



INNOBIZ
중소기업기술혁신협회

Venture for
Tomorrow

www.eqjoint.com

EQ Joint

Stainless Steel Tubes & Fittings

High performance & Economical Price



SAMYOUNG METAL Co.,Ltd.
EQ joint & stainless pipe making



SAMYOUNG METAL *Introduce*

Samyoung Metal dedicated to piping and plumbing materials for over 40 years. With its expertise, we produce high-performance stainless-steel press joints, EQ Joint(KS B 1547), and stainless-steel pipe for general piping(KS D 3595).

Water pipes used for drinking in conventional buildings not only have short lifespan due to scale and corrosion, but also cause deterioration of buildings. EQ Joint has the advantage of semi-permanent lifetime performance with corrosion resistance with passive coating on steel pipes. In addition, the connection of pipes can easily be completed by inserting pipes into an EQ joint and pressing it with a special rechargeable tool for 5~20 seconds.

The press fitting system reduces construction hours and risk of fire, which makes it eco-friendly and safe. EQ Joints and pipes are double-compressed together in hexagon(body) and circle(o-ring) to achieve a strong joint.

The rubber O-ring(EPDM) of EQ Joint shows excellent performance in hydraulic pressure(25kgf/cm²) and high temperature. Recently, the press joint system has proved its quality used in fire extinguish application in many countries.

Samyoung Metal thoroughly inspects its products through various tests. All employees dedicate themselves to realize 0% of defection rate.

Samyoung Metal promises to contribute to human health by providing best stainless-steel pipes and fittings to help distributing clean water to people under the slogan of "High Performance & Economical Price".

Samyoung Metal Co., Ltd CEO Han Hye-sook



Since 1975,
Samyoung Metal with 40 years of experience
provides the best products.

2000's History

- 2015 . 09 | Changed company name from EQ Join Tech Co., Ltd. to Samyoung Metal Co., Ltd.
- 2015 . 07 | Acquired INNO-BIZ certification
| Acquired venture company certification
- 2015 . 06 | Designated as Promising Export Firm of 2015 by Korea SMBA
- 2014 . 06 | Designated as a quality product of Incheon city
- 2013 . 08 | Awarded by Korea Industrial Complex Corporation (New Technology Development and Productivity Enhancement)
- 2013 . 06 | Designated as Promising Export SME of 2015 (Incheon Small & Medium Business Administration, Export Support Center)
- 2013 . 02 | Registered patent (Integrated pipe connector valve)
- 2013 . 01 | Acquired Certificate of Origin per item (Korea-India CEPA)
- 2012 . 02 | Registered patent (Fire-extinguishing pipe adapter and manufacture method)
- 2011 . 11 | Awarded Excellent SME Award (Incheon Small and Medium Business Administration)
| Acquired Certificate of Origin per item (Korea-EU FTA)
- 2011 . 10 | KC Certification
- 2011 . 06 | Designated as excellent quality product of Incheon Metropolitan City
- 2009 . 07 | Acquired INNO-BIZ certification
| Acquired venture company certificatio
- 2009 . 06 | Designated as Promising Export Firm of 2009 (Incheon Small & Medium Business Administration, Export Support Center)
- 2008 . 01 | Changed company name from Samyoung Metal Co., Ltd. to EQ Join Tech Co., Ltd.
- 2007 . 11 | Awarded Proud Water and Sewer Recognition
- 2007 . 09 | Registered utility model (crimping tool for pipe connection)
- 2007 . 08 | Acquired ISO 9001 Certification
- 2007 . 06 | Designated as Promising Export SME of 2007
- 2006 . 09 | Registered utility model (crimping tool for pipe joint)
- 2004 . 12 | Acquired Japan Waterworks Association Quality Certification
- 2004 . 11 | Acquired Quality Superior Product Recommendation - Pipe parts, stainless steel pipe (Incheon Metropolitan City Mayor)
- 2004 . 11 | Awarded Proud Water and Sewer Recognition
- 2003 . 07 | Awarded Exemplary Businesswomen Award (Chairperson of Presidential Commission on Small and Medium Enterprises)
- 2003 . 04 | Awarded Excellent Small and Medium Business Award (Incheon Small and Medium Business Administration)
- 2002 . 12 | Acquired K,S permit (KS D 3595/3576/3577)
- 2002 . 04 | Began exporting to Japan
- 2001 . 07 | Completed stainless steel pipe factory (Incheon city Namdong Industrial Complex)

1990's History

- 1999 . 05 | Designated as Promising Export SME
- 1998 . 08 | Acquired ISO 9002 Certification
- 1997 . 11 | S.Y.M
SAMYONG METAL CO.,LTD.
Registered trademark of Samyoung Metal Co., Ltd.
- 1997 . 03 | Designated as Promising Export SME of Gyeonggi-do in 1997
- 1996 . 05 | Registered trademark of EQ
- 1995 . 08 | Began exporting to Europe
- 1995 . 07 | Converted to Samyoung Metal Corporation Limited
- 1994 . 06 | Registered Samyoung trademark
- 1992 . 12 | Acquired K,S Permit (KS B 1547)
- 1992 . 08 | Moved to a new factory (Yeonggok-dong, Nam-gu, Bucheon-si to Nae-dong, Ojeong-gu, Bucheon-si)
- 1992 . 06 | Implemented internal standardization according to technical guidance
- 1991 . 12 | Started exporting to Asian region
- 1990 . 08 | Changed company name to Samyoung Metal (Began manufacturing)-

With strict quality inspection, Samyoung Metal produces only the best products without leakage.



Production items

EQ Joint	Water supply, hot water supply, cooling/ heating pipe, electric pipe, compressor air pipe, fire-extinguishing pipe etc.
Stainless steel pipe for general piping	Water supply, hot water supply, cooling/ heating pipe, electric pipe, compressor air pipe, fire-extinguishing pipe etc.

