

Chapter 5

Gas welding & cutting



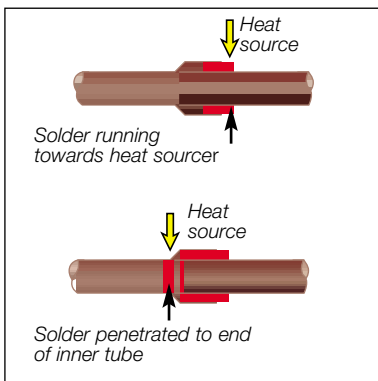
Gas welding & cutting



Brazing

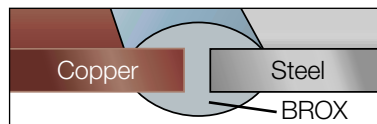
Through the heating action of a torch flame, filler metal (solder) is drawn into the annular space of the joint.

This phenomenon results from solder molecules being attracted to the molecules of the base metal in the parts to be assembled.



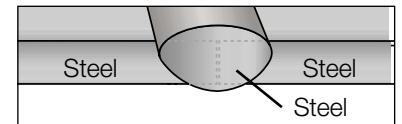
Braze welding

Braze welding is used to assemble two parts made of the same or dissimilar types of base metal, without melting the base metal, using a filler metal with a melting temperature that is lower than that of melting the base metals. This is a gradual welding operation where the filler metal moves as welding progresses. The technique is used to assemble steel, galvanised steel, copper, copper alloys and to repair cast iron.



Welding

Welding consists of an assembly operation in which the base metal of the parts to assemble is heated to coalescence to form the joint. Depending on the thickness, welding can be achieved under conditions that may or may not be welding conditions, strictly speaking: the hottest flame (3 150 °C), the easiest to adjust, the strongest per unit of area, the most oxide-reducing, can cause inclusions.

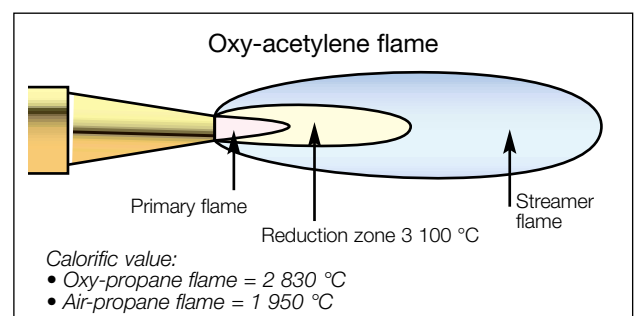


Choice of flame

- Using a **neutral** flame (equal mixture of oxygen and acetylene) is often preferable, especially when assembling metals that oxidise easily at high temperatures.
- Due to its chemical and thermal characteristics, the oxy-acetylene flame offers the best compromise between flexibility and performance.
- To achieve very high-quality brazing or braze welding, depending on the flame adjustment, the flame can easily be **neutral**.
- An oxy-propane or air-propane flame cannot be used to obtain a reduction flame. It can be used only for soft soldering.

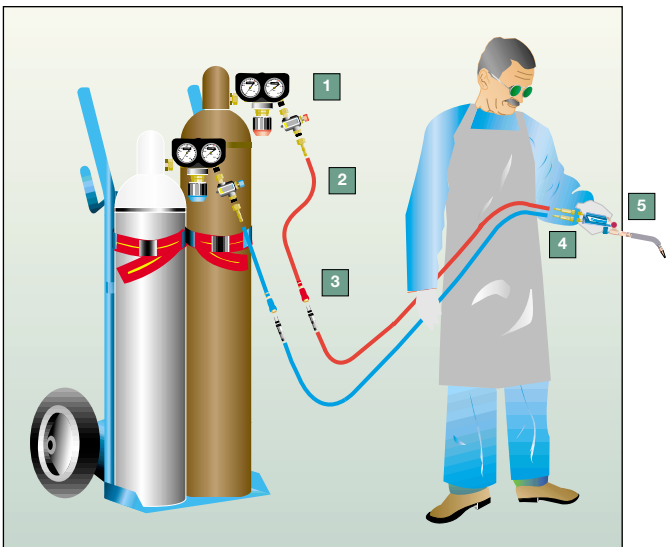
Flame adjustment

- For braze welding, only an oxy-acetylene flame can be used. The flame should be adjusted so that there is slightly more **oxygen** for bronze, brass and galvanised steel.
- For others the flame should be **neutral**.



Additional recommendations:

- Secure the gas cylinders before use either at the workstation or on a suitable trolley.
- Use appropriate personal safety equipment: goggles, gloves, apron.



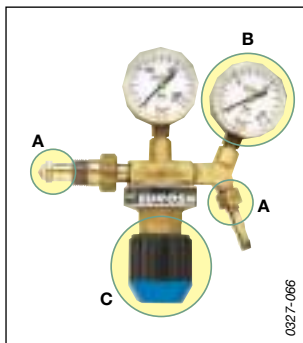
1 – Pressure regulator

Maintenance

- A** - Check threads to ensure they are leaktight*.
- B** - Check pressure gauges.
- C** - Turn adjustment knob after opening gas valve and check that pressure rises gradually.

Golden rules

- Never lubricate.
- SYMAP** recommends replacing pressure regulators after no more than five years of service even if they are still operating correctly.



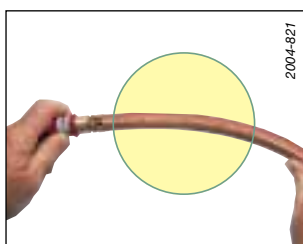
2 - Hoses

Maintenance

Inspect the entire length of the hose by bending it to make sure it is in good condition. Check for splits, cracking and swelling.

Golden rules

SYMAP** recommends replacing hoses after three years of intensive use, otherwise once every five years..



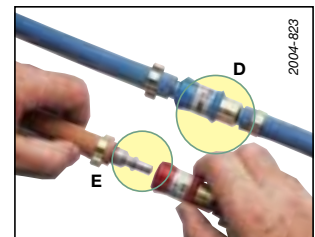
3 – Quick-action couplings

Maintenance

- D** - Check that coupling are securely fastened.
- E** - Check leaktightness* in use at service pressure, first with coupler secured, then disconnected.

Golden rules

Always replace if an incident has occurred (crushing, damage) or in case of malfunctioning (leak, pressure loss).



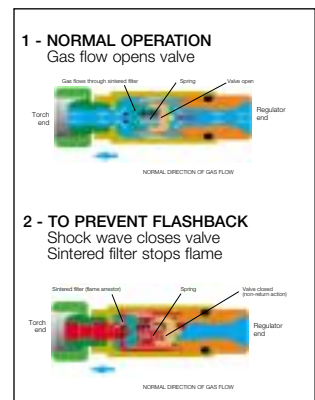
4 – Flashback arrestors

These are vital safety parts as they prevent flame flashback and gas mixture if the torch malfunctions.

