58 Sheets
(Including Cover)

PIPE SUPPORT DESIGN GUIDE

Rev	Date	Drawn	Checked	Checked	App'd	Remarks
1	'11.03.01	George	Glen	Bob	H.Ohtani	Revised
0	'10.07.20	Dennis	Glen	Bob	H.Ohtani	Original

Approved		'11/03/01	PIPE SUPPORT DESIGN GUIDE
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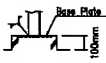
6) Standard Support Foundation Type on the Floor

A) On Ground (On Paving)

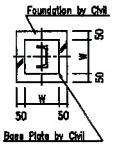
3" & Under

(Base/Anchor Type A)

4" & Over

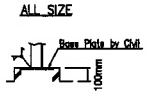


(Base/Anchor Type C)



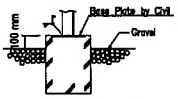
B) On Concrete Floor

ALL SIZE



(Base/Anchor Type C)

C) On Gravel



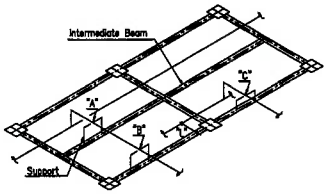
(Base/Anchor Type C)

Member Size	W (mm)
L50x5	200
L75x7	200
C100x50x5	200
C125x65x6	250
C150x75x6.5	250
H125x6.5/9	250
H150x7/10	250
H200x8/12	300
H250x9/14	350
H300x12/12	400

上記以外のBASE PLATE SIZE は CIVIL STD.DWG.「EMBEDDED PLATE FLOOR」
DWG.NO.20-00-SDG1-ST-202を参照すること。

7) Standard Support Type of Branch Pipe Line on the Piperack

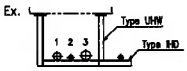
	Bare Pipe	Insulation Pipe (H)	Insulation Pipe (P)
A	Free (All Size)	Free (All Size)	Free (All Size)
B	Guide (6"&Under)	Guide (All Size)	Guide (6"&Under)
	Guide or Free (8" & Over)		Guide or Free (8" & Over)
C	Free (L =< 1M)	Free (All Size)	Free (All Size)
	Guid (L => 1M)		



8) To Minimize Special Support

A) STD. SUPPORT + STD. SUPPORT – Combination Support

Ex.

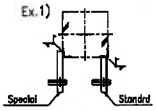


Combination – STD Support "UHW" + STD Support "IHD"

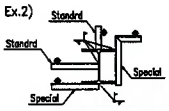
Devise of Standard Support Combination

B) Discrepancy of Standard Support and Special Support

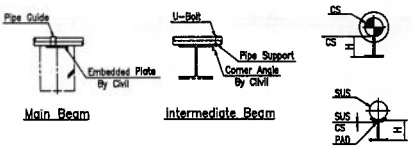
Ex.1)



Ex.2)



9) Standard Support Installation of Pipe Guide and U-Bolt on the Piperack



Main Beam

Intermediate Beam

Pipe Size	Insulation Thickness	Dimension "H"
1/2"~24"	Maximum 80	100
	81~130	150
	131~180	200

Pipe Shoe Height

10) Maximum Allowable Pipe Support Plan

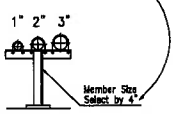
Refer to 「PIPING SPEC (Doc.No.20-00-SPC-PI-161 Sheet 13/25)」

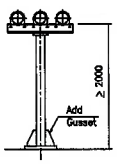
* Vertical support span length,1.3 times of horizontal length

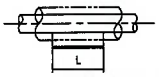
11) Equivalent line Size

When supporting 1",2",3",then

$$LSz = \sqrt{1^2+2^2+3^2} = 3.74 \rightarrow 4"$$







Pipe Size	Installation of Location	Dimension "L"
1/2"~2"	In Area Around Equipment	100
3"~24"	In Area Around Equipment	200
ALL	On Piperack	400
ALL	On Piperack Stopper	MIN. 700

Pipe Shoe Length

	MEMBER DESIGNATION	DIMENSIONS (mm) H	B	t1	t2	r	AREA OF SECTION (10^2mm^2)	MASS PER METER (kg/m)
WIDE H-SHAPE	WH100	100	100	6.0	8.0	10	21.90	17.2
	WH125	125	125	6.5	9.0	10	30.31	23.8
	WH150	150	150	7.0	10	11	40.14	31.5
	WH175	175	175	7.5	11	12	51.21	40.2
	WH200	200	200	8.0	12	13	63.53	49.9
	WH250	250	250	9.0	14	16	92.18	72.4
	WH300	300	300	12	12	18	108.3	83.4
	WH350	350	350	12	19	20	173.9	137
	WH400	400	400	13	21	22	218.7	172
	WH414	414	405	18	28	22	295.4	233
	WH428	428	407	20	35	22	360.7	283
MIDDLE H-SHAPE	WH148	148	100	6	9	11	26.84	21.1
	WH194	194	150	6	9	13	38.01	30.6
	WH244	244	175	7	11	16	56.24	44.1
	WH294	294	200	8	12	18	72.38	56.8
	WH340	340	250	9	14	20	101.5	79.7
	WH390	390	300	10	16	22	136.0	107
	WH440	440	300	11	18	24	157.4	124
	WH488	488	300	11	19	26	163.5	128
	WH588	588	300	12	20	28	192.5	151
	WH700	700	300	13	24	28	235.5	185
	WH800	800	300	14	26	28	267.4	210
	WH900	900	300	16	28	28	309.8	243
SLENDER H-SHAPE	SH175	175	90	5	8	8	23.04	18.1
	SH200	200	100	5.5	8	11	27.16	21.3
	SH250	250	125	6	9	12	37.66	29.6
	SH300	300	150	6.5	9	13	46.78	36.7
	SH350	350	175	7	11	14	63.14	49.6
	SH400	400	200	8	13	16	84.12	66.0
	SH450	450	200	9	14	18	96.76	76.0
	SH500	500	200	10	16	20	114.2	89.6
	SH600	600	200	11	17	22	134.4	106