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KS		
Standard number	Standard name	Permit number
KS B 1547	Light gauge stainless steel pipes press fitting for ordinary piping	No. 9868
KS D 3595	Light gauge stainless steel pipes for ordinary piping	KWWA-KS-2016-049

ISO 9001		
Standard number	Standard name	Permit number
KS Q 9001:2015/ISO 9001:2015	Production and Service of ordinary stainless steel pipes, ordinary stainless steel pipes press type pipe fitting for regular piping	QMS-2333

JIS		
Standard number	Standard name	Permit number
JIS G 3459	Stainless Steel Pipe for Fire-extinguishing Piping	
JIS G 3448	Stainless Steel Pipe for General Piping	

KC Hygiene Safety Standards		
Standard number	Standard name	Permit number
KC	Light gauge stainless steel pipes press fitting for ordinary piping	KCW-2011-0104
	Light gauge stainless steel pipes for ordinary piping	KCW-2011-0315

Advanced technology of Samyoung Metal Co., Ltd. has been globally recognized

EQ Joint / EQ Pipe

• Stainless Steel Press-type Pipe



• ISO 9001

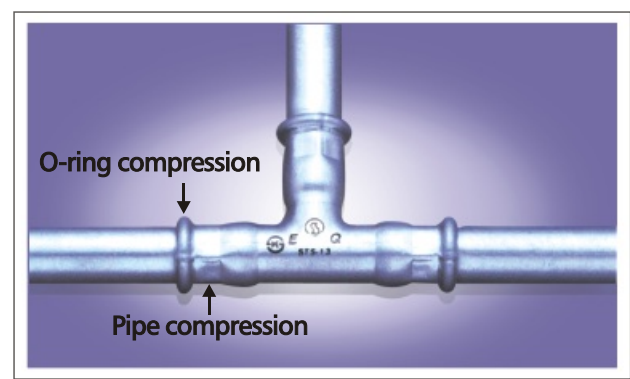
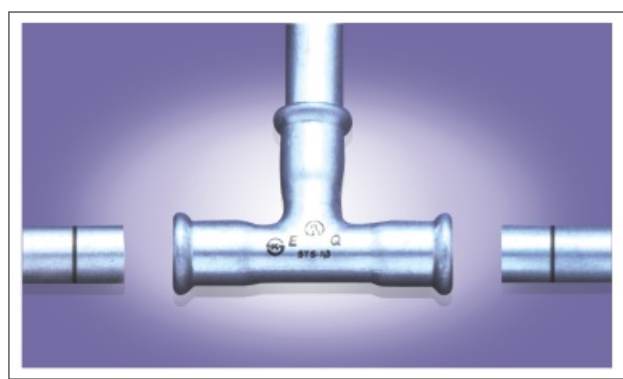
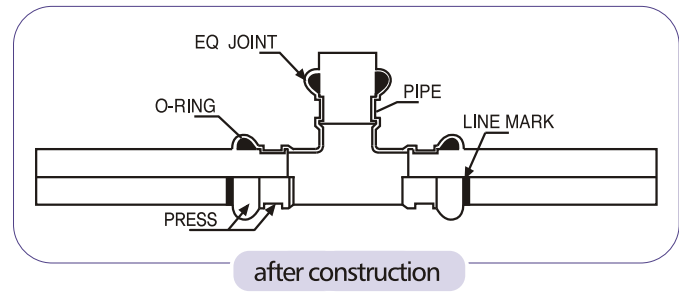
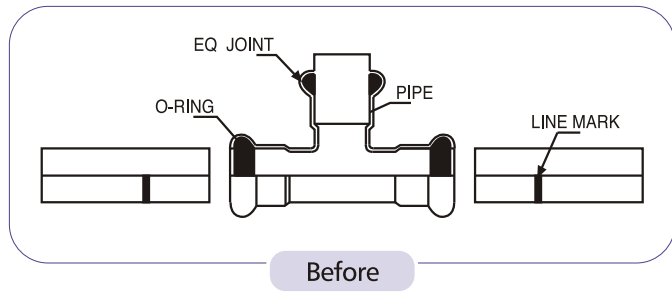
• General Piping

• KC Certificate



EQ Joint(KS B 1547) System

Fittings and pipes are dually compressed as circle (rubber ring) and hexagon (water bucket) in EQ joint system. This results in strong joining and also leads to hydraulic pressure maintenance function based on rubber ring's pressure variation.



EQ Joint Materials

- 1) Body material: All products (150 types) are produced with STS 304 (27 types) STS 316L(32types);can be made to order.
- 2) O-ring material: EPDM rubber is used and the maximum instantaneous temperature is 150°C. When using over a long period of time, we recommend using it at a commercial temperature of 80°C or less.

O-ring (EPDM) Test Report

시험명	기준	결과	비고
외경	25.1	25.1 ± 0.05	
내경	24.9	24.9 ± 0.05	
두께	2.0	2.0 ± 0.05	
외경 편차	±0.05	±0.05	
내경 편차	±0.05	±0.05	
두께 편차	±0.05	±0.05	
외경 편차	±0.05	±0.05	
내경 편차	±0.05	±0.05	
두께 편차	±0.05	±0.05	
외경 편차	±0.05	±0.05	
내경 편차	±0.05	±0.05	
두께 편차	±0.05	±0.05	
외경 편차	±0.05	±0.05	
내경 편차	±0.05	±0.05	
두께 편차	±0.05	±0.05	

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두께 편차	±0.05	±0.05	
외경 편차	±0.05	±0.05	
내경 편차	±0.05	±0.05	
두께 편차	±0.05	±0.05	
외경 편차	±0.05	±0.05	
내경 편차	±0.05	±0.05	
두께 편차	±0.05	±0.05	
외경 편차	±0.05	±0.05	
내경 편차	±0.05	±0.05	
두께 편차	±0.05	±0.05	



With strict quality inspection, Samyoung Metal produces only the best products without leakage.