They must be placed as closely as possible to the torch or be built onto the handle.

Golden rules

- Always replace if flashback or damage has occurred.
- SYMAP** recommends replacing flashback arrestors after no more than three years of service, even if they are still in good condition.



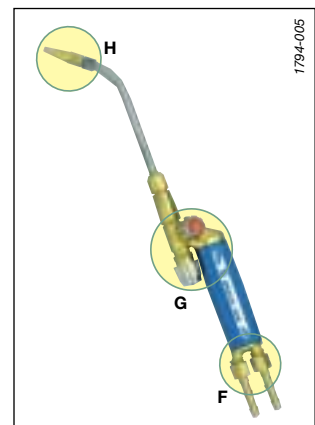
5 - Torch

Maintenance

- F** - Check inlet connectors.
- G** - Check valves to ensure they are leaktight*.
- H** - Check that nozzle or cutting tip is in good condition and check for any leakage.

Golden rules

SYMAP** recommends replacing the torch after no more than five years of service, even if it is still operating correctly.



* To check leaktightness, use our "BUBBLE" leak detector; Cat. no. W 000 010 963.

** SYMAP: Syndicat de la machine-outil du soudage (french association of welding companies)

Gas welding & cutting

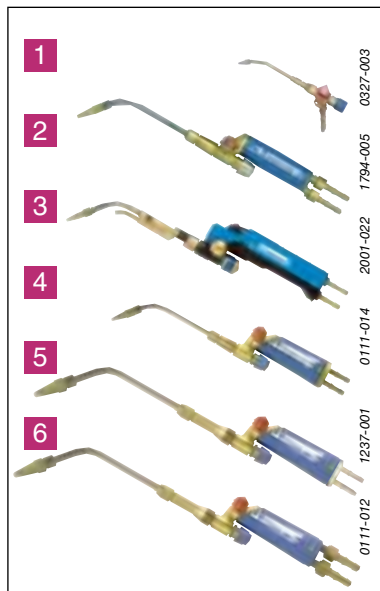
Innovation: SPEEDFIRE the SAF way

- Easy to use, saving both gas and time.**
 SPEEDFIRE enables you to achieve the correct settings immediately before turning on the gas by the use of setting ranges and indexes.
- No risk of burning, simple action, time saved.**
 SPEEDFIRE both gases are turned on and ignited using only one control and one-handed operation.
- Time and gas savings.**
 SPEEDFIRE has different controls for adjustment and igniting/extinguishing. The operator's settings are retained and can be used again when the torch is next ignited. Note that the SPEEDFIRE torch offers the expert user the same setting facilities as a traditional torch.
- Increased safety.**
 SPEEDFIRE both gases can be turned off instantly and smoothly using only one control and one-handed operation.



Welding blowpipes

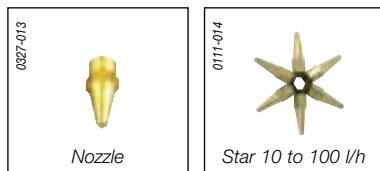
FBA Integrated Flash back Arrestors



Designation	To order Including set of tips and star	Flowrate l/h	Welding thickness mm	Inlet coupling	Applications
1 - VARIAL 00	7214-1600	10 to 140	1	Fixed hose tail Ø 6 mm	For all fine works: goldsmithing, dental technics, model making.
2 - VARIAL 400	7264-3400	40 to 400	0.25 to 5	M 12 x 100 + hose tail Ø 6 mm	For all works concerning welding, brazing and braze welding: car bodyworks repair, boiler making, maintenance shops, plumbing...
3 - SPEEDFIRE S FBA	7500-0050	63 to 400	0.5 to 4	Hose tail Ø 6 mm	Boiler making, ship construction, pipe works (heavy industry)...
4 - PYROSAF 400 C FBA	7264-3002	40 to 400	0.25 to 5	Hose tail Ø 6 mm	
5 - PYROSAF 1000 C FBA	7265-3001	250 to 1 000	2 to 12	Hose tail Ø 10 mm	
6 - PYROSAF 1000 B FBA	7265-3000	250 to 1 000	2 to 12	M 16 x 150 + hose tail Ø 10 mm	

Tips and nozzles for welding blowpipes

For VARIAL 00 (acetylene*)



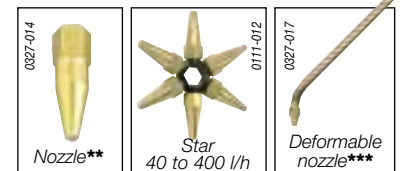
Flowrate l/h	To order	
	nozzle	kit
10	7214-2011	
16	7214-2012	7214-2018
25	7214-2013	kit AD
40	7214-2014	6 tips of 10
63	7214-2015	to 100 l/h)
100	7214-2016	+ star
140	7214-2017	

For PYROSAF 1000 C,
PYROSAF 1000 B (acetylene*)



Flowrate l/h	To order	
	nozzle	kit
250	7268-2013	
315	7268-2014	7268-2012
400	7268-2015	kit AD
500	7268-2016	7 tips + star
630	7268-2017	
1000	7268-2019	

For VARIAL 400, SPEEDFIRE S,
PYROSAF 400 C (acetylene*)



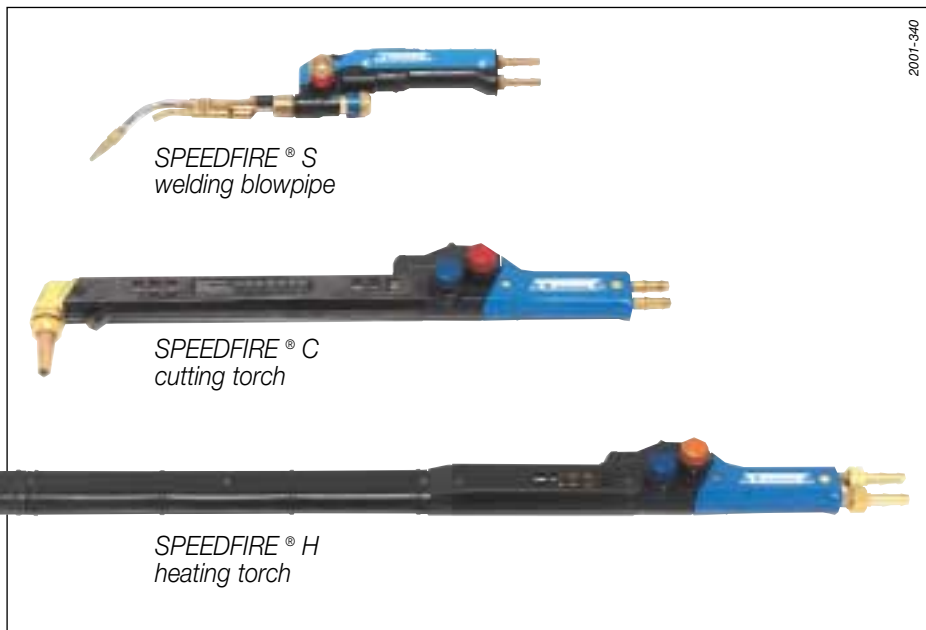
Flowrate l/h	To order	
	nozzle	kit
40**	7264-2008	
63**	7264-2009	
100**	7264-2010	7268-2000
160**	7264-2011	kit AD
250**	7264-2012	7 tips + star
315**	7264-2013	
400**	7264-2014	
100***	7264-3057	
160***	7264-3058	
250***	7264-3059	
315***	7264-3060	
400***	7264-3061	

Nut
M 12 x 125 R
for deformable
nozzle.
Cat. no.
7264-3055

* tips for other gases available: consult us

Simplicity, safety, productivity.

