

**Chiyoda's
High-Pressure Gas
Control System
and Equipment**

2012

CHIYODA HELPS YOUR GAS RELATED JOBS . . .

Since the establishment
1946, we started as a
manufacturer of Gas Welding
& Cutting Equipment.

Nowadays we are very famous as
a Total Gas System Planner of
controlling all kinds of High Pressure
Gases.

We will continue to make our best effort to
supply gas systems more safely & more
effectively.



HEAD OFFICE

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- Specifications in this catalog are subject to change without any obligation on the part of the manufacturer.
- The numerical values, showing in this catalog, are all approximations.

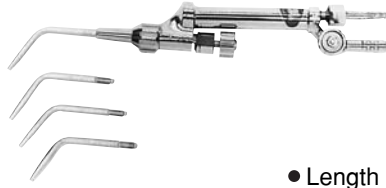
ISO9001 CERTIFICATE



STANDARD TYPE HAND WELDING TORCHES FOR OXY-ACETYLENE/OXY-HYDROGEN



Model 1 Tiny-00 (Swaged) Torch



Tip No.	Tip Orifice (ϕ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Acetylene
25	0.6	0.4~0.5	1.5	0.15
50	0.7	0.5~0.7	2.0	0.2
70	0.8	0.6~0.9	∥	∥
100	0.9	0.8~1.2	∥	∥

- Length 280mm (without tip)
- Weight Torch 300g
Tip 25g
- With 4 pieces tips

Model 2 Tiny-00 Torch



Tip No.	Tip Orifice (ϕ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Acetylene
10	0.4	0.1~0.3	1.5	0.15
16	0.5	0.3~0.4	∥	∥
25	0.6	0.4~0.5	∥	∥
40	0.7	0.5~0.7	∥	∥

- Length 310mm (without tip)
- Weight Torch 300g
Tip 10g
- With 4 pieces tips

Model 4 Small Torch



Tip No.	Tip Orifice (ϕ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Acetylene
50	0.7	0.5~0.7	2.0	0.2
70	0.8	0.6~0.9	∥	∥
100	0.9	0.8~1.2	∥	∥
140	1.0	1.0~1.5	∥	∥
200	1.2	1.5~2.0	∥	∥

- Length 380mm (without tip)
- Weight Torch 480g
Tip 25g
- With 5 pieces tips

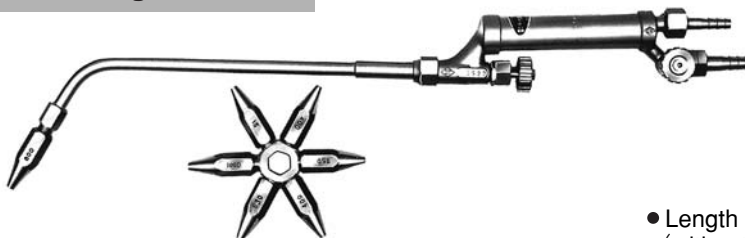
Model 5 Medium Torch



Tip No.	Tip Orifice (ϕ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Acetylene
200	1.2	1.5~2.0	3.0	0.3
225	1.3	2.0~2.3	∥	∥
250	1.4	2.3~2.5	∥	∥
315	1.5	2.5~3.2	∥	∥
400	1.6	3.2~4.0	∥	∥
450	1.7	4.0~4.5	∥	∥
500	1.8	4.5~5.0	∥	∥

- Length 435mm (without tip)
- Weight Torch 490g
Tip 25g
- With 7 pieces tips

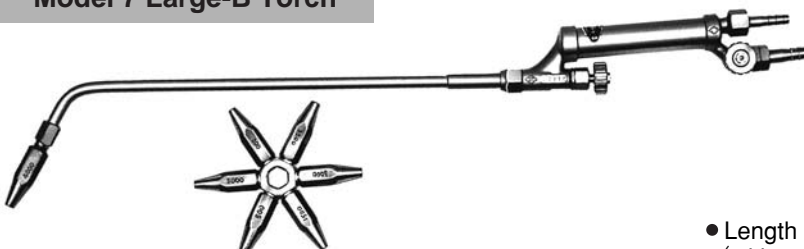
Model 6 Large-A Torch



Tip No.	Tip Orifice (ϕ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Acetylene
250	1.4	2.3~2.5	3.0	0.3
315	1.5	2.5~3.2	∥	∥
400	1.6	3.2~4.0	∥	∥
500	1.8	4.0~5.0	∥	∥
630	2.0	5.0~6.5	4.0	0.4
800	2.2	6.5~8.0	∥	∥
1,000	2.4	8.0~10.0	∥	∥

- Length 550mm (without tip)
- Weight Torch 680g
Tip 45g
- With 7 pieces tips

Model 7 Large-B Torch



Tip No.	Tip Orifice (ϕ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Acetylene
1,200	2.6	10~12	5.0	0.5
1,500	2.8	12~15	∥	∥
2,000	3.0	15~20	∥	∥
2,500	3.2	20~25	∥	∥
3,000	3.4	25~30	∥	∥
3,500	3.6	30~35	∥	∥
4,000	3.8	35~40	∥	∥

- Length 650mm (without tip)
- Weight Torch 730g
Tip 50g
- With 7 pieces tips

STANDARD TYPE HAND HEATING TORCHES FOR OXY-PROPANE/OXY-NATURAL GAS



Model 61 Tiny-00 Torch



Tip No.	Tip Orifice (φ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Propane
16	0.5	0.3~0.4	1.5	0.15
25	0.6	0.4~0.5	∕	∕
40	0.7	0.5~0.7	∕	∕

- Length 310mm (without tip)
- Weight Torch 360g Tip 12g
- With 3 pieces tips

Model 62 Small Torch



Tip No.	Tip Orifice (φ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Propane
50	0.7	0.5~0.7	2.0	0.2
100	0.9	0.7~1.2	∕	∕
200	1.2	1.2~2.0	∕	∕

- Length 380mm (without tip)
- Weight Torch 480g Tip 25g
- With 3 pieces tips

Model 63 Medium Torch



Tip No.	Tip Orifice (φ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Propane
300	1.5	2.0~3.2	3.0	0.3
400	1.6	3.2~4.0	∕	∕
500	1.8	4.0~5.0	∕	∕

- Length 435mm (without tip)
- Weight Torch 490g Tip 25g
- With 3 pieces tips

Model 64 Large-A Torch



Tip No.	Tip Orifice (φ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Propane
600	2.0	5.0~6.5	4.0	0.4
800	2.2	6.5~8.0	∕	∕
1,000	2.4	8.0~10.0	∕	∕

- Length 550mm (without tip)
- Weight Torch 680g Tip 50g
- With 3 pieces tips

Model 65 Large-B Torch



Tip No.	Tip Orifice (φ mm)	Range (mm)	Pressure (kgf/cm ²)	
			Oxygen	Propane
2,000	3.0	10~20	5.0	0.5
3,000	3.4	20~30	∕	∕
4,000	3.8	30~40	∕	∕

- Length 650mm (without tip)
- Weight Torch 730g Tip 50g
- With 3 pieces tips

DUAL FLEX TIPPED HAND BURNER FOR BRAZING & SOLDERING WORKS



- Two flexible extensions can be bent to suit job for best heat distribution.
- The most versatile for welding, brazing, silver soldering and light heating applications to suit job for accuracy identification.

Torch	Acetylene		Propane		Length up to Injector (mm)	Weight up to Injector/Tips (g)
	Tip No.	Range(mm)	Tip No.	Range(mm)		
Tiny Torch	10, 16, 25 & 40	0.1~0.7	16, 25 & 40	0.3~0.7	190	300/12
Small Torch	50, 70, 100, 140, 200	0.5~2.0	50, 100 & 200	0.5~2.0	215	430/25
Medium Torch	200, 225, 250, 315, 400, 450, 500	1.5~5.0	300, 400, 500	2.0~5.0	215	430/25
Large-A Torch	250, 315, 400, 500, 630, 800, 1000	2.3~10.0	600, 800, 1000	5.0~10.0	250	600/50
Large-B Torch	1200, 1500, 2000, 2500, 3000, 3500, 4000	10.0~40.0	2000, 3000, 4000	10.0~40.0	250	600/50

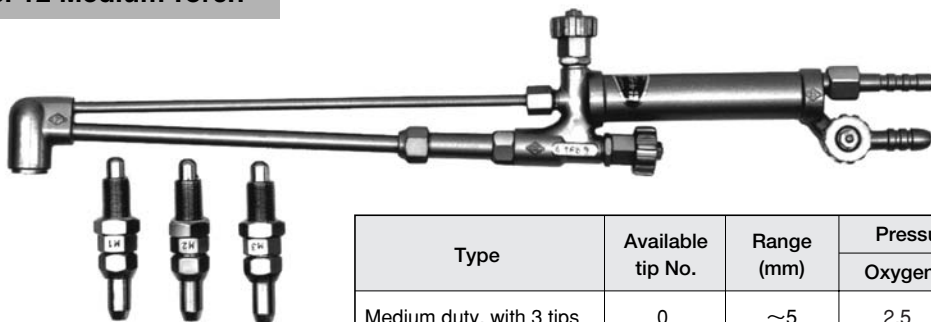
※ Please specify length for the tubes.

STANDARD TYPE HAND CUTTING TORCHES

FOR OXY-ACETYLENE/OXY-PROPANE/OXY-NATURAL GAS

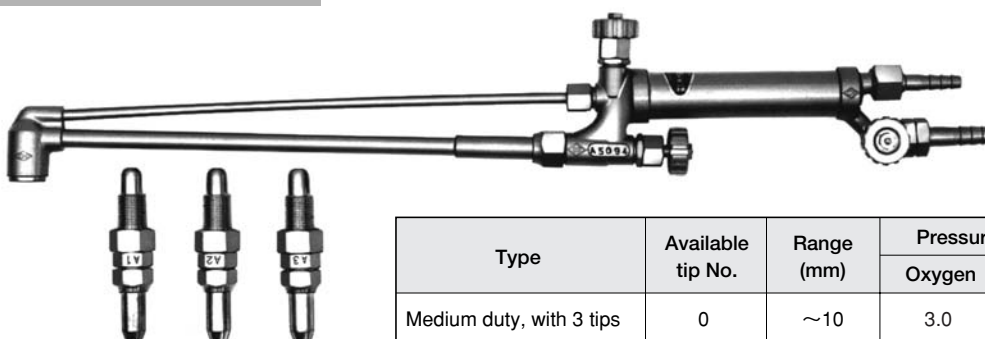


Model 12 Medium Torch



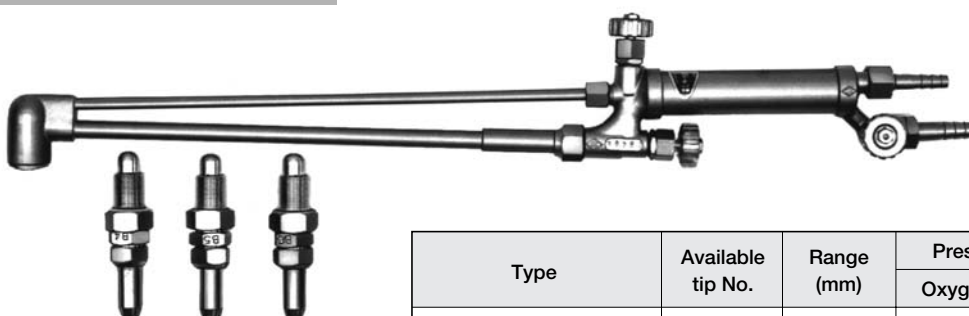
Type	Available tip No.	Range (mm)	Pressure (kgf/cm ²)		Length (mm)	Weight (g)
			Oxygen	Gas		
Medium duty, with 3 tips	0	~5	2.5	0.25	460	Torch: 650 Tip: AC 65 LPG 70
	1	3~7	∕	∕		
	2	5~15	∕	∕		
	3	10~20	∕	∕		

Model 14 Large-A Torch



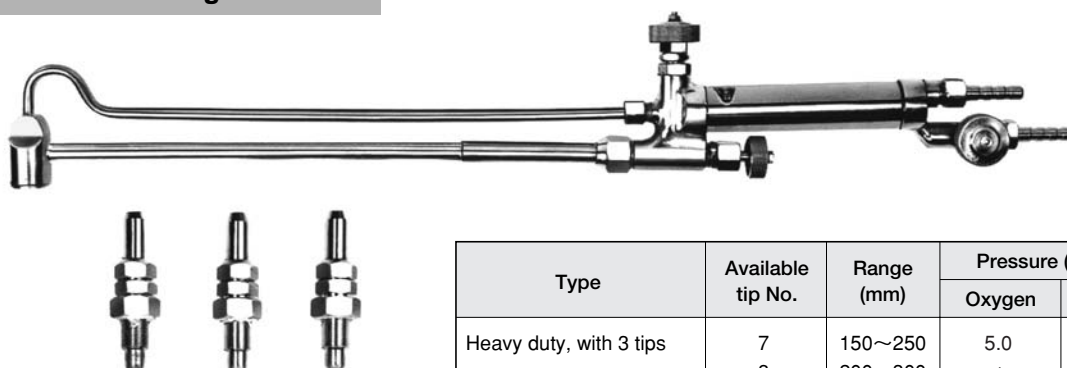
Type	Available tip No.	Range (mm)	Pressure (kgf/cm ²)		Length (mm)	Weight (g)
			Oxygen	Gas		
Medium duty, with 3 tips	0	~10	3.0	0.3	535	Torch: 850 Tip: AC 120 LPG 125
	1	5~15	∕	∕		
	2	15~30	∕	∕		
	3	25~50	∕	∕		

Model 16 Large-B Torch



Type	Available tip No.	Range (mm)	Pressure (kgf/cm ²)		Length (mm)	Weight (g)
			Oxygen	Gas		
Heavy duty, with 3 tips	4	40~80	4.0	0.4	570	Torch: 910 Tip: AC 160 LPG 170
	5	60~150	∕	∕		
	6	120~200	∕	∕		

Model 17 Large-C Torch



Type	Available tip No.	Range (mm)	Pressure (kgf/cm ²)		Length (mm)	Weight (g)
			Oxygen	Gas		
Heavy duty, with 3 tips	7	150~250	5.0	0.5	790	Torch: 1620 Tip: AC 250 LPG 270
	8	200~300	∕	∕		
	9	250~350	∕	∕		

COMBINATION HAND WELDING & CUTTING TORCHES

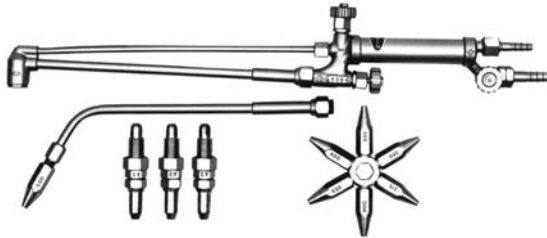
FOR OXY-ACETYLENE/OXY-PROPANE/OXY-NATURAL GAS



VICTORY Standard Combination Torches, operate on low pressured acetylene/propane gas, are designed for economy, safety and convenience.

Model 13 Medium Torch

Model 15 Large-A Torch



Type	Gas	Model	Tip No.	Pressure (kgf/cm ²)		Range (mm)	Length (mm)
				Oxygen	Gas		
Medium	Acetylene	13	Cutting tip No.1,2 & 3	2.5	0.25	3~20	460
			Welding tip No.200, 225, 250, 315, 400, 450 & 500			1.5~5	
Large-A	Propane	18	Cutting tip No.1,2 & 3	3-4	0.3-0.4	3~20	535
			Heating tip No.300, 400 & 500			2~5	
Large-A	Acetylene	15	Cutting tip No.1,2 & 3	3-4	0.3-0.4	5~50	535
			Welding tip No.250, 315, 400, 500, 630, 800 & 1000			2.3~10	
Large-A	Propane	20	Cutting tip No.1,2 & 3	3-4	0.3-0.4	5~50	535
			Heating tip No.600, 800 & 1000			5~10	

Weight (g)

	Medium		Large-A	
Torch	650		850	
Welding Tube	75		200	
Cutting Tip	AC 65	LPG 70	AC 120	LPG 125
Welding Tip	25		45	

SWAGE TYPE HAND WELDING TORCHES

FOR OXY-ACETYLENE



Model 8 Swage G-0

Model 9 Swage G-1

Model 10 Swage G-2



Type	Gas	Model	Tip No.	Pressure (kgf/cm ²)		Range (mm)	Length (mm)	Weight (g)	
				Oxygen	Acetylene			Torch	Tip
G-0	Acetylene	8	50, 70, 100, 140 & 200	2	0.2	0.5~2.0	380	400	30
G-1		9	250, 315, 400, 500, 630, 800 & 1000	4	0.4	2.3~10	510	570	100
G-2		10	1200, 1500, 2000, 2500, 3000, 3500 & 4000	5	0.5	10~40	590	600	150

ORIGINAL TYPE HAND WELDING TORCHES

"GLITTER" FOR OXY-ACETYLENE/OXY-PROPANE/OXY-HYDROGEN



- Aluminum Die-casting Grip is easy to handle for operator.
- Stainless-steel made torch-tubes is lead long service-life.
- Special O-ring in the injector made a perfect gas sealing.
- Tight seating designed valve spindle is legalized leak-free.
- New designed valve spindle is easy to replace.

Type	Standard Tips (No. Orifice φmm)								Welding Plate thickness (mm)	Pressure (kgf/cm ²)		Length (mm)	Weight (g)	
	No.	10	16	25	40					Oxygen	Acetylene		Torch	Tip
TINY-00	No.	10	16	25	40				0.1~0.7	1.5	0.15	370	500	10
	Orifice φmm	0.4	0.5	0.6	0.7									
SMALL	No.	50	70	100	140	200			0.5~2.0	2.0	0.2	395	530	25
	Orifice φmm	0.7	0.8	0.9	1.0	1.2								
MEDIUM	No.	200	225	250	315	400	450	500	1.5~5.0	3.0	0.3	435	540	25
	Orifice φmm	1.2	1.3	1.4	1.5	1.6	1.7	1.8						
LARGE-A	No.	250	315	400	500	630	800	1000	2.3~10.0	3.0~4.0	0.3~0.4	600	760	45
	Orifice φmm	1.4	1.5	1.6	1.8	2.0	2.2	2.4						
LARGE-B	No.	1200	1500	2000	2500	3000	3500	4000	10.0~40.0	5.0	0.5	650	770	50
	Orifice φmm	2.6	2.8	3.0	3.2	3.4	3.6	3.8						

ORIGINAL TYPE HAND CUTTING TORCHES (TORCH MIXING TYPE)

"GLITTER"

FOR OXY-ACETYLENE/OXY-PROPANE/OXY-NATURAL GAS



- Aluminum Die-casting Grip is easy to handle for operator.
- Stainless-steel made Torch-tubes are lead long service-life.
- Special O-ring in the injector made a perfect gas sealing.
- Tight seating design valve spindle is legalized leak-free.
- Silver plated special cutting tips are free from spatter.
- Flat designed head & tail are used wrench easily.