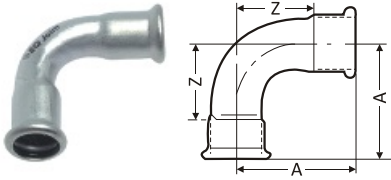


Types and Specifications of EQ Joint

※ ± permissible tolerance

90E

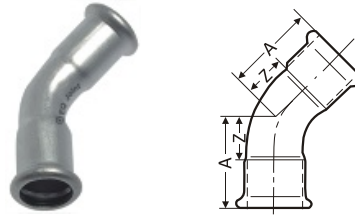
90° Elbow



SU	A	Z
15	48	25
20	58	30
25	67	42
30	91	54
40	112	65
50	127	74
60	148	86
75	158	85
80	170	93
100	214	114

45E

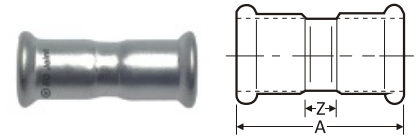
45° Elbow



SU	A	Z
15	36	15
20	42	18
25	46	21
30	64	27
40	80	33
50	86	32
60	100	39
75	130	55
80	135	60
100	170	70

S

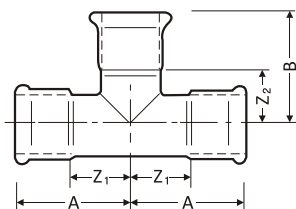
Socket



SU	A	Z
15	53	9
20	60	10
25	62	10
30	100	20
40	118	22
50	128	24
60	150	26
75	187	38
80	190	36
100	229	30

T

Tee

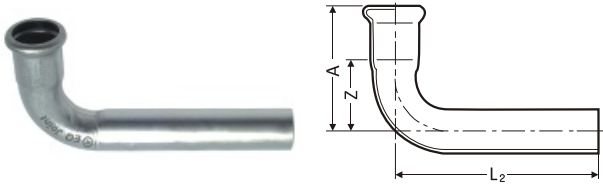


SU	A	B	Z ₁	Z ₂	SU	A	B	Z ₁	Z ₂
15	38	40	16	17	50X30	102	95	48	50
20	44	47	18	21	50X40	102	95	48	50
25	49	52	23	26	60X15	121	72	57	49
30	77	77	40	40	60X20	121	89	57	63
40	88	88	40	40	60X25	121	87	57	61
50	93	93	40	40	60X30	121	94	57	57
60	121	113	57	49	60X40	121	99	57	51
80	165	146	88	69	60X50	121	106	57	52
100	199	190	100	90	80X15	140	79	63	56
20X15	45	43	19	20	80X20	140	92	63	66
25X15	50	46	24	23	80X25	140	91	63	66
25X20	50	52	24	26	80X30	140	111	63	74
30X15	75	60	38	37	80X40	140	117	63	69
30X20	75	60	38	37	80X50	150	125	73	72
30X25	75	60	38	37	80X60	150	122	73	58
40X15	88	74	40	51	100X20	169	91	69	67
40X20	88	74	40	51	100X25	169	103	69	78
40X25	88	73	40	51	100X30	169	123	69	86
40X30	88	74	40	51	100X40	169	140	70	150
50X15	102	72	48	49	100X50	169	150	70	150
50X20	102	76	48	50	100X60	169	150	70	150
50X25	102	77	48	50	100X80	169	170	100	190



90SE

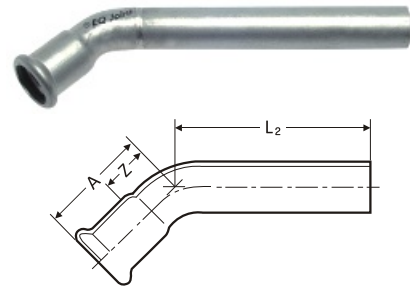
90° Socket elbow



N	A	Z	L ₂
15	46	24	122
20	57	31	131
25	65	39	137
30	88	51	223
40	112	64	255
50	124	70	262
60	147	83	273

45SE

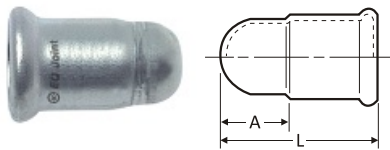
45° Socket elbow



N	A	Z	L
15	36	13	117
20	40	17	116
25	43	17	121
30	60	23	225
40	75	27	228
50	87	33	232
60	98	34	237

C

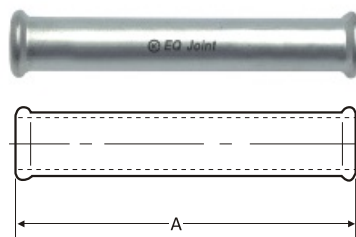
Cap



SU	A	L
15	13	33
20	18	43
25	20	44
30	36	76
40	40	84
50	48	100
60	46	108
80	72	148
100	73	173

BS

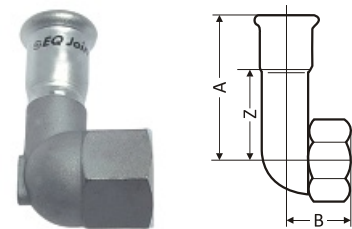
Bear Socket



SU	A
15	115
20	128
25	128
30	127
40	129
50	130
60	150
75	187
80	190
100	230

WE(S)

Water-type elbow (Short)



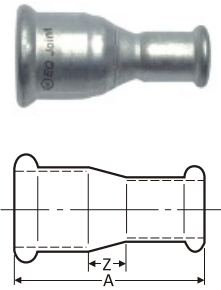
SU	A	B	Z
15X $\frac{1}{2}$	48	26	27
20X $\frac{1}{2}$	53	29	29
20X $\frac{3}{4}$	56	31	32

Samyoung Metal guarantees quality
with KS-certified products.



R

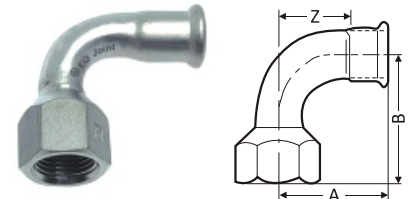
Reducer



SU	A	Z	SU	A	Z
20X15	62	16	60X50	157	39
25X15	70	22	75X25	152	70
25X20	70	19	75X30	234	124
30X15	100	40	75X40	246	126
30X20	103	40	75X50	246	121
30X25	90	27	75X60	264	129
40X15	127	60	80X25	185	82
40X20	125	54	80X30	229	124
40X25	119	46	80X40	253	128
40X30	123	35	80X50	251	121
50X15	131	59	80X60	265	124
50X20	129	50	80X75	278	131
50X25	130	50	100X25	222	134
50X30	135	44	100X30	232	100
50X40	130	30	100X40	249	107
60X15	175	88	100X50	278	134
60X20	173	83	100X60	290	140
60X25	165	64	100X75	310	133
60X30	174	62	100X80	310	133
60X40	171	64			

WE

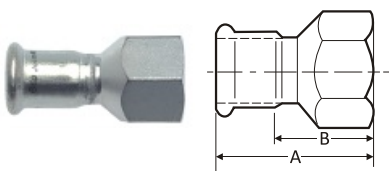
Water-type elbow



SU	A	B	Z
15X $\frac{1}{2}$	47	47	24
20X $\frac{1}{2}$	58	56	34
20X $\frac{3}{4}$	57	57	31
25X1	65	65	39

WS

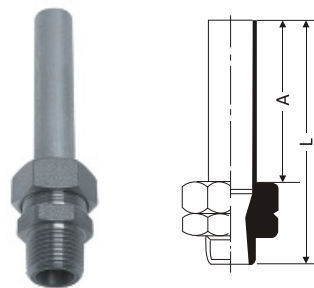
Faucet socket



SU	A	B
15X $\frac{1}{2}$	53	31
20X $\frac{1}{2}$	58	34
20X $\frac{3}{4}$	59	34
25X $\frac{1}{2}$	63	39
25X $\frac{3}{4}$	65	41
25X1	63	37

