

C l e a n n e s s   b y   P u r p o s e



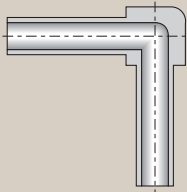
# WE Weld Fitting

*IHARA SCIENCE CORPORATION*

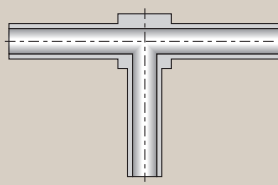
# WELD FITTINGS

# VISUAL INDEX

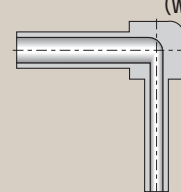
**4** ELBOW : AWLB  
AWF-L (width flats)



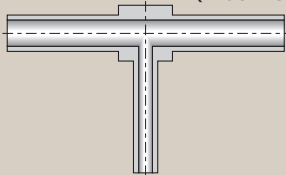
**4** TEE : AWTB  
AWF-T (width flats)



**4** REDUCING ELBOW : AWLRB  
AWF-LR (width flats)



**4** REDUCING TEE : AWTRB  
AWF-TR (width flats)



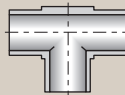
**4** REDUCING UNION :  
AWURB



**5** SHORT ELBOW : SAWLSB



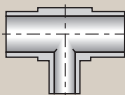
**5** SHORT TEE : SAWTSB



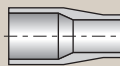
**5** SHORT REDUCING ELBOW :  
SAWLRB



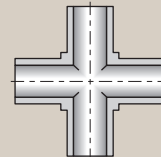
**5** SHORT REDUCING TEE :  
SAWTRB



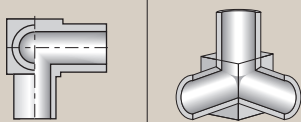
**5** SHORT REDUCING UNION :  
SAWURB



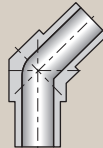
**5** SHORT CROSS :  
SAWXS



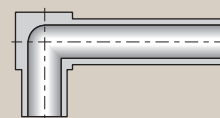
**6** SHORT ANGLE TEE :  
SAWLST



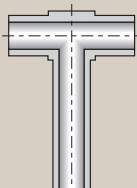
**6** 45° ELBOW : SAWVSB



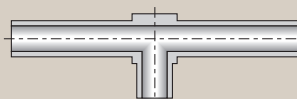
**6** ONE END LONG ELBOW :  
SAWLLB



**6** MIDDLE BRANCH LONG TEE :  
SAWTNB



**6** MIDDLE BRANCH SHORT TEE :  
SAWTLB

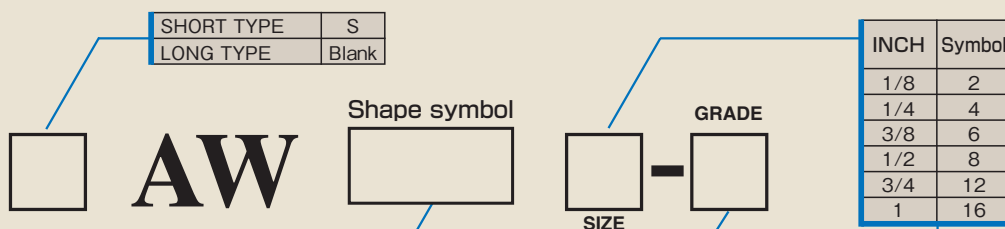


## FEATURES

- The two standards of single melt material and double melt material are available.
- Dimensional tolerances are held to minimum by precision machining.
- After precision washing and drying up, each fitting is packed in a double layers bag in the clean room. Purge with high purity nitrogen gas and then vacuum sealed.



