

BENKAN[®]



THAI BENKAN CO.,LTD.

58 Soi Watkrual Bangkru Suksawat 70 Prapadaeng Samutprakarn 10130

THAILAND

Tel : 662 463-6235-7 Fax : 662 463-8241

www.thaibenkan.co.th



Company Name	THAI BENKAN CO.,LTD.	
Brand Name	BENKAN	
Address	58, Soi Watkrunai, Bangkru, Suksawat 70, Prapadaeng, Samutprakarn, 10130, Thailand	
Capital	Baht 165,094,500	
Employees	395	
Establish	August 5th, 1987	
Area	Land : 25,185 sq. meters	Building : 13,825 sq. meters
Major Equipment	Pipe cutting machine 8 Elbow bending machine 8 Elbow sizing machine 9 Reducer forming machine 3 Tee forming machine 2	Cap forming machine 1 Heat treatment furnace 3 Shot blast 4 Bevelling machine 39 Coating line 1

BENKAN

LOCATION



THAI BENKAN CO.,LTD

58 MOO 13 SOI WATKRUNAI, SUKSAWAT 70 RD. BANGKRU

PHRAPRADAENG, SAMUTPRAKARN 10130, THAILAND

TEL. 02-463-0074, 02-463-6235-7, 02-819-0410-3

FAX. 02-463-6238, 02-463-8241

Carbon Steel & Alloy Steel**Elbow**

90°
Elbow (Long)

90°
Elbow (Short)

45°
Elbow (Long)

180°
Elbow (Long)

180°
Elbow (Short)

Reducer

Reducer
(Concentric)

Reducer
(Eccentric)

Tee

T (Straight)

T (Reducing)

Cap

Cap

Stainless Steel & Duplex**Elbow**

90°
Elbow (Long)

90°
Elbow (Short)

45°
Elbow (Long)

Reducer

Reducer
(Concentric)

Reducer
(Eccentric)

Tee

T (Straight)

T (Reducing)

Cap

Cap

Production Range Chart

Carbon Steel (Seamless)	Type	Diameter	Wall Thickness	Remarks	
A 234 WPB A 420 WPL6 A 860 WPHY42 A 860 WPHY52 A 860 WPHY60	Elbow Long	90,45	1/2" - 12"	STD - Sch160 / XXS (XXS : 3/4" - 12")	
		180	1/2" - 8"	STD - Sch160 (Sch160 : 11/4" - 4")	
	Elbow Short	90	1" - 12"	STD - Sch160 / XXS	
		180	1" - 8"	STD - Sch160 (Sch160 : 11/2" - 6")	
	Reducer	Concentric	3/4" - 16"	STD - Sch160 / XXS	
		Eccentric			
	Tee		1/2" - 16"	STD - Sch80 / XS	(Sch160 : 1/2" - 8")
					(XXS : 11/2" - 8")
	Cap		1 1/4" - 14"	STD - Sch120	(Sch120 : 4" - 14")



Stainless Steel (Seamless/Welded)	Type	Diameter	Wall Thickness	Remarks	
A 403 WP304 / 304L WP316 / 316L WP S31254	Elbow Long	90,45	1/2" - 4"	Sch10S - Sch160 / XXS (Sch160 / XXS 3/4" - 4")	
			5" - 16"	Sch10S - Sch80S	
	Elbow Short	90	1" - 4"	Sch10S - Sch160 / XXS	
			5" - 16"	Sch10S - Sch80S	
	Reducer	Concentric	3/4" - 16"	Sch10S - Sch160 / XXS	(Sch160 : 3/4" - 6")
		Eccentric			(XXS : 3/4" - 5")
	Tee		1/2" - 5"	Sch10S - Sch160 / XXS	(XXS : 11/2" - 4")
			6" - 16"	Sch10S - Sch40S	(Sch40S : 6" - 12")
	Cap		1 1/4" - 14"	Sch10S - Sch120	(Sch120 / 4" - 14")