- 3 decisive advantages:
- preadjusted flowrates,
 - immediate ignition and extinction,
 - memory adjustment.



Manual cutting torches

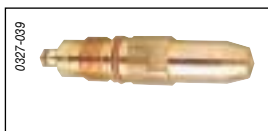


FBA Integrated Flash back Arrestors

Designation	To order	Angle	Cutting capacity mm	Coupling	Length mm	Applications
1 - PYROCOPT 0	0679-2020	100°	1.5 to 50	M 12 x 100 + hose tail Ø 6 mm	360	Cutting of fine sheet, plumbing, small works...
2 - PYROCOPT G1	7608-0001 7622-0001 7623-0001	90° 120° 180°	3 to 300	M 16 x 150 + hose tail Ø 10 mm	550	Worksites.
3 - ALCOPT G1	7800-0001	90°	3 to 300	M 16 x 150 + hose tail Ø 10 mm	450	Maintenance, shops, boiler making, general steel construction.
4 - ALCOPT G1 C	7800-0002 7800-0007	90° 120°	3 to 300	FBA with hose tail Ø 10 mm	450	
5 - SPEEDFIRE C Acetylene	7500-0020 7500-0021	G1 90° IC 90°	3 to 300	FBA with hose tail Ø 10 mm	500	
5 - SPEEDFIRE C Propane	7500-0023 7500-0025	G1 90° IC 90°				

Cutting nozzles for manual cutting torches

For PYROCOPT 0



To order	Gauge in mm	Cutting thickness in mm
Acetylene		
0679-2005	5/10	1.5-10
0679-2006	10/10	5-25
0679-2018	15/10	25-50



For PYROCOPT G1, ALCOPT G1, ALCOPT G1 C and SPEEDFIRE C

To order G1 nozzles		Gauge in mm	Cutting thickness in mm	To order IC nozzles	
Acetylene	Tetrene			Acetylene	Tetrene
7018-1688	7018-1628	7/10	3-10	7018-1590	7018-1607
7018-1689	7018-1629	10/10	10-25	7018-1591	7018-1608
7018-1690	7018-1630	12/10	25-50	7018-1592	7018-1609
7018-1691	7018-1631	16/10	50-80	7018-1593	7018-1610
7018-1692	7018-1632	20/10	80-120	7018-1594	7018-1611
7018-1693	7018-1633	25/10	120-200	7018-1595	7018-1612
7018-1694	7018-1634	30/10	200-300	7018-1596	7018-1613
Propane	Natural gas			Propane	
7018-1621	7018-1635	7/10	3-10	7018-1600	-
7018-1622	7018-1636	10/10	10-25	7018-1601	-
7018-1623	7018-1637	12/10	25-50	7018-1602	-
7018-1624	7018-1638	16/10	50-80	7018-1603	-
7018-1625	7018-1639	20/10	80-120	7018-1604	-
7018-1626	7018-1640	25/10	120-200	7018-1605	-
7018-1627	7018-1641	30/10	200-300	7018-1606	-

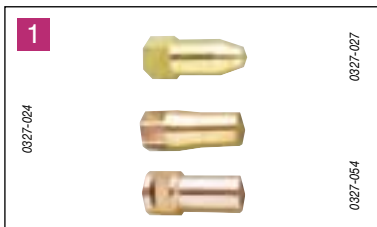
Gas welding & cutting

Heating torches



Designation	To order	Gas	Flowrate l/h	Inlet coupling	Length mm	Applications
1 - VARIAL G2	7270-0024	Acetylene or Propane Tetrene	1 200 to 3 000	M 16 x 150 + hose tails Ø 10 mm	650	Brazing of large workpieces, highly localised heating, shaping.
2 - SPEEDFIRE H	7500-0030	Propane	1 500 to 6 200	M 16 x 150 + hose tails Ø 10 mm	1 050	Heat shrink, heat treatment, descaling, preheating and shaping.

Tips for heating torches



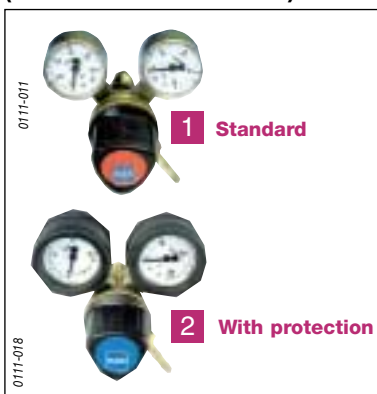
Designation	Gas	To order	Flowrate in l/h	Thread
1- Tips for VARIAL G2	Single flame	Propane Tetrene	0679-0039	1 200
			0679-0040	1 500
			0679-0041	1 800
Multiflame	Propane	0653-0152	3 500	Female M 14 x 150
		7383-0011	1 250	
		7383-0012	2 000	
		7383-0013	3 150	



Designation	Gas	To order	Flowrate in l/h	Thread
2- Tips for SPEEDFIRE H	Propane	7501-0012	1 500 to 2 700	Female 1/2 x 25 UNS
		7501-0013	2 000 to 4 500	
		7501-0014	3 000 to 6 200	

Pressure regulators

OXYJUNIOR regulator with membrane, light weight, ideal for portable cylinders type OXYFLAM, ROLLERFLAM. (conform to ISO EN 2503)



Gas	Type	To order	Cylinder Max outlet pressure in bar		Flowrate in Nm³/h	Inlet connection	Outlet connection
			Cylinder	Outlet			
Oxygen	1 - standard	0968-7200	200	10	17	NF-F	M 16 x 150 R + hose tails Ø 6 mm
	2 - with protection	0968-7160					
Acetylene	1 - standard	0968-7201	25	1.5	1.2	NF-H	M 16 x 150 L + hose tails Ø 6 mm
	2 - with protection	0968-7161					

EUROSAF regulator B 20 and B 50 for cylinders

For industrial applications with B 20 and B 50 cylinders. Integrated and non accessible valve. State of origin is guaranteed by a sealing sticking label. End of piston stroke limits the adjusting range. Pressure regulator adjusting knob which cannot be removed. Security pressure gauges (in case of overload there won't be any ejected parts).