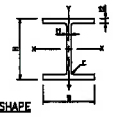
	MEMBER DESIGNATION	DIMENSIONS (mm) H	B	t1	t2	r1	r2	AREA OF SECTION (10^2mm^2)	MASS PER METER (kg/m)
I-SHAPE	I150	150	75	5.5	6.5	8.0	4.5	21.85	17.1
	I200	200	100	7	10	10.0	5	33.08	26.0
	I250	250	125	7.5	12.5	12.0	6	48.79	38.3
	I300	300	150	8	13	12.0	6	61.58	48.3
	I350	350	150	9	15	13.0	6.5	74.56	58.5
	I400	400	150	10	15	17.0	8.5	91.73	72.0
	I450	450	170	13	20	27.0	13.5	146.1	115.0

	MEMBER DESIGNATION	DIMENSIONS (mm) H	B	t1	t2	r	AREA OF SECTION (10^2mm^2)	MASS PER METER (kg/m)
TEE SHAPE	CT125	125	125	6.0	9	12	18.63	14.6
	CT150	150	150	6.5	9	13	23.39	18.4
	CT175	175	175	7.0	11	14	31.57	24.8
	CT200	200	200	8.0	13	18	42.06	33.0
	CT250	250	200	10	16	20	57.12	44.8
	CT300	300	200	11	17	22	67.21	52.8

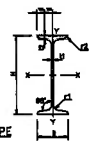
	MEMBER DESIGNATION	DIMENSIONS (mm) H	B	t1	t2	r1	r2	AREA OF SECTION (10^2mm^2)	MASS PER METER (kg/m)
CHANNEL	75	75	40	5.0	7.0	8	4	6.82	5.92
	100	100	50	5.0	7.5	8	4	11.92	9.36
	125	125	65	6.0	8.0	8	4	17.11	13.4
	150	150	75	6.5	10.0	10	5	23.71	18.6
	180	180	75	7.0	10.5	11	5.5	27.20	21.4
	200	200	80	7.5	11.0	12	6	31.33	24.6
	250	250	90	9.0	13.0	14	7	44.07	34.6
	300	300	90	10	15.5	16	8	54.74	43.0
	380	380	100	13	20.0	24	12	85.71	67.3

	MEMBER DESIGNATION	DIMENSIONS (mm) A	B	t	r1	r2	AREA OF SECTION (10^2mm^2)	MASS PER METER (kg/m)
EQUAL ANGLE	L40	40	40	5	4.5	3	3.755	2.95
	L50	50	50	6	6.5	4.5	5.644	4.43
	L65	65	65	6	6.5	4	7.527	5.91
	L75	75	75	9	8.5	6	12.88	9.96
	L90	90	90	7	10	5	12.22	9.59
	L100	100	100	10	10	7	19.0	14.8

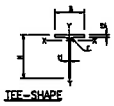
	MEMBER DESIGNATION	DIMENSIONS (mm) A	B	t	r1	r2	AREA OF SECTION (10^2mm^2)	MASS PER METER (kg/m)
UNEQUAL ANGLE	L125x75	125	75	7	10	6	13.62	10.7
	L150x90	150	90	8	12	6	20.94	16.4



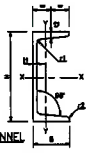
H-SHAPE



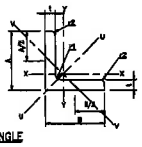
I-SHAPE



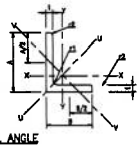
TEE-SHAPE



CHANNEL



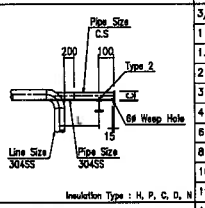
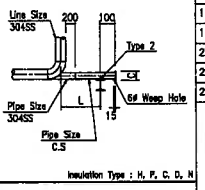
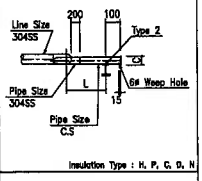
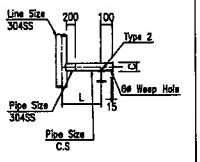
EQUAL ANGLE



UNEQUAL ANGLE

TITLE
STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

DATE	2009/08/18
REV.	0

Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code	FIG
D	1 (on Elbow to Down)	S (W/Stopper)	–	–	N	3/4 ~ 26	3 : 304SS	
		G (W/Guide)	–	–				
		F (Free End)	–	–				
D	2 (on Elbow to Up)	S (W/Stopper)	–	–	N	3/4 ~ 26	3 : 304SS	
		G (W/Guide)	–	–				
		F (Free End)	–	–				
D	3 (on Elbow Horizontal)	S (W/Stopper)	–	–	N	3/4 ~ 26	3 : 304SS	
		G (W/Guide)	–	–				
		F (Free End)	–	–				
D	4 (on Vertical Line)	S (W/Stopper)	–	–	N	3/4 ~ 26	3 : 304SS	
		G (W/Guide)	–	–				
		F (Free End)	–	–				

Application

Line Size	Pipe Size	MAX.L
3/4	3/4	750
1	3/4	750
1.1/2	1	750
2	1.1/2	1000
3	2	1000
4	3	1500
6	4	2000
8	6	2000
10	6	2000
12	6	2000
14	8	2000
16	8	2000
18	10	2000
20	10	2000
24	14	2000
26	14	2000

Pipe Size	C
3/4	50
1	60
1.1/2	70
2	80
3	110
4	140
6	190
8	240
10	290
12	340
14	380
16	430
18	480

Note:
Member Size Select By Attachment: D Type
PAGE_A-01

1) Support Type No.