Type	Tip No.	Orifice (φ mm)	Thickness to be cut (mm)	Pressure (kgf/cm ²)		Length (mm)	Weight (g)	
				Oxygen	Fuel gas		Torch	Tip
MEDIUM	0	0.6	~5	2.5	0.25	465	670	AC 65 LPG 70
	1	0.7	3~7					
	2	0.9	5~15					
	3	1.1	10~20					
LARGE-A	0	0.8	~10	3.0	0.3	525	900	AC 120 LPG 125
	1	1.0	5~15					
	2	1.3	15~30					
	3	1.6	25~50					

※Combination Welding And Cutting Torch Sets are also available

ORIGINAL TYPE HAND CUTTING TORCHES (TORCH MIXING TYPE)

"NEW-GLITTER"

FOR OXY-ACETYLENE/OXY-PROPANE



- Hard stainless-steel made torch-tubes are lead long service-life.
- The lightest weight (530g) is good for long time operation.
- New designed valve spindle is easy to replace.
- Silver plated special cutting tips are free from spatter.
- Individual oxygen and gas lines are legalized most safety.

Type	Tip No.	Orifice (φ mm)	Thickness to be cut (mm)	Pressure (kgf/cm ²)		Length (mm)	Weight (g)	
				Oxygen	Fuel gas		Torch	Tip
MEDIUM	0	0.6	~5	2.5	0.25	420	530	AC 65 LPG 70
	1	0.7	3~7					
	2	0.9	5~15					
	3	1.1	10~20					
LARGE-A	0	0.8	~10	3.0	0.3	470	570	AC 120 LPG 125
	1	1.0	5~15					
	2	1.3	15~30					
	3	1.6	25~50					

※Combination Welding And Cutting Torch Sets are also available

ORIGINAL TYPE HAND CUTTING TORCHES (TORCH MIXING TYPE)

"NEW-GLITTER DX"

FOR OXY-ACETYLENE/OXY-PROPANE



- Short length design with well-balanced weight enables stable cutting performance.

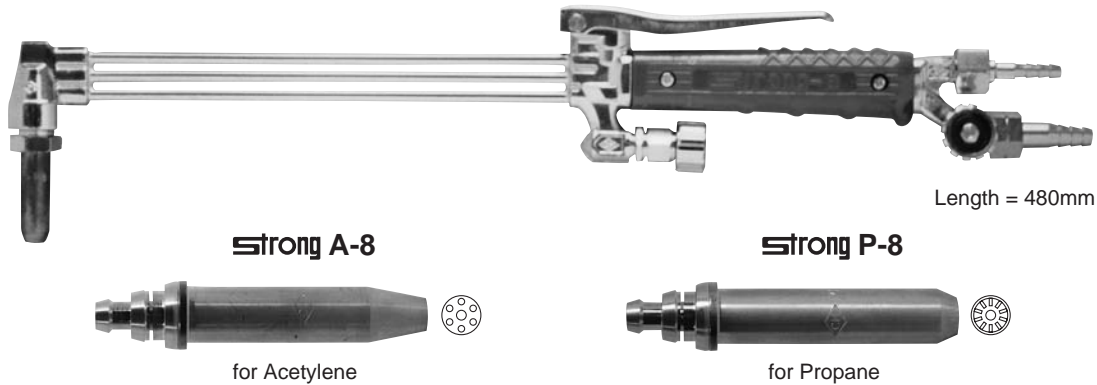
Type	Tip No.	Orifice (φ mm)	Thickness to be cut (mm)	Pressure (kgf/cm ²)		Length (mm)	Weight (g)	
				Oxygen	Fuel gas		Torch	Tip
MEDIUM	0	0.6	~5	2.5	0.25	445	665	AC 65 LPG 70
	1	0.7	3~7					
	2	0.9	5~15					
	3	1.1	10~20					
LARGE-A	0	0.8	~10	3.0	0.3	500	820	AC 120 LPG 125
	1	1.0	5~15					
	2	1.3	15~30					
	3	1.6	25~50					

MEDIUM DUTY HAND CUTTING TORCH (TIP MIXING TYPE)

"Strong-8" FOR OXY-ACETYLENE/OXY-PROPANE/OXY-ETHYLENE/OXY-NATURAL GAS



COVERING A RANGE OF METAL THICKNESS UP TO 80mm(3")



Size	Orifice (φ mm)	Thickness to be cut (mm)	Cutting Speed (mm/min.)	Pressure (kgf/cm ²)		Gas Consumption (L/h)				Weight (g)		
				Oxygen	Gas	Jet-Oxy	Pre-Oxy		Pre-Gas		Torch	Tip
							A-8	P-8	A-8	P-8		
1	0.7	3~7	600~700	2.0	0.2	650	285	1200	240	320	675	65
2	0.9	5~15	500~600	2.0	0.2	1050	310	1200	280	320		
3	1.1	10~20	400~500	2.5	0.25	1900	375	1425	340	380		
4	1.3	15~30	350~400	2.5	0.25	2600	400	1425	360	380		
5	1.6	25~50	300~350	3.0	0.3	4500	500	2000	450	500		
6	1.9	40~80	250~300	3.0	0.3	6500	500	2000	450	500		

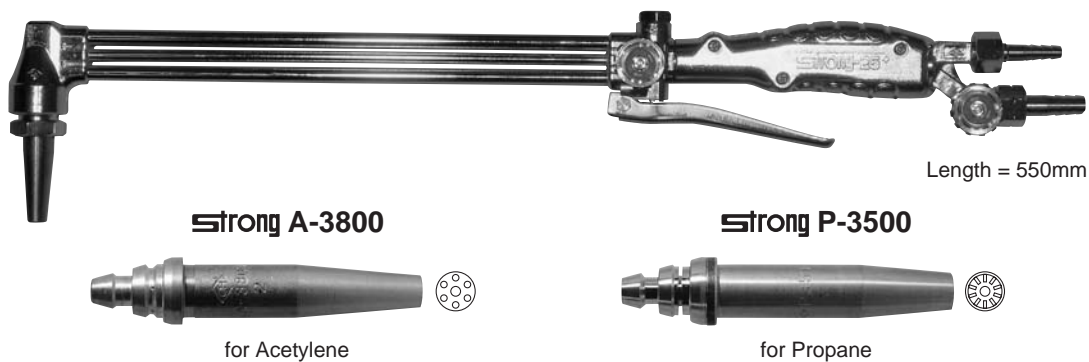
- We have also tips for Ethylene Gas (E-8) and Natural Gas (N-8).
- Our all cutting tips are delivered after strict ignition test one by one.

HEAVY DUTY HAND CUTTING TORCH (TIP MIXING TYPE)

"Strong-25+" FOR OXY-ACETYLENE/OXY-PROPANE/OXY-ETHYLENE/OXY-NATURAL GAS



COVERING A RANGE OF METAL THICKNESS UP TO 300mm(12")



Size	Orifice (φ mm)	Thickness to be cut (mm)	Cutting Speed (mm/min.)	Pressure (kgf/cm ²)		Gas Consumption (L/h)				Weight (g)		
				Oxygen	Gas	Jet-Oxy	Pre-Oxy		Pre-Gas		Torch	Tip
							A-3800	P-3500	A-3800	P-3500		
00	0.8	3~5	700~660	2.0	0.2	850	410	1200	370	300	950	110
0	1.0	5~10	660~550	2.0	0.2	1300	410	1200	370	300		
1	1.2	10~20	550~490	3.0	0.3	2500	480	1400	430	350		
2	1.4	15~30	490~400	3.0	0.3	3450	480	1400	430	350		
3	1.6	25~50	400~350	3.0	0.3	4500	480	1400	430	350		
4	1.9	40~80	350~320	4.0	0.4	8000	550	2200	500	550		
5	2.3	60~150	320~200	4.0	0.4	11000	690	2200	630	550		
6	2.7	120~200	200~150	4.0	0.4	16000	770	2200	700	550		
7	3.0	150~250	150~80	5.0	0.5	24000	1060	3400	960	850		
8	3.4	200~300	80~45	5.0	0.5	30000	1060	3400	960	850		

- We have also tips for Ethylene Gas (E-3840) and Natural Gas (N-3900).
- Our all cutting tips are delivered after strict ignition test one by one.

MULTI-FLAME HAND HEATING TORCHES FOR OXY-PROPANE/OXY-NATURAL GAS



Model 66



Model 67



Model 68



Model	Type	Tip No.	Orifice × Nos. of hole	Range (mm)	Pressure (kgf/cm ²)		Consumption (L/h)		Length (mm)	Weight (g)	
					Oxy	Propane	Oxy	Propane		Torch	Tip
66	2000/ capacity with 1 multi-flame tip	2000	0.9×21	5~15	3.0	0.3	7,000	1,800	680	860	55
67	5000/ capacity with 2 multi-flame tips	3500	1.1×25	5~20	4.0	0.4	9,000	2,200	1,040	1,330	120
		5000	1.3×25	5~30	4.0	0.4	10,000	2,500			
68	10000/ capacity with 2 multi-flame tips	7500	1.1×33	5~40	5.0	0.5	13,000	3,200	1,420	1,570	180
		10000	1.3×33	5~50	5.0	0.5	16,000	4,000			

HAND BURNERS FOR INDUSTRIES FOR PROPANE/NATURAL GAS



Model 69 Tiny Torch



Model 70 Small Torch



Model 71 Medium Torch



Model 72 Large Torch



Model	Type	Orifice × Tip end dia. (φ mm)	Propane Pressure (kgf/cm ²)	Length incl. Tip (mm)	Weight incl. Tip (g)
69	Light duty	0.8×20	0.3	445	530
70	Light duty	0.9×30	0.4	650	710
71	Medium duty	1.1×40	0.5	850	1,480
72	Heavy duty	1.4×50	0.6	900	1,840

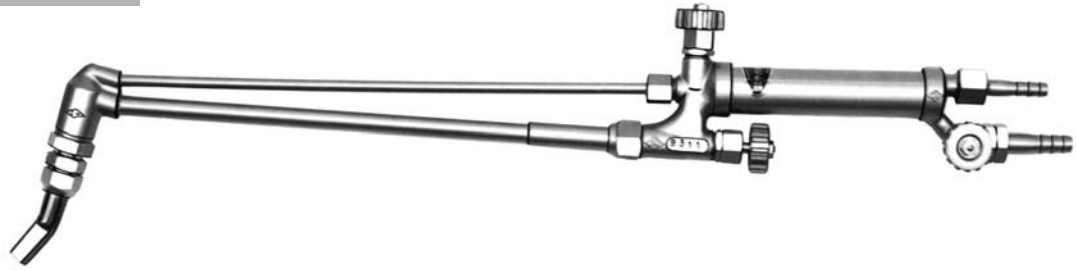
HAND GOUGING & SCARFING TORCHES

FOR OXY-ACETYLENE/OXY-PROPANE



※Oxy-Natural Gas Torches are also available

Model 21 Gouging Torch



Length : 570mm

Tip No.		AG 1	AG 2	AG 3
Orifice ϕ (mm)		1.0×2.5	1.3×3.2	1.6×4.0
Gouging Speed (mm/min)		150~400	150~400	150~400
Gouging Capacity	Width (mm)	5~9	7~10	9~13
	Depth (mm)	3~6	3~7	5~10
Recommended Pressure (kgf/cm ²)	Oxygen	3.0	4.0	5.0
	Fuel gas	0.3	0.4	0.5
Weight (g)	Torch	850		
	Tip	146		

Bent Gouging Tip



Model 24 Medium duty Scarfing Torch



Model 25 Heavy duty Scarfing Torch



Model No.	24			25
Torch Length (mm)	1,150			1,320
Tip No.	ST-1	ST-2	ST-3	G3-15
Orifice (mm)	6.0	7.0	8.0	15.0
Scarfing Speed (mm/min)	10~13	10~13	10~13	12~15
Scarfing Capacity	Width (mm)	20~33	30~40	40~60
	Depth (mm)	2~3	2~5	2~5
Recommended Pressure (kgf/cm ²)	Oxy	8	9	10
	Fuel gas	0.5	0.5	0.5
Weight (g)	Torch	1,800		
	Tip	142		

ST Multi-Flame Scarfing Tip



G3 Multi-Flame Scarfing Tip



Note : When ordering the above torches, please specify "Oxy-Propane" or "Oxy-Acetylene"

DIRECT CYLINDER PRESSURE TYPE HANDY BURNERS FOR PROPANE



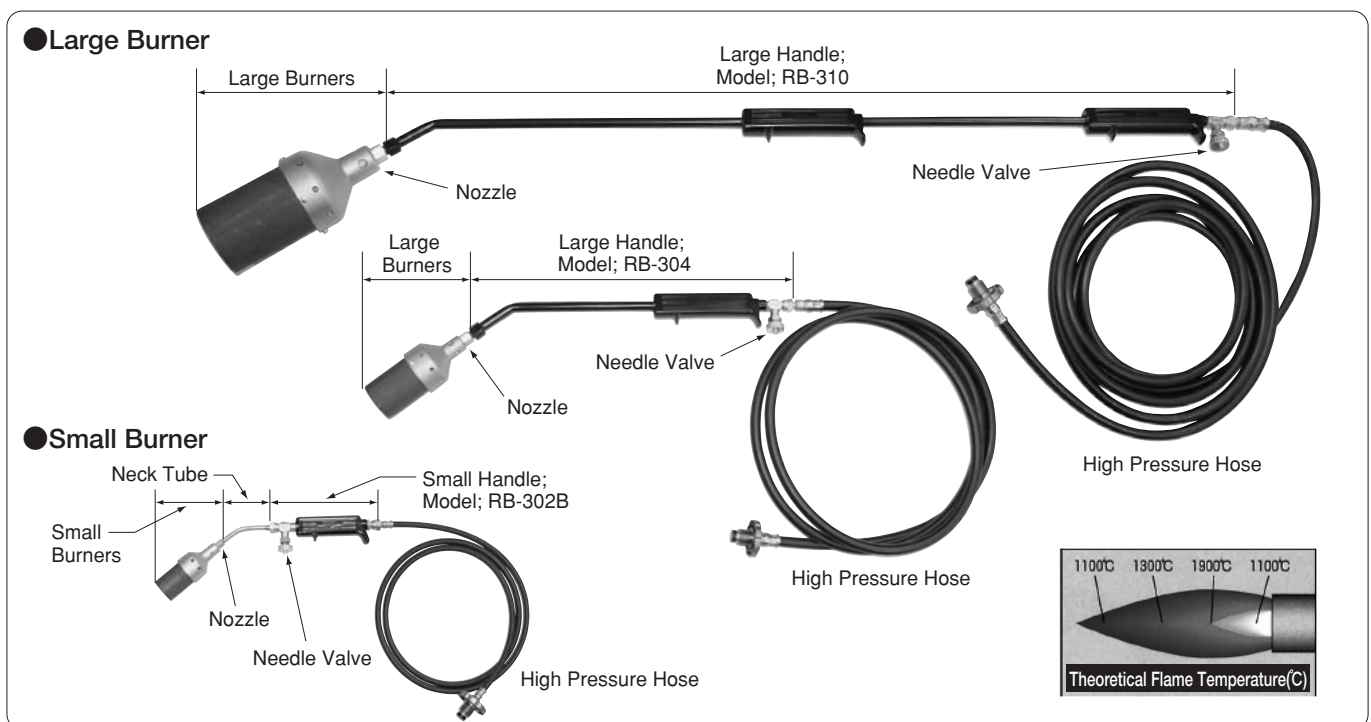
Features

- Can get 1200°C of high temperature flame only with LPG cylinder.
- Can use burners only to connect directly to LPG cylinder without using pressure regulator. (Use LPG at more than 2kgf/cm²)
- All parts connections are metal-to-metal contact without using sealing materials.
- High-Pressure Hose (RB-502) made with small diameter realizes flexibility to make operation smoothy.
- Small burner, RB-102 for food processing is made of stainless steel and aluminum to avoid rusting.

Usage

- Melting tar and asphalt · Pre-Heating for mold · Pre-Heating for welding · Roofing and Waterproofing
- Removing paint and rusting · Heating for piping, Brazing · Glass and Precious metal processing
- Browning foods · Roasting the soil and Burning weed and bush · Forest pests · Disinfection of cattle house
- Melting snow and ice

Example for Assembly



Specifications

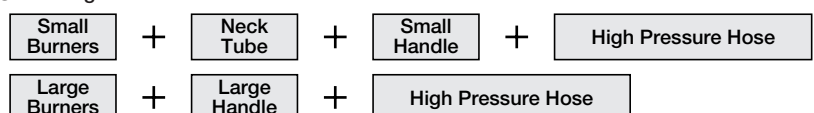
※Nozzle is included in every burners

Small Handle (RB-302B)								Small Handle (RB-302B)		
Small Burners Model No.	Burner Diameter (mm)	Gas Consumption g/h (2kgf/cm ²)	Flame Type	Weight (g)	Length (mm)	Main Material	Nozzle Ident. No.	Neck Tube Model No.	Weight (g)	Length (mm)
RB-118	15	45	Needle	36	60	Brass	A	RB-201	46	100
RB-119	17	83	Standard	44	64	Brass	B	RB-202S	46	105
RB-178	25	250	Blowlamp	92	90	Brass	H	RB-203	46	75
RB-156	54	104	Flat	117	115	Brass/Steel	C	RB-204	104	200
RB-144S	40	1330	Powerful	187	127	Steel & Aluminum	T	Small Handle Model No.	Weight (g)	Length (mm)
RB-102	40	1330	Powerful	160	127	Stainless Steel Aluminum	T	RB-302B	240	175

Large Handle (RB-304/RB-310)								Large Handle (RB-304/RB-310)		
Large Burners Model No.	Burner Diameter (mm)	Gas Consumption g/h (2kgf/cm ²)	Flame Type	Weight (g)	Length (mm)	Main Material	Nozzle Ident. No.	Large Handle Model No.	Weight (g)	Length (mm)
RB-144L	40	1330	Powerful	191	129	Steel & Aluminum	F	RB-304	500	465
RB-145	55	2680	Powerful	401	154		G	RB-310	960	1030
RB-185	85	5600	Powerful	940	216		R	—	—	—

High Pressure Hose		
Model No.	Weight (g)	Length (mm)
RB-502H	360	2055
RB-503H	810	3055
RB-505H	1190	5055