Gas	To order	Pressure in bar		Flow-rate Nm ³ /h	Inlet connection	Outlet connection
		Cylinder	Outlet			
1 - Oxygen	0964-1004 0964-1000	200	4 10	15 40	NF-F	M 16 x 150 R + hose tails Ø 10 mm
1 - Acetylene	0964-1001 0964-1005	25	1.5	6	NF-H NF-A (stirup)	M 16 x 150 L + hose tails Ø 10 mm
1 - Compressed air	0964-1051	200	10	40	NF-B	M 16 x 150 R + hose tails Ø 10 mm
1 - Neutral gas	0964-1060 0964-1061	200	4 10	15 40	NF-C	M 16 x 150 R + hose tails Ø 10 mm
1 - Hydrogen	0964-1070 0964-1071	200	4 10	45 120	NF-E	M 16 x 150 L + hose tails Ø 10 mm
2 - Propane	0964-1030	25	4	10	NF-E	M 16 x 150 L + hose tails Ø 10 mm
2 - Tetrene	0964-1040	25	4	10	NF-H	M 16 x 150 L + hose tails Ø 10 mm

Armoured regulator for B 20 and B 50 cylinders

MANOBLOC 3: especially manufactured for worksite application. Ruggedness due to anti-shock protection. End of piston stroke limits the adjustment range. Adjusting knob which cannot be removed. Security valve.



Gas	To order	Pressure in bar		Flow-rate Nm ³ /h	Inlet connection	Outlet connection
		Cylinder	Outlet			
Oxygen	2962-1852 2962-1802	200	4 10	15 40	NF-F	M 16 x 150 R + hose tails Ø 10 mm
Acetylene	2982-1601 2982-1602	25	1.5	6	NF-H NF-A (stirup)	M 16 x 150 L + hose tails Ø 10 mm
Propane	2962-1604	25	1.5	6	NF-E	M 16 x 150 L + hose tails Ø 10 mm

EUROSAF B conform ISO EN 2503: recommended for worksite applications. Ruggedness due to anti-shock protection. End of piston stroke limits the adjustment range. State of origin is guaranteed by a sealing sticking label. Adjusting knob which cannot be removed. Integrated security valve not accessible.



Gas	To order	Pressure in bar		Flow-rate Nm ³ /h	Inlet connection	Outlet connection
		Cylinder	Outlet			
Oxygen	0965-1004 0965-1000	200	4 10	15 40	NF-F	M 16 x 150 R + hose tails Ø 10 mm
Acetylene	0965-1001	25	1.5	6	NF-H	M 16 x 150 L + hose tails Ø 10 mm
Propane	0965-1030	25	4	10	NF-E	M 16 x 150 L + hose tails Ø 10 mm
Neutral gas	0965-1061	200	10	40	NF-C	M 16 x 150 R + hose tails Ø 10 mm

Gas welding & cutting

Pressure regulator / manoflowmeter (continuous adjustment)

Recommended for the regulation and adjustment of the gasflow, argon and mixtures, especially for the MIG and TIG applications.

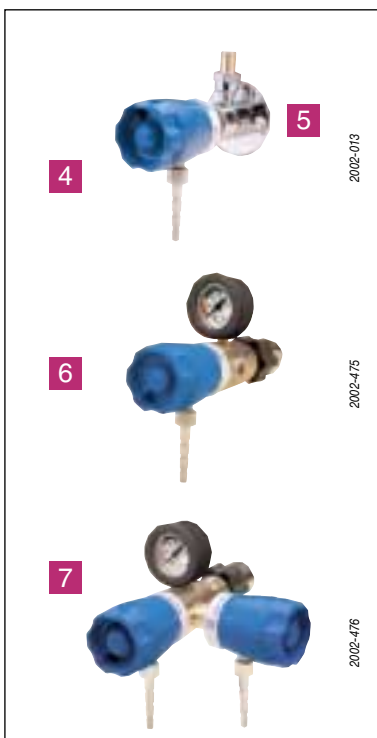


Designation	To order	Flowrate in l/min	Cylinder pressure in bar	Inlet connection	Outlet connection	Characteristics
1- EUROSAF Conform to ISO EN 2503	0964-1080	25 (TIG)	200	NF-C	M 12 x 100 R	Pressure regulator with piston for applications with B 20 and B 50 cylinders. Integrated and non accessible valve.
	0964-1081	40 (MIG)				
1- EUROSAF B Conform to ISO EN 2503	0964-1080	25 (TIG)				Ruggedness due to anti-shock protection. End of piston stroke limits the adjustment range. State of origin. Adjusting knob which cannot be removed. Security valve
	0964-1081	40 (MIG)				
3- MANOBLOC 3	2962-1851	30				

QUICKFLOW pressure regulator / flowmeter (preadjusted settings)

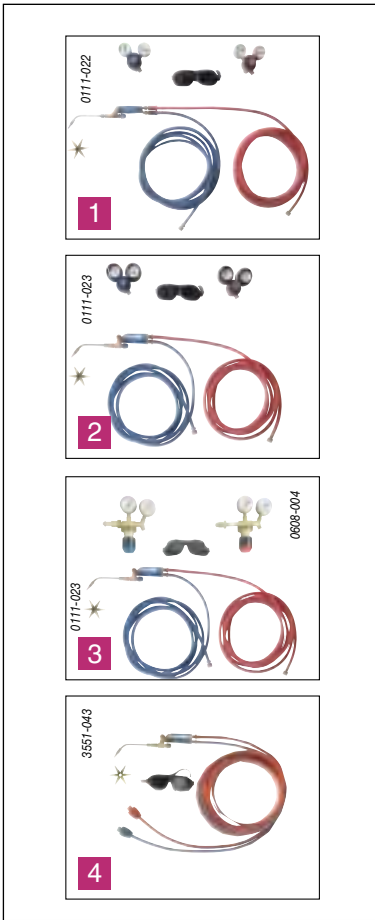
Precise, simple and easy adjustment of welding shielding gas flowrate for MIG-MAG and TIG.