S 01S - N - 2 - 3 - H
Support / Generic Type / Sub Type / Base/Anchor Type / Equiv.Line Size / Material Code / Insulation Type

2) Base/Anchor Type

Type : N (No Base Plate, Not Welded)

Free End or On Rack/Structure
Note : All other base types not applicabe to above listed base types shall use "N"

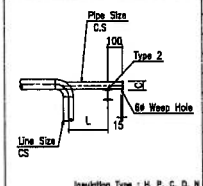
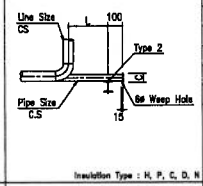
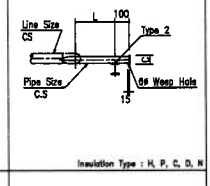
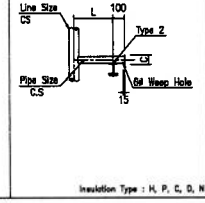
3) Insulation Type
H: Hot Insulation
P: Personnel Protection
C: Cold Insulation
D: Anti-Sweating
N: No Insulation

4) Type 2
S (W/Stopper) : Fix Type Pipe Shoe / Rigid Type U-Bolt
G (W/Guide) : Pipe Shoe & Guide / Loose Type U-Bolt
F (Free End) : Pipe Shoe / Non U-Bolt

Dummy Pipe for SUS Pipe

TITLE
STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

DATE	2009/08/18
REV.	0

Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code	FIG
D	1 (on Elbow to Down)	S (W/Stopper)	–	–	N	3/4 ~ 26	1 : Carbon Steel	
		G (W/Guide)	–	–				
		F (Free End)	–	–				
D	2 (on Elbow to Up)	S (W/Stopper)	–	–	N	3/4 ~ 26	1 : Carbon Steel	
		G (W/Guide)	–	–				
		F (Free End)	–	–				
D	3 (on Elbow Horizontal)	S (W/Stopper)	–	–	N	3/4 ~ 26	1 : Carbon Steel	
		G (W/Guide)	–	–				
		F (Free End)	–	–				
D	4 (on Vertical Line)	S (W/Stopper)	–	–	N	3/4 ~ 26	1 : Carbon Steel	
		G (W/Guide)	–	–				
		F (Free End)	–	–				

Application

Line Size	Pipe Size	MAX.L
3/4	3/4	750
1	3/4	750
1.1/2	1	750
2	1.1/2	1000
3	2	1000
4	3	1500
6	4	2000
8	6	2000
10	6	2000
12	6	2000
14	8	2000
16	8	2000
18	10	2000
20	10	2000
24	14	2000
26	14	2000

Pipe Size	C
3/4	50
1	60
1.1/2	70
2	80
3	110
4	140
6	190
8	240
10	290
12	340
14	380
16	430
18	480

Note:
Member Size Select By Attachment: D Type
PAGE_A-01

1) Support Type No.

S 01S - N - 2 - 1 - H
Support / Generic Type / Sub Type / Base/Anchor Type / Equiv.Line Size / Material Code / Insulation Type

2) Base/Anchor Type

Type : N (No Base Plate, Not Welded)

Free End or On Rack/Structure
Note : All other base types not applicabe to above listed base types shall use "N"

3) Insulation Type
H: Hot Insulation
P: Personnel Protection
C: Cold Insulation
D: Anti-Sweating
N: No Insulation

4) Type 2
S (W/Stopper) : Fix Type Pipe Shoe / Rigid Type U-Bolt
G (W/Guide) : Pipe Shoe & Guide / Loose Type U-Bolt
F (Free End) : Pipe Shoe / Non U-Bolt

Dummy Pipe for C.S Pipe

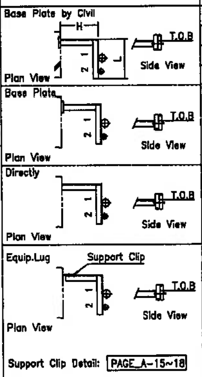
DASH Engineering Philippines, Inc.

STANDARD FOR DETAIL DESIGN

TITLE STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

DATE	2009/08/18
REV.	0

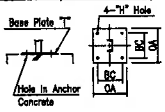
Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code	FIG	Application
F	V (Vertical Line)	–	–	–	C	1/2 ~ 2	1 : Carbon Steel 3 : 304SS	Base Plate by Civil; Plan View; Side View; T.O.B	Line Size / MAX.H / MAX.L: L50x6 / 600 / 500; L65x6 / 600 / 750; C100x50x5 / 1000 / 750. Note: Member Size Select By Attachment: F Type PAGE_A-02
		–	–	–	W			Base Plate; Plan View; Side View; T.O.B	
		–	–	–	D			Directly; Plan View; Side View; T.O.B	
		–	–	–	E			Equip.Lug; Support Clip; Plan View; Side View; T.O.B; Support Clip Detail: PAGE_A-15~18	L65x6 / 600 / 750; L75x9 / 600 / 750. Equiv.Line Size 1/2~1 = L65x6; Equiv.Line Size 11/2~2 = L75x9



1) Support Type No. S FV - C - 6 - 1 (Support, Generic Type, Sub Type, Base/Anchor Type, Equiv.Line Size, Material Code)

2) Base/Anchor Type

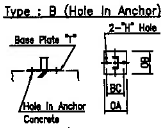
Type : A (Hole In Anchor)



<Parts Code : "OA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23

Type : B (Hole In Anchor)

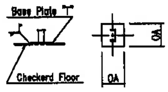


<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

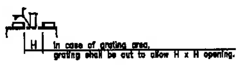
Type : W (Base Plate Welded to Steel Structure)



<Parts Code : "OA"x"T">

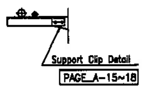
Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)



Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : E (Equipment Lug)

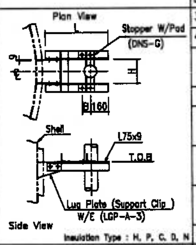
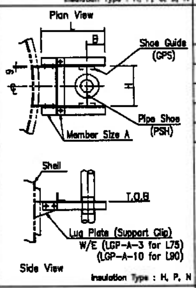
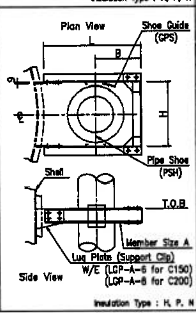


DASH Engineering Philippines, Inc.