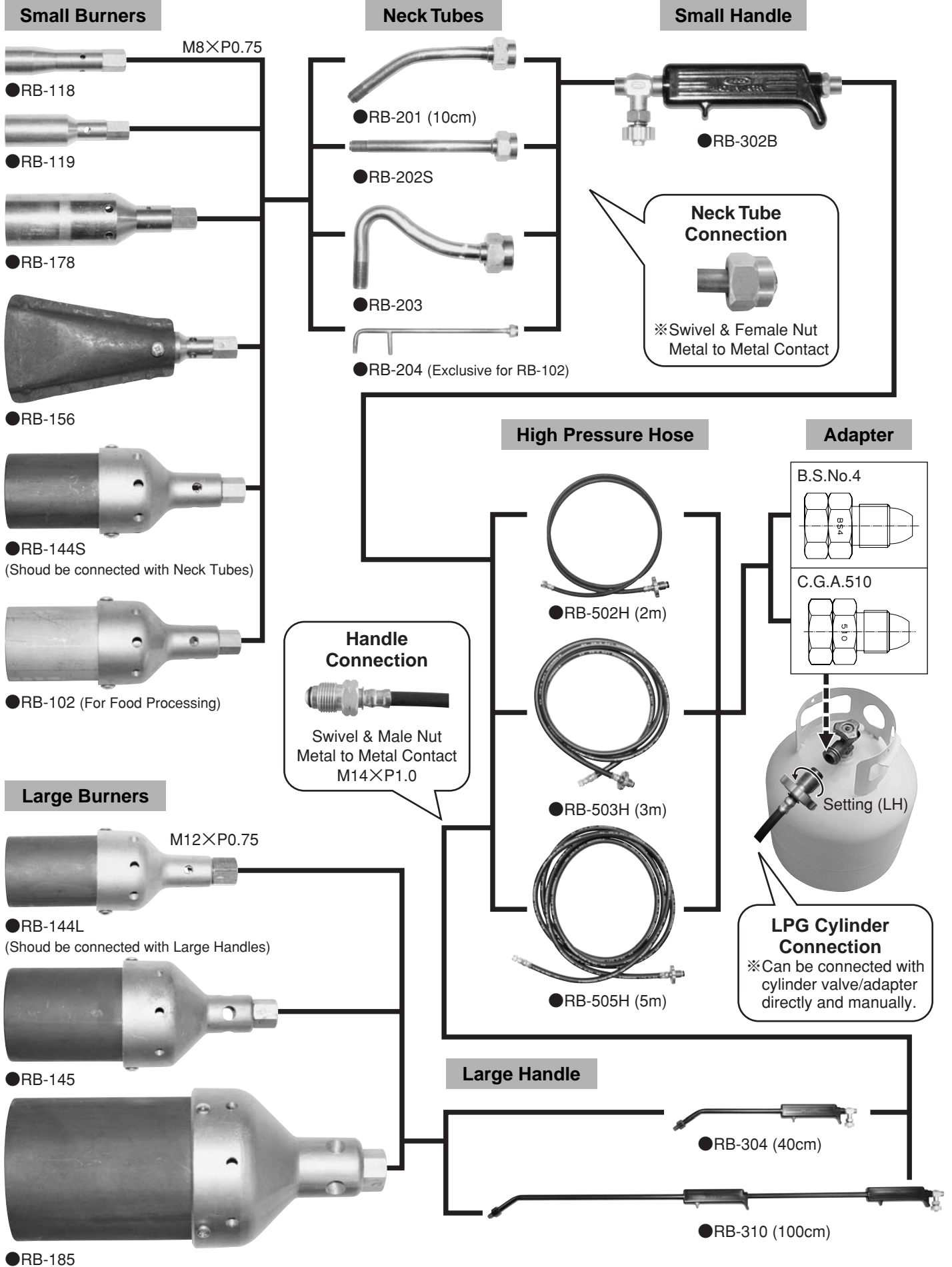
Ordering Information



DIRECT CYLINDER PRESSURE TYPE HANDY BURNERS FOR PROPANE



Chart of Assembly



FLASHBACK ARRESTORS FOR REGULATOR

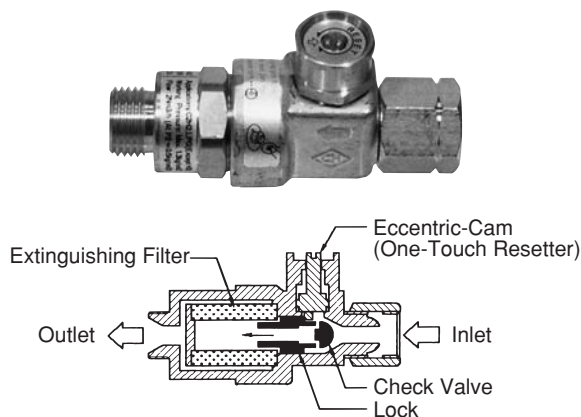
"SAVE-POINT-S" SERIES FOR ACETYLENE/PROPANE/NATURAL GAS/ETHYLENE/OXYGEN



The SAVE-POINT Series Flashback Arrestors completely prevent any reverse flow, backfire or flashback caused by gas welding and cutting jobs, and it insures the safety of operators away from explosions or fire troubles by its highly mechanism.

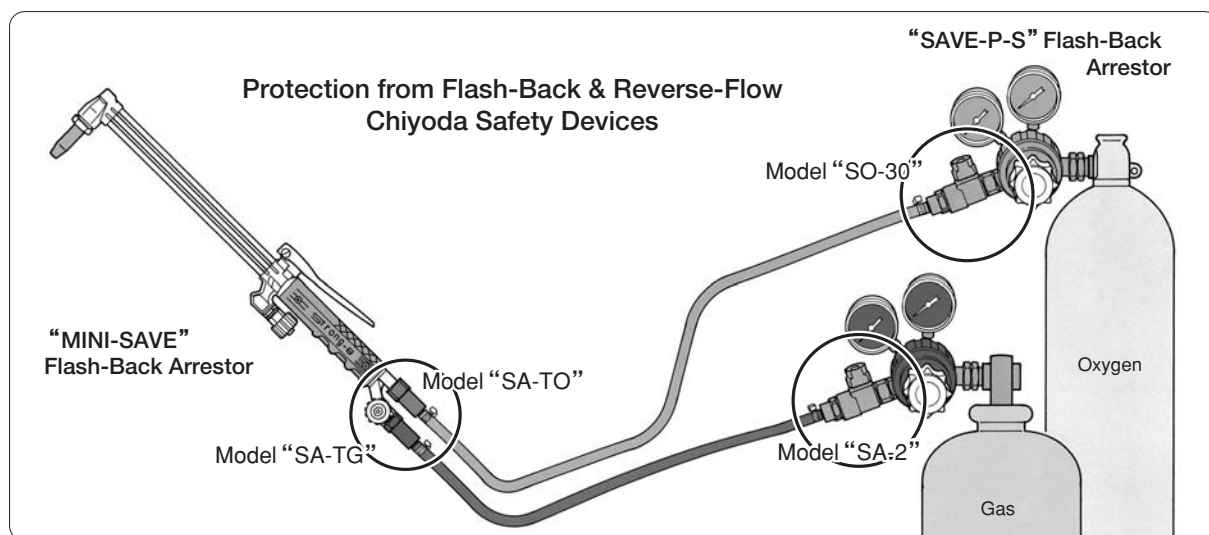
■ Type SA-2 & SO-30

For mounting on a cylinder regulator or an outlet of pipeline.



■ Specifications

Types	SA-2	SO-30
Applications	Acet. LPG, CNG, Ethylene	Oxygen
Working Pressure (kgf/cm ²)	1.3	10
Flowing Capacity (Nm ³ /h)	2	30
Setting Position	Regulator End	Regulator End
Inlet Connection	M16 P1.5(L)F	M16 P1.5(R)F
Outlet Connection	M16 P1.5(L)M	M16 P1.5(R)M
Length (mm)	76	76
Weight (g)	205	210



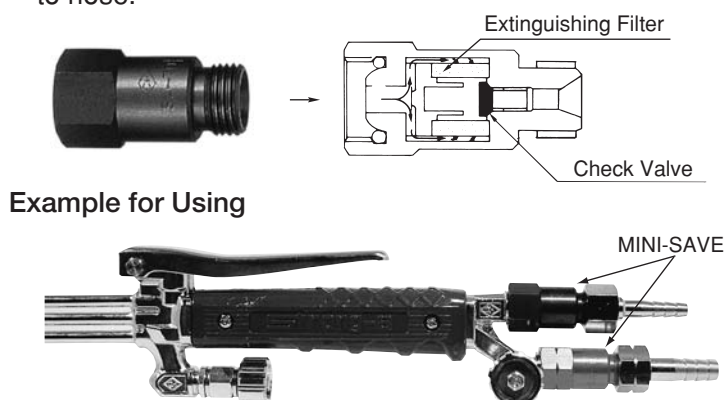
FLASHBACK ARRESTORS FOR TORCH END

"MINI-SAVE" SERIES FOR ACETYLENE/PROPANE/NATURAL GAS/ETHYLENE/OXYGEN



■ Type SA-TG & SA-TO / SAL-TG & SAL-TO

For mounting on a torch end or an intermediate of hose to hose.



■ Specifications

Types	SA-TG	SAL-TG	SA-TO	SAL-TO
Applications	Acet. LPG, CNG, Ethylene		Oxygen	
Working Pressure (kgf/cm ²)	1.0		10	
Flowing Capacity (Nm ³ /h)	1.0	1.6	10	13
Setting Position	Torch End			
Connections Inlet	M16 P1.5(L)M		M16 P1.5(R)M	
Outlet	M16 P1.5(L)F		M16 P1.5(R)F	
Length (mm)	40	49	40	49
Weight (g)	30	38	30	38





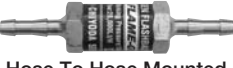

"FLAME-GUARD" SERIES FOR ACETYLENE/PROPANE/NATURAL GAS/ETHYLENE/OXYGEN

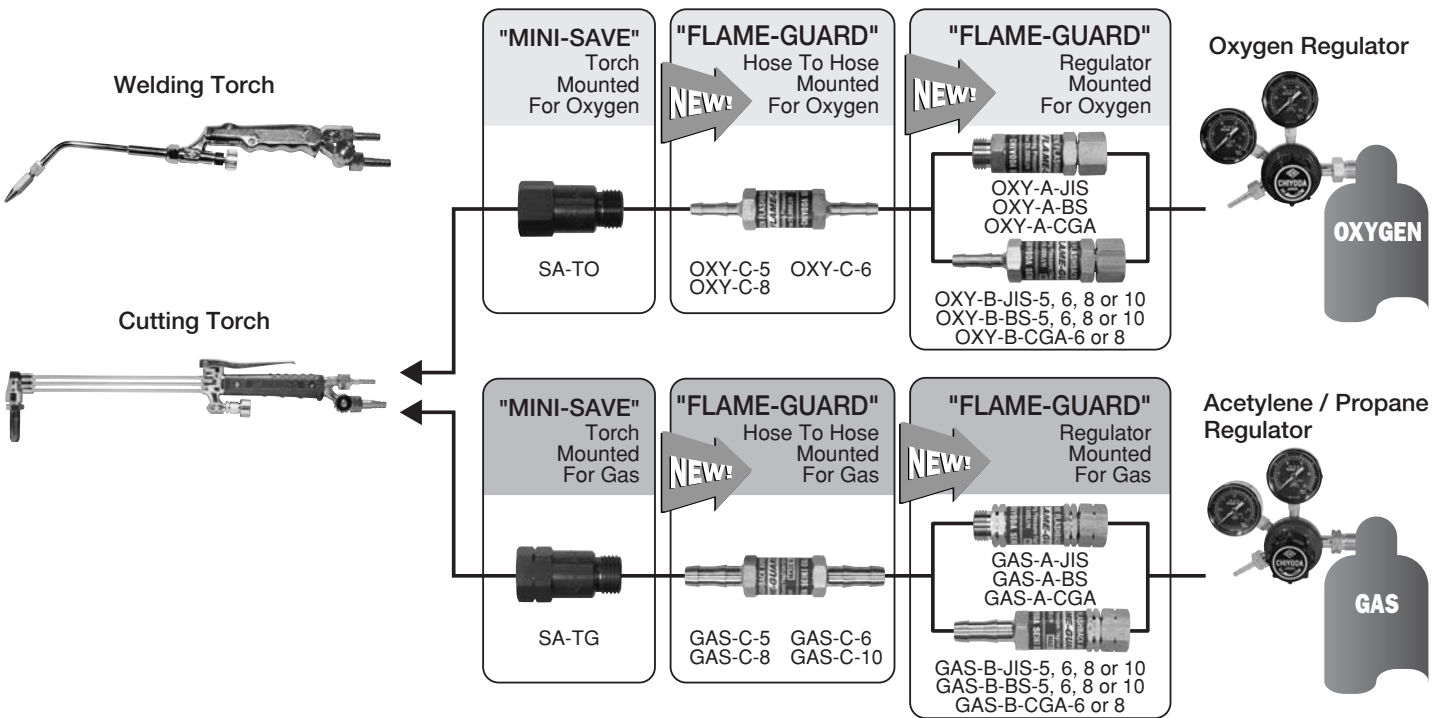
- Flame-Guard Series Flashback Arrestors are designed to be mounted to oxygen and acetylene/propane gas regulators or intermediately to hose & hose.
- No need any resetting after flashback.
- Flame-Guard Series are featured with check valves and fire-extinguishing filters to prevent reverse flow and backfire or flashback in order to protect operators from severe accidents by the explosion or fire troubles.

Specifications

* HN=Hose Nipple

Caution: Hydrogen Is prohibited to use on "FLAME-GUARD SERIES".

Oxygen Model	Type	Inlet Connect.	Outlet Connect.	Over Length (mm)	Weight (g)	Gas Model (Acetylene/Propane)	Type	Inlet Connect.	Outlet Connect.	Over Length (mm)	Weight (g)
Working Press. (Max.kgf/cm ²)	10 (Bar)					Working Press. (Max.kgf/cm ²)	1 (Bar)				
Flowing Capacity (Max.Lt/H)	28,000					Flowing Capacity (Max.Lt/H)	3,600				
 Regulator Mounted	OXY-A-JIS	M16×1.5 RH(F)	M16×1.5 RH(M)	65	102	 Regulator Mounted	GAS-A-JIS	M16×1.5 LH(F)	M16×1.5 LH(M)	65	102
	OXY-A-BS	BSP3/8" RH(F)	BSP3/8" RH(M)				GAS-A-BS	BSP3/8" LH(F)	BSP3/8" LH(M)		
	OXY-A-CGA	UNF9/16" RH(F)	UNF9/16" RH(M)				GAS-A-CGA	UNF9/16" LH(F)	UNF9/16" LH(M)		
 Regulator Mounted	OXY-B-JIS-5	M16×1.5 RH(F)	φ5mm HN	87	91	 Regulator Mounted	GAS-B-JIS-5	M16×1.5 LH(F)	φ5mm HN	87	91
	OXY-B-JIS-6		φ6.3mm HN				GAS-B-JIS-6		φ6.3mm HN		
	OXY-B-JIS-8		φ8mm HN				GAS-B-JIS-8		φ8mm HN		
	OXY-B-BS-6	BSP3/8" RH(F)	φ6.3mm HN				GAS-B-JIS-10	φ10mm HN	112		
	OXY-B-BS-8	φ8mm HN	GAS-B-BS-6				BSP3/8" LH(F)	φ6.3mm HN			
	OXY-B-CGA-6	UNF9/16" RH(F)	φ6.3mm HN				GAS-B-BS-8	φ8mm HN			
	OXY-B-CGA-8	φ8mm HN	GAS-B-BS-10				φ10mm HN	112			
		GAS-B-CGA-6	UNF9/16" LH(F)	φ6.3mm HN	91						
		GAS-B-CGA-8	φ8mm HN	102							
 Hose To Hose Mounted	OXY-C-5	φ5mm Hose Nipple	103	52	67	 Hose To Hose Mounted	GAS-C-5	φ5mm Hose Nipple	103	52	
	OXY-C-6	φ6.3mm Hose Nipple					GAS-C-6	φ6.3mm Hose Nipple			
	OXY-C-8	φ8mm Hose Nipple					GAS-C-8	φ8mm Hose Nipple			
							GAS-C-10	φ10mm Hose Nipple			105



Note: In case of double or triple setting of flashback arrestor as above, please pay attention to the final flow rate as below.

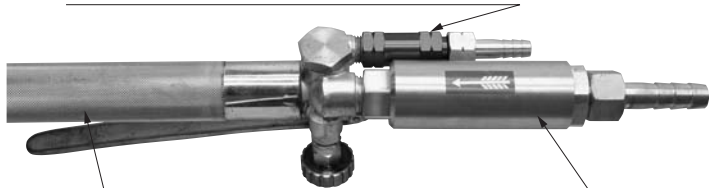
Test Condition	Fluid	Final Flow Rate (Nm ³ /h)	
		Oxygen (10kgf/cm ²)	Gas (1kgf/cm ²)
Single Setting (5m Rubber Hose×1PC.)		28 (ΔP=3kgf/cm ²)	3.6 (ΔP=0.6kgf/cm ²)
Double Setting (5m Rubber Hose×2PCS.)		20 (ΔP=3kgf/cm ²)	2.2 (ΔP=0.6kgf/cm ²)
Triple Setting (5m Rubber Hose×3PCS.)		15 (ΔP=3kgf/cm ²)	1.4 (ΔP=0.6kgf/cm ²)

FLASHBACK ARRESTORS FOR SCARFING TORCH

"SFST-02, SFG3-02" FOR OXYGEN USE ONLY



MINI-SAVE-LONG FOR FUEL GAS



SFG3-02 FOR OXYGEN

G3 SCARFING TORCH

Types	SFST-02	SFG3-02
Applications	Oxygen	
Working Pressure (kgf/cm ²)	15	
Flowing Capacity (Nm ³ /h)	150 or more	
Inlet/Outlet Connection	M16×P1.5 (R)	M20×P1.5 (R)
Length (mm)	108	127
Weight (g)	539	593

FLASHBACK ARRESTORS FOR MANIFOLD & PIPELINE (HIGH FLOW TYPE)

"SAVE-POINT-L" SERIES FOR ACETYLENE/PROPANE/NATURAL GAS/ETHYLENE/HYDROGEN



LA-8



LH-15



LP-8

* Flange connection is optional.

Specifications

Types	LA-8	LP-8	LH-15
Applications	Acetylene	LPG, CNG, Ethylene	Hydrogen
Working Pressure (kgf/cm ²)	1.3		
Flowing Capacity (Nm ³ /h)	8 P1=0.5k	8 P1=0.5k	20 P1=1.0k
Setting Position	Distribution Line, Manifold End		
Inlet Connection	1/2"PT (F)		
Outlet Connection	1/2"PT (F)		
Length (mm)	150		
Weight (kg)	1.8		

FLASHBACK ARRESTORS FOR MANIFOLD & PIPELINE (HIGH FLOW TYPE)

"SAVE-POINT-G" SERIES FOR ACETYLENE/PROPANE/NATURAL GAS/ETHYLENE/OXYGEN



SGS-20A
(LPG)



SGS-25A
(LPG)



SGS-25A
(ACETYLENE)



SGS-50A
(LPG)

* Flange connection is optional.