## PART NUMBERS BY DESCRIPTIVE

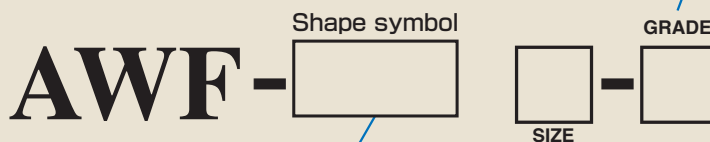


Products	Symbol	Products	Symbol
LONG ELBOW*1	LB	MIDDLE BRANCH LONG TEE	TNB
LONG TEE*1	LT	45° ELBOW	VSB
REDUCING ELBOW*1	LRB	REDUCER	URB
REDUCING TEE*1	TRB	REDUCING ELBOW	LRB
SHORT ELBOW	LSB	REDUCING TEE	TRB
SHORT TEE	TSB	ONE END LONG ELBOW	LLB
SHORT CROSS	XSB	MIDDLE BRANCH SHORT TEE	TLB
SHORT ANGLE TEE	LST		

\*は1"サイズでのみとなります。

Products	Symbol
Single Melt Ra0.8(μm)	32
Single Melt Ra0.18(μm)	07
Double Melt Ra0.18(μm)	07W
Double Melt Ra0.1(μm)	04W

## AS FORGED SURFACE



Products	Symbol
LONG ELBOW	L
LONG TEE	T
SHORT REDUCING ELBOW	LR
SHORT REDUCING ELBOW	TR

## ⚠ WARNING

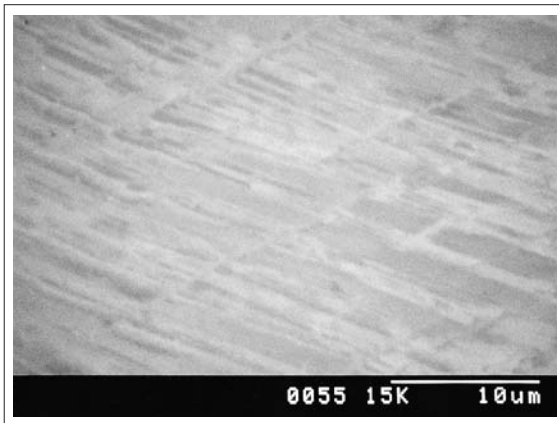
Inappropriate selection and improper handling of fittings, valves and related accessories can result in physical injuries and damaged to the system. Fittings, valves and related accessories should be under the responsibility and authority of the system engineers and the users with due consideration to their compatibility to the systems to which they are applied and the condition of their use, and must be proper installed, operated and maintained.

Standard material : SUS316L

## PRODUCT SPECIFICATION

Grade	32	07	07W	04W
Material	SUS316L Mn $\leq$ 0.80 % S $\leq$ 0.002 %		SUS316L Vacuum double melt material C $\leq$ 0.015 % Mn $\leq$ 0.05 % S $\leq$ 0.002 %	
Cleanliness grade	A+B+C $\leq$ 0.05%		A+B+C $\leq$ 0.03%	
Surface finish	Ra0.8 ( $\mu$ m)	Ra0.18 ( $\mu$ m)		Ra0.1 ( $\mu$ m)
Color label to identify grade	White	Yellow	Pink	Blue