STANDARD FOR DETAIL DESIGN

TITLE STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

DATE	2011/03/01
REV.	1

Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code	FIG
H	I (No Bracing)	F (Fixed)	–	–	E	3 or 4	1 : Carbon Steel 3 : 304SS	
H	I (No Bracing)	S (Sliding)	–	–	E	3 ~ 10	1 : Carbon Steel 3 : 304SS	
						12 ~ 26	1 : Carbon Steel 3 : 304SS	

Application (H-I-F):

Line Size	MAX.L	MAX.Load(kg)
3	1500	235
4	1500	235

Ins.Thikness	Line Size	H
0 mm	3	180
	4	215
~75 mm	3	290
	4	315
~125 mm	3	390
	4	415

Application (H-I-S, 3 ~ 10):

Line Size	MAX.L	Member Size A	H	B
3	1500	L75	336	160
4	1500	L75	360	160
6	1500	L75	414	185
8	1500	L90	464	210
10	1500	L90	518	240

Max.Insulation Thikness : 90mm

Application (H-I-S, 12 ~ 26):

Line Size	MAX.L	Member Size A	H	B
12	1500	C150x75	570	410
14	1500	C150x75	600	425
16	1500	C150x75	650	450
18	1500	C150x75	704	477
20	1500	C150x75	754	502
24	1500	C200x80	856	553
26	1500	C200x80	906	578

Max.Insulation Thikness : 90mm

1) Support Type No. S HIF - E - 3 - 1 (Support, Generic Type, Sub Type, Base/Anchor Type, Equiv.Line Size, Material Code)

2) Base/Anchor Type

Type : E (Equipment Lug)

3) Insulation Type

H: Hot Insulation
P: Personnel Protection
C: Cold Insulation
D: Anti-Sweating
N: No Insulation

4) Support Clip Detail: PAGE_A-15

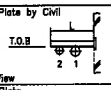
NOTE: Special Case Support Clip Detail: PAGE_A-16~18

TITLE
STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

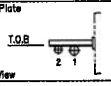
DATE	2009/08/18
REV.	0

Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code
I	B (Horizontal Line)	–	–	–	C	1/2 ~ 14	1 : Carbon Steel 3 : 304SS
		–	–	–	W		
		–	–	–	D		
I	H (Horizontal Line)	–	–	–	C	1/2 ~ 14	1 : Carbon Steel 3 : 304SS
		–	–	–	W		
		–	–	–	D		
		–	–	–	E		

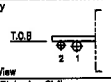
FIG

Base Plate by Civil


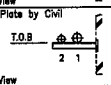
Side View

Base Plate


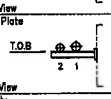
Side View

Directly


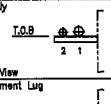
Side View

Base Plate by Civil


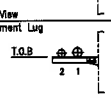
Side View

Base Plate


Side View

Directly


Side View

Equipment Lug


Side View

Support Clip Detail: PAGE_A-15~18

Application

Size	MAX.H	MAX.L
L50x6		600
L65x6		800
L75x9		600
C100x50x5		1000
C125x65x6		1000
C150x75x6.5		1000

Equiv. Line Size	Member Size
1/2 ~ 2	L50x6
3 ~ 4	L65x6
8 ~ 8	L75x9
10	C100x50x5
12	C125x65x6
14	C150x75x6.5

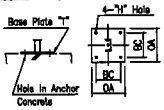
Note:
Member Size Select By Attachment: I Type PAGE_A-03

Size	MAX.L	MAX.Load(kg)
L65x6	600	30
L75x9	600	60

Equiv.Line Size 1/2~1 = L65x6
Equiv.Line Size 11/2~2 = L75x9

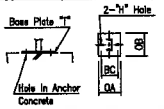
1) Support Type No.
S I B - C - 2 - 1 Material Code
Support / Generic Type / Sub Type / Equiv.Line Size / Base/Anchor Type

2) Base/Anchor Type

Type : A (Hole In Anchor)


<Parts Code : "OA"/"BC"x"T"-"H">

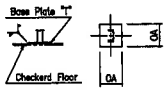
Member Size	Parts Code	H	Member Size	Parts Code	H
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23

Type : B (Hole In Anchor)


<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

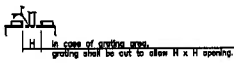
Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

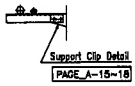
Type : W (Base Plate Welded to Steel Structure)


<Parts Code : "OA"x"T">

Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)


Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : E (Equipment Lug)


PAGE-015

TITLE
STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

DATE	2009/08/18
REV.	0

Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code
I	S (Horizontal Line)	–	–	–	A	1/2 ~ 3	1 : Carbon Steel 3 : 304SS
		–	–	–	C		
		–	–	–	W		
		–	–	–	G		
		–	–	–	D		
I	V (Horizontal Line)	–	–	–	C	1/2 ~ 3	1 : Carbon Steel 3 : 304SS
		–	–	–	W		
		–	–	–	D		

FIG

Hole In Anchor

Base Plate by Civil

Base Plate

on Grating

Directly

Base Plate by Civil

Base Plate

Directly

Application

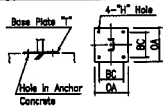
Size	MAX.H	MAX.L
L50x6		600
L65x6		800
L75x9		600
C100x50x5		1000
C125x65x6		1000
C150x75x6.5		1000

Equiv. Line Size	Member Size
1/2 ~ 2	L50x6
3	L65x6

Note:
Member Size Select By Attachment: I Type PAGE_A-03

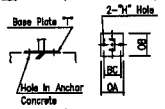
1) Support Type No.
S I S - C - 2 - 1 Material Code
Support / Generic Type / Sub Type / Equiv.Line Size / Base/Anchor Type

2) Base/Anchor Type

Type : A (Hole In Anchor)


<Parts Code : "OA"/"BC"x"T"-"H">

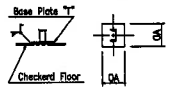
Member Size	Parts Code	H	Member Size	Parts Code	H	For Type:C
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15	FG-M12
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19	FG-M16
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19	FG-M16
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19	FG-M16
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19	FG-M16
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23	FG-M20
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23	FG-M20
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23	FG-M20
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23	FG-M20
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23	FG-M20
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23	FG-M20

Type : B (Hole In Anchor)


<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

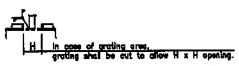
Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

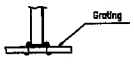
Type : W (Base Plate Welded to Steel Structure)


<Parts Code : "OA"x"T">

Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)


Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : G (On Grating)


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DASH Engineering Philippines, Inc.