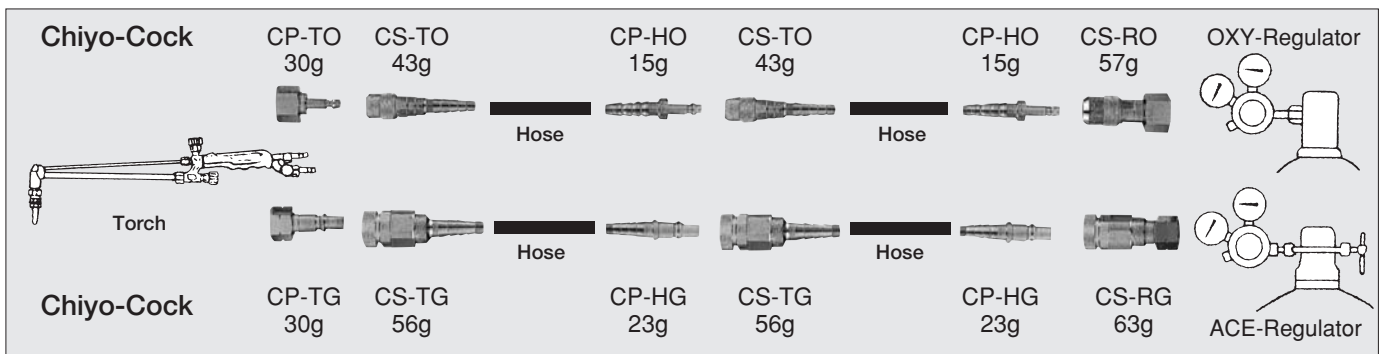
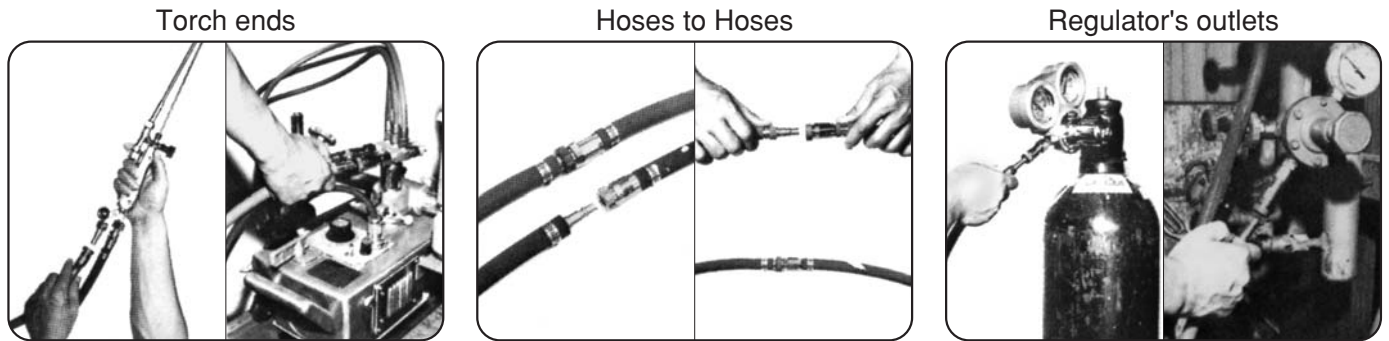
Types	SGS-20A	SGS-20A	SCS-C ₂ H ₄ -20A	SGS-25A	SGS-25A	SCS-C ₂ H ₄ -25A	SGS-50A	CY-OX-15A	SCS-OX-20A	SCS-OX-25A
Applications	Acetylene	LPG/CNG	Ethylene	Acetylene	LPG/CNG	Ethylene	LPG/CNG	Oxygen	Oxygen	Oxygen
Working Pressure (kgf/cm ²)	1.3	1.5	1.5	1.3	1.5	1.5	2	2	7	10
Flowing Capacity (Nm ³ /h)	15	15	12	30	30	30	60	30	60	150
Setting Position	Large-Flow Distribution Line, Manifold End									
Inlet Connection	3/4"PT(F)			1"PT(F)			2"PT(F)	1/2"PT(F)	3/4"PT(F)	1"PT(F)
Outlet Connection	3/4"PT(F)			1"PT(F)			2"PT(F)	1/2"PT(F)	3/4"PT(F)	1"PT(F)
Length (mm)	219	219	240	378	330	343	465	227	313	313
Weight (kg)	6.5	6.5	3.0	31	13	14.2	30	3	12	12

ONE TOUCH HOSE COUPLINGS "CHIYO-COCK" SERIES



For an Instant Joining or Detaching of Welding Equipment

■ Example for using



■ Applicable hose size For Oxygen For Gas
Chiyo-Cock: 1/4" · 5/16" 1/4" · 3/8"

PORTABLE GAS WELDING/CUTTING STATION "NEW CHIYO-PACK"

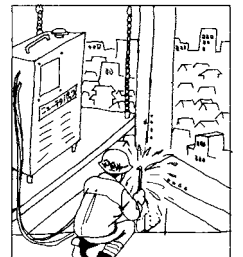


Completely Assembled All Necessary Welding/Cutting Equipment in Steel Box with Casters

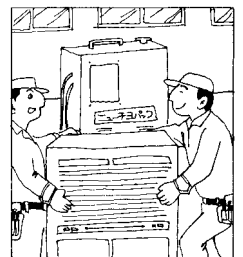
Our "NEW CHIYO-PACK" Portable Welding/Cutting Station has 3.6 Liter Oxygen & Acetylene Cylinders and allows 1.5 hours for gas welding and 1 hour for cutting operation.
Size: 730mm(H)×250mm(W)×215mm(D), Weight: 30kgs



Fireman's or Policemam's emergency appliance.



Building constructions



On-site and outdoor jobs

Single-Hand Operated Cutting Machine- **VIC-3**

Featuring compact, light weight construction for balance one-hand operation and used for straight-line, curve, circle and bevel welding edge and free-hand cutting.

The constant running in any operation by the adopted Variable Register obtains uniform cutting surfaces.

Specifications :

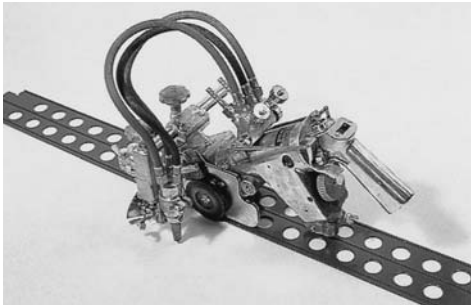
Voltage : AC 100V or 200V

Speeds : 100~1,000mm/min.

Cutting Thick. : 5~100mm

Bevel Cutting : 45°

Weight : Body 7.1kgs, Rail 3.2kgs



Single Hand Operated Cutting Machine- **VIC-4**

Straight handle type, compact and light weight construction for balanced single-hand operation in straight line, bevelling circle and free cutting.

Specifications :

Voltage : AC 100V or 200V

Speeds : 50~1,000mm/min.

Cutting Thick. : 5~100mm

Circle Cutting Range : ϕ 60~1,200mm

Bevel Cutting : Max. 45°

Weight : 9.8kgs



Automatic Gas Cutting Tool- **VIC-7 (STRONG AUTO)**

Small and light weight hand cutting torch having various efficient performances

Specifications :

Voltage : AC 100V or 200V

Motor : DC12V, 7200r.p.m.

Speed reducer : 1/300

Speed Control : Transistor Control

Cutting Thick. : 5-50mm

Cutting Speed : 200-700mm/min.

Wheel Drive : Friction drive

Weight : 2.7kgs

Straight line/Curved line/Pipe/Circular/ Small circle/Square/Shaped steel/Bevel-edge cutting are available with various attachments.

Attachment :

Square Cutting (Standard), Bevelling Wheel (Option), Auxiliary Wheel for Square Cutting (Op.), Small Circle Cutting (Op.), Manual Guide Lever (Op.), Large Circle Cutting (Op.), Straight Rail (Op.)



Small Circle Cutting Machine- **Auto SPIDER-250**

Featuring very light weight body with quick action gas shut-off valve & magnet provide easy carrying & all position cutting.

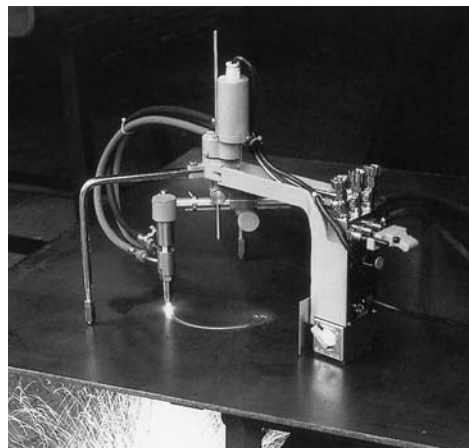
Specifications :

Cutting Capacity : ϕ 30~250mm

Cutting Thick. : 4.5~30mm

Voltage : AC 100V or 200V

Weight : 5.8kgs



Straight Line Cutting Machine (Light Duty) - **VIC-12**

Featuring small and light weight die-cast body with carrying handle for easy and quick movement of machine to another place.

Install unique "PI-SHUTTER" quick action gas saving shut-off valve as a standard accessory.

No more time adjustments of consuming flame and inconsistent cutting quality.

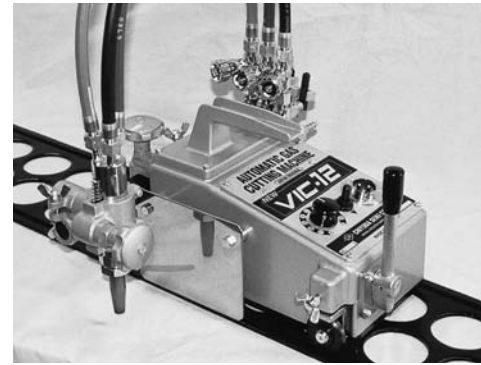
Specifications :

Voltage : AC 100V or 200V

Cutting Thick. : 5-60mm

Bevel Cutting : 45°

Weight : Body 4kgs, Rail 5.3kgs



Straight-Line Cutting Machine (Heavy Duty) - **VIC-17**

Strong and light-weight structure assure perfect portability and easy handling for heavy duty job. Install unique "PI-SHUTTER" quick action gas saving shut-off valve.

Specifications :

Voltage : AC 100V or 200V

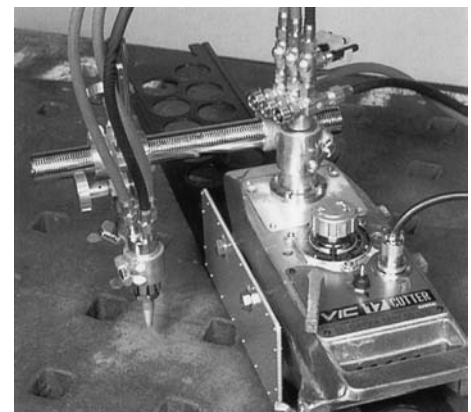
Speeds : 80~800mm/min.(50HZ)

100~1,000mm/min.(60HZ)

Cutting Thick. : 5~150mm

Weight : Body 11.5kgs, Rail 5.3kgs

Attachment for circle cutting & X,V,Y bevel cutting and dual torches are available as option.





Automatic Shape Cutting Machine- **VIC-22**

Steel template type, operation panel in front.

Specifications :

Voltage : AC 100V or 200V
Speeds : 100-1,000mm/min.
Cutting Thick. : 3~100mm
Cutting Range

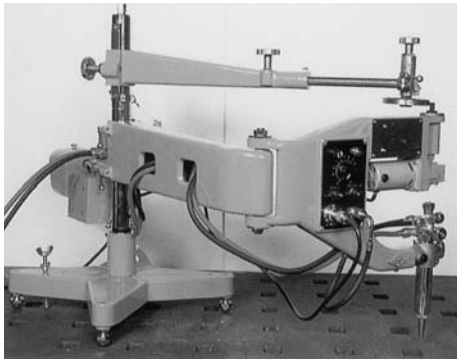
Circle Cutting : ϕ 30~700mm
(Standard)

: ϕ 600~1,700
(Using Attachment)

Cutting Accuracy : ± 0.5 mm over
500mm Dia.

Magnet Roller Dia. : 10mm

Weight : 33kgs



Large Circule Cutting Machine- **VIC-32**

Dedicated circle cutting machine, also provides bevel cutting & horizontal position cutting.

Specifications :

Voltage : AC 100V or 200V
Speeds : 100-850mm/min.

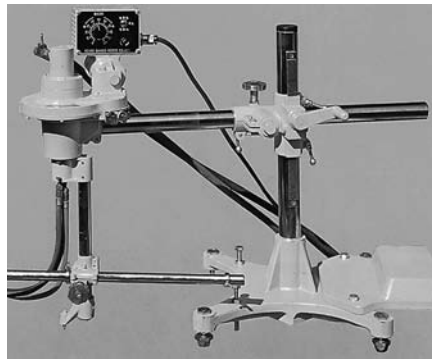
(S.C.R. Control)

Cutting Diameter : ϕ 30~600mm
(Standard)

Cutting Thick. : 5~50mm

Bevel Cutting : 45°

Weight : 25kgs



Portable Automatic Shape Steel Flame Cutter- **COSMO Junior-Z**

Most famous & popular H-beam cutting machine in the world.

Specifications :

Voltage : AC 100V or 200V
Speeds : 0~800mm/min.
Cutting Thick. : 3~25mm
Bevel Cutting : 45°

TYPE	CUTTING RANGE(MM)		RAIL LENGTH(M)	WEIGHT (KG)
	WEB	FLANGE		
F-300	150-600	100-300	1.2	12.8
F-400	150-900	100-400	1.5	15.6
F-600	150-1700	100-600	2.3	16.2



Manual Operation Pipe Cutting Machine- **VIC-65E**

4 wheel type manual pipe cutting machine with chain.

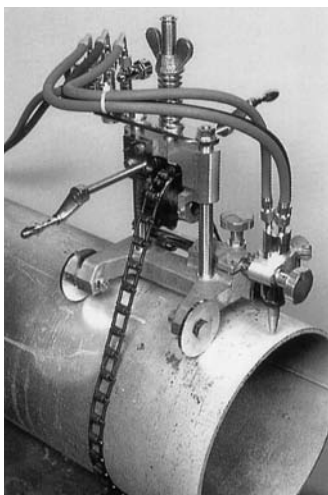
Specifications :

Pipe Diameter : 100~600mm (Standard)
Cutting Thick. : 5~50mm

Edge Shape : I or V

Bevel Angle : Up to 45°

Weight : 9kgs



Automatic Gas Pipe Cutting Machine- **VIC-66E**

4 wheel type automatic pipe cutting machine with chain.

Specifications :

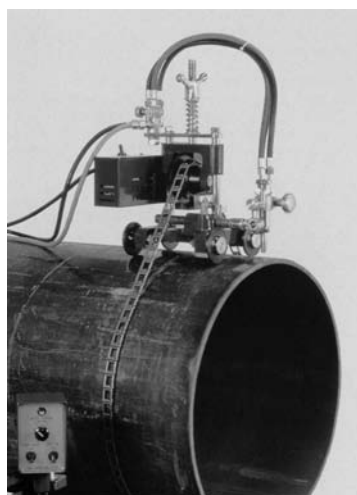
Voltage : AC 100V or 200V
Cutting Thick. : 5~50mm

Speeds : 100~600mm/min.

Pipe Diameter : 150~600mm

Bevel Angle : Up to 45°

Weight : 14kgs



Automatic Gas Pipe Cutting Machine- **VIC-67**

4 wheel type automatic pipe cutting machine with chain suitable for large pipes.

Specifications :

Voltage : AC 100V or 200V

Cutting Thick. : 5~50mm

Speeds : 100~700mm/min.

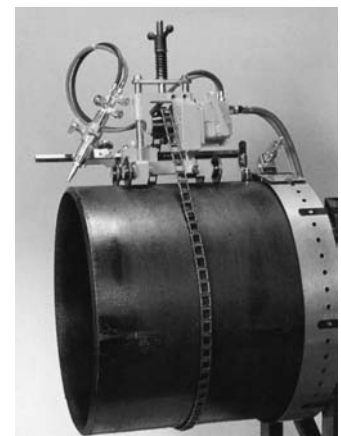
Pipe Diameter : 150~600mm (D-600)

*Optionals for large diameter pipes

- D-900 (Max.pipe ϕ 900mm)
- D-1200 (Max.pipe ϕ 1200mm)
- D-1500 (Max.pipe ϕ 1500mm)

Bevel Angle : Up to 45°

Weight : 15kgs



CYLINDER REGULATORS

"VICTORY" SERIES



"VICTORY" Regulators—single stage with easy to read 60mm ϕ gauges.

For general gas welding/heating and cutting operations, these regulators feature greater flows and accuracy, more economy, greater safety and easy maintenance.



For Oxygen



For Acetylene

Specifications

※ Inlet connection: See P.36

Applicable Gas		Oxygen / Nitrogen	Acetylene / Propane
Max. Inlet Pressure	(kgf/cm ²)	165	25
Delivery Pressure	(kgf/cm ²)	2~15	0.2~1.5
Standard Flow Rate	(Nm ³ /h)	60 (at 5kgf/cm ²)	5 (at 0.5kgf/cm ²)
Max. Flow Rate	(Nm ³ /h)	130	11
Inlet Pressure Gauge	(kgf/cm ²)	0~250 (3,500lb/in ²)	0~25 (350lb/in ²)
Delivery Pressure Gauge	(kgf/cm ²)	0~25 (350lb/in ²)	0~2 (40lb/in ²)
Inlet Connection		JIS, BS, CGA, DIN	JIS, BS, CGA, DIN
Outlet Connection		M16×P1.5(R)+hose nipple	M16×P1.5(L)+hose nipple
Weight	(kg)	1.33	1.08

CYLINDER REGULATORS

"NEWASTER" SERIES



For Oxygen



For Acetylene



For Propane

Specifications

※ Inlet connection: See P.36

Applicable Gas		Oxygen / Nitrogen	Acetylene / Propane	Hydrogen / Helium
Max. Inlet Pressure	(kgf/cm ²)	165	25	165
Delivery Pressure	(kgf/cm ²)	2~15	0.2~1.5	2~15
Standard Flow Rate	(Nm ³ /h)	35 (at 5kgf/cm ²)	5 (at 0.5kgf/cm ²)	70 (at 5kgf/cm ²)
Max. Flow Rate	(Nm ³ /h)	100	11	200
Inlet Pressure Gauge	(kgf/cm ²)	0~250 (3,500lb/in ²)	0~25 (350lb/in ²)	0~250 (3,500lb/in ²)
Delivery Pressure Gauge	(kgf/cm ²)	0~25 (350lb/in ²)	0~3 (40lb/in ²)	0~25 (350lb/in ²)
Inlet Connection		JIS, BS, CGA, DIN	JIS, BS, CGA, DIN	JIS, BS, CGA, DIN
Outlet Connection		M16×P1.5(R)+hose nipple	M16×P1.5(L)+hose nipple	M16×P1.5(L)+hose nipple
Weight	(kg)	1.18	1.08	1.08

CYLINDER REGULATORS "MODEL 2001" SERIES



For O₂, N₂, Ar, H₂, He, CO₂



Straight Inlet Type for O₂



For Acetylene



For Propane

■ Specifications ※ Inlet connection: Please see P.36

Applicable Gas	Oxygen / Nitrogen	Acetylene / Propane	Hydrogen / Helium	220kg for O ₂ ,N ₂ ,Ar(H ₂ ,He)
Max. Inlet Pressure (kgf/cm ²)	165	25	165	220
Delivery Pressure (kgf/cm ²)	2~15	0.2~1.5	2~15	2~15
Standard Flow Rate (Nm ³ /h)	60 (at 5kgf/cm ²)	7 (at 0.5kgf/cm ²)	120 (at 5kgf/cm ²)	60 (120)
Max. Flow Rate (Nm ³ /h)	130	18	260	130 (260)
Inlet Pressure Gauge (kgf/cm ²)	0~250 (3,500lb/in ²)	0~25 (350lb/in ²)	0~250 (3,500lb/in ²)	0~350 (5,000lb/in ²)
Delivery Pressure Gauge (kgf/cm ²)	0~25 (350lb/in ²)	0~3 (40lb/in ²)	0~25 (350lb/in ²)	0~25 (350lb/in ²)
Inlet Connection	JIS, BS, CGA, DIN	JIS, BS, CGA, DIN	JIS, BS, CGA, DIN	JIS, BS, CGA, DIN
Outlet Connection	M16×P1.5(R) + hose nipple	M16×P1.5(L) + hose nipple	M16×P1.5(L) + hose nipple	M16×P1.5(R) or (L)
Weight (kg)	1.4	1.4	1.4	1.4

CYLINDER REGULATORS "MODEL 2012" SERIES



The Model 2012 single stage gas regulator meets industry's demand of compact design and economy, manufactured carefully from the best selected materials.