- For TIG welding, adjustment: 0 / 3 / 5 / 7 / 9 / 12 and 15 l/min
- For MIG welding, adjustment: 0 / 12 / 15 / 18 / 20 / 22 and 25 l/min



Designation	To order	Flowrate in l/min	Cylinder pressure in bar	Inlet connection	Outlet connection	Characteristics
4- QUICKFLOW	0961-1015	15 (TIG)	3	M 17 gas	M 12 x 100	Flow regulator for pipe network. To be mounted on support valve.
	0961-1025	25 (MIG)				
5- Support Valve	0998-0001	-		to be brazed on pipe 8 x 10	F 17 gas	Flow regulator for pipe network. Support valve for the above connection of QUICKFLOW.
6- QUICKFLOW D	0965-1080	15 (TIG)	200	NF-C	M 12 x 100	Cylinder pressure regulator with manoflowmeter.
	0965-1081	25 (MIG)				
7- Double QUICKFLOW 15-25	2962-1851	15 (TIG) and 25 (MIG)				Cylinder pressure regulator with manoflowmeter with two outlet connections

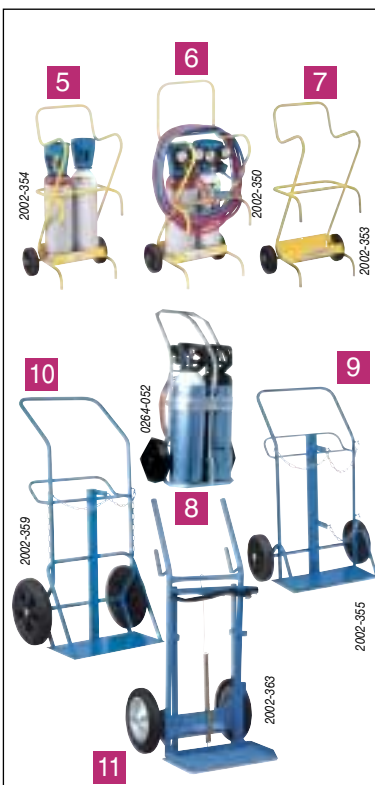
Sets



SAF manual flame sets are supplied fully assembled. You simply connect them up by fastening screw-type connectors or quick-action couplings.

Designation	To order	Composition
1- Welding set 0 <i>Small cylinder</i>	0450-3000	<ul style="list-style-type: none"> • 1 OXYJUNIOR 5 acetylene and oxygen pressure regulator, • 1 VARIAL 400 welding blowpipe, • 5 m acetylene and oxygen hose Ø 6.3 mm, • 1 acetylene and oxygen SECURTOP flash back arrester, • 4 clips Ø 6 mm and goggles shade 5.
2- Welding set 0 Compact / OXYJUNIOR <i>Small cylinder</i>	0450-2050	<ul style="list-style-type: none"> • 1 OXYJUNIOR 5 acetylene and oxygen pressure regulator with protection, • 1 PYROSAF 400 COMPACT welding blowpipe with built-in flash back arrester, • 5 m acetylene and oxygen hose Ø 6.3 mm, • 4 clips Ø 6 mm and goggles shade 5.
3- Welding set 0 Compact / EUROSAF <i>Industrial cylinder</i>	0450-2090	<ul style="list-style-type: none"> • 1 EUROSAF acetylene and oxygen pressure regulator, • 1 PYROSAF 400 COMPACT welding blowpipe with built-in flash back arrester, • 5 m acetylene and oxygen hose Ø 6.3 mm, • 1 hose coupling Ø 6 mm - 16 x 150 R, • 1 hose coupling - 16 x 150 L, • 1 goggles shade 5.
4- TIPTOP Welding set 0 Compact <i>ALTOP/MINITOP cylinder</i>	0450-0098	<ul style="list-style-type: none"> • 1 PYROSAF 400 COMPACT welding blowpipe with built-in flash back arrester, • 5 m acetylene and oxygen hose Ø 6.3 mm, • 1 goggles shade 5.

Trolleys for gas cylinders



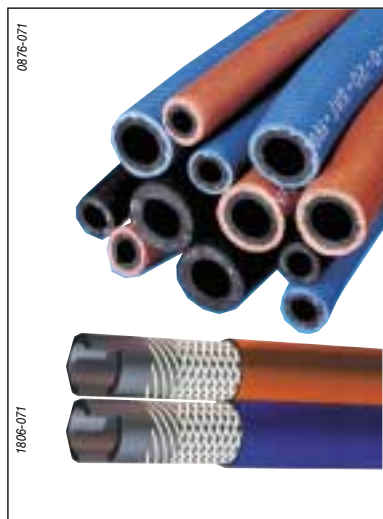
Designation	To order	Composition
5- OXYFLAM prodige rack	0451-0009	<ul style="list-style-type: none"> • trolley, • oxygen cylinder (1 m³), • acetylene cylinder (0.8 m³).
6- Equipped OXYFLAM prodige rack	0451-0010	<ul style="list-style-type: none"> • welding set 0 - Cat. no. 0450-3000, • OXYFLAM prodige trolley - Cat. no. 0451-0009.
7- OXYFLAM trolley	0451-0003	-
8- ROLLERFLAM trolley	0451-0012	<ul style="list-style-type: none"> • trolley, • oxygen cylinder (2.3 m³), • acetylene cylinder (1.6 m³).
Equipped ROLLERFLAM trolley	0451-0013	<ul style="list-style-type: none"> • welding set COMPACT 0 - Cat. no. 0450-2050, • ROLLERFLAM trolley - Cat. no. 0451-0012.
9- B 20 trolley	0704-0520	<ul style="list-style-type: none"> • trolley for oxygen cylinder (4 ou 3 m³) and for acetylene cylinder (2 or 3 m³).
10- B 50 trolley	0704-0550	<ul style="list-style-type: none"> • trolley for oxygen cylinder (10 m³), • trolley, for acetylene cylinder (4 or 6 m³).
11- B 50 Safety trolley	0704-0508	<ul style="list-style-type: none"> • trolley for oxygen/acetylene cylinder,
	0704-0509	<ul style="list-style-type: none"> • trolley for oxy/propane cylinder.

Patented model with sliding support. Offer a perfect stability, an excellent handness and a very good balance.

Gas welding & cutting

Hoses conform to EN 559 standard

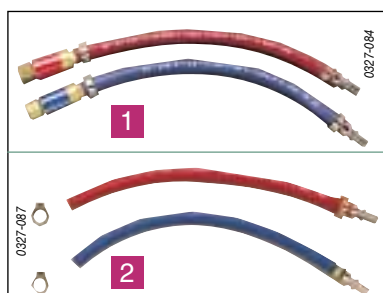
The date indicated on the hose is the date of manufacture.



Designation	Operating pressure bar	To order	
		Coil (20 m)	Coil (40 m)
Simple hose Ø 6.3 mm <ul style="list-style-type: none"> Acetylene Oxygen Propane Argon / neutral gas 	10	W 000 010 058 W 000 010 059 W 000 010 052 -	W 000 010 060 W 000 010 061 W 000 010 062 W 000 010 072
Simple hose Ø 10 mm <ul style="list-style-type: none"> Acetylene Oxygen mixte acetylene/GPL Argon / neutral gas 	20	W 000 010 066 W 000 010 067 - -	W 000 010 068 W 000 010 069 W 000 010 071 W 000 010 073
Twin hoses Ø 6.3 mm <ul style="list-style-type: none"> Oxygen / acetylene 	10	W 000 010 077	W 000 010 063
Twin hoses Ø 10 mm <ul style="list-style-type: none"> Oxygen / acetylene 	20	W 000 010 054	W 000 010 070

Handles

Two hoses with double clips, fitted with SECURTOP to torches and fitted with QUICKMATIC male coupling at the other end.