UM

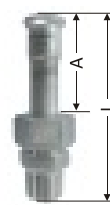
Union



SU	L	A
15X $\frac{1}{2}$	121	78
20X $\frac{3}{4}$	138	93
25X1	144	94
30X1 $\frac{1}{4}$	164	108
40X1 $\frac{1}{2}$	167	108
50X2	178	113
60X2 $\frac{1}{2}$	120	

UM(Hub)

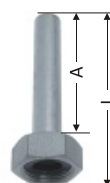
Union(Hub)



SU	L	A
15X $\frac{1}{2}$	96	52
20X $\frac{3}{4}$	104	59
25X1	110	60
30X1 $\frac{1}{4}$	139	83
40X1 $\frac{1}{2}$	156	58
50X2	161	96

UF

Fitting(Hub)

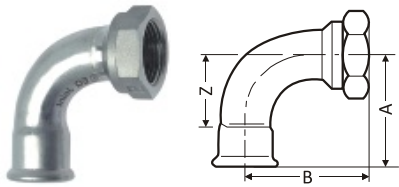


SU	L	A
15X $\frac{3}{4}$	95	79
20X1	111	93
25X1 $\frac{1}{4}$	122	101
30X1 $\frac{1}{2}$	131	108
40X2	134	109
50X2 $\frac{1}{2}$	121	100



AE(F)

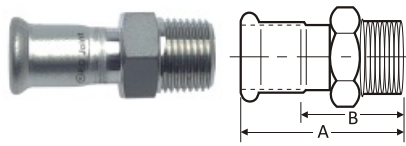
Adapter elbow(Female)



SU	A	B	Z
15X $\frac{1}{2}$	47	44	26
20X $\frac{1}{2}$	58	53	33
20X $\frac{3}{4}$	57	57	33
25X1	66	62	40
30X1	90	75	51
30X1 $\frac{1}{4}$	90	75	51
40X1 $\frac{1}{4}$	109	76	62
40X1 $\frac{1}{2}$	112	83	65
50X1 $\frac{1}{2}$	123	88	71
50X2	125	96	73
60X2	158	110	99
60X2 $\frac{1}{2}$	148	151	86

AS(M)

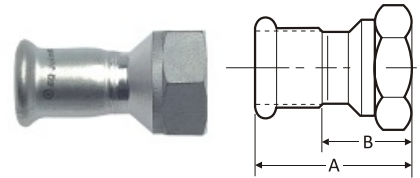
Adapter socket(Male)



SU	A	B
15X $\frac{1}{2}$	57	36
20X $\frac{1}{2}$	61	37
20X $\frac{3}{4}$	64	40
25X $\frac{3}{4}$	75	50
25X1	68	43
30X1	87	48
30X1 $\frac{1}{4}$	102	63
40X1 $\frac{1}{4}$	98	51
40X1 $\frac{1}{2}$	112	64
50X1 $\frac{1}{2}$	105	53
50X2	125	71
60X2 $\frac{1}{2}$	136	74
60X2	153	90

AS(F)

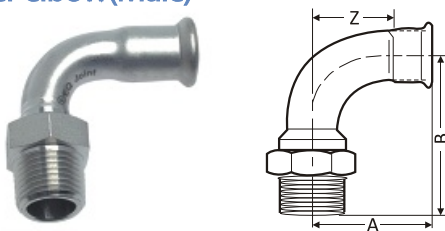
Adapter socket(Female)



SU	A	B
15X $\frac{1}{2}$	49	28
20X $\frac{1}{2}$	58	34
20X $\frac{3}{4}$	53	28
25X1	58	32
30X1	76	37
30X1 $\frac{1}{4}$	91	50
40X1 $\frac{1}{4}$	86	39
40X1 $\frac{1}{2}$	100	52
50X1 $\frac{1}{2}$	91	39
50X2	110	57
60X2	113	57
60X2 $\frac{1}{2}$	153	91

AE(M)

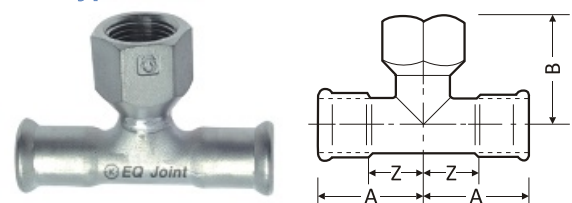
Adapter elbow(Male)



SU	A	B	Z
15X $\frac{1}{2}$	47	50	26
20X $\frac{1}{2}$	57	59	31
20X $\frac{3}{4}$	58	61	32
25X1	66	77	40
30X1	90	78	51
30X1 $\frac{1}{4}$	93	81	56
40X1 $\frac{1}{4}$	112	94	64
40X1 $\frac{1}{2}$	112	94	64
50X1 $\frac{1}{2}$	123	115	71
50X2	126	111	78
60X2	148	135	90
60X2 $\frac{1}{2}$	147	154	83

WT

Water-type Tee



SU	A	B	Z
15X $\frac{1}{2}$	38	38	17
20X $\frac{1}{2}$	45	45	20
20X $\frac{3}{4}$	45	45	20
25X $\frac{1}{2}$	50	48	25
25X $\frac{3}{4}$	50	50	25
25X1	50	57	25
30X $\frac{1}{2}$	77	53	37
40X $\frac{1}{2}$	88	61	40
50X $\frac{1}{2}$	93	65	33
60X $\frac{1}{2}$	105	74	35
80X $\frac{1}{2}$	140	85	60

The proper operating temperature of EQ Joint is 0°C ~ 80°C, and the maximum use temperature is 150°C.