Model 2012 regulator can be relied upon to meet your pressure control demand with best cost performance !!



For Oxygen

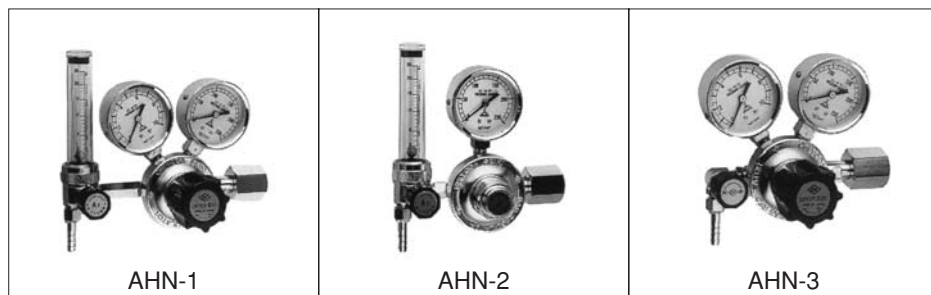


For Acetylene

■ Specifications

Applicable Gas	Oxygen / Nitrogen	Acetylene / Propane
Max. Inlet Pressure (kgf/cm ²)	165	25
Max. Working Pressure (kgf/cm ²)	9.9	0.98
Standard Flow Rate (Nm ³ /h)	38 (P ₂ =5kg/cm ²)	10 (P ₂ =0.5kg/cm ²)
Inlet Pressure Gauge (kgf/cm ²)	0~250 (3500lb/in ²)	0~40 (560lb/in ²)
Delivery Pressure Gauge (kgf/cm ²)	0~25 (350lb/in ²)	0~2 (30lb/in ²)
Inlet Connection	JIS, B.S., CGA, DIN, etc.	
Outlet Connection	M16×P1.5(R)+hose nipple	M16×P1.5(L)+hose nipple
Weight (kg)	1.3	1.28

AH series regulators are compensated (balanced) to provide constant delivery pressure and flow regardless of decaying inlet pressure as same as two-stage regulator.



Types	AHN-1	AHN-2	AHN-3
Applicable Gases	Ar, N ₂ , O ₂ , He etc.		
Body Material	Chrome plated die forged brass		
Inlet P.(kgf/cm ²)	165		
Delivery P.(kgf/cm ²)	1~6	1.5	1~6
Max. Flow Rate(NL/min)	100	50	100
Flowmeter(NL/min)	2~25	2~25	—
Weight(kg)	1.5	1.2	1.3

※AHN-2 Secondary pressure is fixed.

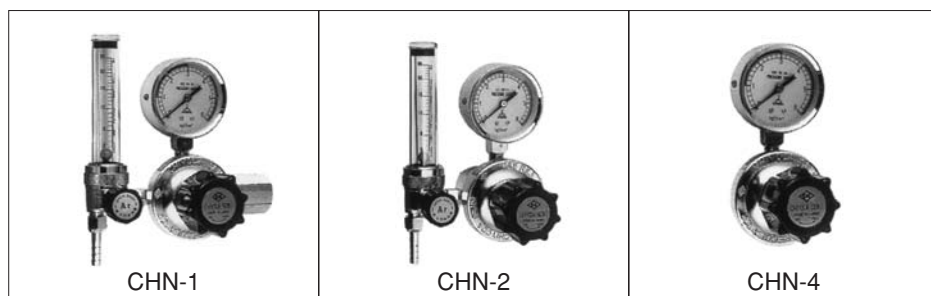
BH series two-stage regulators provide a constant no-fluctuating gas flow from start to finish of your operations. Once the working pressure is fixed, no further attention is necessary.



Types	BHN-1	BHN-2	BHN-3
Applicable Gases	Ar, N ₂ , O ₂ , H ₂ , He etc.		
Body Material	Chrome plated die forged brass		
Inlet P.(kgf/cm ²)	165		
Delivery P.(kgf/cm ²)	1~3	1.5	1~3
Max. Flow Rate(NL/min)	100	50	100
Flowmeter(NL/min)	2~25	2~25	—
Weight(kg)	2.0	1.8	1.9

※BHN-2 Secondary pressure is fixed.

CH series pipeline regulators are designed for outlet stations, suitable for optimum control and delivery pressure far from central gas manifolds.



Types	CHN-1	CHN-2	CHN-4
Applicable Gases	Ar, N ₂ , O ₂ , CO ₂ , C ₂ H ₂ , H ₂ , He etc.		
Body Material	Chrome plated die forged brass		
Inlet P.(kgf/cm ²)	10		
Delivery P.(kgf/cm ²)	1~3		
Max. Flow Rate(NL/min)	30		
Flowmeter(NL/min)	2~25	2~25	—
Weight(kg)	1.2	1.2	0.8

※"CHN-4" Available for pannel setting.

GH series single stage regulators are designed for economy and popular applications.



Types	GHN-1	GHN-2	GHN-3
Applicable Gases	Ar, N ₂ , O ₂ , H ₂ , He etc.		
Body Material	Chrome plated die forged brass		
Inlet P.(kgf/cm ²)	165		
Delivery P.(kgf/cm ²)	1~6	1.5	1~6
Max. Flow Rate(NL/min)	100	50	100
Flowmeter(NL/min)	2~25	2~25	—
Weight(kg)	1.5	1.2	1.3

※GHN-2 Secondary pressure is fixed.

- ※Stainless-steel made Diaphragm is used for Helium & Hydrogen Gases.
- ※Stainless-steel made Body & Parts are also available as "SS" models.
- ※Please make sure your using gas name in your ordering.

High flows of CO₂ lead to the formation of dry ice crystals inside regulator orifices. These crystals reduce or stop flows completely.

EH series electrically heated, thermostatically controlled, regulator prevent internal dry ice accumulations and freeze-up inside orifices.

Types and Specifications:



- Features:**
- * Attached thermal seal shows the temperature (50°C) of heater.
 - * Built-in over heat protector Available for 5kgf/cm² delivery pressure. (EH50 and EH100 series).

Types	EH-1N	EH-2N	EH-3N	EH-4N	EH50-1	EH50-3	EH50-4	EH100-1	EH100-3	EH100-4
Applicable Gas	CO ₂ (Non-syphon cylinder)									
Max. Inlet Pressure (kgf/cm ²)	165									
Delivery Pressure (kgf/cm ²)	1~3				3(Fixed)	1~3		3(Fixed)	1~3	
Max. Flow Rate (NL/min)	25				70			120		
Inlet P. Gauge (kgf/cm ²)	No gauge	0~250	No gauge	0~250	0~250	No gauge	0~250	0~250	No gauge	0~250
Delivery P. Gauge (kgf/cm ²)	0~6				No gauge	0~6	0~6	No gauge	0~6	0~6
Flowmeter (NL/min)	2~25		No flowmeter		5~50	No flowmeter		10~100	No flowmeter	
Electric Source	AC-110/220V 50/60Hz Cord length:2m									
Heater Capacity	190W				380W			570W		
Weight (kg)	1.8	2.06	1.51	1.88	3.05	2.8	2.85	3.1	2.8	2.85

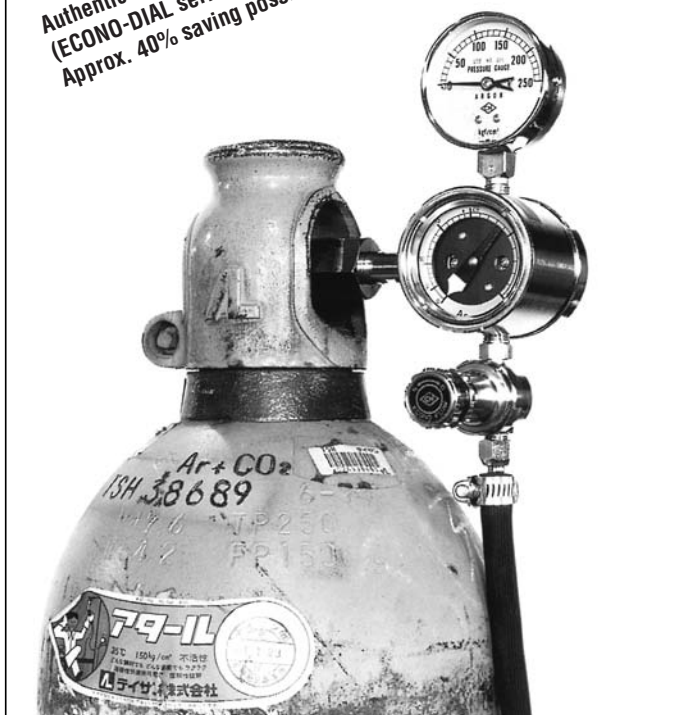
NON-HEATER CYLINDER REGULATOR "FC-20" FOR CO₂ GAS

MODEL:FC-20 is a pressure regulator for CO₂ gas featured with an aluminum made heat exchanger to prevent internal dry ice accumulations and freeze-up inside orifices, and also it is featured with a two stage pressure control structure for stable gas supply.



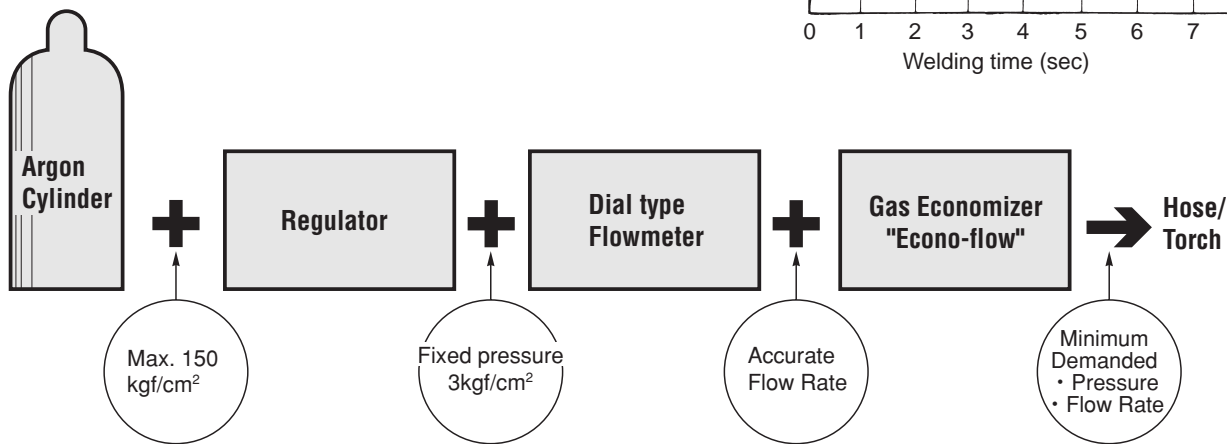
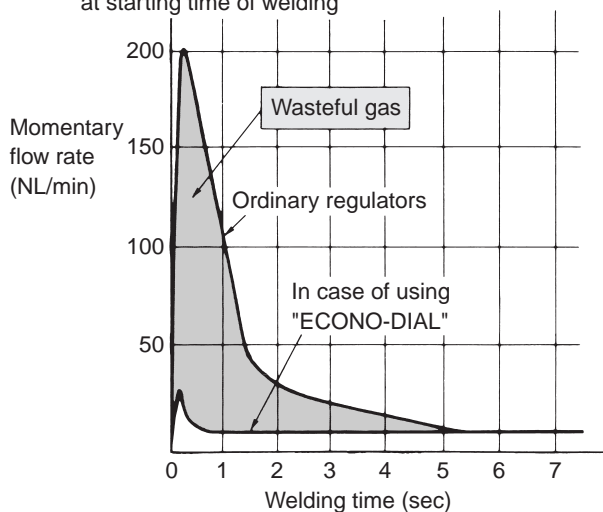
Model	FC-20
Applicable Gas	CO ₂ (Non-syphon cylinder)
Inlet Pressure (kgf/cm ²)	15~70
Delivery Pressure (kgf/cm ²)	1.5~3
Max. Flow Rate (NL/min)	25
Inlet P. Gauge (kgf/cm ²)	None
Delivery P. Gauge (kgf/cm ²)	0~6
Flowmeter (NL/min)	2~25
Working Temperature (°C)	-40~+40
Weight (kg)	2.7

Authentic edition of shielding gas saving
(ECONO-DIAL series)
Approx. 40% saving possible !

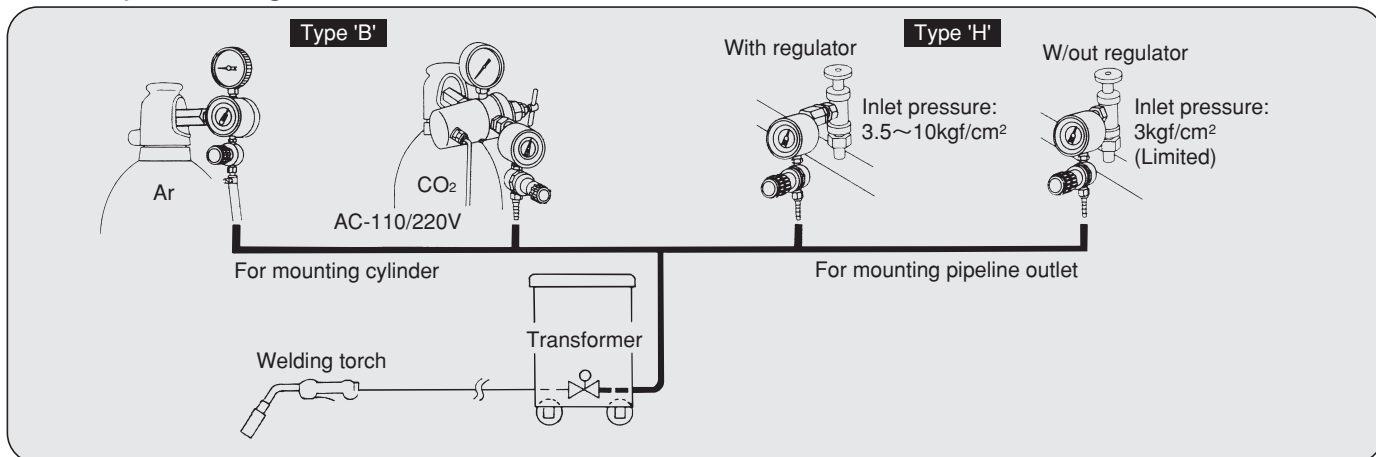


In shielding gas feed method, normally we are using conventional pressure regulators and flowmeters in TIG, MIG and CO₂ Arc welding, but in this method, a much volume of wasteful gas is discharged in a few seconds of at start of welding. In addition to poor efficiency, it adversely affects the welding surfaces and may spoil welding qualities. "ECONO-DIAL" has been developed to minimize discharge of wasteful gas. It keeps gas flow at constant rate as from start of welding and assures smooth arc start and energy saving without causing deterioration of welding qualities.

Momentary flow curve for wasteful gas at starting time of welding



Example for using



"ECONO-DIAL" DELIVERY PRESSURE FIXED AT 3kgf/cm²

■ Economizing Test

Comparing the "ECONO-DIAL" with an ordinary flowmeter regulator in the following testing conditions, the merit table shows about 22 to 62% of shielding gas have been saved in 10 seconds at the start of welding.

■ Testing conditions

1. Time of welding: 10 seconds
2. Length of welding cable: 10 meters with torch
3. Delivery pressure: 3kgf/cm²
4. Hose inside diameter: 1/4"(6.35mm)

● NEW ECONO-DIAL for STATION OUTLET

※ Compact size with built-in economizer and light weight with aluminum body ensure eternal economization for shielding gas.



0.72kg

H-Ar/-CO₂ (with mini-regulator)





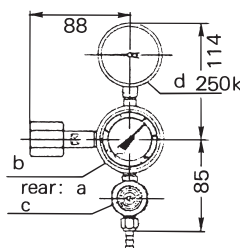
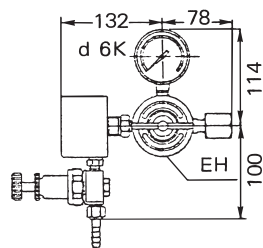
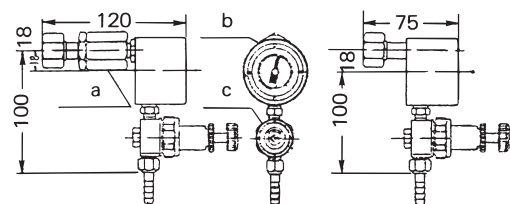


0.61kg

H-Ar/-CO₂ (without mini-regulator)

■ Merit table

Flowmeter set value at welding start (L/min.)	Rubber hose length (Meter)	Kinds of Regulator	Consumptions (cc/10sec.)	Economization (cc/10sec.)
Ar Welding	3	Ordinary type w/o Econo-flow	1,910	1,030 (53.9%)
		ECONO-DIAL	880	
	10	Ordinary type w/o Econo-flow	2,390	1,494 (62.5%)
		ECONO-DIAL	896	
10	3	Ordinary type w/o Econo-flow	2,190	600 (27.4%)
		ECONO-DIAL	1,590	
	10	Ordinary type w/o Econo-flow	2,546	875 (34.4%)
		ECONO-DIAL	1,671	
CO ₂ Welding	10	Ordinary type w/o Econo-flow	3,283	933 (28.4%)
		ECONO-DIAL	2,350	
	20	Ordinary type w/o Econo-flow	3,750	1,187 (31.6%)
		ECONO-DIAL	2,563	
20	10	Ordinary type w/o Econo-flow	4,050	905 (22.3%)
		ECONO-DIAL	3,145	
	20	Ordinary type w/o Econo-flow	4,440	1,135 (25.5%)
		ECONO-DIAL	3,305	

Ar regulator	CO ₂ regulator	Station outlet flowmeters	
B-AR-15L B-AR-30L B-AR-50L	B-CO ₂ -30L B-CO ₂ -50L	(with mini-regulator) H-AR-15L H-AR-30L H-AR-50L	(without mini-regulator) H-AR-15L H-AR-30L H-AR-50L H-CO ₂ -30L H-CO ₂ -50L
 2.1kg	 2.6kg Power: 110V/220V	 1.3kg	 1.1kg
			

a: mini-regulator b: dial flow-meter c: econo-flow d: pressure gauge

HIGH PURITY GAS REGULATORS FOR GAS CYLINDER

"EXCELLENT MARK II" SERIES



■Applications

Instrument Analysis Carrier Gases
Semiconductor Manufacturing Gases
Poisonous & corrosive gases

■Quality & Grade

Ex-mk II Series are consisted in three grades, such as G1, G2 and G3.
Each grade product is constructed under careful consideration about the construction, materials, cleaning, assembly, performance, inspection and packing.

