
BRH 1/4	716.14116	006
BRH 3/8	716.14117	006

Oxygen lances			
Description	*Length*	*Art. No.*	*Cat. No.*
Oxygen lance 1/4	3,0 m	0.463.0143	000
Oxygen lance 3/8	3,0 m	0.463.0383	000
Oxygen lance 3/8	4,0 m	0.463.0384	000
Oxygen lance 3/8	6,0 m	0463.0386	000

Accessories	FB 1000 / FB 1600 / FBK 1600
Description	*Art. No.*	*Cat. No.*
Replacement clamp shaft ESPH 1/4	716.14118	006
Replacement clamp shaft ESPH 3/8	716.14119	006
Cylinder regulator U 13 F 10 bar	509.99850	004
Cylinder regulator U 13 F 20 bar	509.99900	004

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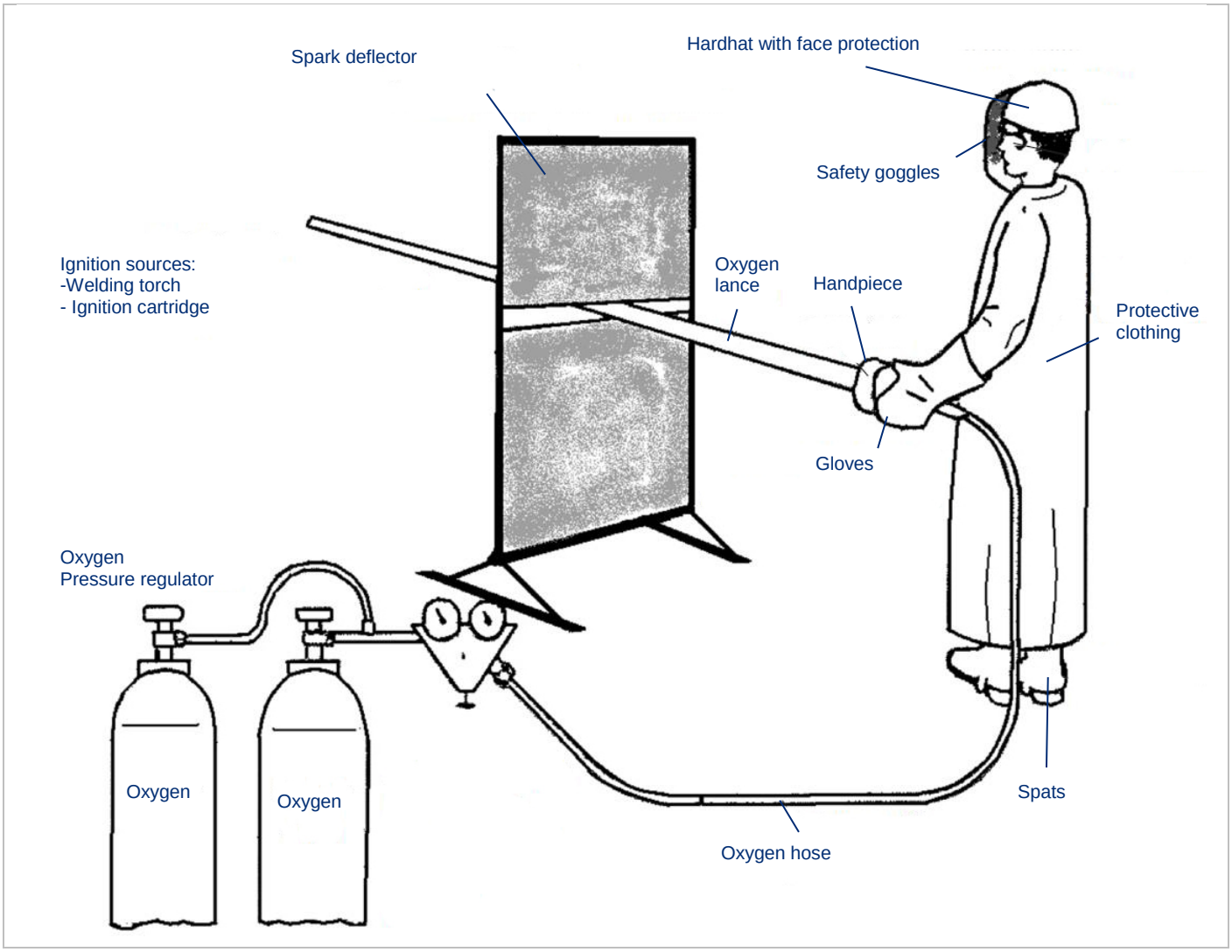
Handling Oxygen lances