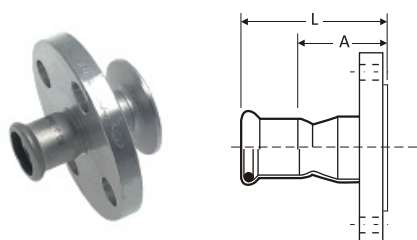
EQ Joint

Special ITEM(ordered product)

※ ± permissible tolerance

EQ-F

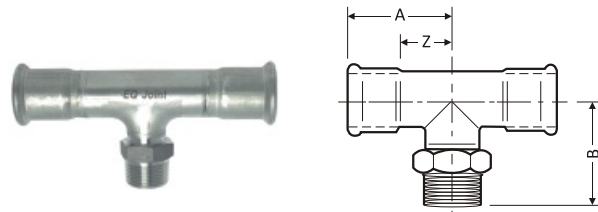
EQ Flange



SU	L	A
15	59	38
20	80	57
25	90	65
30	100	60
40	120	71
50	127	73
60	146	83
75	145	70
80	145	69
100	164	66

T-AS(M)

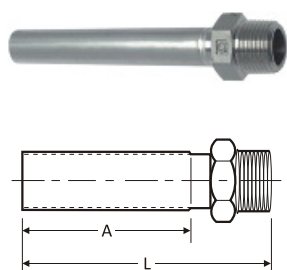
Adapter tee(male)-down



SU	A	Z	B
25X $\frac{3}{4}$	50	26	51
25X1	50	26	55
30X $\frac{3}{4}$	77	37	56
40X $\frac{3}{4}$	88	40	68
50X $\frac{1}{2}$	93	33	69
50X $\frac{3}{4}$	93	33	75
60X $\frac{1}{2}$	105	35	72
60X $\frac{3}{4}$	105	35	78
60X2	105	35	94

AHS(M)

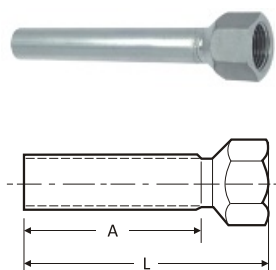
Singular-Socket Adapter(male)



SU	L	A
15X $\frac{1}{2}$	130	100
20X $\frac{3}{4}$	235	100
25X1	238	100
30X1 $\frac{1}{4}$	242	100
40X1 $\frac{1}{2}$	244	100
50X2	249	100

AHS(F)

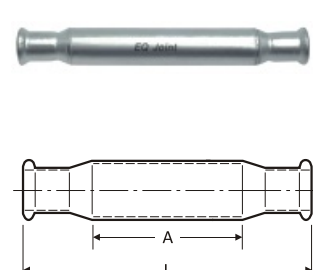
Singular-Socket Adapter(female)



SU	L	A
15X $\frac{1}{2}$	126	100
20X $\frac{3}{4}$	225	100
25X1	227	100
30X1 $\frac{1}{4}$	229	100
40X1 $\frac{1}{2}$	230	100
50X2	234	100

FAS

Fixation Anchor Socket

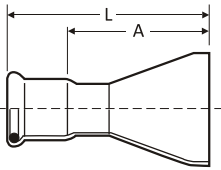


SU	L	A
15	362	300
20	376	300
25	380	300
30	420	300
40	435	300
50	450	300
60	490	300
80	595	300



R-RED

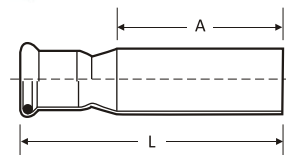
Ralica Reducer



SU	L	A	SU	L	A
25AX20	89	65	100AX25	182	158
50AX40	145	98	100AX30	198	159
65AX20	163	139	100AX40	170	123
65AX25	163	139	100AX50	178	126
65AX40	158	111	100AX80	198	102
65AX50	163	111	125AX25	207	183
80AX20	157	133	125AX30	224	185
80AX25	157	133	125AX50	190	138
80AX30	148	109	125AX60	223	128
80AX40	151	104			
80AX50	163	111			

RS

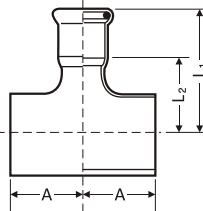
Ralica Half-socket



SU	L	A
15AX15	131	100
20AX20	138	100
25AX25	139	100
32AX30	160	100
40AX40	168	100
50AX50	173	100
65AX60	196	100
80AX80	200	100
100AX100	214	100

R-TEE

Ralica Tee



SU	A	L ₁	L ₂
65AX15	76	86	65
65AX20	76	94	70
65AX25	76	87	63
65AX30	76	120	81
65AX40	76	136	89
65AX50	76	145	93
65AX60	76	148	90
80AX15	86	83	62
80AX20	86	93	69
80AX25	86	94	70
80AX30	86	131	92

SU	A	L ₁	L ₂
80AX50	86	150	98
80AX60	86	156	96
80AX80	86	182	103
100AX40	105	154	107
100AX50	105	165	113
100AX60	105	169	109
100AX80	105	193	115
100AX100	105	219	123
125AX60	124	183	123
125AX80	124	204	126

AS(M)-PN

Adapter socket(male) -nipple



SU
30X1
30x1 $\frac{1}{4}$
40x1 $\frac{1}{4}$
40x1 $\frac{1}{2}$
50x1 $\frac{1}{2}$
50x2
60x2
60x2 $\frac{1}{2}$

AS(F)-PS

Adapter socket(female) -socket



SU
30X1
30x1 $\frac{1}{4}$
40x1 $\frac{1}{4}$
40x1 $\frac{1}{2}$
50x1 $\frac{1}{2}$
50x2
60x2
60x2 $\frac{1}{2}$

AE(M)-PN

Adapter Elbow(male) - nipple



SU
30X1
30x1 $\frac{1}{4}$
40x1 $\frac{1}{4}$
40x1 $\frac{1}{2}$
50x1 $\frac{1}{2}$
50x2
60x2
60x2 $\frac{1}{2}$

AE(F)-PS

Adapter Elbow(female) - socket



SU
30X1
30x1 $\frac{1}{4}$
40x1 $\frac{1}{4}$
40x1 $\frac{1}{2}$
50x1 $\frac{1}{2}$
50x2
60x2
60x2 $\frac{1}{2}$