Grade	G1	G2	G3
Helium leak rate	$\leq 1 \times 10^{-8}$ Acc/sec.	$\leq 1 \times 10^{-7}$ Acc/sec.	Compressed He 12hours
Connections	1/4VCR or Tube	Screw in	Screw in
Cleaning	Two-steps ultrasonically cleaning		
Assembling	In a Class 1000 Clean room		
Material	Stainless steel 316		
Packaging	Packed in a polyethylene film under N ₂		

Single Stage Regulators

EX-20mk II G1



EX-100mk II G3



Two Stage Regulators

EX-300mk II G2



EX-400mk II G3



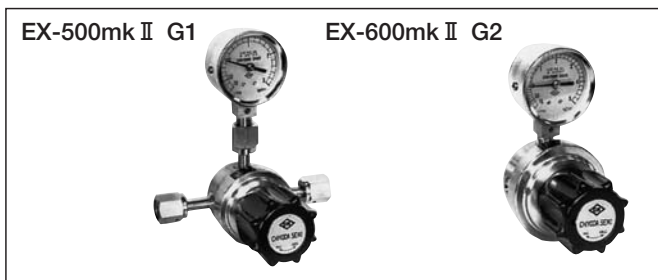
■Specifications

Models	EX-20mk II	EX-100mk II	EX-300mk II	EX-400mk II
Max. Inlet Pressure (kgf/cm ²)	220	220	220	220
Max. Delivery Pressure (kgf/cm ²)	10	10	6	6
Normal Flow Rate (NL/min)	20	100	20	100
Max. Flow Rate (NL/min)	50	150	30	150
Flow Coefficient (CV=)	0.05max	0.05max	0.05max	0.05max
Temperature Range (°C)	-10~60	-10~60	-10~60	-10~60
Dew Point (°C)	-70	-70	-70	-70
Helium Leak Rate (Acc/sec)	$\leq 1 \times 10^{-8}$	$\leq 1 \times 10^{-8}$	$\leq 1 \times 10^{-8}$	$\leq 1 \times 10^{-8}$
Weight (kg)	1.2	1.3	1.9	2.0

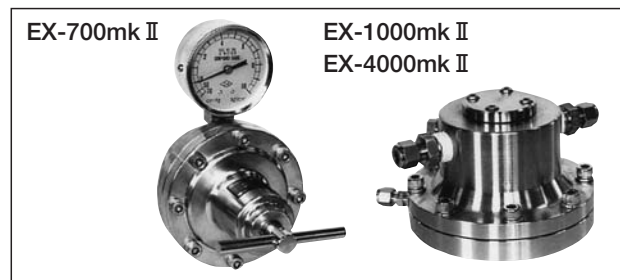
"EXCELLENT MARK II" SERIES



Station line regulators



High flow line regulators



Specifications

Models	EX-500mk II	EX-600mk II	EX-700mk II	EX-1000mk II	EX-4000
Max. Inlet Pressure (kgf/cm ²)	30	30	20	10	10
Max. Delivery Pressure (kgf/cm ²)	10	10	10	8	8
Normal Flow Rate (NL/min)	20	100	300	1000	4000
Max. Flow Rate (NL/min)	50	150	450	2000	5000
Flow Coefficient (CV=)	0.17	0.17	0.60	1.75	3.58
Temperature Range (°C)	-10~60	-10~60	-10~60	-10~60	-10~60
Dew Point (°C)	-70	-70	-70	-70	-70
Helium Leak Rate (Acc/sec)	≤1×10 ⁻⁸	≤1×10 ⁻⁸	≤1×10 ⁻⁷	≤1×10 ⁻⁶	≤1×10 ⁻⁶
Weight (kg)	0.9	1.0	3.5	6.0	16

ULTRA HIGH PURITY GAS REGULATORS "EXCELLENT-MEGA" SERIES



EX-M (Excel Mega) Series single stage stainless steel regulators are designed for Instrument Analysis or Semiconductor Manufacturers where high purity must be maintained. This series regulators are more accuracy than our EX-mk II series and have been founded to have a leakage rate of less than 1×10⁻¹⁰ Acc/sec.of helium.

Single Stage Regulators



Pipeline Regulators



Specifications

Models	EX-M-20	EX-M-100	EX-M-500	EX-M-600
Max. Inlet Pressure (kgf/cm ²)	220	220	30	30
Max. Delivery Pressure (kgf/cm ²)	10	10	10	10
Normal Flow Rate (NL/min)	20	100	20	100
Max. Flow Rate (NL/min)	50	150	50	150
Flow Coefficient (CV=)	0.05	0.05	0.17	0.17
Temperature Range (°C)	-10~60	-10~60	-10~60	-10~60
Dew Point (°C)	-74	-74	-74	-74
Helium Leak Rate (Acc/sec)	≤1×10 ⁻¹⁰	≤1×10 ⁻¹⁰	≤1×10 ⁻¹⁰	≤1×10 ⁻¹⁰
Connections	1/4 VCR or Tube	1/4 VCR or Tube	1/4 VCR or Tube	1/4 VCR or Tube
Weight (kg)	1.2	1.3	0.9	1.0
Surface Finish	Electropolished Rmax. 0.7 μm			

※EX-M-700, EX-M-1000, EX-M-4000 regulators available for large flow.

PIPELINE & MANIFOLD REGULATORS

FOR OXYGEN/NITROGEN/ARGON/HYDROGEN/HELIUM, ETC.



High Delivery Pressure Regulators for Cylinder



KR-80H

Models	Gauges (kgf/cm ²)		Max. Working (kgf/cm ²)		Flow Capacity (Nm ³ /h)	Weight (kg)
	HP	LP	Inlet Pressure	Delivery Pressure		
KR-30H	0~250	0~50	165	30	50	1.7
KR-80H	0~250	0~150	165	80	100	2.3
KR-120H	0~250	0~200	165	120	80	2.5
KR-170H	0~250	0~250	165	150	80	3.3
TKR-50K	0~250	0~50	165	30	75	2.0
TKR-100K	0~250	0~150	165	100	170	2.4

※Incoming Pressure: Max. 220kgf/cm² types are also available.

High Inlet Pressure Regulators for distribution lines



TKR-140

Models	Gauges (kgf/cm ²)		Max. Working (kgf/cm ²)		Flow Capacity (Nm ³ /h)	Weight (kg)
	HP	LP	Inlet Pressure	Delivery Pressure		
TKR-140	0~350	0~25	220	15	155	3.5
TKR-200	0~350	0~25	220	15	280	5.2
TKR-500	0~350	0~25	220	15	320	9.0
TKR-1000	0~350	0~15	220	10	570	16.0

High Flow Regulators for central manifold or distribution lines



GS-200

Models	Gauges (kgf/cm ²)		Max. Working (kgf/cm ²)		Flow Capacity (Nm ³ /h)	Weight (kg)
	HP	LP	Inlet Pressure	Delivery Pressure		
GS-140	0~250	0~25	165	15	155	3.5
GS-200	0~250	0~25	165	15	280	5.2
GS-140L	0~50	0~15	30	10	150	3.5
GS-200L	0~50	0~15	30	10	230	5.2

High Flow Regulators for distribution lines



GS-1000

Models	Gauges (kgf/cm ²)		Max. Working (kgf/cm ²)		Flow Capacity (Nm ³ /h)	Weight (kg)
	HP	LP	Inlet Pressure	Delivery Pressure		
GS-500	0~250	0~25	165	15	560	9.0
GS-1000	0~250	0~15	165	10	1,050	16.0

Outlet Regulators
for pipeline
GL-10, GL-25
for Acetylene, Propane

GL-30, GL-60, GL-120,
GL-180
for O₂, N₂, Ar, CO₂ etc.



GL-30

Models	Gauges (kgf/cm ²)		Max. Working (kgf/cm ²)		Max. Flow Capacity (Nm ³ /h)	Weight (kg)
	HP	LP	Inlet Pressure	Delivery Pressure		
GL-10	—	0~2	2	1	10	0.8
GL-25	—	0~2	2	1	25	1.9
GL-30	—	0~15	10	8	30	0.8
GL-60	—	0~25	25	15	60	0.9
GL-120	—	0~25	15	8	120	1.9
GL-180	—	0~25	40	15	180	1.9

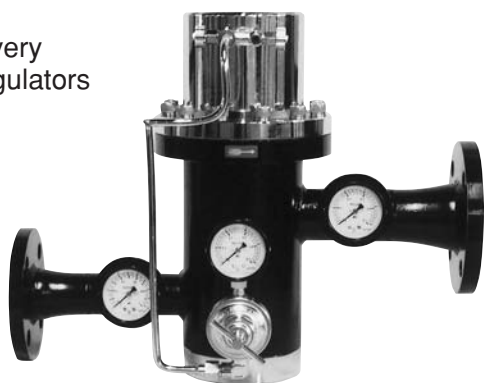
High Flow
Regulators
for Acetylene
manifolds or
distribution
lines



GS-14

Models	Gauges (kgf/cm ²)		Max. Working (kgf/cm ²)		Flow Capacity (Nm ³ /h)	Weight (kg)
	HP	LP	Inlet Pressure	Delivery Pressure		
GS-14	0~30	0~3	30	1.5	20	3.5
GS-20	0~30	0~3	30	1.5	36	5.2

High Flow,
but Low Delivery
Pressure Regulators



RSC-3

Models	Gauges (kgf/cm ²)		Max. Working (kgf/cm ²)		Flow Capacity (Nm ³ /h)	Weight (kg)
	HP	LP	Inlet Pressure	Delivery Pressure		
RF-400	0~2	0~0.5	1	0.2	150	93
RF-400P	0~20	0~3	5	2	750	90
MGS-200	-	-	10	0.4	300	26.2
RSC-3	—	—	30	10	2,300	31

High Flow Regulators
for manifold or distribution lines



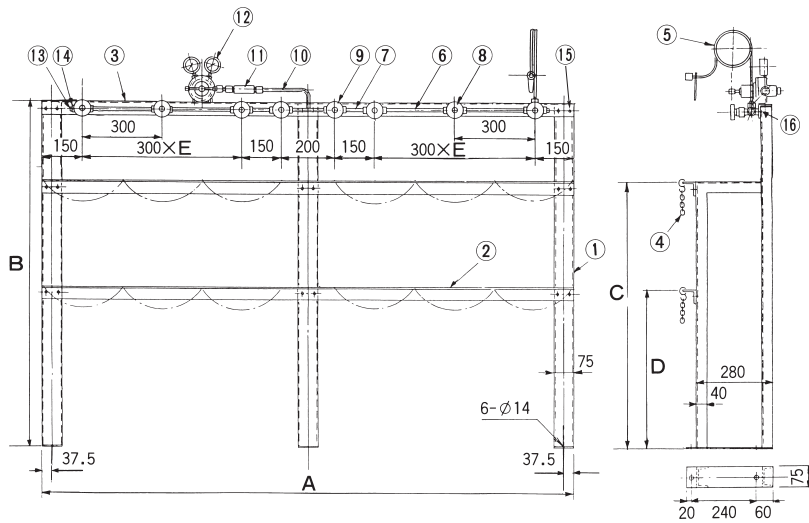
GS-3000P

Models	Gauges (kgf/cm ²)		Max. Working (kgf/cm ²)		Flow Capacity (Nm ³ /h)	Weight (kg)
	HP	LP	Inlet Pressure	Delivery Pressure		
GS-1000P	0~250	0~25	165	15	1,050	18.7
GS-2000P	0~250	0~25	165	15	1,600	34.6
GS-3000P	0~250	0~25	165	15	2,300	45.0

※ Incoming Pressure: Max. 220kgf/cm² types are also available.

1. Single-Row (Wall type) Manifold

Applicable for O₂, N₂, Ar, H₂, C₂H₂, He, CO₂, etc.



■Dimensions

Single-row type for O₂, N₂, Ar, H₂, He, CO₂, cylinders

Cylinders	A	B	C	D	E
2×2	1400	1300	1000	600	1
3×3	2000	∕	∕	∕	2
4×4	2600	∕	∕	∕	3
5×5	3200	∕	∕	∕	4
6×6	3800	∕	∕	∕	5

Single-row type for Acetylene cylinders

Cylinders	A	B	C	D	E
2×2	1400	1200	600	250	1
3×3	2000	∕	∕	∕	2
4×4	2600	∕	∕	∕	3
5×5	3200	∕	∕	∕	4
6×6	3800	∕	∕	∕	5

■Part Informations

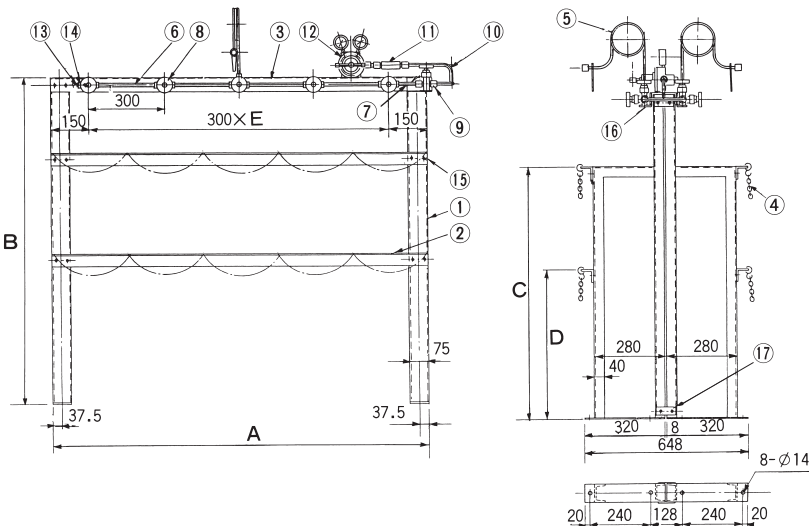
No.	Parts	Remarks
1	Pedestal	Steel L75×40
2	Cylinder holder	Steel L50×50
3	Valve mounting frame	Steel L50×50
4	Chains	SS41
5	Pigtail	PH-1
6	L-pipe	UN-L
7	S-pipe	UN-S
8	3-way valve	KV-250-T
9	Shut-off valve	KV-250-CIS
10	T-pipe	UN-T
11	Strainer	FB-22
12	Pressure Regulator	GS-140
13	Stop nut	UN-PN
14	Nut	W22 M14
15	Setting bolt	M10-L10
16	Setting bolt	M8-L15

ANTI-FREEZING HEATER for non-syphon CO₂ cylinders.



※See page 30

2. Double-Row Manifold



■Dimensions

Double-row type for O₂, N₂, Ar, H₂, He, CO₂, cylinders

Cylinders	A	B	C	D	E
2×2	600	1300	1000	600	1
3×3	900	∕	∕	∕	2
4×4	1200	∕	∕	∕	3
5×5	1500	∕	∕	∕	4
6×6	1800	∕	∕	∕	5

Double-row type for Acetylene cylinders

Cylinders	A	B	C	D	E
2×2	600	1200	600	250	1
3×3	900	∕	∕	∕	2
4×4	1200	∕	∕	∕	3
5×5	1500	∕	∕	∕	4
6×6	1800	∕	∕	∕	5

■Part Informations

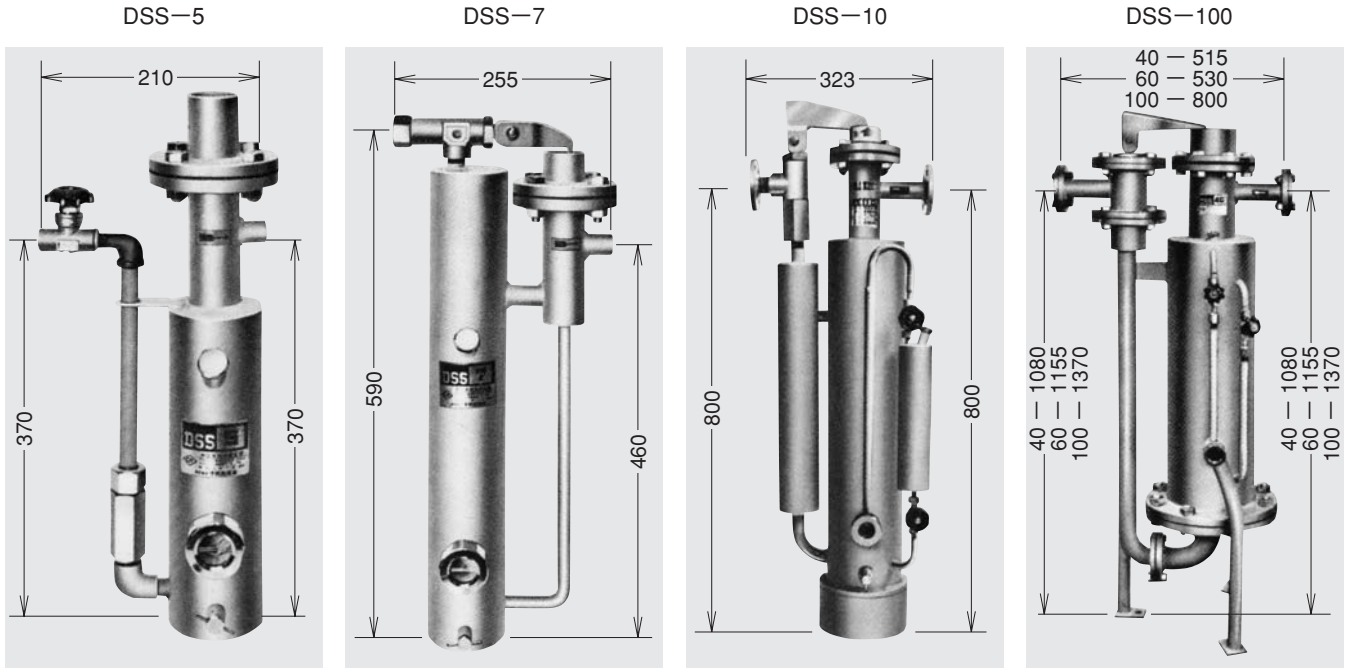
No.	Parts	Remarks
1	Pedestal	Steel L75×40
2	Cylinder holder	Steel L50×50
3	Valve mounting frame	Steel L50×50
4	Chains	SS41
5	Pigtail	PH-1
6	L-pipe	UN-L
7	S-pipe	UN-S
8	3-way valve	KV-250-T
9	Shut-off valve	KV-250-CIS
10	T-pipe	UN-T
11	Strainer	FB-22
12	Pressure Regulator	GS-140
13	Stop nut	UN-PN
14	Nut	W22 M14
15	Setting bolt	M10-L10
16	Setting bolt	M8-L15
17	Steel plate	SS41