### Double melt (VIM+VAR) material



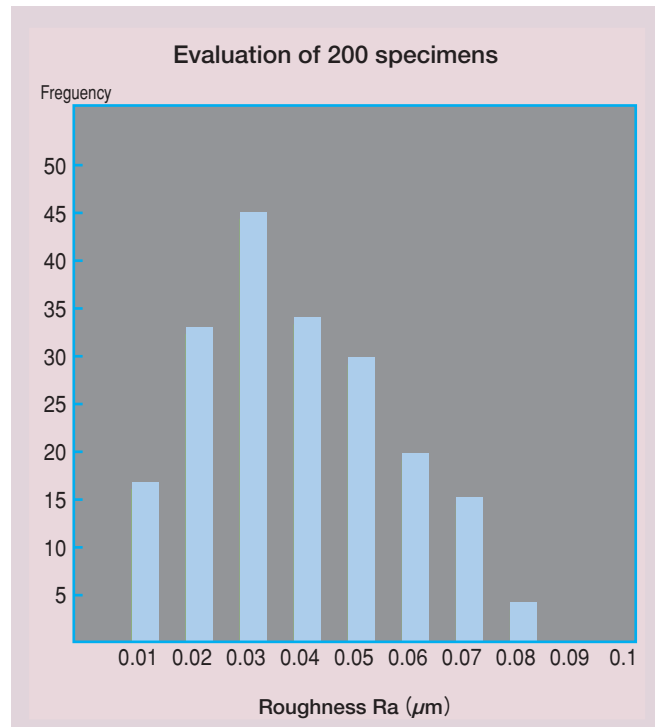
( $\times$  3000)

### Measurement of non-metallic inclusion (JIS G 0555)

Type	A-inclusion	B-inclusion	C-inclusion	Total (A+B+C)
Single melt	0.008	0	0.013	0.021
Double melt	0	0	0.013	0.013

(%)

### Frequency distribution of the internal surface roughness

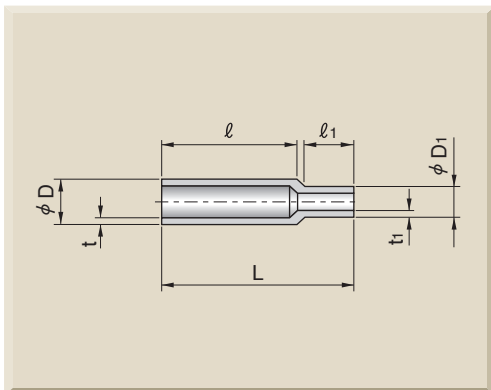
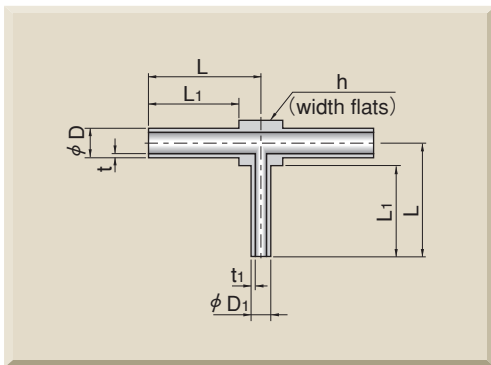
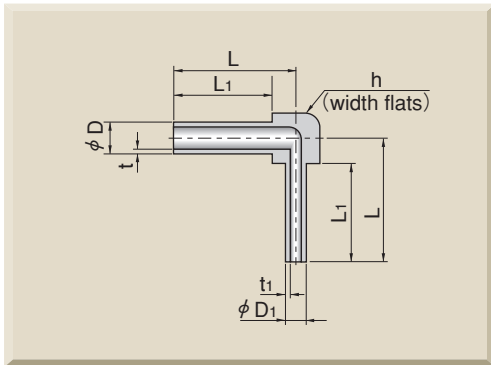
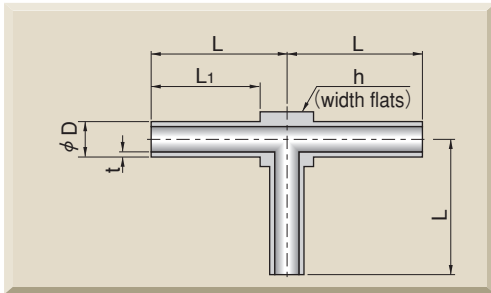
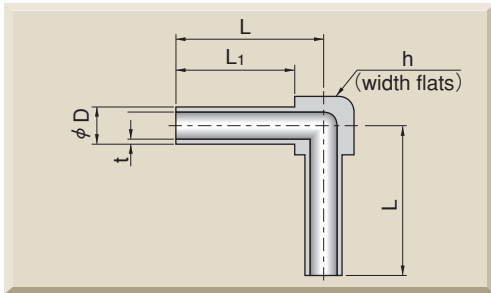