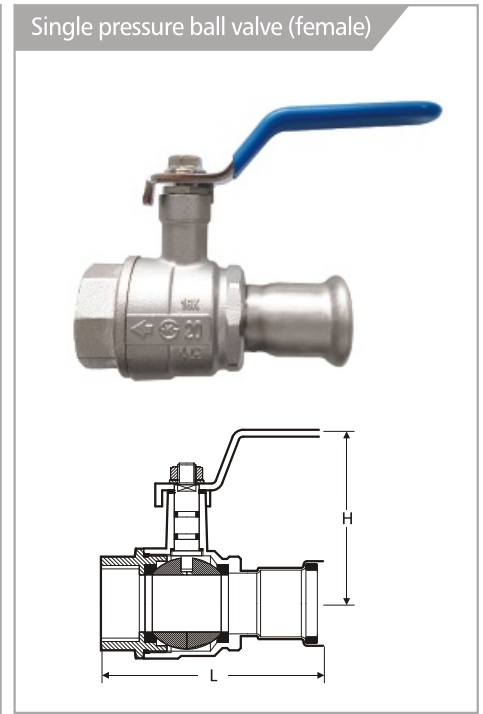
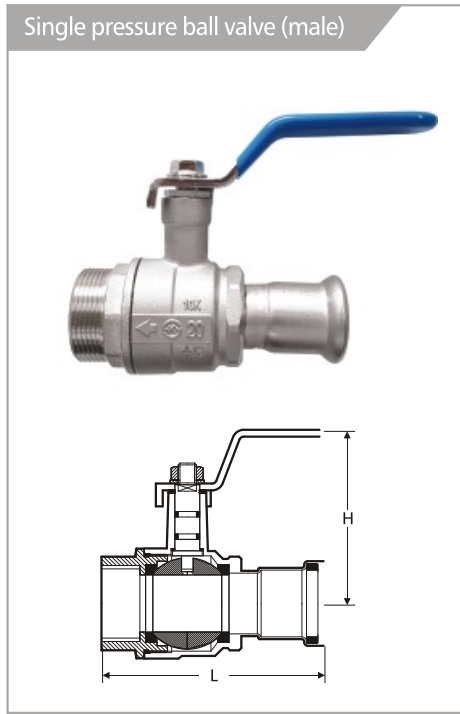
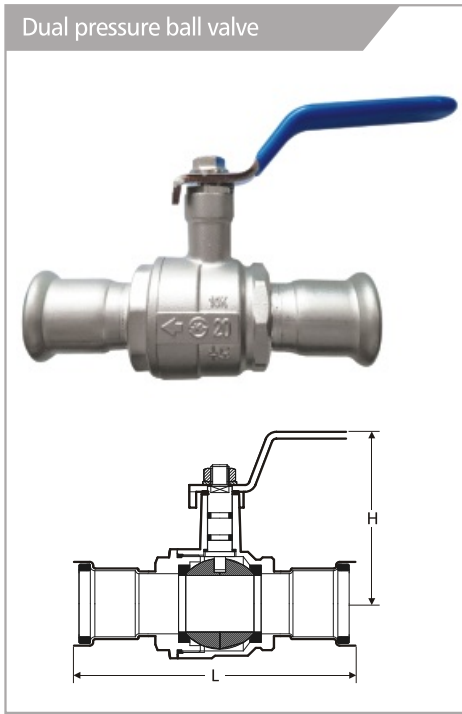
You do not need to be an expert, anyone can save time and reduce labor cost.



<p>T-BA(F) Double Adapter (female)</p>	<p>BAS(M,F) Double Adapter (male, female)</p>	<p>T-WE(S) Tee-water type Elbow</p>	<p>T-AS(M) Adapter Tee(male)-up</p>
<p>T-AS(F) Adapter Tee(female)-up</p>	<p>90RE 90° Reducing Elbow</p>	<p>WT(L) Long-water type Tee</p>	
<p>R-AS(M) Adapter Reducer(male)</p>	<p>90SE(S) 90° Half Adapter Elbow (male)</p>	<p>WE(L)</p>	
<p>90° 90° Half Adapter Elbow (male)</p>	<p>45° 45° Half Adapter Elbow (male)</p>	<p>EQ Homegroove Tee</p>	<p>EQ Homegroove Socket</p>
<p>RS(SH)-F Springlerhead Reducer Socket</p>	<p>Patented item</p>	<p>AE(M)-PF</p>	<p>AS(M)-PF</p>
<p>T-AS(M)-PF</p>	<p>※ Special products other than the above can be produced according to the requirements of the order.</p>		

Stainless Ball Valve

(Patent) STS Integrated Press Ball Valve



Dimension

Naming method	L	H	Naming method	L	H	Naming method	L	H
15A	100	60	15A	75	60	15A	80	60
20A	113	63	20A	84	63	20A	89	63
25A	122	73	25A	95	73	25A	100.5	73
32A	163	80	32A	121	80	32A	127	80
40A	204	89	40A	142	89	40A	149	89
50A	216	96	50A	160	96	50A	167	96

Specification

- Raw material: Stainless steel (STS 304)
- Test pressure: Body pressure: 2.94 MPa / Leakage: 1.74 Mpa
- Usage pressure: 0.98 MPa 10K
- Lifetime: same as STS pipe lifespan
- Constructability: press type (labor cost reduction)
- Certificate: Patent No. 10-1236872, KC certified product

- It is economical, despite being a press type stainless steel.
 - Leakage frequency is reduced since there are no screwed parts.
 - There is no concern about corrosion, and the water quality is clean.
 - Full bore (FULL BORE) can supply sufficient flow rate.
 - It is easy to construct insulation by lengthening the neck (STEM).
 - Valves should be cut and replaced if they need to be repaired, but the possibility of malfunction is low.
- ※ Union type ball valve will likely be cut and replaced during repair.

Materials

NO	PARTS	MATERIALS
1	BODY	SSC13
2	BONNET	SSC13
3	BALL	STS304 or C3771
4	HUB	SSC13
5	STEM	STS304 or C3604

Stainless Steel Welded Pipe & Tubes

Stainless Steel Pipe for General Piping (STS 304)

- Standard : KS D 3595 / JIS G 3448 / ASTM A269
- Usage: Water supply, drainage, hot and cold-water piping, electric piping, fire-extinguishing piping, etc. (Apartment, hospital, factory, etc.)
- Material : STS 304, STS 316
- Scope : KS D 3595, JIS G 3448, ASTM A 269
- Grade : 304, 316

Dimension and tolerance

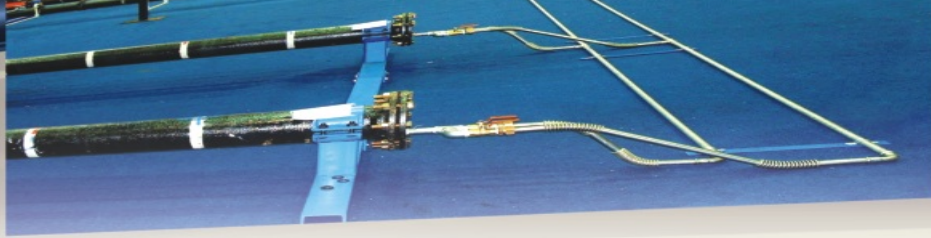
Naming method	Outer diameter (mm)		Width (mm)		Weight (kg/m)	
	Su (K-type)	Size	Tolerance	Thickness	Tolerance	STS304TPD
15	15.88	0	0.8	± 0.12	0.301	0.303
20	22.22		1.0		0.529	0.532
25	28.58		1.0		0.687	0.691
30	34.0	± 0.34	1.2		0.980	0.986
40	42.7	± 0.43	1.2		1.24	1.25
50	48.6	± 0.49	1.2		1.42	1.43
60	60.5	± 0.60	1.5	± 0.15	2.20	2.21
75	76.3	± 1%	1.5		2.79	2.81
80	89.1		2.0	± 0.30	4.34	4.37
100	114.3		2.0		5.59	5.63
125	139.8		2.0		6.87	6.91