STATION FLASH-BACK ARRESTORS

WATER-SEALED SAFETY UNIT FOR FLAMMABLE GAS



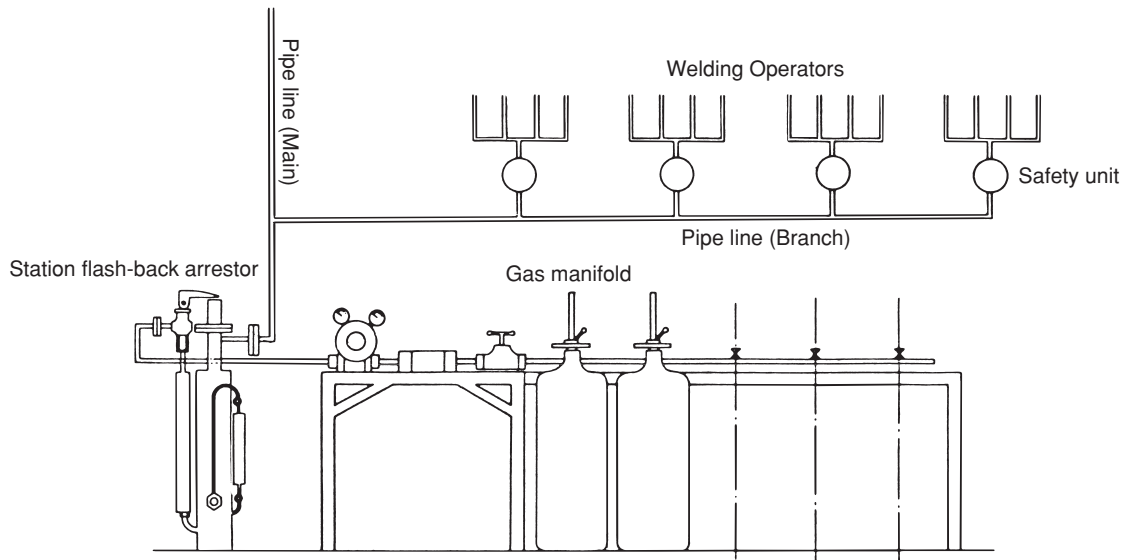
Types



Specifications

Type	DSS-5	DSS-7	DSS-10	DSS-40	DSS-60	DSS-100
Flow Capacity (m ³ /h)	5	7	20	40	60	100
Inlet	PT $\frac{3}{8}$ Female	PT $\frac{1}{2}$ Female	1B×5KF	1 $\frac{1}{2}$ B×5KF	2B×5KF	2 $\frac{1}{2}$ B×5KF
Outlet	PF $\frac{3}{8}$ Female	PF $\frac{1}{2}$ Female				
Height (mm)	500	600	850	1,300	1,400	1,700
Weight (kg)	8	11	30	105	110	216

Installations



Strainer (Filter)

Install in the inlet of regulator to prevent dust coming-in

Strainer (FB-22) (FB-29)
Max. 220kg/cm ²
FB-22: W22-M14+φ10mm nipple/784g FB-29: W29-M16+φ16mm nipple/1,330g

For O₂, Ar, CO₂

All stainless-steel made is also available

Flashback Arrestor

Install in primary line to prevent flash-back.
Working Pressure: Max. 30kgf/cm²

Small Arrestor (FA-1)	Large Arrestor (FA-2)	Save Point-L (LA-8) (LP-8)
M22-P2 Male		Max. 1.3kg/cm ²
W22-Thread 14 Male 332g	15A×20k-flange 1,680g	RC 1/2" Female 1,800g

For Acetylene

For Acetylene

LA-8: Acetylene

LP-8: LPG, Ethylene, LNG

Connecting Tubes

- Parts for various kind of manifold
- Material: Brass+Stainless-steel
- All stainless-steel made is also available

L-Tube (UN-L)	S-Tube (UN-S)	T-Tube (UN-TA)
W22-Thread 14 NUT 408g	W22-Thread 14 NUT 264g	JIS15A×20k-flange W22-Thread 14 NUT 1,270g
T-Tube (UN-T)	U-Tube (UN-U)	Flange-Nut (UN-O)
W22-Thread 14 NUT 680g	W22-Thread 14 NUT 720g	15A×10k-flange W22-Thread 14 NUT 780g
Stop Nut (UN-PN)		
W22-Thread 14 NUT 128g		

Pigtails

with Spanner Handle (PH-1)	with Round Handle (PH-2)	with Universal Tube (PH-4)	for Standard Gas (PH-5)
For general gas	For general gas	For gas filling	For standard gas
JIS, B.S., CGA Copper tube W22-Thread 14 NUT 718g	W22-Thread 14 NUT Copper tube JIS, B.S., CGA 1,106g	Copper tube W22-Thread 14 NUT JIS, B.S., CGA 1,300g	φ 6.35 tube JIS, B.S., CGA Stainless-steel 316 tube 350g
for Hi-Purity Gas (PH-6)	for Acetylene (CY04-22)	for N ₂ , Ar (KB04-22N)	for LPG (PH-9)
For hi-purity gas	For acetylene	For N ₂ , Ar	For LPG
Single type Swagelock VCR with purge-line Swagelock VCR 360g JIS, B.S., CGA 260g Stainless-steel 316 tube	Synthetic fiber W22-Thread 14 NUT 506g/m	Synthetic fiber W22-Thread 14 NUT 600g/m	Synthetic fiber PT-1/4" male W22.5-Thread 14 Male (L) 330g/m

FOR CO₂ GAS



Outline

If carbon dioxide gas is used so much, by the temperature fall of gas, the operation part of the pressure regulator freezes with dry ice crystals and gas may not flow.

CK-Series electrically heated, thermostatically controlled, anti-freezing heater prevent from internal dry ice accumulations and freeze-up of orifices regulator inside.

Features

- Compact design & High thermal efficiency.
- A temperature rise is known at a glance with thermostat emblem (50°C display).
- Unusual heating prevention cutout built-in.
- Build the special strainer in the entrance side and prevent the sheet leak of a pressure regulator.
- It is semi- water proof structure.
- The entrance for equipments is per metal and has prevented the gas leak.

For Cylinder Outlet

Model:CK-190B / CK-380B



For Manifolds

Model:CK-190K / CK-380K / CK-570K



Application & Measurements

For Cylinder

For Manifolds

Caution

1. CK-Series cannot be used for CO₂ siphon cylinder
2. Please start to supply gas. After the of the thermostat emblem looms, which means the temperature of the heater reached to 50°C
3. In order to improve thermal efficiency. Please attach just before a pressure regulator.
4. The number in mentioned () express the size of CK-190K.

Specifications

Spec.	Model	For Cylinder	For Cylinder Manifold
		CK-190B / CK-380B	CK-190K / CK-380K / CK-570K
Applicable Gas		CO ₂ , O ₂ , N ₂ , N ₂ O etc.	
Max. Inlet Pressure (kgf/cm ²)		150	
Power Supply		AC-110/220V 50/60HZ *As other power supply available at option, please specify the voltage.	
Thermostat (°C)		60+/-5	
Code Length (m)		2	
Inlet Connection		W22-14TH SWIVEL & NUT	W22-14TH (MALE)
Outlet Connection		W22-14TH (MALE)	W22-14TH SWIVEL & NUT

Capacity

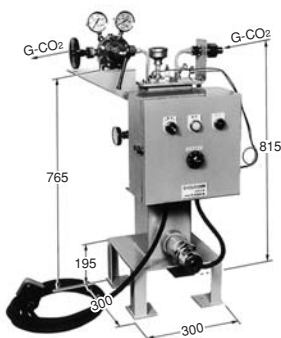
Model	Capacity	Max. Flow Capacity (m ³ /h · Normal)			Heater Capacity (W)	Weight (kg)
		CO ₂		N ₂		
		75kgf/cm ² ≧	75kgf/cm ² ≦			
CK-190B CK-190K		6	2	25	190	1.8
CK-380B CK-380K		12	4	50	380 (190×2)	2.3
CK-570K		18	6	75	570 (190×3)	2.4

High Flow Type Anti-Freezing Heater for CO₂ Gas Service, Ground Mounted ... CVR-G-20B-100/-200,CVR-G-40B-200

●This unit is installed especially after high flow CO₂ gas manifold for stable gas supply.

*CAUTION; This unit is prohibited to use for syphon type CO₂ cylinder.

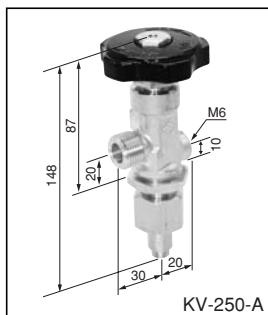
As this unit is not a vaporizer, for the liquefied CO₂ gas supply, please use vaporizer as per required capacity.



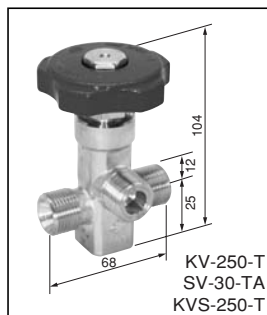
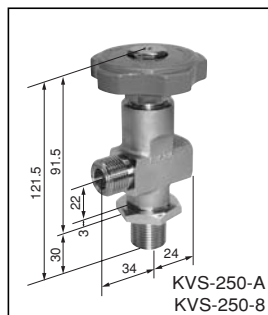
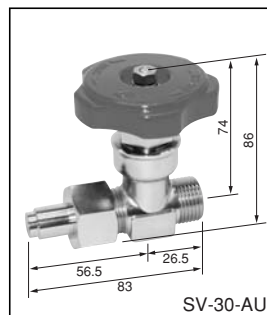
Specifications

Specification	Model	CVR-G 20B-100	CVR-G 20B-200	CVR-G 40B-200
Capacity (kg/h)		20 (CO ₂)		40 (CO ₂)
Heater Capacity (kW)		1		2
Power Supply		AC110V	AC220V 3 Fase	AC220V 3 Fase
Thermostat (°C)		60+/-5		
Code Length (m)		5		
Inlet Connection (mm)		Application ϕ 10 Copper Tube		
Outlet Connection		15A X 10KF		
Applicable Gas		CO ₂ Gas (Siphon Cylinder is prohibited to use)		
Max. Inlet Pressure (kgf/cm ²)		100		
Delivery Pressure Range (kgf/cm ²)		2~5		
Water Level Alarm		Alarm & Heater Circuit Interception		
Weight (kg)		40		

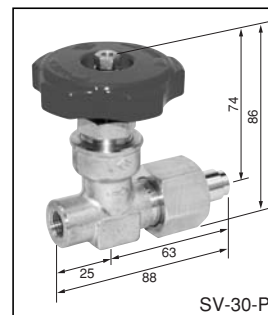
Neck Valve

※Handle: ϕ 66mm

KV-250-A

KV-250-T
SV-30-TA
KVS-250-TKVS-250-A
KVS-250-8

SV-30-AU

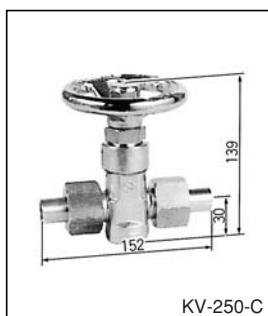


SV-30-P

Specifications

Name	Model	Gas	Design Pressure (kgf/cm ²)	Connection		Dia. (mm)	Material Body/Disc	cv	Weight (g)
				Inlet	Outlet				
Neck Valve	KV-250-A	O ₂ , N ₂ , CO ₂ , Ar, H ₂ , He	250	W22-M14 M12P1.0	W22-M14 MALE	4	C3771B DIFLON	0.45	620
Neck Valve	KVS-250-A		250	W22-M14 MALE		12	SUS316 DIFLON	0.45	575
Neck Valve	KVS-250-8		250	W22-M14 MALE		10	SUS316 DIFLON	1.0	555
Three-way Valve	KV-250-T		250	W22-M14 MALE		4	C3771B DIFLON	0.45	530
Acetylene Neck Valve	SV-30-AU	C ₂ H ₂	30	W22-M14 with ϕ 15mm nipple		6	C3771B NYLON	0.8	440
Acetylene Three-way Valve	SV-30-TA	C ₂ H ₂	30	W22-M14 MALE		4	C3771B DIFLON	0.45	530
LPG Neck Valve	SV-30-P	LPG	30	Rc-1/4		6	C3771B NYLON	0.8	455
Three-way Valve (SUS)	KVS-250-T	O ₂ , H ₂ , He	250	W22-M14 MALE		4	SUS316 DIFLON	0.45	540

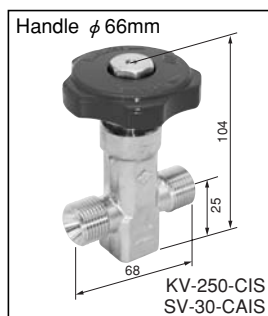
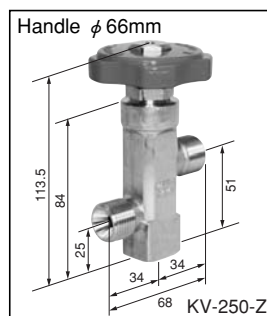
Shut-Off Valve



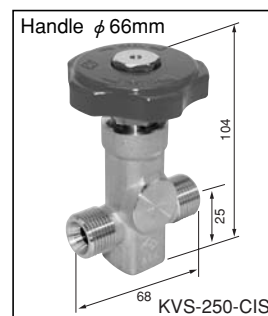
KV-250-C



KV-250-F

KV-250-CIS
SV-30-CAIS

KV-250-Z



KVS-250-CIS

Specifications

Name	Model	Gas	Design Pressure (kgf/cm ²)	Connection		Dia. (mm)	Material Body/Disc	cv	Weight (g)
				Inlet	Outlet				
Shut-Off Valve	KV-250-C	O ₂ , N ₂ , CO ₂ , Ar, H ₂ , He	250	W29-M16 (Male)	ϕ 16mm nipple	10	C3771B DIFLON	1.65	2160
Filling Valve	KV-250-F		250	W40-P2.0 (Male)	ϕ 22mm nipple	14		3.0	4435
Shut-Off Valve	KV-250-CIS		250	W22-M14 (Male)		8	1.0	510	
Shut-Off Valve	KV-250-Z		250	W22-M14 (Male)	(Uneven Parallel)	8	1.0	510	
Acetylene Shut-Off Valve	SV-30-CAIS	C ₂ H ₂	30	W22-M14 (Male)		8	C3771B DIFLON	1.0	510
Shut-Off Valve (SUS)	KVS-250-CIS	O ₂ , H ₂ , He	250	W22-M14 (Male)		8	SUS316 DIFLON	1.0	520

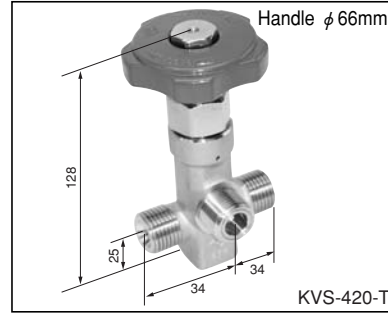
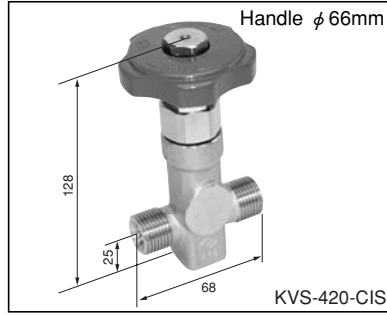
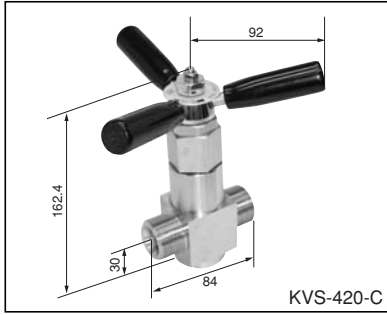
Valve Handle with Open / Close Indication

- Newly developed valve handle with open/close indication enables to recognize whether the valve is opened or closed at a glance.

Please also specify as **[KVW]-250-A/-T**, **[KVS]-250-A/-8**, **[SVW]-30-TA1**, **[KVW]-250-CIS/-Z**, **[KVS]-250-CIS**, **[SVW]-30-CAIS** in your ordering.



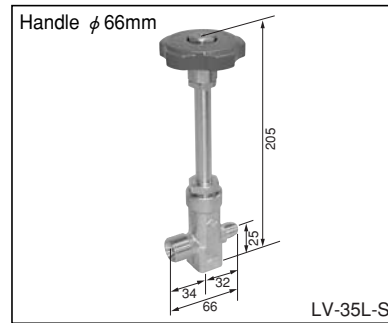
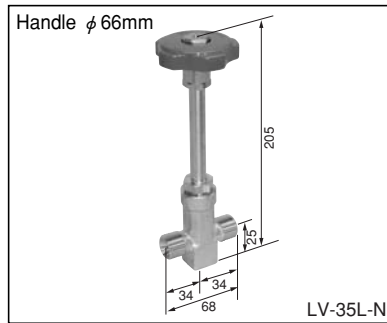
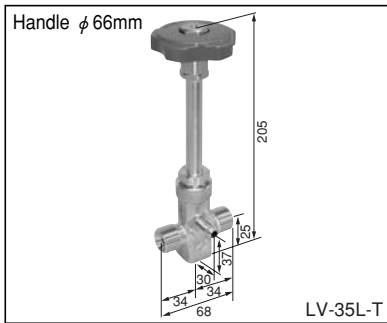
SHUT-OFF VALVES FOR ULTRA-HIGH PRESSURE



Specifications

Name	Model	Gas	Design Pressure (kgf/cm ²)	Connection		Dia. (mm)	Material Body/Disc	cv	Weight (g)
				Inlet	Outlet				
Two-Way Valve	KVS-420-C	O ₂ , N ₂ , Ar, H ₂ , He	420	M32×2(RH)(M)	M32×2(RH)(M)	10	SUS316 DAIFLON	1.65	1,640
Two-Way Valve	KVS-420-CIS			M23×2(RH)(M)	M23×2(RH)(M)	4		0.45	640
Three-Way Valve	KVS-420-T			M23×2(RH)(M)	M23×2(RH)(M)	4		0.45	660

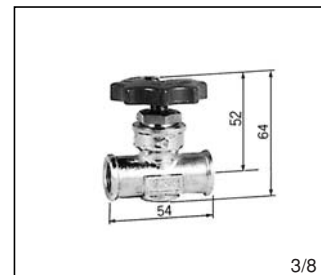
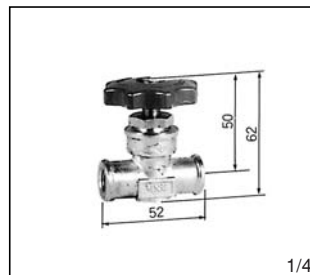
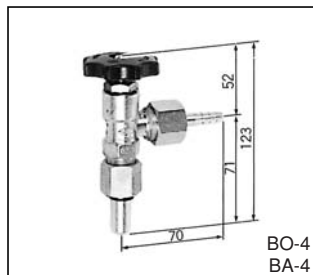
NECK VALVES/SHUT-OFF VALVES FOR CRYOGENIC GAS



Specifications

Name	Model	Gas	Design Pressure (kgf/cm ²)	Working Temperature (°C)	Connection		Dia. (mm)	Material Body/Disc	cv	Weight (g)
					Inlet	Outlet				
Neck Valve/ Shut Off-Valve for Cryogenic Gas Control	Three-Way Valve	LN ₂ , LAr, LO ₂ , LCO ₂	35	-196~+4	9/16-18UNF(RH)(M)	W22-14TH(RH)(M)	7	C3771B DAIFLON	0.45	660
	Two-Way Valve				W22-14TH(RH)(M)					650
	Two-Way Valve				9/16-18UNF(RH)(M)	640				

OUTLET VALVES/STOP VALVES



Specifications

Name	Model	Gas	Design Pressure (kgf/cm ²)	Connection		Dia. (mm)	Material Body/Disc	cv	Weight (g)	
				Inlet	Outlet					
B-Valve	BO-3	O ₂ , N ₂ , CO ₂ , Ar, He	30	M18-P1.5 φ13mm nipple	W22-M14 (RH)(M)	6	C3771B NYLON	0.8	300	
Acetylene B-Valve	BA-3	C ₂ H ₂ , LPG, H ₂			W22-M14 (LH)(M)					
B-Valve	BO-4	O ₂ , N ₂ , CO ₂ , Ar, He			W22-M14 (M) 5/16" hose nipple	6			370	
Acetylene B-Valve	BA-4	C ₂ H ₂ , LPG, H ₂			W22-M14 (M) 3/8" hose nipple					
Stop Valve	1/4	O ₂ , N ₂ , CO ₂ ,			RC 1/4" Female	RC 1/4" (F)			6.5	210
Stop Valve	3/8	Ar, H ₂ , He, LPG			RC 3/8" Female	RC 3/8" (F)			7	230

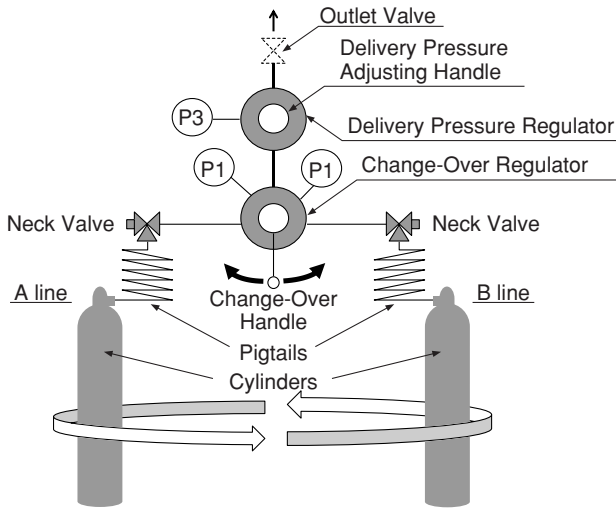
SEMI-AUTOMATIC CHANGE-OVER SYSTEMS

MODEL: CH-100/EXS-100



Functions

At the intermediate of two separated cylinder banks, the change-over system switches when gas is depleted in one cylinder bank to the other, allowing cylinder replacement with uninterrupted gas service.