Designation	To order	Ø mm	Destination	Length in cm
1- Two hoses oxygen and acetylen fitted with: <ul style="list-style-type: none"> at one end SECURTOP (FBA) for connection to blowpipe or torch at the other end QUICKMATIC male quick action coupling 	0450-1058	6.3	VARIAL 400 PYROCOPT 0	25
	0450-1059	10	PYROSAF 1000 B PYROCOPT G1 ALCOPT G1	
2- Two hoses oxygen and acetylen fitted with: <ul style="list-style-type: none"> at one end a clip for connection to hose tail of blowpipe or torch with integrated FBA at the other end QUICKMATIC male quick action coupling 	0450-1060	6.3	PYROSAF 400 C SPEEDFIRE S	25
	0450-1061	10	PYROSAF 1000 C ALCOPT G1 C SPEEDFIRE C	

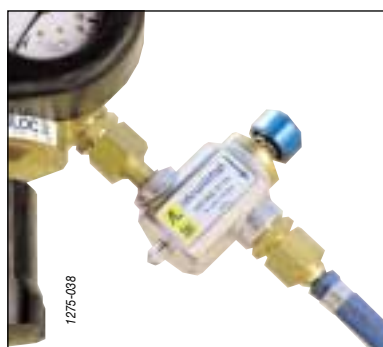
Hose sets



Two hoses with double clips, fitted with LORMATIC female coupling at one end and fitted with union nuts M 16 x 150 at the other end.

Designation	To order	Ø mm	Length in cm
Inlet QUICKKATIC female Outlet union nuts M 16 x 150	0450-1072	10	100

Automatic gas shut off device SECURISTOP

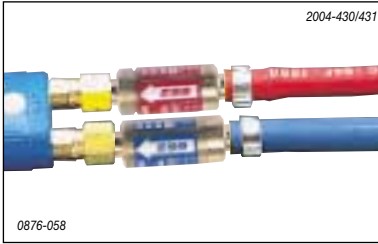


Connection on the pressure regulator outlet. Cut automatically the gas in the event of rupture of the hoses. Do not exceed the maximum flow lengths indicated.

To order	Gas	Pressure in bar	Flowrate in l/h	Ø hose in mm	Max hose length in m	Connection	
						Inlet	Outlet
0712-1644	Acetylene, propane welding	0.5 to 1.5	1 200	6 10	10 20	female nut M 16 x 150 L	male M 16 x 150 L
0712-1645	Acetylene, propane cutting	1 to 1.5	4 000	10	20		
0712-1646	Oxygen welding	1.5 to 4	5 000	6 10	10 20	female nut M 16 x 150 R	male M 16 x 150 R
0712-1647	Oxygen cutting	4 to 10	20 000	10	20		

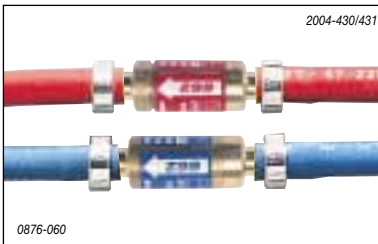
Flash back-arrestors

Connection on the torch



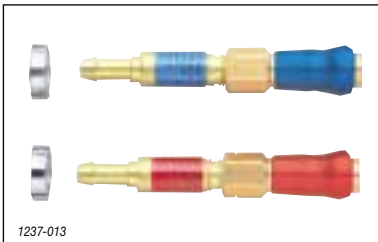
Designation	<i>To order</i>		Inlet connection	Outlet connection
	oxygen	fuel		
SECURTOP VARIAL 400 PYROCOPT 0	0712-9008	-	hose Ø 6 mm	female M 12 x 100 R
	-	0712-9009	hose Ø 6 mm	female M 12 x 100 L
SECURTOP PYROSAF 1000 B PYROCOPT G1 ALCOPT G1	0712-9004	-	hose Ø 10 mm	female M 12 x 100 R
	-	0712-9005	hose Ø 10 mm	female M 12 x 100 L
SECURTOP PYROSAF 1000 B PYROCOPT G1 ALCOPT G1	0712-2004	-	hose Ø 10 mm	female M 12 x 100 R
	-	0712-2005	hose Ø 10 mm	female M 12 x 100 L

Connection between hoses



Designation	<i>To order</i>		Inlet connection	Outlet connection
	oxygen	fuel		
SECURTOP Hoses Ø 6 and 10 mm	0712-2000	0712-2001	Hose Ø 6 and 10 mm	

Connection on LORMATIC coupling



Designation	<i>To order</i>		Inlet connection	Outlet connection
	oxygen	fuel		
SECURISAF LORMATIC female Hoses amont Ø 10 mm	0712-1505	0712-1506	Hose Ø 10 mm	LORMATIC female

Connection on pressure regulator

Designed to be connected on pressure regulator. They are 2 SECURISAF types:

- SECURISAF classical
- SECURISAF thermal

are delivered with thermics security which melts in the event of flash back and releases a valve which stops the output of gas.



Designation	<i>To order</i>		Inlet connection	Outlet connection
	oxygen	fuel		
SECURISAF classical	0712-1490	-	female M 16 x 150 R	male M 16 x 150 R
	-	0712-1491	female M 16 x 150 L	male M 16 x 150 L
SECURISAF thermal	0712-1486	-	female M 16 x 150 R	male M 16 x 150 R
	-	0712-1487	female M 16 x 150 L	male M 16 x 150 L

Gas welding & cutting

QUICKMATIC quick action coupling (auto-closes up)



The QUICKMATIC quick action coupling (with auto-closes up) are flame accessories to be mounted between hoses or at the outlet fitting of pressure regulators. The female part of the QUICKMATIC is always in the upper part of the gas flow. The QUICKMATIC's female part allows:

- locking during operation
- automatic stop of the gas flow when uncoupling (auto-closes up coupling)

Conforms to the ISO 7289 standard



Connection between hoses

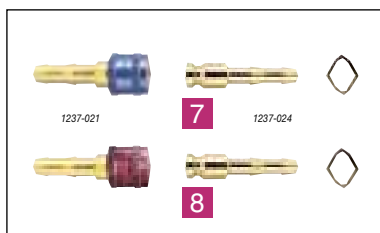
QUICKMATIC	Ø hose (mm)	To order	
		Female coupling	Male coupling
1 - fuel gases	6 and 10	W 000 011 002	W 000 011 005
2 - oxygen	6 and 10	W 000 011 001	W 000 011 004
3 - neutral gases (argon...)	4	W 000 011 003	W 000 011 006

Exists also in kit Cat no. W 000 011 017 composed with a pair of male+female couplings for oxygen and a pair of male+female couplings for fuel gases.