### Chemical Composition of Material

	C	Mn	P	S	Si	Ni	Cr	Mo
SUS316L	0.030	2.00	0.045	0.030	1.00	12.00 15.00	16.00 18.00	2.00 3.00
Ihara standard Single melt	0.030	0.80	0.032	0.002	0.35 0.73	12.00 15.00	16.00 18.00	2.00 3.00
Ihara standard Double melt	0.015	0.05	0.030	0.002	0.015	12.00 15.00	16.00 18.00	2.00 3.00
Actual Single melt	0.020	0.78	0.028	0.010	0.55	12.09	17.21	2.05
Actual Double melt	0.001	0.01	0.003	0.001	0.01	14.70	17.80	2.64

(%)

## LONG TYPE



## ELBOW

Parts numbers	$\phi D$ ※	t	L1	L	h
AWF-L4	1/4 (6.35)	1.0	19.05	25.0	11.1
AWF-L6	3/8 (9.53)	1.0	19.05	25.0	11.1
AWF-L8	1/2 (12.7)	1.24	19.05	29.0	17.2
AWF-L12	3/4 (19.05)	1.65	22.5	33.5	22
AWLB 16	1 (25.4)	1.65	24.5	39.0	29

## TEE

Parts numbers	$\phi D$ ※	t	L1	L	h
AWF-T4	1/4 (6.35)	1.0	19.05	25.0	11.1
AWF-T6	3/8 (9.53)	1.0	19.05	25.0	11.1
AWF-T8	1/2 (12.7)	1.24	19.05	29.0	17.2
AWF-T12	3/4 (19.05)	1.65	22.5	33.5	22
AWTB 16	1 (25.4)	1.65	24.5	39.0	29

## REDUCING ELBOW

Parts numbers	$\phi D$ ※	$\phi D1$ ※	t	t1	L1	L	h
AWF-LR 6-4	3/8 (9.53)	1/4 (6.35)	1.0	1.0	19.05	25.0	11.1
AWF-LR 8-4	1/2 (12.7)	1/4 (6.35)	1.24	1.0	19.05	29.0	17.2
AWF-LR 8-6	1/2 (12.7)	3/8 (9.53)	1.24	1.0	19.05	29.0	17.2
AWF-LR 12-4	3/4 (19.05)	1/4 (6.35)	1.65	1.0	22.5	33.5	22
AWF-LR 12-6	3/4 (19.05)	3/8 (9.53)	1.65	1.0	22.5	33.5	22
AWF-LR 12-8	3/4 (19.05)	1/2 (12.7)	1.65	1.24	22.5	33.5	22
AWLRB 16-4	1 (25.4)	1/4 (6.35)	1.65	1.0	24.5	39.0	29
AWLRB 16-6	1 (25.4)	3/8 (9.53)	1.65	1.0	24.5	39.0	29
AWLRB 16-8	1 (25.4)	1/2 (12.7)	1.65	1.24	24.5	39.0	29
AWLRB 16-12	1 (25.4)	3/4 (19.05)	1.65	1.65	24.5	39.0	29

