

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



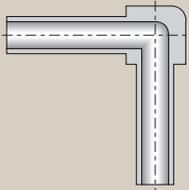
WE Weld Fitting

IHARA SCIENCE CORPORATION

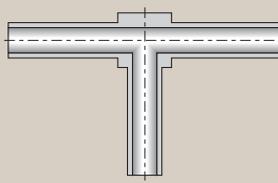
WELD FITTINGS

VISUAL INDEX

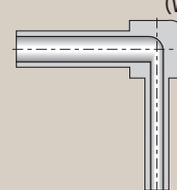
4 ELBOW : AWLB
AWF-L (width flats)



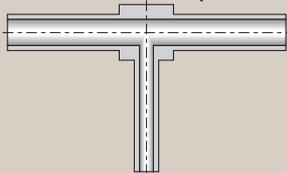
4 TEE : AWTB
AWF-T (width flats)



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



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



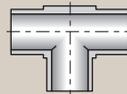
4 REDUCING UNION :
AWURB



5 SHORT ELBOW : SAWLSB



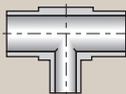
5 SHORT TEE : SAWTSB



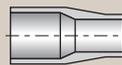
5 SHORT REDUCING ELBOW :
SAWLRB



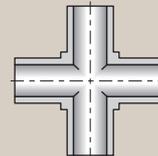
5 SHORT REDUCING TEE :
SAWTRB



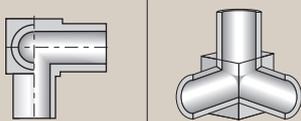
5 SHORT REDUCING UNION :
SAWURB



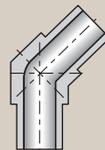
5 SHORT CROSS :
SAWXS



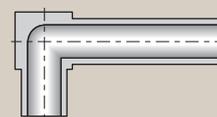
6 SHORT ANGLE TEE :
SAWLST



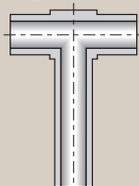
6 45° ELBOW : SAWVSB



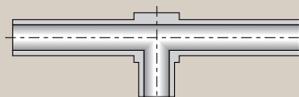
6 ONE END LONG ELBOW :
SAWLLB



6 MIDDLE BRANCH LONG TEE :
SAWTNB



6 MIDDLE BRANCH SHORT TEE :
SAWTLB

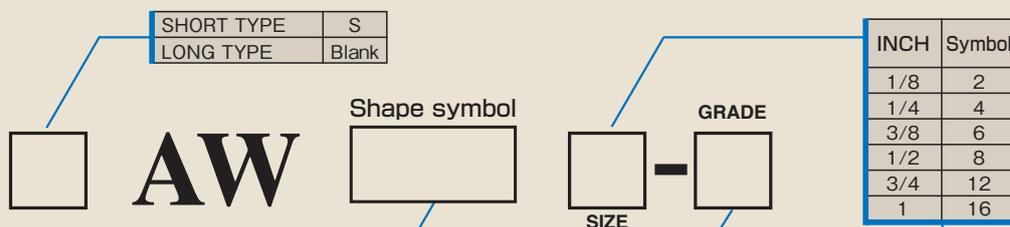


FEATURES

- 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

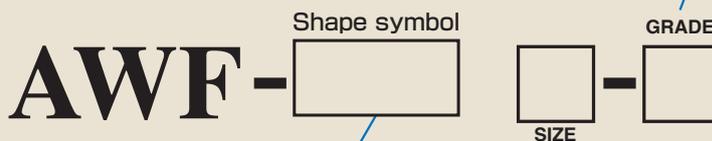


Products	Symbol	Products	Symbol
LONG ELBOW*1	LB	MIDDLE BRANCH LONG TEE	TNB
LONG TEE*1	LT	45° ELBOW	VSB
REDUCING ELBOW*1	LRB	REDUCER	URB
REDUCING TEE*1	TRB	REDUCING ELBOW	LRB
SHORT ELBOW	LSB	REDUCING TEE	TRB
SHORT TEE	TSB	ONE END LONG ELBOW	LLB
SHORT CROSS	XSB	MIDDLE BRANCH SHORT TEE	TLB
SHORT ANGLE TEE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