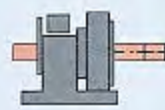


Duplex Stainless Steel (Seamless/Welded)	Type	Diameter	Wall Thickness	Remarks	
A 815 S31803 S32205 S32750 S32760	Elbow Long	90,45	1/2" - 16"	Sch10S - Sch80S (Sch80S / 1/2" - 4")	
	Elbow Short	90	1" - 2"	Sch10S - Sch80S	
			4" - 16"		
	Reducer	Concentric	3/4" - 16"	Sch10S - Sch80S	
		Eccentric			
	Tee		1/2" - 12"	Sch10S - Sch80S	(Sch40S : 1/2" - 10")
					(Sch80S : 1/2" - 6")
Cap		1 1/4" - 14"	Sch10S - Sch120	(Sch120 4" - 14")	

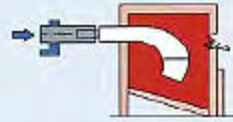


Alloy Steel (Seamless)	Type	Diameter	Wall Thickness	Remarks	
A 234 WP1 WP5 WP9 WP11 WP12 WP22 WP91	Elbow Long	90,45	1/2" - 12"	STD - Sch160 / XXS (XXS : 3/4" - 12")	
		180	1/2" - 8"	STD - Sch160 (Sch160 / 11/4" - 4")	
	Elbow Short	90	1" - 12"	STD - Sch160 / XXS	
		180	1" - 8"	STD - Sch160 (Sch160 : 11/2" - 6")	
	Reducer	Concentric	3/4" - 16"	STD - Sch160 / XXS	
		Eccentric			
	Tee		1/2" - 16"	STD - Sch80 / XS	(Sch160 : 1/2" - 8")
					(XXS : 11/2" - 8")
	Cap		1 1/4" - 14"	STD - Sch80 / XS	



CARBON Steel**ELBOW**

PIPE CUTTING



BENDING



SIZING PRESS



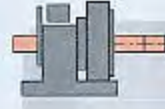
MACHINING (GAS CUTTING)



SHOT BLASTING



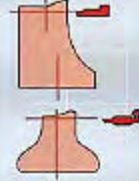
BEVEL ENDS

REDUCER

PIPE CUTTING



FORMING (COLD/HOT)



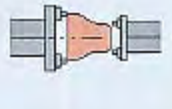
END CUTTING



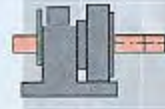
HEAT TREATMENT



SHOT BLASTING



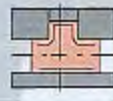
BEVEL ENDS

TEE

PIPE CUTTING



LUBRICANT COATING



FORMING



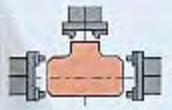
HEAT TREATMENT



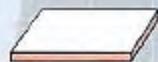
CUT THE BRANCH OF TEE



SHOT BLASTING



BEVEL ENDS

CAP

PLATE



PLATE CUTTING



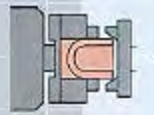
FORMING



HEAT TREATMENT



SHOT BLASTING



BEVEL ENDS



INSPECTION



COATING LINE



MARKING



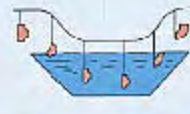
PACKING

STAINLESS Steel**ELBOW**

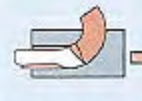
STAINLESS PIPE



PIPE CUTTING



LUBRICANT COATING



COLD FORMING MANDREL



HEAT TREATMENT



SIZING (ELBOW)

ELBOW

STAINLESS PLATE



PLATE CUTTING



U FORMING



O FORMING



WELDING



GRINDING

REDUCER

STAINLESS PIPE



PIPE CUTTING



FORMING



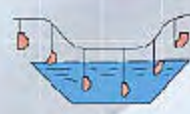
HEAT TREATMENT

TEE

STAINLESS PIPE



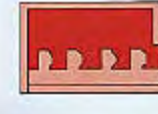
PIPE CUTTING



LUBRICANT COATING



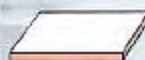
FORMING



HEAT TREATMENT



CUT THE BRANCH OF TEE

CAP

PLATE



PLATE CUTTING



FORMING



HEAT TREATMENT



SIZING



BEVEL ENDS



PICKLING



INSPECTION



MARKING



PACKING

<Applicable Standards>

ASTM	A234 A403 A420 A815 A860	Carbon & alloy steel fittings Stainless steel fittings Fittings for low temperature service Duplex stainless fittings Fittings with high tensile property
ASME	B16.9 / B16.11 / B16.25	For dimension
MSS	SP25 SP75 SP43	For marking procedure Fittings with high tensile property
JIS	B2311 / B2312 / B2313	
EN	10204 3.1	For Inspection Certificate