## REDUCING TEE

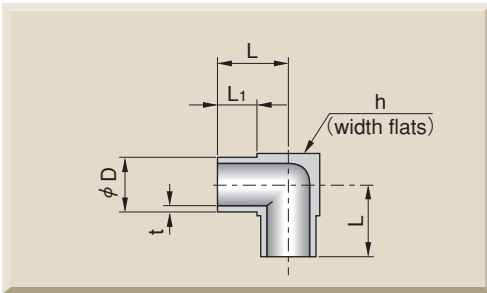
Parts numbers	$\phi D$ ※	$\phi D1$ ※	t	t1	L1	L	h
AWF-TR 6-4	3/8 (9.53)	1/4 (6.35)	1.0	1.0	19.05	25.0	11.1
AWF-TR 8-4	1/2 (12.7)	1/4 (6.35)	1.24	1.0	19.05	29.0	17.2
AWF-TR 8-6	1/2 (12.7)	3/8 (9.53)	1.24	1.0	19.05	29.0	17.2
AWF-TR 12-4	3/4 (19.05)	1/4 (6.35)	1.65	1.0	22.5	33.5	22
AWF-TR 12-6	3/4 (19.05)	3/8 (9.53)	1.65	1.0	22.5	33.5	22
AWF-TR 12-8	3/4 (19.05)	1/2 (12.7)	1.65	1.24	22.5	33.5	22
AWTRB 16-4	1 (25.4)	1/4 (6.35)	1.65	1.0	24.5	39.0	29
AWTRB 16-8	1 (25.4)	1/2 (12.7)	1.65	1.24	24.5	39.0	29
AWTRB 16-12	1 (25.4)	3/4 (19.05)	1.65	1.65	24.5	39.0	29

## REDUCING UNION

Parts numbers	$\phi D$ ※	$\phi D1$ ※	t	t1	L	ℓ	ℓ1
AWURB 4-2	1/4 (6.35)	1/8 (3.18)	1.0	0.71	27.0	19	7
AWURB 6-4	3/8 (9.53)	1/4 (6.35)	1.0	1.0	38.8	17.9	20
AWURB 8-4	1/2 (12.7)	1/4 (6.35)	1.24	1.0	38.6	16.8	20
AWURB 8-6	1/2 (12.7)	3/8 (9.53)	1.24	1.0	38.6	17.7	20
AWURB 12-4	3/4 (19.05)	1/4 (6.35)	1.65	1.0	45.0	21.3	20
AWURB 12-6	3/4 (19.05)	3/8 (9.53)	1.65	1.0	45.0	22.3	20
AWURB 12-8	3/4 (19.05)	1/2 (12.7)	1.65	1.24	48.0	22.2	24
AWURB 16-4	1 (25.4)	1/4 (6.35)	1.65	1.0	48.0	22.5	20
AWURB 16-6	1 (25.4)	3/8 (9.53)	1.65	1.0	48.0	23.4	20
AWURB 16-8	1 (25.4)	1/2 (12.7)	1.65	1.24	52.0	24.3	24
AWURB 16-12	1 (25.4)	3/4 (19.05)	1.65	1.65	52.0	30.2	20

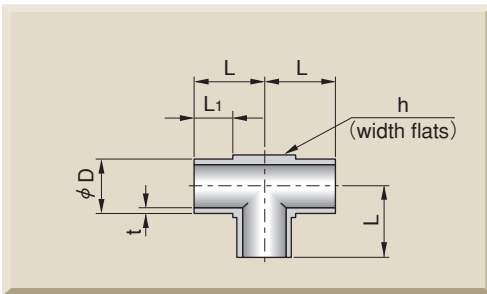
※  $\phi D$  and  $\phi D1$  indicate in inch.  
( ) indicate in mm.

## SHORT TYPE



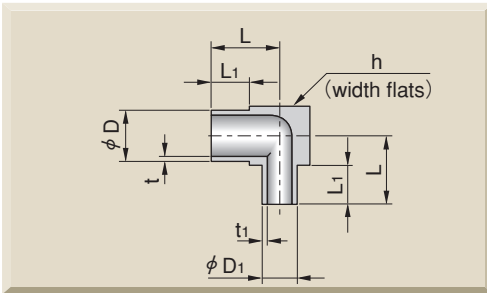
### SHORT ELBOW

Parts numbers	$\phi D$	t	L1	L	h
SAWLSB 2	1/8 (3.18)	0.71	6.35	10.33	7.96
SAWLSB 4	1/4 (6.35)	1.0	6.35	10.33	7.96
SAWLSB 6	3/8 (9.53)	1.0	6.35	11.91	11.13
SAWLSB 8	1/2 (12.7)	1.24	6.35	13.47	14.31