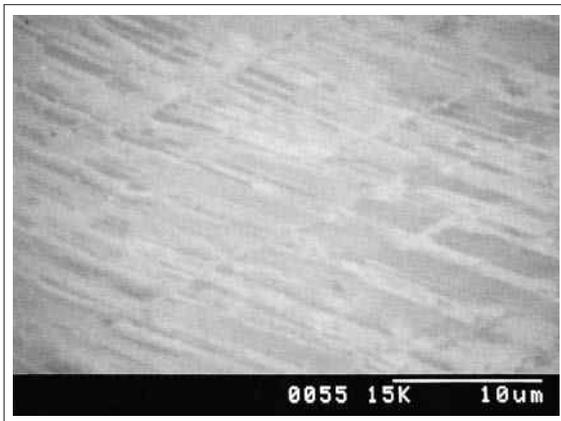
Inappropriate selection and improper handling of fittings, valves and related accessories can result in physical injuries and damaged to the system. Fittings, valves and related accessories should be under the responsibility and authority of the system engineers and the users with due consideration to 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 (μ m)	Ra0.18 (μ m)		Ra0.1 (μ m)
Color label to identify grade	White	Yellow	Pink	Blue

Double melt (VIM+VAR) material



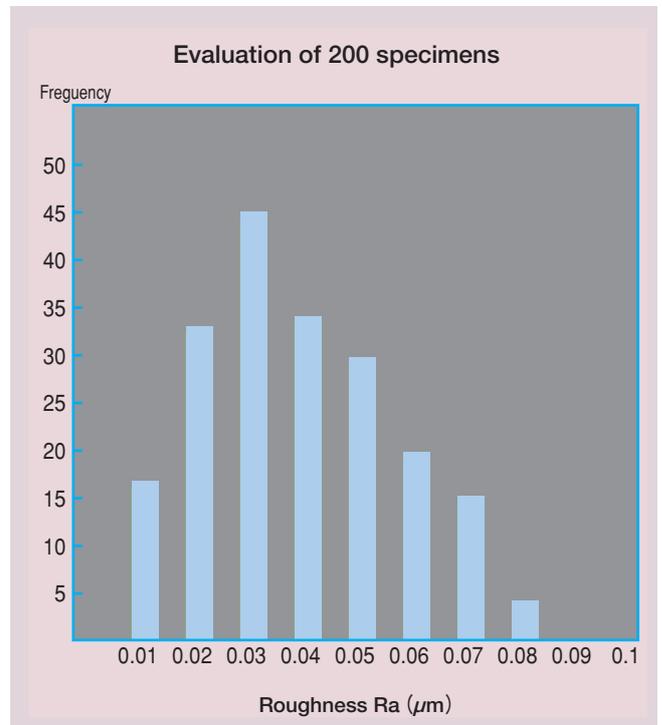
(\times 3000)

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

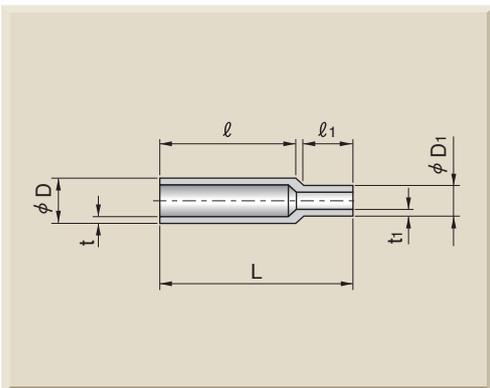
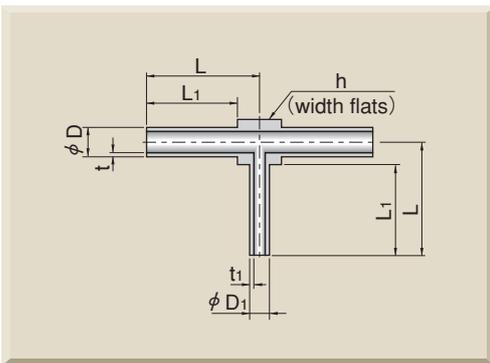
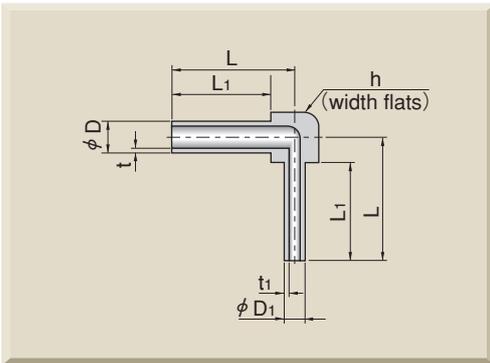
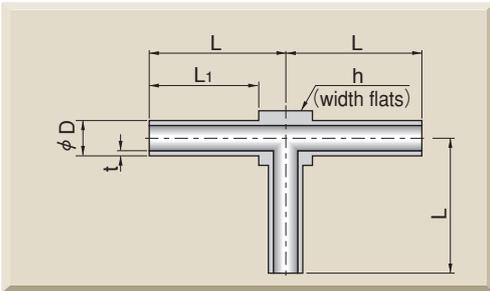
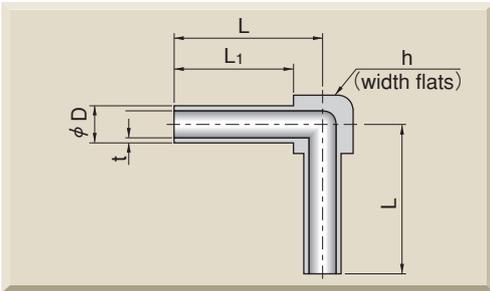