Connection on pressure regulator

QUICKMATIC	Thread	To order		Ø hose (mm)
		Female coupling Cat. no.	Male coupling Cat. no.	
4 - fuel gases	M 16 x 150 L	W 000 011 008	W 000 011 005	6 and 10
	3/8" L	W 000 011 011		
5 - oxygen	M 16 x 150 R	W 000 011 007	W 000 011 004	6 and 10
	3/8" R	W 000 011 010		
	1/4" R	W 000 011 009		
6 - neutral gas (argon...)	12 x 100 R	W 000 011 012	W 000 011 006	4

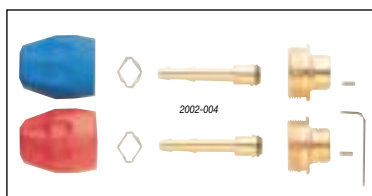
LOR coupling



Connection between hoses

Designation	Ø hose (mm)	To order	
		Female coupling	Male coupling
7 - oxygen	6	0799-1299	0799-1303
	10	0799-1297	0799-1301
8 - fuel gases	6	0799-1300	0799-1304
	10	0799-1298	0799-1302

TIPTOP coupling

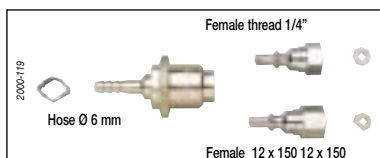


Connection on ALTOP, MINITOP cylinders and standard pressure regulators

Connection without tool of the gas hose thread M16 x 150 on pressure regulator's outlet or ALTOP and MINITOP cylinders.

Designation	Ø hose (mm)	To order	
		TIPTOP	
	6	7001-5506	
	10	7001-5510	

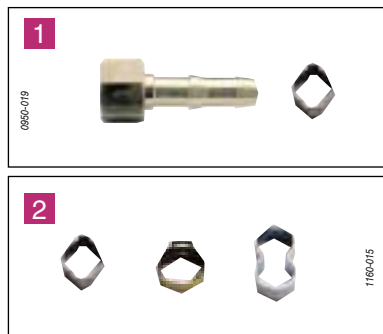
QUICK ARGON coupling



Connection on ALTOP cylinder for neutral gas

Quick coupling without tool of the gas hose for ALTOP cylinder neutral gas. Cat. no. 7003-0003

Hose tail and clips



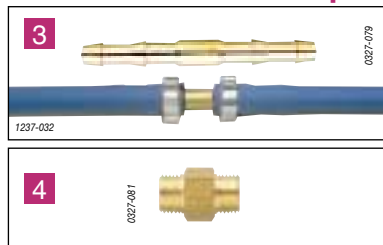
1 - Hose tail

Ø hose (mm)	Thread type	To order
6	12 x 100 R	7001-2017
6	12 x 100 L	7001-2018
6	16 x 150 R	7001-2019
6	16 x 150 L	7001-2020
10	16 x 150 R	7001-2021
10	16 x 150 L	7001-2022

2 - Clips

Type of clips	Ø hose (mm)	To order
"2" clips	6	7001-2013
	10	7001-2014
single clip	6	7001-2035
	10	7001-2034
hose gathering clip	6	0802-0159
	10	0802-0160

Hose nipple and double male coupling



3 - Hose nipple

Ø of 2 hoses (mm)	To order
6 x 6	0803-0014
6 x 10	0803-0003
10 x 10	0803-0004

4 - double male threaded coupling

Thread	Gas	To order
M 16 x 150 R	oxygen	0729-0103
M 16 x 150 L	acetylene	0729-0104

Twin low pressure outlet connection for pressure regulator



Gas	Inlet connection	Outlet connection	To order
Oxygen Neutral gas	M 16 x 150 R	M 16 x 150 R + hose tail Ø 10 mm	0803-0121
Acetylene Fuel gas	M 16 x 150 L	M 16 x 150 L + hose tail Ø 10 mm	0803-0122

Accessories

1 - Tip cleaners

- Set of 4 - Cat. no. 0400-0509
- Set of 12 - Cat. no. 0400-0084

2 - Mirror with magnetic fixation

- Cat. no. W 000 010 557

3 - Spark lighter. Supplied with flints

- Cat. no. 0613-0103

4 - ECO 73 economiser (hose tail Ø 10 mm)

- Acetylene - Cat. no. 2482-0307
- Butane, tetrene and propane. Cat. no. 0612-0003

The ECO 73 economiser is placed on a work station between the pressure regulator and the torch. It enables the torch to be stopped and restarted without modifying the operation settings. An incorporated by-pass assures an instant relighting of the torch.

5 - Thermic protection

- aluminized kaolin. dimensions 200 x 250 mm. Cat. no. 0002-0013.

6 - Cutting guide

- Roller type cutting guide with manual lead. Cat. no. 4672-1503
- For G1 and IC cutting torches.
- Right-angle or bevel cuts:
 - straight, - curved, - circular (100-700 mm Ø).
- Delivered with two hose tails Ø 15 and 17 mm.

7 - Welding table

- Worksurface 650 x 450 mm, height 800 mm. Cat. no. 0090-0100.

8 - Hose reels

- **Ø 6.3 mm**
Cat. no 0410-0393 equipped: double oxygen/acetylene hoses Ø 6.3 mm conform to EN 559 standard, 10 m length, equipped with two handles 1 m length, Ø 6.3 mm for connection with network, weight: 15 kg.
- **Ø 10 mm**
Cat. no. 0410-0394 equipped: double oxygen/acetylene Ø 10 mm, conform to EN 559 standard, 15 m length, equipped with two handles, 1 m length, Ø 10 mm for connection with network, weight: 28 kg.
- Pivoting groundwork, floor mounting: is appropriate for the above devices. Cat. no. 0410-0395.



Gas welding & cutting



Gas distribution

1 - Semi-automatic pressure regulation

This panel enables continuous supply to a distribution panel pipeline from two gas supplies alternatively "in service" and "in reserve".

This type of installation guarantees efficient emptying of the gas cylinders of both supplies.

	Gas and pressure	Max. flowrate	To order
• Small installation	Ox/neutral gas 4 bar	10 m ³ /h	1025-1910
	Ox/neutral gas 10 bar	25 m ³ /h	1025-1911
	AD 1.5 bar	5 m ³ /h	1025-1909
• Medium installation	Ox/neutral gas 10 bar	70 m ³ /h	1025-1902
	AD 1.5 bar	10 m ³ /h	1025-1900



2 - Panels

• Double panel

Cat. no. 0691-0001

The double panel is for feeding welding blowpipes, heating torches (gasflow up to 4000 l/h) and cutting torches (thickness up to 200 mm)

The double panel contains:

- 1 oxygen single feeder station 10 bar,
- 1 fuel gas single feeder station 1.5 bar,
- 1 flash back arrestor (oxygen),
- 1 flash back arrestor (fuel gas),
- 1 QUICKMATIC female and male Ø 10 mm (oxygen),
- 1 QUICKMATIC female and male Ø 10 mm (fuel gas),
- 1 blue plastic coated sheet metal enclosure,
- quarter turn valves OX and AD with unions.