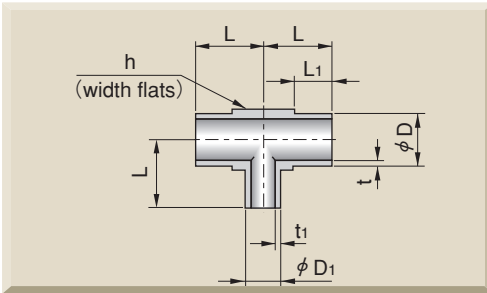
### SHORT TEE

Parts numbers	$\phi D$	t	L1	L	h
SAWTSB 2	1/8 (3.18)	0.71	6.35	10.33	7.96
SAWTSB 4	1/4 (6.35)	1.0	6.35	10.33	7.96
SAWTSB 6	3/8 (9.53)	1.0	6.35	11.91	11.13
SAWTSB 8	1/2 (12.7)	1.24	6.35	13.47	14.31



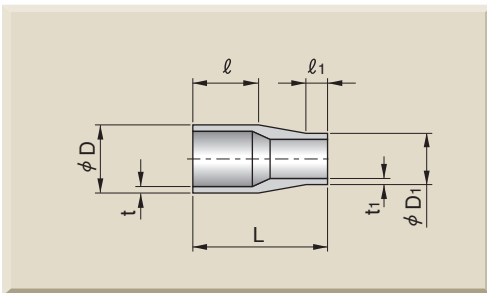
### SHORT REDUCING ELBOW

Parts numbers	$\phi D$	$\phi D1$	t	t1	L1	L	h
SAWLRB 6-4	3/8 (9.53)	1/4 (6.35)	1.0	1.0	6.35	11.91	11.13
SAWLRB 8-4	1/2 (12.7)	1/4 (6.35)	1.24	1.0	6.35	13.47	14.31
SAWLRB 8-6	1/2 (12.7)	3/8 (9.53)	1.24	1.0	6.35	13.47	14.31



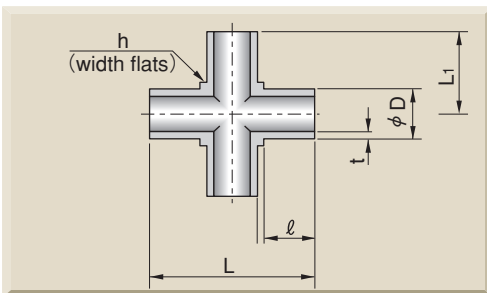
### SHORT REDUCING TEE

Parts numbers	$\phi D$	$\phi D1$	t	t1	L1	L	h
SAWTRB 4-2	1/4 (6.35)	1/8 (3.18)	1.0	0.71	6.35	10.33	7.96
SAWTRB 6-4	3/8 (9.53)	1/4 (6.35)	1.0	1.0	6.35	11.91	11.13
SAWTRB 8-4	1/2 (12.7)	1/4 (6.35)	1.24	1.0	6.35	13.47	14.31
SAWTRB 8-6	1/2 (12.7)	3/8 (9.53)	1.24	1.0	6.35	13.47	14.31