Chemical Composition of Material

	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	ϕD ※	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	ϕD ※	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	ϕD ※	$\phi D1$ ※	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

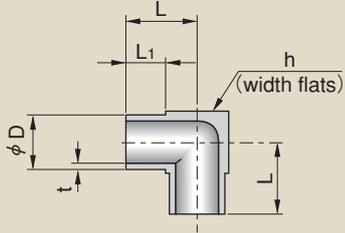
Parts numbers	ϕD ※	$\phi D1$ ※	t	t1	L1	L	h
AWF-TR 6-4	3/8 (9.53)	1/4 (6.35)	1.0	1.0	19.05	25.0	11.1
AWF-TR 8-4	1/2 (12.7)	1/4 (6.35)	1.24	1.0	19.05	29.0	17.2
AWF-TR 8-6	1/2 (12.7)	3/8 (9.53)	1.24	1.0	19.05	29.0	17.2
AWF-TR 12-4	3/4 (19.05)	1/4 (6.35)	1.65	1.0	22.5	33.5	22
AWF-TR 12-6	3/4 (19.05)	3/8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

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

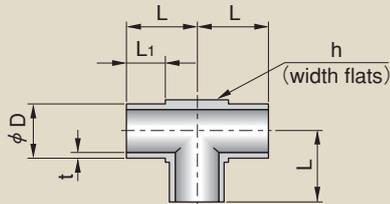
SHORT TYPE



SHORT ELBOW

(mm)

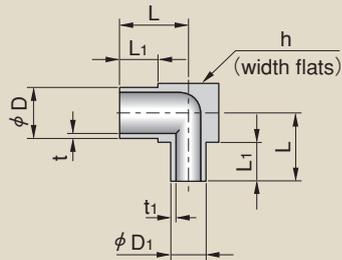
Parts numbers	ϕD	t	L1	L	h
SAWLSB 2	1/8 (3.18)	0.71	6.35	10.33	7.96
SAWLSB 4	1/4 (6.35)	1.0	6.35	10.33	7.96
SAWLSB 6	3/8 (9.53)	1.0	6.35	11.91	11.13
SAWLSB 8	1/2 (12.7)	1.24	6.35	13.47	14.31



SHORT TEE

(mm)

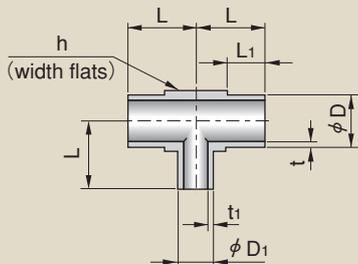
Parts numbers	ϕD	t	L1	L	h
SAWTSB 2	1/8 (3.18)	0.71	6.35	10.33	7.96
SAWTSB 4	1/4 (6.35)	1.0	6.35	10.33	7.96
SAWTSB 6	3/8 (9.53)	1.0	6.35	11.91	11.13
SAWTSB 8	1/2 (12.7)	1.24	6.35	13.47	14.31



SHORT REDUCING ELBOW

(mm)

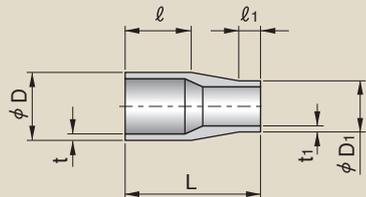
Parts numbers	ϕD	$\phi D1$	t	t1	L1	L	h
SAWLRB 6-4	3/8 (9.53)	1/4 (6.35)	1.0	1.0	6.35	11.91	11.13
SAWLRB 8-4	1/2 (12.7)	1/4 (6.35)	1.24	1.0	6.35	13.47	14.31
SAWLRB 8-6	1/2 (12.7)	3/8 (9.53)	1.24	1.0	6.35	13.47	14.31



SHORT REDUCING TEE

(mm)