The minimum equipment required for handling Oxygen lances is:

- Lance holder (BRH)
- Oxygen hose, metallically armoured, with at least 9 mm internal diameter
- Oxygen cylinder regulator (U 13 F)
- Strongly flame resistant personal protective clothing



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MESSER Cutting Systems

Cylinder pressure regulator U 13 F

U 13 F

Characteristics:
- Constant working pressure through large membrane area, even with varying cylinder pressures, exact adjustments
- Safety: protected against burning out by special arrangement and quality of the seal and membrane materials
- Optimum flow characteristics and large housing surface hinder freezing
- Resistant to fluctuations through indirectly impinged membrane. Gas flow is not fed through the membrane chamber
- Resistance to burning out confirmed by BAM test
- Trade body certification 1 BG 65

Connections
- At the inlet a cylinder valve connection for the type of gas and at the outlet removable hose connections according to the applicable national standards

Safety valve
- Blows off upwards with connection for exhaust gas removal line

Characteristic
L10 = 6

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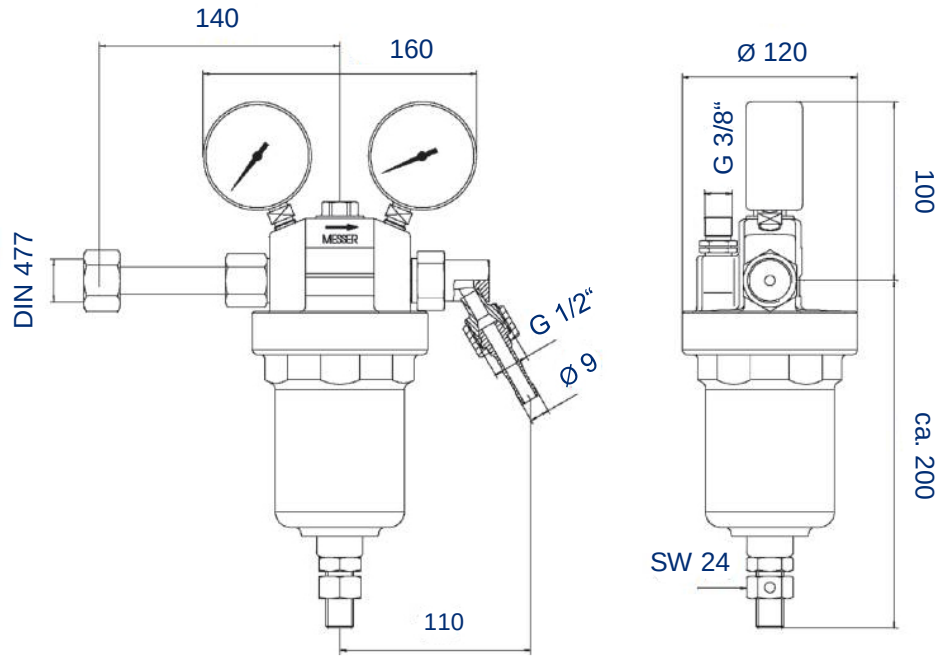
Gas flow

Inlet pressure	Flow rate (m^3/h) Oxygen) With outlet pressure [bar]			
	5	10	15	20
50	200	200	200	200
30	150	150	150	150
20	100	100	100	-
15	80	80	-	-

Description		*Art. No.*	*Cat. No.*
Cylinder pressure regulator U 13 F For oxygen	10 bar	509.99850	004
Cylinder pressure regulator U 13 F For oxygen	20 bar	509.99900	004



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