### SHORT REDUCING UNION

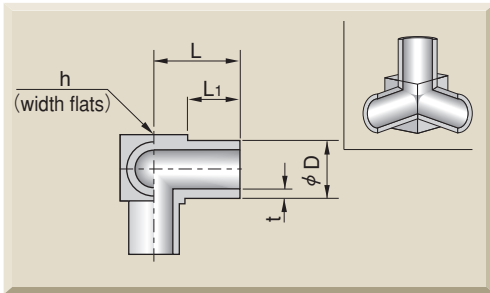
Parts numbers	$\phi D$	$\phi D1$	t	t1	L	ℓ	ℓ1
SAWURB 4-2	1/4 (6.35)	1/8 (3.18)	1.0	0.71	19.05	10.35	6.35
SAWURB 6-4	3/8 (9.53)	1/4 (6.35)	1.0	1.0	19.05	10.35	6.35
SAWURB 8-4	1/2 (12.7)	1/4 (6.35)	1.24	1.0	19.05	10.35	6.35
SAWURB 8-6	1/2 (12.7)	3/8 (9.53)	1.24	1.0	19.05	10.35	6.35



### SHORT CROSS

Parts numbers	$\phi D$	t	L	L1	ℓ	h
SAWXSB 2	1/8 (3.18)	0.71	20.66	10.33	6.35	7.96
SAWXSB 4	1/4 (6.35)	1.0	20.66	10.33	6.35	7.96
SAWXSB 6	3/8 (9.53)	1.0	23.82	11.91	6.35	11.13
SAWXSB 8	1/2 (12.7)	1.24	26.94	13.47	6.35	14.31

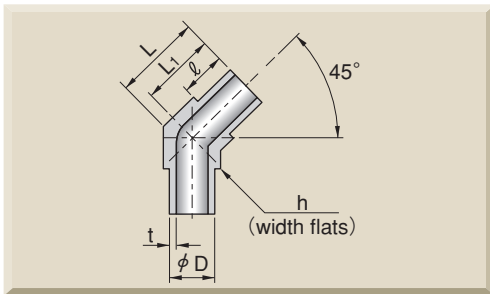
## SHORT TYPE



### SHORT ANGLE TEE

(mm)

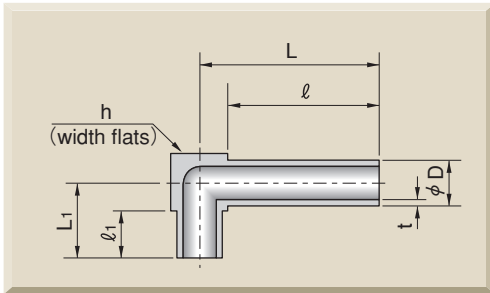
Parts numbers	φD	t	L	L1	h
SAWLST 2	1/8 (3.18)	0.71	10.33	6.35	7.96
SAWLST 4	1/4 (6.35)	1.0	10.33	6.35	7.96
SAWLST 6	3/8 (9.53)	1.0	11.91	6.35	11.13
SAWLST 8	1/2 (12.7)	1.24	13.47	6.35	14.24



### 45° ELBOW

(mm)

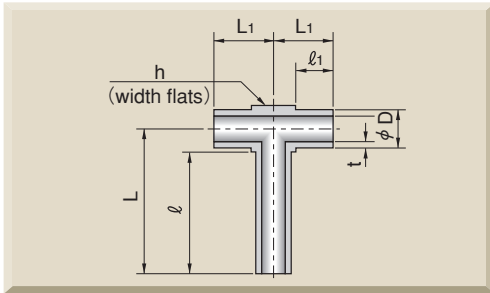
Parts numbers	φD	t	L	L1	ℓ	h
SAWVSB 4	1/4 (6.35)	1.0	11.98	10.33	6.35	7.96



### ONE END LONG ELBOW

(mm)

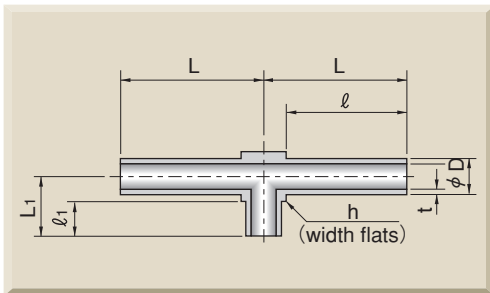
Parts numbers	φD	t	ℓ	ℓ1	L	L1	h
SAWLLB 4	1/4 (6.35)	1.0	21.02	6.35	25.0	10.33	7.96
SAWLLB 6	3/8 (9.53)	1.0	19.43	6.35	25.0	11.91	11.13