Stainless Steel Pipes

- Standard : KS D 3576 / JIS G 3459 / ASTM A312
- Usage: Petrochemistry, pulp manufacture, corrosion resistance of fiber and other industries, heat resistance, low temperature piping
- Material : STS 304, STS 304L, STS 316, STS 316L & others
- Scope : For high or low temperature & General service (KS D 3576, JIS G 3459, ASTM A312)
- Grade : 304, 314L, 316, 316L & others

Dimension

Naming method		Outer diameter (mm)		Wall thickness(SCH)									
A	B	KS (JIS)	KS (JIS)	5S		10S		20S	40S		80S		
				KS (JIS)	KS (JIS)	KS (JIS)	KS (JIS)	KS (JIS)	KS (JIS)	KS (JIS)	KS (JIS)	KS (JIS)	
6	1/8	10.5	10.29	1.0		1.2	1.24	1.5	1.7	1.73	2.4	2.41	
8	1/4	13.8	13.72	1.2		1.65	1.65	2.0	2.2	2.24	3.0	3.02	
10	3/8	17.3	17.15	1.2		1.65	1.65	2.0	2.3	2.31	3.2	3.20	
15	1/2	21.7	21.34	1.65	1.65	2.1	2.11	2.5	2.8	2.77	3.7	3.73	
20	3/4	27.2	26.67	1.65	1.65	2.1	2.11	2.5	2.9	2.87	3.9	3.91	
25	1	34.0	33.40	1.65	1.65	2.8	2.77	3.0	3.4	3.38	4.5	4.55	
32	1 1/4	42.7	42.16	1.65	1.65	2.8	2.77	3.0	3.6	3.56	4.9	4.85	
40	1 1/2	48.6	48.26	1.65	1.65	2.8	2.77	3.0	3.7	3.68	5.1	5.58	
50	2	60.5	60.33	1.65	1.65	2.8	2.77	3.5	3.9	3.91	5.5	5.54	
65	2 1/2	76.3	73.03	2.1	2.11	3.0	3.05	3.5	5.2	5.16	7.0	7.01	
80	3	89.1	88.90	2.1	2.11	3.0	3.05	4.0	5.5	5.49	7.6	7.62	
90	3 1/2	101.6	101.6	2.1	2.11	3.0	3.05	4.0	5.7	5.74	8.1	8.08	
100	4	114.3	114.30	2.1	2.11	3.0	3.05	4.0	6.0	6.02	8.6	8.56	
125	5	139.8	141.30	2.8	2.77	3.4	3.0	5.0	6.6	6.55	9.5	9.52	
150	6	165.2	168.28	2.8	2.77	3.4	3.40	5.0	7.1	7.11	11.0	10.97	



Characteristics of EQ Joint



Saves Working Time

Simply insert a pipe into a fitting and press it with a tool, then the work is completed. Conventional piping of bolts, nuts, and welds takes a long time, but EQ joint system is simple and saves time.

No skill is required

In conventional plumbing, the workers are required to have special skills and cautions. Anyone can apply EQ joint system with no special skills.



No fire is required

Since there is no fire at the piping site, there is no risk of fire. It is suitable for piping for house repair.

Becomes a completely clean facility.

Bolts and nuts system use cutting oil and compounds when soldering, which can cause metal contamination. Press type EQ joint system will help you to build a clean facility.



Lightweight piping is now possible.

Using thin stainless steel, lightweight piping is possible for tall buildings. The inner diameter of lightweight piping is wide and the waterflow is large.

Samyoung Metal's strict quality inspection (self-inspection for water pressure of 40Kgf/cm²) helps you to prevent risks of water leakage

※ Caution - If ground water is used for stainless steel piping, piping may be adversely affected.

Standard Cost Estimation (Machine Facility Part)

Press Fitting Type (perm)

Standard	Outer diameter	Thickness	Plumber	special worker
15 SU	15.88mm	0.8mm	0.0280	0.0400
20	22.22	1.0	0.0320	0.0400
25	28.58	1.0	0.0360	0.0500
30	34.0	1.2	0.0625	0.0590
40	42.7	1.2	0.0800	0.0760
50	48.6	1.2	0.1020	0.0775
60	60.5	1.5	0.1320	0.0790
75	76.3	1.5	0.1434	0.0847
80	89.1	2.0	0.1548	0.0904
100	114.3	2.0	0.2016	0.1160

[Commentary]

- ① This estimation is a standard general piping estimation for neck's inside of press fitting type stainless steel pipe.
 - ② Marking, boxing, inserting, installing supporting metals, cutting joints, minor transportation, and water transportation includes estimation. However, since insulation stanchion and tube stanchion are excluded in the support facility installation, they are appropriated separately.
 - ③ On this estimation, add 20% for toilet pipe and 30% for machine pipe.
 - ④ For outdoor piping (inside the culvert), decrease 10% from this above-mentioned amount.
 - ⑤ For attachment components, decrease 30% from this above-mentioned amount. (estimation for buried water supply pipes)
 - ⑥ For floor heating piping, increase % from this above-mentioned amount.
 - ⑦ If the walls are peeled and maintenance work is required in the indoor pipes (except for the floor heating piping), it can be increased within the range of 10% of the above-mentioned amount.
 - ⑧ Excavation, Refilling, and residue treatment for tube attachment are separately included.
 - ⑨ If bending is required, it is added separately to the above-mentioned amount.
- ※ Refer to page 1152 of the 2007 Edition of Standard Construction Estimation.-

Samyoung Metal is running a "Zero Defect Campaign" to prevent defects after the construction.



EQ Joint Specifications

- Responsible construction will be ensured by giving a construction briefing session to all the workers before the piping construction.

1. Applicable Standards

- Stainless steel pipe for general piping (KS D 3595) 15SU ~ 100SU

2. Application Scope

- Underground water supply pipes, water supply and hot water supply pipes inside buildings, heating and cooling pipes, fire-extinguishing pipes, electric pipes, air pipes, etc.

3. Materials and Quality

- STS 304, KS B 1547, KS D 3595

4. Construction Method

① Cut Pipes



Cut the tube so that the end of the tube is at a right angle. Use a cutter (B) specially-designed for stainless steel.