Technical Informations

Types	CH-100	EXS-100
Specifications		
Applications	For Normal & Standard gases	For High purity gases
Fluids	O ₂ , N ₂ , Ar, H ₂ , He, CO ₂ , etc.	Various kinds of gas, except corrosive gases
Max. Inlet pressure (P ₁) (kgf/cm ²)	165	
Change-over pressure (P ₂) (kgf/cm ²)	Around 10	
Delivery pressure (P ₃) (kgf/cm ²)	1~6	
Normal flow rate (NL/min.)	50	
Inlet pressure gauge Range (2 pcs.) (kgf/cm ²)	0~250	
Delivery pressure gauge Range (1 pc.)	0~10kgf/cm ²	76cmHg~10kgf/cm ²
Inlet connection	W22-14M (Male)	Half-union 1/4"
Outlet connection	PT 1/4 (Female)	Half-union 1/4"
Material (Wetted parts)	C3771B Diaphragm CR	SUS316 Diaphragm SUS316
Weight (incl. panel) (kg)	6.5	5.8

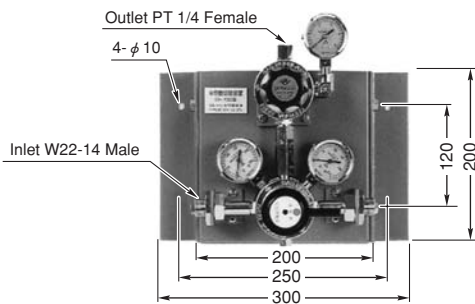
Selection Guide

Types	Panel-Set	Pedestal-Set	Neck-Valve Set
Applications			
For Normal Gas	CH-100 TYPE	MCH-100A TYPE (1×1)	MCH-100AN TYPE (1×1)
For Standard Gas		MCH-100B TYPE (1×1)	MCH-100BN TYPE (1×1)
For Hi-Purity Gas	EXS-100 TYPE	MEXS-100 TYPE (1×1)	MEXS-100N TYPE (1×1)

※2×2 or more cylinder types are also available

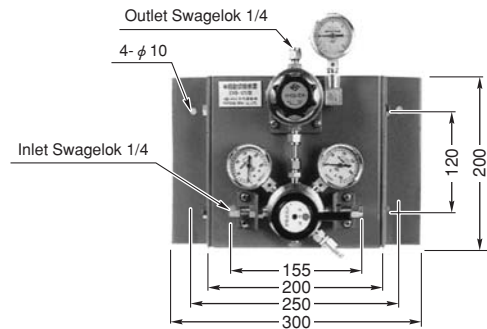
CH-100 (Panel Set)

(For Normal Gas, Calibration Gas)



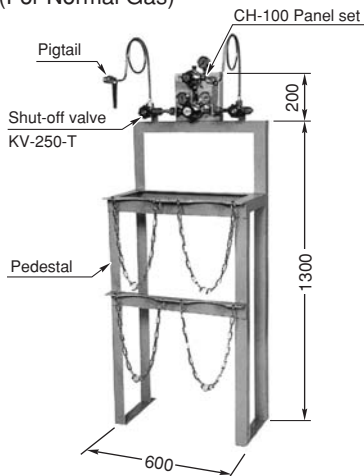
EXS-100 (Panel Set)

(For Hi-Purity Gas)



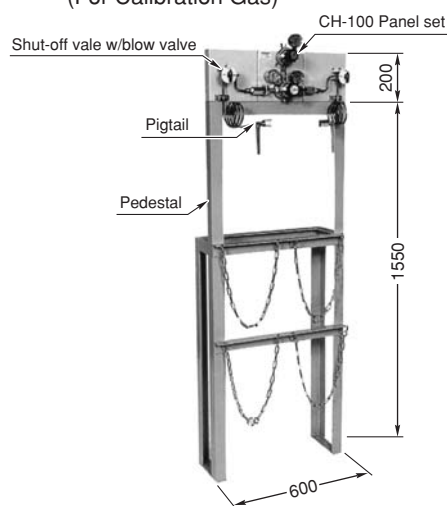
MCH-100A (Pedestal Set)

(For Normal Gas)



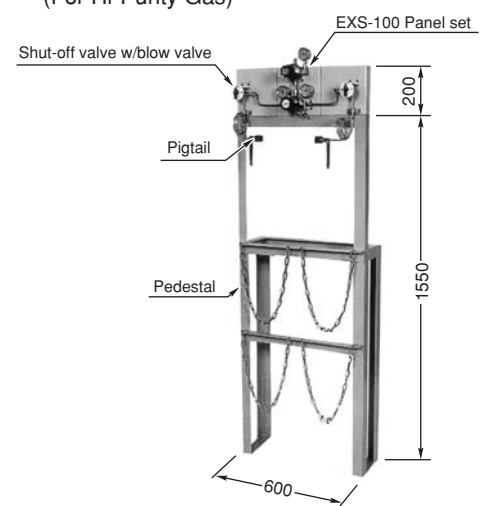
MCH-100B (Pedestal Set)

(For Calibration Gas)



MEXS-100 (Pedestal Set)

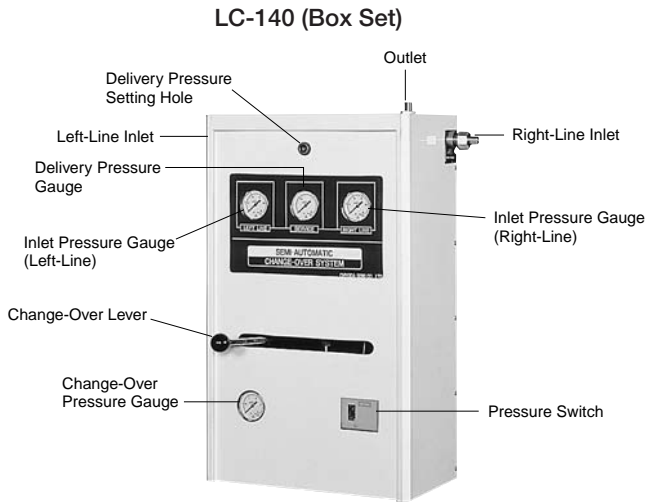
(For Hi-Purity Gas)



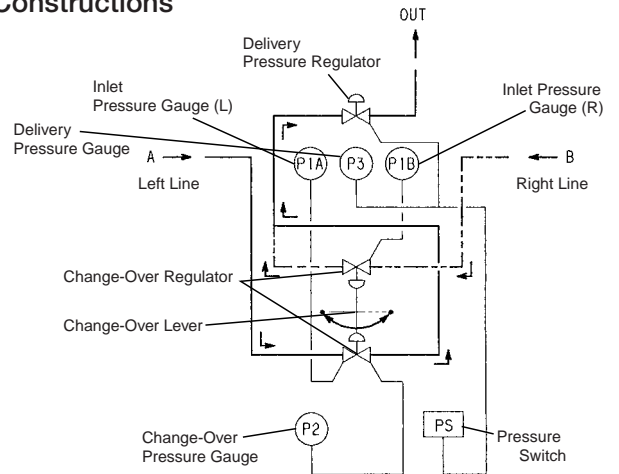
SEMI-AUTOMATIC CHANGE-OVER SYSTEM (HIGH FLOW TYPE) MODEL: LC-140



Parts Name



Constructions



Specifications

Applicable Gas	O ₂ , N ₂ , Ar, Air etc.
Max. Inlet Pressure (P1) (kgf/cm ²)	165
Secondary Pressure (P2) (Change-over Pressure)	A: Pre-set side 10kgf/cm ² B: Variable side 12kgf/cm ²
Delivery Pressure (P3) (kgf/cm ²)	1~7
Max. Flow-rate (Nm ³ /h)	50
Inlet Pressure Gauge (kgf/cm ²)	0~250
Secondary Pressure Gauge (kgf/cm ²)	0~15
Delivery Pressure Gauge (kgf/cm ²)	0~15
Pressure Switch Setting (kgf/cm ²)	3
Inlet Connection	W22M14 Male
Outlet Connection	W22M14 Male
Size (mm)	750(H)x454(W)x305(D)
Net Weight (kg)	42 (Body Only)

LC-140 (Pedestal Set)

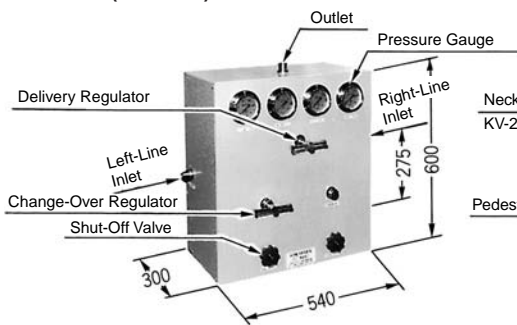


SEMI-AUTOMATIC CHANGE-OVER SYSTEM (HIGH FLOW TYPE) MODEL: CH-140

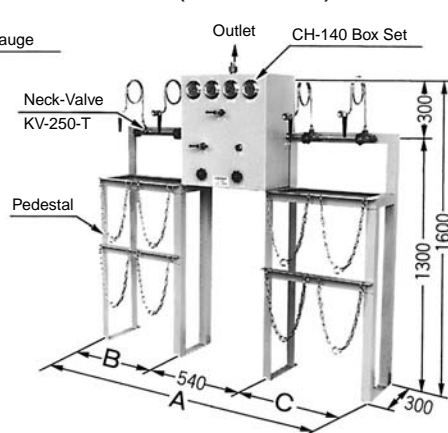


Parts Name

CH-140 (Box Set)



CH-140 (Pedestal Set)



A, B, C Depend On The Nos. Of Cylinders

Specifications

Applicable Gas	O ₂ , N ₂ , Ar, Air etc.
Max. Inlet Pressure (P1) (kgf/cm ²)	165
Secondary Pressure (P2) (Change-over Pressure)	A: Pre-set side 7kgf/cm ² B: Variable side 8kgf/cm ²
Delivery Pressure (P3) (kgf/cm ²)	1~5 (~9kgf)
Standard Flow-rate (Nm ³ /h)	60
Inlet Pressure Gauge (kgf/cm ²)	0~250
Delivery Pressure Gauge (kgf/cm ²)	0~15
Inlet Connection	W22M14 Male
Outlet Connection	W29M16 Male
Size (mm)	600(H)x540(W)x300(D)
Net Weight (kg)	33.5 (Body Only)

*Flange type outlet connection is also available

COMPACT TYPE GAS MIXERS

MODEL: 2MD-100/2MF-100



Model: 2MD-100



■Outline

This compact type gas mixer makes more stable mixed gas by using hi-precision dial-type flow-meter and hi-precision gas-mixer.

■Features

1. Because of dial type flow meters are installed, the delivery flow rate is a stable and an accuracy.
2. The delivery gas flow rate is accurately controlled by an original designed gas mixer.
3. No reverse flow does occur by using a check valve.
4. For your optional use, the mixer has two outlets, in front and reverse side.
5. The minimize compact designed mixer is easy for carrying.

■Specifications

Applicable Gas	Argon, CO ₂ , Air, Nitrogen, Helium, Hydrogen	
Inlet Pressure (kgf/cm ²)	4~10	
Adjusting Pressure (kgf/cm ²)	3	
Max. Flow-rate (NL/min.)	100	
Flowmeter (NL/min.)	50+50	
	30+30	
	15+15	
Size (mm)	300(W)×180(H)×160(L)	
Weight (kg)	5	

Model: 2MF-100



■Outline

This compact type gas mixer makes a stable mixed gas by using float type flow-meter and mixer.

■Features

1. Because of using an original designed gas mixer is installed, the delivery gas flow is accurately controlled at $\pm 2.5\%$ to 5% of a desired rate.
2. The delivery pressured is fixed at 3kgf/cm² by using a built-in regulator.
3. No reverse flow does occur by using a check valve.
4. The minimize compact designed mixer is easy for carrying.

■Specifications

Applicable Gas	Argon and CO ₂	
Inlet Pressure (kgf/cm ²)	4~10	
Adjusting Pressure (kgf/cm ²)	3 (Fixed)	
Max. Flow-rate (NL/min.)	50 (both Ar, CO ₂)	
Flowmeter (NL/min.)	Argon 25 or 50	
	CO ₂ 25 or 50	
Size (mm)	200(W)×220(H)×230(L)	
Weight (kg)	6	

CO₂ VAPORIZERS

CVR SERIES



■Outline

Our "CVR" type CO₂ Vaporizers change liquid CO₂ in cylinder, tank or container to CO₂ gas by using electric heaters, steam or hot water and supply stability.

■Features

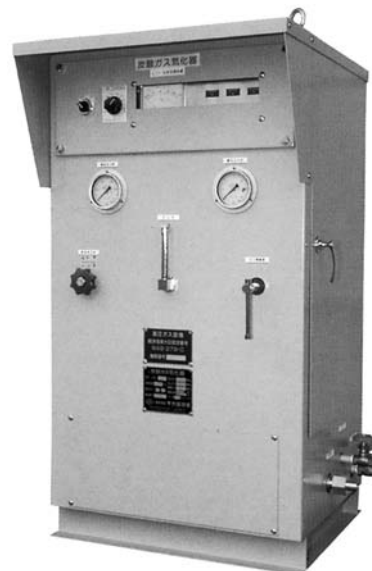
*Our original WATER LEVEL WARNING UNIT is installed in the unit, the heaters are not burnt out in case of no water.

*The compact design body use only small installation space and proof for rain.

Specifications	Cylinder	Tank	Container
Design	120	30	35
Pressure (kgf/cm ²)			
Working Inlet (P1) (kgf/cm ²)	35~100	18~25	18~30
Pressure Delivery (P2) (kgf/cm ²)		2-6	
Pressure Inlet (P1) (kgf/cm ²)	0-200		0-50
Gauge Delivery (P2) (kgf/cm ²)		0-10	
Safety Valve (kgf/cm ²)	120	28	35

Type	Vaporizing Volume (kg/h)	Heater Capacity (kw)	Size (mm)	Inlet Nipple (mm)	Water (Liter)	Weight (kg)
			(W)×(D)×(H)			
CVR-40	40	5	400×400×825	φ 16	7	70
CVR-60	60	8	600×500×1100		40	120
CVR-100	100	10			125	
CVR-150	150	15	600×600×1600		80	205
CVR-200	200	20			210	
CVR-300	300	30	700×700×1600	φ 22	120	275
CVR-400	400	40				290

CVR- 100T



GAS SAVER MODEL: CH-GS II



Outline

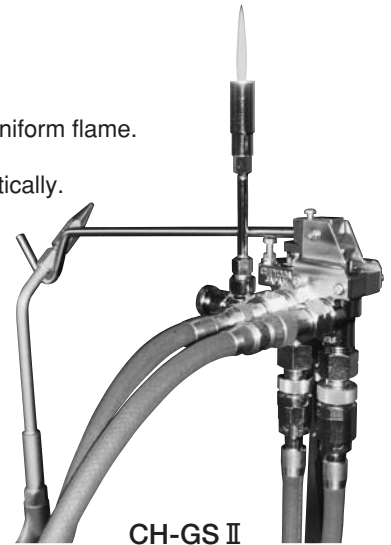
Our MODEL:CH-GS II gas saver makes unnecessary flame adjustment at new start of gas welding, heating & brazing work and reduce the wast of gas and time sharply.

Features

- Easy ignition with the pilot burner leads reducing the wast of gas and time.
- No need to adjust the flame when re-igniting and can move to work immediately with always uniform flame.
- Can perform uniform work everytime with always uniform flame.
- Only by hanging the torch on the lever, gas flow is intercepted and the flame goes out automatically.
- Designed for both acetylene and propane gases.
(However, please use the torch, tips and hose of exclusive use.)
- By mounting leg, can be attached on the work stand directly.

Specifications

Gas	Pressure (kgf/cm ²)	Inlet / Outlet Connection		Weight (g)
		Joint Screw (mm)	Hose Nipple (mm)	
Oxygen	1~7	M16×1.5 (RH)	φ 5, 6.3, 8	1,284 (Fixing bolts are not included)
Acetylene LPG	0.2~1	M16×1.5 (LH)	φ 5, 6.3, 8, 10	



ACCESSORIES



Outlet Station Flowmeters Dial and Tube types



Spark Lighters



Nozzle Cleaners



Electrode Holders



INLET CONNECTIONS



	Japanese	British	American	German
Nitrogen	JIS φ 22-14TH (R) INT. 	BS No.3 5/8 BSP.M.-R.H. 	CGA No.580 0.965"-14NGO-RH-EXT. 	DIN477. No.10 φ 24.32-14TH (R) INT.
Argon	JIS φ 22-14TH (R) INT. 	BS No.3 5/8 BSP.M.-R.H. 	CGA No.580 0.965"-14NGO-RH-EXT. 	DIN477. No.6 φ 21.8-14TH (R) INT.
Helium	JIS φ 21-14TH (L) INT. 	BS No.3 5/8 BSP.M.-R.H. 	CGA No.580 0.965"-14NGO-RH-EXT. 	DIN477. No.6 φ 21.8-14TH (R) INT.
Hydrogen	JIS φ 22-14TH (L) INT. 	BS No.4 5/8 BSP.M.-L.H. 	CGA No.350 0.825"-14NGO-LH-INT. 	DIN477. No.1 φ 21.8-14TH (L) INT.
Carbon Dioxide	JIS φ 22-14TH (R) INT. 	BS No.8 0.860-14 T.P.IW-M-R.H. 	CGA No.320 0.825"-14NGO-RH-INT. 	DIN477. No.6 φ 21.8-14TH (R) INT.



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