### MIDDLE BRANCH LONG TEE

(mm)

Parts numbers	φD	t	ℓ1	ℓ	L1	L	h
SAWTNB 4	1/4 (6.35)	1.0	6.35	21.02	10.33	25.0	7.96
SAWTNB 6	3/8 (9.53)	1.0	6.35	19.43	11.91	25.0	11.13



### MIDDLE BRANCH SHORT TEE

(mm)

Parts numbers	φD	t	ℓ	ℓ1	L	L1	h
SAWTLB 4	1/4 (6.35)	1.0	21.02	6.35	25.0	10.33	7.96
SAWTLB 6	3/8 (9.53)	1.0	19.43	6.35	25.0	11.91	11.13

**WARNING**

If you don't select and handle fittings, valves and related accessories in an adequate manner, it may damage human beings and applicable systems.  
Within the responsibility and authorization of users and piping designers, fittings, valves and related accessories shall be adequately selected, assembled, used and maintained based on the applicable conditions and product conformity to the system to be applied. Please read carefully our operation manual and feel free to contact with Ihara if you have any question or request.



ISO9001, ISO14001 Certified Office  
Certified office for high-pressure gas facility testing and manufacturing,  
certified office for N valves and N-II fittings

**IHARA SCIENCE CORPORATION**

**Headquarters/Sales Offices****Headquarters****East Japan Sales Office**

11-3 Takanawa 3-chome Minato-ku,  
Tokyo 108-0074 Japan  
TEL: 03-6721-6981 FAX: 03-6721-6991

**Tohoku Sales Office**

5600-3, Higashineko, Oaza, Higashine city,  
Yamagata prefecture 999-3701  
TEL: 0237-43-7802 FAX: 0237-43-7803

**Chubu Sales Office**

Tsakasa Building, 3-14-19, Chiyoda, Naka ward, Nagoya city, Aichi  
prefecture 460-0012  
TEL: 052-323-2627 FAX: 052-323-2630

**Kansai Sales Office**

7F, GL Osaka Building, 4-1-18, Tenma, Kita ward Osaka city, Osaka  
prefecture 530-0043  
TEL: 06-6358-9255 FAX: 06-6358-9260

**Kyushu Sales Office**

103, Maison de Sophie, 1-1-8, Onoue, Kumamoto city, Kumamoto  
prefecture 862-0913  
TEL: 096-386-5353 FAX: 096-386-5354

**Group Companies****Yamagata-Ihara Corporation**

5600-3, Higashineko, Oaza, Higashine city,  
Yamagata prefecture 999-3701  
TEL: +81-237-43-5501 FAX: +81-237-43-5504

**IHARA SCIENCE TAIWAN Co.,Ltd**

No.79, Mingyi St., West Dist.,  
Taichung City 403, Taiwan (R.O.C.)  
TEL: +886-4-2319-1116 FAX: +886-4-2319-1126

**SUZHOU IHARA SCIENCE Co.,Ltd.**

SHANGHAI OFFICE  
UnitJ-11F, Huamin Empire Plaza, No.728, YanAn Road(W),  
Shanghai 200050, R.P.China  
TEL: +86-21-5239-9884 FAX: +86-21-5283-3811

**IHARA KOREA Co.,Ltd**

Digital Empire II 103-905, Sinwon-ro 88, Yeongtong-Gu, Suwon-Si  
Gyeonggi-Do, 443-734, South Korea  
TEL: +82-31-695-6800 FAX: +82-31-695-6808

**IHARA SCIENCE USA CORPORATION**

1915 Peters Road, Suite 103 Irving, Texas 75061  
TEL: +1-469-586-4671 FAX: +1-469-586-4723

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