A
Pipe-cutter



B
Stainless steel-cutter



C
High-speed cutter

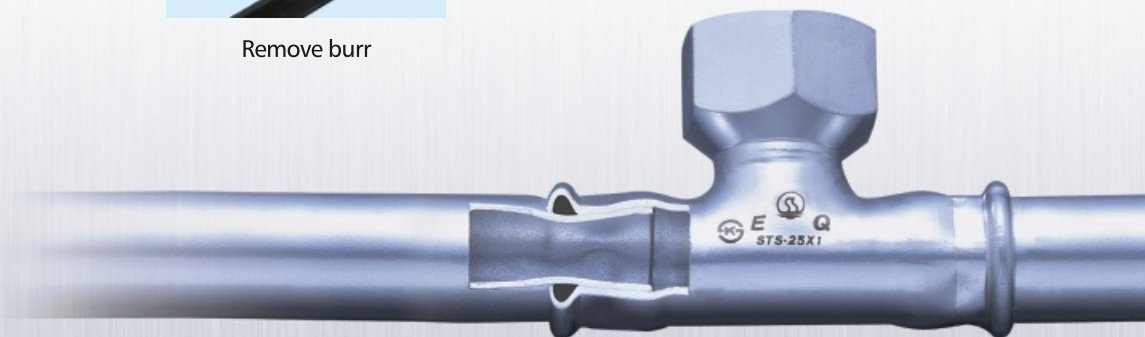
② Remove Burr



After cutting with the high-speed cutter shown in Fig. C above, the burr should be thoroughly removed with a burr-remover, file (steel sharpener), etc.



Remove burr





③ Mark Line



The EQ line marking is displayed below. Mark the line with a special EQ line marking ruler. If there is no EQ line marking ruler, remove the o-ring from the socket and use that socket as a line indicator. Mark the line mark so it can be seen after the pipe has been pushed into the joint.



Line mark



Before inserting the pipe until the line mark



Before inserting the pipe until the line mark

④ Pressing Procedure



Insert the pipe to the end of the joint, check the line mark again, and then press it. For EQ joint fittings, crimping tools recommended by Samyoung Metal must be used. By performing crimping tool inspection periodically, it is possible to prevent the construction failure due to aging of the crimping tool.



Before pressing



After pressing

⑤ Check pression



Use a hexagonal gauge to check the parts and the sum of the compression.



Check compression

⑥ Test Water Pressure

The pipe corresponding to the water supply device shall test the water pressure specified by the waterworks authority (25 Kg_f / cm²). The pumping pipe shall be double the pressure corresponding to the process before pumping, and other details shall be in accordance with the standard specification. Remove air completely to prevent danger, then apply pressure.

We provide good products with perfect construction and sustainable environment.



EQ Joint Construction Precautions

- 1) Do not damage the rubber ring.
Cut off the deformed pipe and completely remove burr.



- 2) Push the pipe fully into the line mark.
Check the line mark before pressing and push it in sufficiently.



- 3) Do not make a compression mistake (The special EQ tool is necessary)



- 4) For adapter part construction, screw parts must be conducted first and then the curl part should be pressed.
- 5) When buried in polluted soil such as animal shed, farmland, garbage landfill, corrosion by microorganisms may occur. In order to avoid this, it should be buried wrapped with vinyl or tape after a soil research and perform flow tests.
- 6) If left without water flow for a long period in underground burial, it may cause chemical reaction due to water content, ventilation, etc., which may cause corrosion. It is important to flow water as soon as possible.
- 7) Using materials containing chlorine or sulphide attachments may cause corrosion. In order to avoid this, wrap vinyl or tape.
- 8) Do not let straight pipes drop or touch heavy objects during the transportation or during the piping work, especially the part connected with the pipe joint should not be deformed.
- 9) Stainless steel pipes should not be hung with steel wire. Pipes should be transported with nylon wire and cloth band. Also, large caliber pipes should not be hung with steel wire.
- 10) During temporary storage, cover stainless steel pipes with vinyl cover or security cover.
- 11) For a proper storage, a place where the stainless-steel pipe would not be damaged by falling objects is to be selected. Do not store in contact with gas pipes or reinforcing bars.
- 12) Fittings should be kept in plastic packed state at all times. When inserting the pipe into the joint, be sure to clean it before inserting it.
- 13) When inserting the pipe, insert the pipe and components straight so that the rubber ring would not be damaged. If the pipe cannot be inserted smoothly, insert water directly into the rubber ring part.
- 14) When pressing, fit the groove of fittings to the groove of the jaw, and press the tube so that the jaw is perpendicular to the groove.
- 15) It is recommended to mark the compressed part with a marker to verify the compression.
- 16) Do not apply any physical impact by throwing or dropping when using the jaw.
- 17) For EQ joints, crimping tools recommended by Samyoung Metal should be used.
- 18) Precautions for Groundwater Use
- ① When groundwater is used, special care is required because microbial corrosion (MIC) is likely to occur.
 - Landfill, coastal regions, and industrial areas are subject to chlorine-caused corrosion.
 - There are high probability of occurrence in summer due to high temperature and humidity.
 - ② Prevention Methods
 - Flow water after water quality testing
 - Use portable water
 - Install water purification facility
 - Insert corrosion inhibitor

※ We are not responsible for defects due to failure to follow the instructions.



Battery-powered pressing tools

Rechargeable crimping tool (mini, medium, medium+, big)



Jaw used only for EQ joint



Cautions when using rechargeable crimping tool

- Before and after usage, clean the jaw and the machine, and check for any abnormality (damage or wear such as holes, gold or grooves). Clean the jaw with jaw-specific oil. Clean the machine's body with air or damp cloth with neutral detergent, and then dry it.
- If the battery is discharged during use, cool the heat of the machine for at least 10 minutes and then use it again. (Continuous use of a tool without a break can cause the machine to be over loaded and result in defects.)
- After 10,000 presses, send the instrument to the designated service center for inspection.(Annual inspection is recommended)
- If oil leaks from the machine, do not touch it.
- Wear protective glasses during usage.

Signal	Duration	Period	Meaning
● ● ●	Short flash	Insert battery	Self-check O.K
■	20 seconds on	before pressure	No battery
● ● ●	Flashes for 20 seconds (2Hz)	after pressure	Demand A/S
● ● ● ●	Flashes for 20 seconds (5Hz)	High temperature reach	Device over temperature
■ ●	Illuminates for 20 seconds and flashes intermittently	after pressure	Demand A/S & Battery Lifetime

Since 1975,
Samyoung Metal, A trusted manufacturer of
40 years of tradition and experience.



SAMYOUNG METAL Co.,Ltd.

EQ joint & stainless pipe making

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