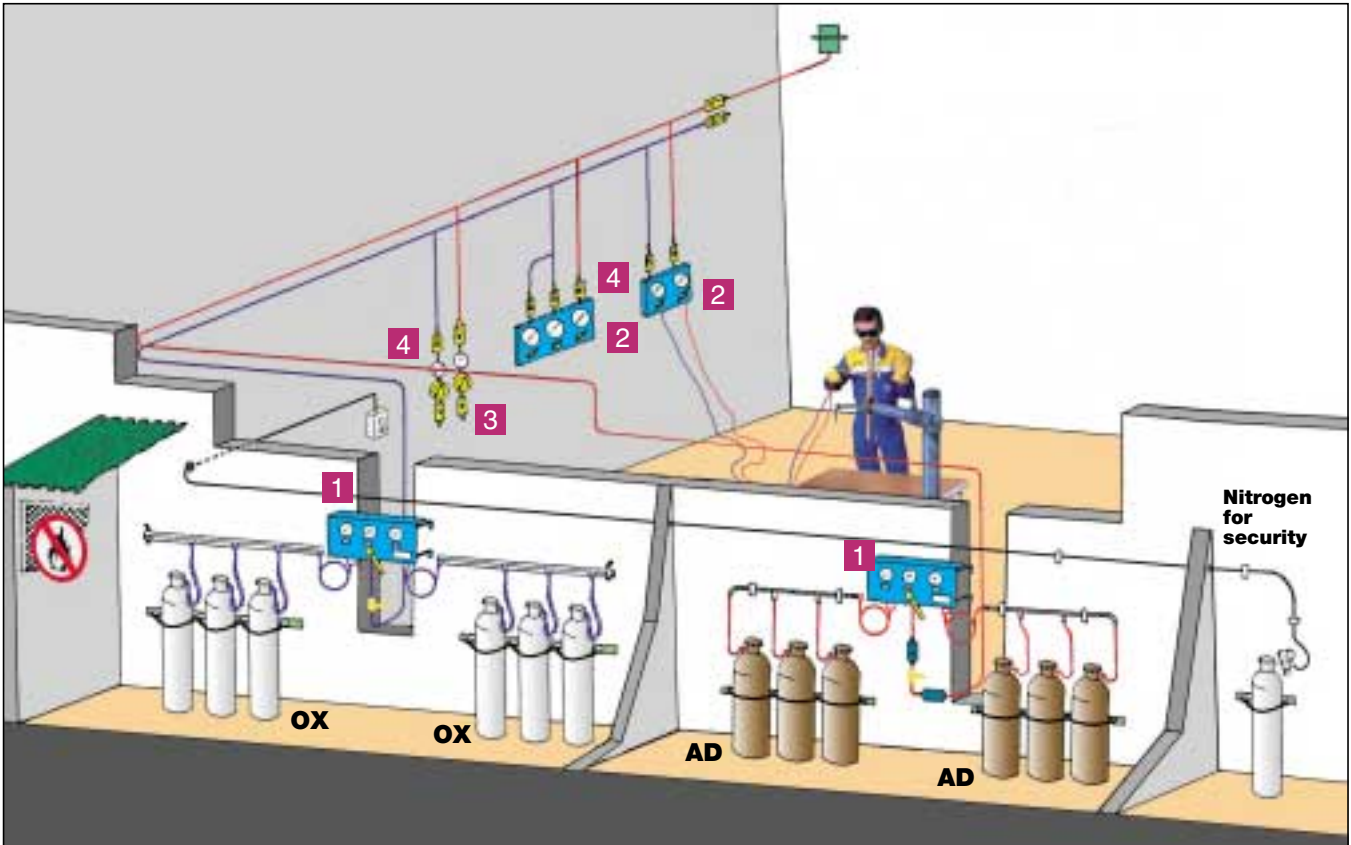
• Triple panel

Cat. no. 0691-0002

The triple panel is for supplying oxycutting machines which don't have any pressure regulator incorporated and are supplied with a triple feeding (heating oxygen, cutting oxygen and fuel gas).

The triple panel contains:

- 1 oxygen single feeder station 10 bars,
- 1 heating oxygen single feeder station 4 bars,
- 1 combustible gas single feeder station 1.5 bar,
- 1 flash back arrestor for heating oxygen,
- 1 flash back arrestor for fuel gas,
- 2 LORMATIC female and male Ø 10 mm (oxygen),
- 1 LORMATIC female and male Ø 10 mm (fuel gas),
- 1 blue plastic coated sheet metal enclosure,
- quarter turn valves OX and AD with unions.



3 - Single feeder station

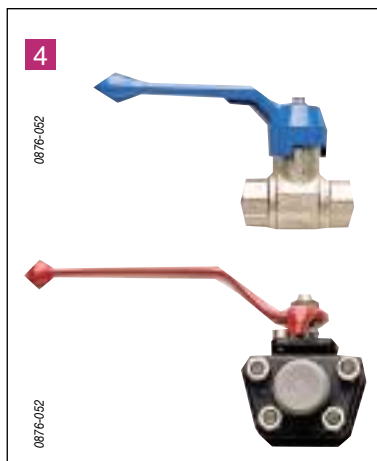
The single feeder station contains:

- one quarter turn valve with LH 3/8" threaded connector,
- 1 LH 3/8" male/female union,
- 1 set of 12 x 17 (3/8") steel piping with purge well,
- 1 in-line pressure regulator with 63 mm diameter brass pressure gauge and M 16 x 150 output connector with union and hose tail for Ø 10 mm hose.

Gas	Maximum outlet pressure in bar	Pressure gauge graduation in bar	Flowrate m ³ /h	To order
Oxygen or neutral gas	4	6	25 oxygen	0691-0603
	10	16	95 oxygen	0691-0605
Fuel gases	1.5	2.5	10 acetylene	0691-0607
	4	6	20 propane	0691-0609
				0712-1500 0712-1501

Using SECURISAF flash back arrestors:

- oxygen
- fuel gas



4 - In-line valves

SCREW-ON VALVES	To order	
Tube	Oxygen (blue)	Fuel gas (red)
12 x 17 (3/8")	0022-1660	0022-1661
15 x 21 (1/2")	0022-1663	0022-1664
WELD-ON-VALVES		
Tube	Oxygen (blue)	Fuel gas (red)
12 x 17 (3/8")	-	0022-1671
15 x 21 (1/2")	0022-1673	-
20 x 27 (3/4")	0022-1676	0022-1677
26 x 34 (1")	0022-1679	0022-1680