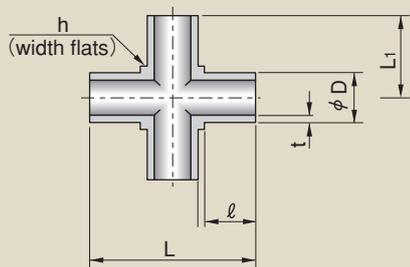
Parts numbers	ϕD	$\phi D1$	t	t1	L1	L	h
SAWTRB 4-2	1/4 (6.35)	1/8 (3.18)	1.0	0.71	6.35	10.33	7.96
SAWTRB 6-4	3/8 (9.53)	1/4 (6.35)	1.0	1.0	6.35	11.91	11.13
SAWTRB 8-4	1/2 (12.7)	1/4 (6.35)	1.24	1.0	6.35	13.47	14.31
SAWTRB 8-6	1/2 (12.7)	3/8 (9.53)	1.24	1.0	6.35	13.47	14.31



SHORT REDUCING UNION

(mm)

Parts numbers	ϕD	$\phi D1$	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

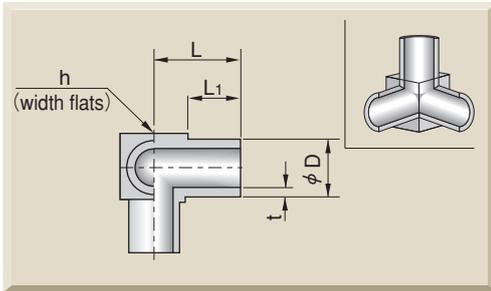


SHORT CROSS

(mm)

Parts numbers	ϕD	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

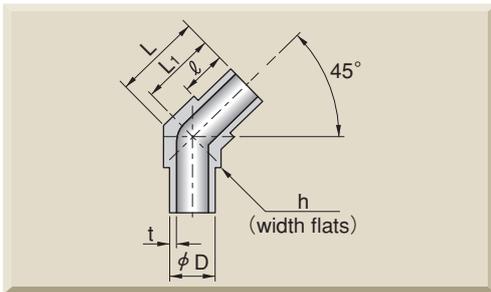
SHORT TYPE



SHORT ANGLE TEE

(mm)

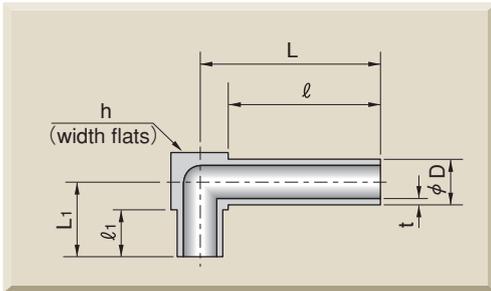
Parts numbers	ϕD	t	L	L1	h
SAWLST 2	1/8 (3.18)	0.71	10.33	6.35	7.96
SAWLST 4	1/4 (6.35)	1.0	10.33	6.35	7.96
SAWLST 6	3/8 (9.53)	1.0	11.91	6.35	11.13
SAWLST 8	1/2 (12.7)	1.24	13.47	6.35	14.24



45° ELBOW

(mm)

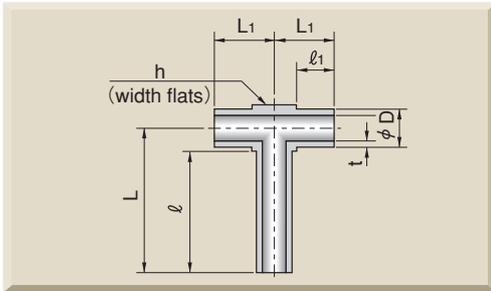
Parts numbers	ϕD	t	L	L1	ℓ	h
SAWVSB 4	1/4 (6.35)	1.0	11.98	10.33	6.35	7.96



ONE END LONG ELBOW

(mm)

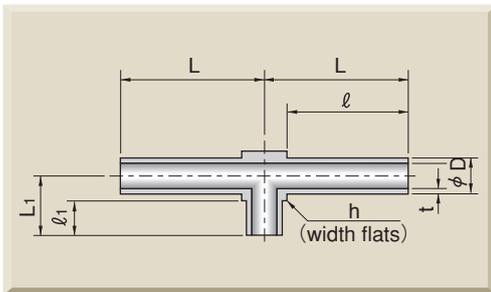
Parts numbers	ϕD	t	ℓ	$\ell 1$	L	L1	h
SAWLLB 4	1/4 (6.35)	1.0	21.02	6.35	25.0	10.33	7.96
SAWLLB 6	3/8 (9.53)	1.0	19.43	6.35	25.0	11.91	11.13



MIDDLE BRANCH LONG TEE

(mm)

Parts numbers	ϕD	t	$\ell 1$	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	$\ell 1$	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

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