<Qualifications>

Name ; ISO9001:2000 Pressure Equipment Directive (PED 97/23/EC) JIS Mark Scheme, Certificate of Compliance Norsok M-650	Certified by: Lloyd's Register Quality Assurance Limited Lloyd's Register Quality Assurance Limited Japan Quality Assurance Organization (JQA) Det Norske Veritas
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<Approvals>

Name; Shell Global Solutuins Exxon Mobil (Asia) Total Chevron Dow Chemical-Asia / Pacific CSA Syncrude Aramco Overseas Company SABIC KOC KNPC PDO	Country: Netherland Singapore France Indonesia Holland Canada Canada Japan Saudi Arabia Kuwait Kuwait Oman
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Company Standards	Carbon Steel & Alloy Steel	Stainless Steel & Duplex
Coating	Rust-preventive paint (black)	Passivity treatment
Marking	Die stamping	Electrolysis etching Ink marking
Packing	Carton box Wooden case Wooden crate Wooden pallet & Shrink pack	

Note : Company standards are subject to minor changes without prior notice.



Butt-Welding-Fittings-Weight-And-Volume

Nominal Pipe Size	WEIGHT (Kg)									
	90° Long		90° Short		Reducer		Tee		Cap	
	STD	XS	STD	XS	STD	XS	STD	XS	STD	XS
1/2	0.08	0.10	-	-	-	-	0.08	0.11	0.04	0.05
3/4	0.10	0.13	-	-	0.06	0.07	0.12	0.16	0.05	0.07
1	0.15	0.19	0.10	0.13	0.11	0.14	0.25	0.31	0.11	0.14
1-1/4	0.26	0.34	0.17	0.23	0.15	0.20	0.42	0.55	0.14	0.19
1-1/2	0.37	0.49	0.24	0.33	0.24	0.32	0.60	0.80	0.17	0.24
2	0.65	0.89	0.43	0.60	0.37	0.51	0.87	1.19	0.23	0.33
2-1/2	1.30	1.71	0.87	1.14	0.70	0.92	1.67	2.19	0.40	0.53
3	2.03	2.73	1.35	1.82	0.91	1.23	2.41	3.24	0.66	0.91
3-1/2	2.82	3.91	1.88	2.61	1.28	1.77	3.12	4.32	0.96	1.36
4	3.83	5.36	2.55	3.57	1.45	2.02	4.12	5.77	1.17	1.68
5	6.55	9.23	4.37	6.08	2.52	3.54	6.59	9.29	1.92	2.77
6	10.1	15.3	6.75	10.2	3.63	5.47	9.73	14.7	2.90	4.49
8	20.4	30.9	13.6	20.3	5.80	8.76	18.1	27.4	5.20	7.24
10	36.2	48.8	24.1	32.49	9.76	13.1	30.9	41.7	9.18	12.5
12	52.8	69.9	35.2	46.6	13.9	18.3	44.2	58.5	13.3	17.8
14	67.9	89.9	45.2	59.9	25.6	33.9	53.5	70.9	15.9	21.2
16	89.0	118.0	59.3	78.6	31.0	41.1	66.1	87.7	20.0	26.7

Nominal Pipe Size	VOLUME (m3)				
	90° Long	90° Short	Reducer	Tee	Cap
1/2	-	-	-	-	-
3/4	-	-	-	-	-
1	-	-	-	-	-
1-1/4	-	-	-	-	-
1-1/2	-	-	-	-	-
2	0.001	0.001	-	0.001	-
2-1/2	0.002	0.001	0.001	0.001	-
3	0.003	0.002	0.001	0.002	-
3-1/2	0.004	0.003	0.001	0.003	0.001
4	0.005	0.004	0.001	0.004	0.001
5	0.010	0.007	0.002	0.007	0.001
6	0.016	0.011	0.004	0.011	0.002
8	0.037	0.025	0.007	0.022	0.005
10	0.070	0.046	0.013	0.040	0.009
12	0.118	0.079	0.021	0.067	0.015
14	0.164	0.109	0.042	0.091	0.021
16	0.245	0.163	0.059	0.126	0.029

* Weight and volume are according to theoretical calculation.

* Figures of tees are on equal tees and figures of reducers are on one size reduction reducers.