STANDARD FOR DETAIL DESIGN

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STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

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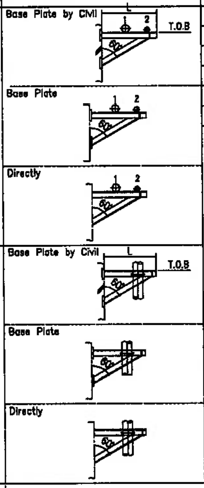


Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code	FIG
K	H (Horizontal Line)	–	–	–	C	2 ~ 26	1 : Carbon Steel 3 : 304SS	Base Plate by Civil
		–	–	–	W			Base Plate
		–	–	–	D			Directly
K	U (Vertical Line)	–	–	–	C	2 ~ 26	1 : Carbon Steel 3 : 304SS	Base Plate by Civil
		–	–	–	W			Base Plate
		–	–	–	D			Directly

Application

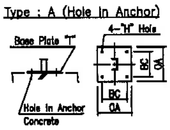
Size	MAX.H	MAX.L
L50x6		800
L65x6		1000
L75x9		1200
C100x50x5		1500
C125x65x6		1700
C150x75x6.5		2000

Note:
Member Size Select By Attachment: K Type
PAGE_A-04

1) Support Type No. [S][KH]-[C]-[2]-[1]
Support / Generic Type / Sub Type / Base/Anchor Type / Equiv.Line Size / Material Code

2) Base/Anchor Type

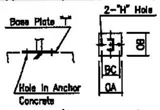
Type : A (Hole In Anchor)



<Parts Code : "OA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23

Type : B (Hole In Anchor)

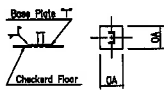


<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

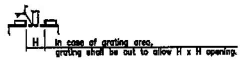
Type : W (Base Plate Welded to Steel Structure)



<Parts Code : "OA"x"T">

Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)



Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : E (Equipment Lug)

DASH Engineering Philippines, Inc.

STANDARD FOR DETAIL DESIGN

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STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

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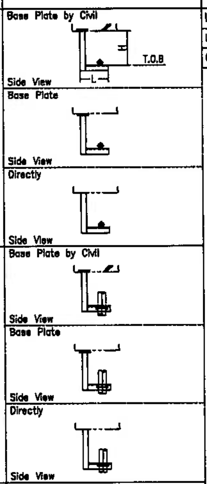


Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code	FIG
L	H (Horizontal Line)	–	–	–	C	1/2 ~ 2	1 : Carbon Steel 3 : 304SS	Base Plate by Civil / Side View
		–	–	–	W			Base Plate / Side View
		–	–	–	D			Directly / Side View
L	U (Vertical Line)	–	–	–	C	1/2 ~ 2	1 : Carbon Steel 3 : 304SS	Base Plate by Civil / Side View
		–	–	–	W			Base Plate / Side View
		–	–	–	D			Directly / Side View

Application

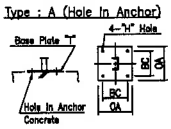
Size	MAX.H	MAX.L
L50x6	600	500
L65x6	600	600
C100x50x5	1500	750

Note:
Member Size Select By Attachment: F Type
PAGE_A-02

1) Support Type No. [S][LH]-[C]-[2]-[1]
Support / Generic Type / Sub Type / Base/Anchor Type / Equiv.Line Size / Material Code

2) Base/Anchor Type

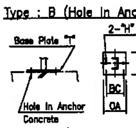
Type : A (Hole In Anchor)



<Parts Code : "OA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23

Type : B (Hole In Anchor)

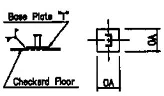


<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

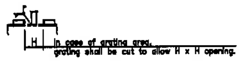
Type : W (Base Plate Welded to Steel Structure)



<Parts Code : "OA"x"T">

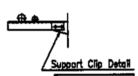
Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)



Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : E (Equipment Lug)



DASH Engineering Philippines, Inc.

STANDARD FOR DETAIL DESIGN

TITLE

STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

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Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code
M	V (Vertical Line)	–	–	–	C	2 ~ 26	1 : Carbon Steel 3 : 304SS
		–	–	–	W		
		–	–	–	D		

Base Plate by Civil — Plan View / Side View

Base Plate — Plan View / Side View

Directly — Plan View / Side View

Application Size	MAX.H	MAX.L
L50x6	600	400
L65x6	1000	700
L75x9	1200	1000
C100x50x5	1500	1200
C125x65x6	1800	1400
C150x75x6.5	2200	1600
H125x8.5/9	3000	2500
H150x7/10	4000	3000

Note:
Member Size Select By Attachment: MH Type

PAGE_A-05,06

1) Support Type No. SI MV - C - 2 - 1 (Support / Generic Type / Sub Type / Base/Anchor Type / Equiv.Line Size / Material Code)

2) Base/Anchor Type

Type : A (Hole In Anchor)

<Parts Code : "OA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23
8	BP300/220x12-23	23	H125x8.5/9	BP300/220x12-23	23
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23

Type : B (Hole In Anchor)

<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x160/130x9-19	19

Type : C (Base Plate by Civil)

Type : W (Base Plate Welded to Steel Structure)

<Parts Code : "OA"x"T">

Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
1.1/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x8.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)

H — In case of grating area, grating shall be cut to allow H x H opening.

Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
1.1/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x8.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : E (Equipment Lug)

Support Clip Detail

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M-3/3

DASH Engineering Philippines, Inc.

STANDARD FOR DETAIL DESIGN

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STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

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Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code	FIG
N	H (Horizontal Line)	–	–	–	C	2 ~ 26	1 : Carbon Steel 3 : 304SS	Base Plate by Civil
		–	–	–	W			Base Plate
		–	–	–	D			Directly
N	U (Vertical Line)	–	–	–	C	2 ~ 26	1 : Carbon Steel 3 : 304SS	Base Plate by Civil
		–	–	–	W			Base Plate
		–	–	–	D			Directly

Application Size	MAX.H	MAX.L
L50x6	1000	800
L65x6	1000	800
L75x9	1500	1000
C100x50x5	2000	1300
C125x65x6	2000	1500
C150x75x6.5	2500	1700

Note:
Member Size Select By Attachment: MH Type

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1) Support Type No. SI NH - C - 2 - 1 (Support / Generic Type / Sub Type / Base/Anchor Type / Equiv.Line Size / Material Code)

2) Base/Anchor Type

Type : A (Hole In Anchor)

<Parts Code : "OA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23
8	BP300/220x12-23	23	H125x8.5/9	BP300/220x12-23	23
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23

Type : B (Hole In Anchor)

<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x160/130x9-19	19

Type : C (Base Plate by Civil)

Type : W (Base Plate Welded to Steel Structure)

<Parts Code : "OA"x"T">

Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
1.1/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x8.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)

H — In case of grating area, grating shall be cut to allow H x H opening.

Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
1.1/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x8.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : E (Equipment Lug)

Support Clip Detail

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N-1/1

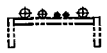
DASH Engineering Philippines Inc.

STANDARD FOR DETAIL DESIGN

TITLE

STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

DATE	2009/08/18
REV.	0

Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code	FIG	Application Size	MAX.H	MAX.L
R	H (Horizontal Line)	–	–	–	N	All	N/A	On Civil Support  Side View			
	U (Vertical Line)	–	–	–	N	All	N/A	On Civil Support Side View			

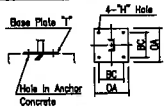
1) Support Type No.

S RH - N - 2 - / Material Code

Support; Generic Type; Sub Type; Base/Anchor Type; Equiv.Line Size

2) Base/Anchor Type

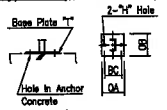
Type : A (Hole In Anchor)



<Parts Code : "QA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23

Type : B (Hole In Anchor)

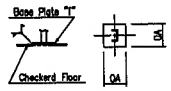


<Parts Code : "QA"x"08"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x8-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

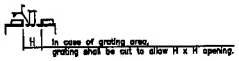
Type : W (Base Plate Welded to Steel Structure)



<Parts Code : "QA"x"T">

Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)



Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	460	H300x12/12	380
18	530		
20	580		
24	680		

Type : E (Equipment Lug)

Support Clip Detail

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R-1/1

DASH Engineering Philippines Inc.

STANDARD FOR DETAIL DESIGN

TITLE

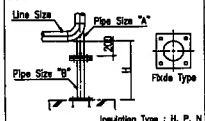
STANDARD DRAWING / SUPPORT STANDARD TYPE LIST

DATE	2009/08/18
REV.	0

Generic Type	Sub Type Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code
S	E (on Elbow)	F (Fixed W/Bolt)	N (Not Adjustable)	P (Pipe)	A	11/2 ~ 26	1 : Carbon Steel 3 : 304SS
					C		
					W		
					G		
		B (Sliding W/Bolt)			A or C or W or G		
		S (Sliding)					

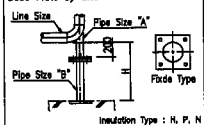
FIG

Hole In Anchor



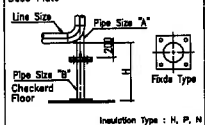
Insulation Type : H, P, N

Base Plate by Civil



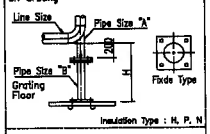
Insulation Type : H, P, N

Base Plate



Insulation Type : H, P, N

on Grating



Insulation Type : H, P, N

Same as Fixed Type

Sliding Type (W/Bolt)

Insulation Type : H, P, N

Same as Fixed Type

Sliding Type (Spacer Plate)

Insulation Type : H, P, N

Line Size	Pipe Size A	Pipe Size B	MAX.H
11/2	1	1	750
2	11/2	11/2	
21/2	2	2	
3	2	2	
4	3	3	1000
5	4	4	1250
6	4	4	
8	6	6	1500
10	6	6	
12	6	6	
14	8	8	
16	8	8	
18	10	10	
20	10	10	
24	14	14	
26	14	14	

MAX.Insulation Thikness : 150mm

Note:
Member Size Select By Attachment: S Type
PAGE_A-11

Non INS.
Hot INS.

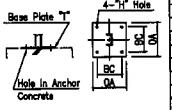
1) Support Type No.

S SEENP - C - 2 - 1 Material Code

Support; Generic Type; Sub Type; Base/Anchor Type; Equiv.Line Size

2) Base/Anchor Type

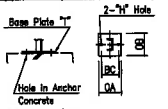
Type : A (Hole In Anchor)



<Parts Code : "QA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H	For Type:G
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15	FG-M12
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19	FG-M16
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19	FG-M16
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19	FG-M16
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19	FG-M16
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23	FG-M20
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23	FG-M20
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23	FG-M20
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23	FG-M20
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23	FG-M20
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23	FG-M20

Type : B (Hole In Anchor)

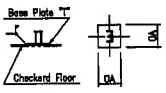


<Parts Code : "QA"x"08"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x8-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

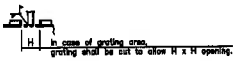
Type : W (Base Plate Welded to Steel Structure)



<Parts Code : "QA"x"T">

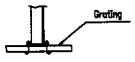
Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)



Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	460	H300x12/12	380
18	530		
20	580		
24	680		

Type : G (On Grating)



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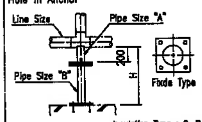
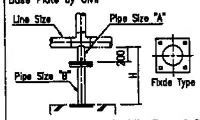
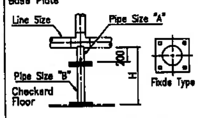
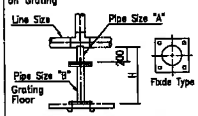
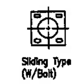
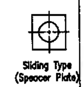
S-1/5

Generic Type	Sub Type Type1	Sub Type Type2	Sub Type Type3	Sub Type Type4	Base Anchor Type	Equiv. Line Size	Material Code	FIG
S	T (on tee)	F (Fixed W/Bolt)	N (Not Adjustable)	C (Cold Service)	A	11/2 ~ 26	1 : Carbon Steel 3 : 304SS	Hole In Anchor  Insulation Type : C, D
					C			Base Plate by Civil  Insulation Type : C, D
					W			Base Plate  Insulation Type : C, D
					G			on Grating  Insulation Type : C, D
		B (Sliding W/Bolt)			A or C or W or G			Same as Fixed Type  Insulation Type : C, D
		S (Sliding)						Same as Fixed Type  Insulation Type : C, D

Line Size	Pipe Size A	Pipe Size B	MAX.H
11/2	1	1	
2	11/2	11/2	
21/2	2	2	750
3	2	2	
4	3	3	1000
5	4	4	1250
6	4	4	
8	6	6	1500
10	8	6	
12	8	6	
14	8	8	
16	8	8	
18	10	10	
20	10	10	
24	14	14	
26	14	14	

MAX.Insulation Thikness : 65mm

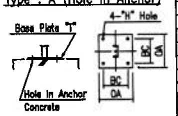
Cold INS.

Note:
Member Size Select By
Attachment: S Type
PAGE_A-11

1) Support Type No. S SEFNP - C - 2 - 1 — Material Code
Support / Generic Type / Sub Type / Base/Anchor Type / Equiv.Line Size

2) Base/Anchor Type

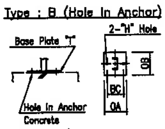
Type : A (Hole In Anchor)



<Parts Code : "OA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H	For Type:G
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15	FG-M12
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19	FG-M16
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19	FG-M16
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19	FG-M16
4	BP190/130x9-19	19	C125x65x8	BP240/180x9-19	19	FG-M16
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23	FG-M20
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23	FG-M20
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23	FG-M20
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23	FG-M20
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23	FG-M20
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23	FG-M20

Type : B (Hole In Anchor)

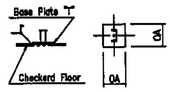


<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

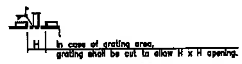
Type : W (Base Plate Welded to Steel Structure)



<Parts Code : "OA"x"T">

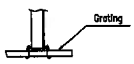
Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)



Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : G (On Grating)



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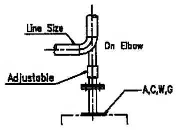
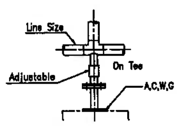
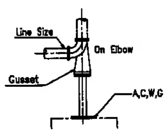
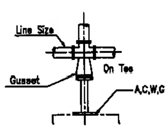
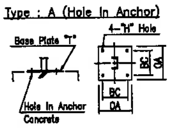
Generic Type	Sub Type Type1	Sub Type Type2	Sub Type Type3	Sub Type Type4	Description	FIG
S	E (on Elbow)	(Slide) B	A (Adjustable)	C	On Elbow, Sliding, Adjustable, Cold Type	 On Elbow Adjustable
		(Slide) B		P	On Elbow, Sliding, Adjustable, Pipe Type	
		(Fix) F		C	On Elbow, Fixed, Adjustable, Cold Type	
		(Fix) F		P	On Elbow, Fixed Adjustable, Pipe Type	
	T (on Tee)	(Slide) B		C	On Tee, Sliding, Adjustable, Cold Type	 On Tee Adjustable
		(Slide) B		P	On Tee, Sliding, Adjustable, Pipe Type	
		(Fix) F		C	On Tee, Fixed, Adjustable, Cold Type	
		(Fix) F		P	On Tee, Fixed, Adjustable, Pipe Type	
	E (on Elbow)	(Fix) F	N (Not Adjustable)	G (Gusset)	On Elbow, Fixed, Not Adjust, Gusset Type	 On Elbow Not Adjustable
		(Slide) S			On Elbow, Sliding, Not Adjust, Gusset Type	
	T (on Tee)	(Fix) F			On Tee, Fixed, Not Adjust, Gusset Type	 On Tee Not Adjustable
		(Slide) S			On Tee, Sliding, Not Adjust, Gusset Type	

(Column headings of this sheet: Generic Type, Sub Type Type1–Type4, Base Anchor Type, Equiv. Line Size, Material Code, FIG, Line Size, Pipe Size A, Pipe Size B, MAX.H (MIN.H))

1) Support Type No. S SEFNP - C - 2 - 1 — Material Code
Support / Generic Type / Sub Type / Base/Anchor Type / Equiv.Line Size

2) Base/Anchor Type

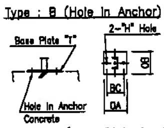
Type : A (Hole In Anchor)



<Parts Code : "OA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H	For Type:G
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15	FG-M12
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19	FG-M16
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19	FG-M16
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19	FG-M16
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19	FG-M16
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23	FG-M20
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23	FG-M20
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23	FG-M20
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23	FG-M20
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23	FG-M20
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23	FG-M20

Type : B (Hole In Anchor)

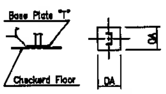


<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

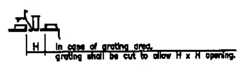
Type : W (Base Plate Welded to Steel Structure)



<Parts Code : "OA"x"T">

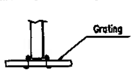
Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)



Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : G (On Grating)



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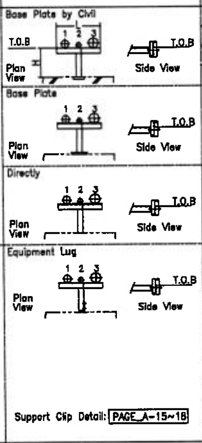
Generic Type	Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code
T	V (Vertical Line)	–	–	–	C	1/2 ~ 3	1 : Carbon Steel, 3 : 304SS
		–	–	–	W		
		–	–	–	D		
		–	–	–	E	1/2 ~ 2	1 : Carbon Steel, 3 : 304SS

FIG



Support Clip Detail: PAGE_A-15~18

Application

Size	MAX.H	MAX.L
L50x6	600	400
L65x6	600	500
C100x50x5	1500	1000

Note:
Member Size Select By Attachment: T Type PAGE_A-12

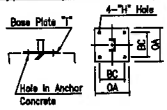
Size	MAX.H	MAX.Load(kg)
L65x6	600	30
L75x9	800	60

Equiv. Line Size	MAX.L	Member Size
1/2	500	L65x6
3/4	500	L65x6
1	500	L65x6
11/2	700	L75x9
2	700	L75x9

1) Support Type No. S TV - C - 2 - 1 (Support, Generic Type, Sub Type, Base/Anchor Type, Equiv.Line Size, Material Code)

2) Base/Anchor Type

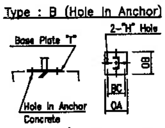
Type : A (Hole In Anchor)



<Parts Code : "OA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23

Type : B (Hole In Anchor)

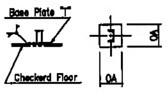


<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

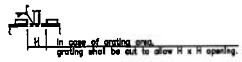
Type : W (Base Plate Welded to Steel Structure)



<Parts Code : "OA"x"T">

Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP180x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)



Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : E (Equipment Lug)

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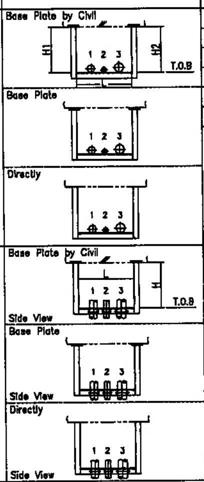
Generic Type	Type1	Type2	Type3	Type4	Base Anchor Type	Equiv. Line Size	Material Code
U	H (Horizontal Line)	–	–	–	C	2 ~ 26	1 : Carbon Steel, 3 : 304SS
		–	–	–	W		
		–	–	–	D		
U	U (Vertical Line)	–	–	–	C	2 ~ 26	1 : Carbon Steel, 3 : 304SS
		–	–	–	W		
		–	–	–	D		

FIG



Application

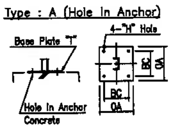
Size	MAX.H	MAX.L
L50x6	1000	400
L65x6	1200	800
L75x9	1500	1000
C100x50x5	1800	1300
C125x65x6	2200	1500
C150x75x6.5	2500	1700

Note:
Member Size Select By Attachment: U Type PAGE_A-13,14

1) Support Type No. S UH - C - 2 - 1 (Support, Generic Type, Sub Type, Base/Anchor Type, Equiv.Line Size, Material Code)

2) Base/Anchor Type

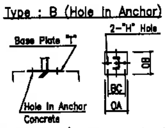
Type : A (Hole In Anchor)



<Parts Code : "OA"/"BC"x"T"-"H">

Member Size	Parts Code	H	Member Size	Parts Code	H
PIPE 1	BP130/80x6-15	15	SECTION L50x6	BP130/80x6-15	15
1.1/2	BP130/80x6-15	15	L65x6	BP160/100x9-19	19
2	BP130/80x6-15	15	L75x9	BP190/130x9-19	19
3	BP160/100x9-19	19	C100x50x5	BP190/130x9-19	19
4	BP190/130x9-19	19	C125x65x6	BP240/180x9-19	19
6	BP240/180x9-19	19	C150x75x6.5	BP300/220x12-23	23
8	BP300/220x12-23	23	H125x6.5/9	BP300/220x12-23	23
10	BP350/270x12-23	23	H150x7/10	BP300/220x12-23	23
12	BP400/320x12-19	23	H200x8/12	BP350/270x12-23	23
14	BP450/350x12-19	23	H250x9/14	BP400/320x12-23	23
16	BP500/400x16-23	23	H300x12/12	BP500/400x16-23	23

Type : B (Hole In Anchor)

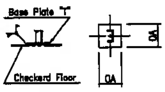


<Parts Code : "OA"x"OB"/"BC"x"T"-"H">

Member Size	Parts Code	H
SECTION L50x6	BP140x100/100x6-15	15
L65x6	BP160x120/120x9-19	19
L75x9	BP180x140/130x9-19	19
C100x50x5	BP180x140/130x9-19	19
C125x65x6	BP190x190/130x9-19	19

Type : C (Base Plate by Civil)

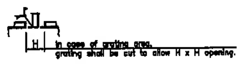
Type : W (Base Plate Welded to Steel Structure)



<Parts Code : "OA"x"T">

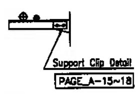
Member Size	Parts Code	Member Size	Parts Code
PIPE 1	BP130x6	SECTION L50x6	BP130x6
11/2	BP130x6	L65x6	BP160x9
2	BP130x6	L75x9	BP190x9
3	BP160x9	C100x50x5	BP190x9
4	BP190x9	C125x65x6	BP240x9
6	BP240x9	C150x75x6.5	BP240x9
8	BP300x12	H125x6.5/9	BP240x9
10	BP350x12	H150x7/10	BP240x9
12	BP400x12	H200x8/12	BP300x12
14	BP450x12	H250x9/14	BP350x12
16	BP500x16	H300x12/12	BP400x12
18	BP550x16		
20	BP600x19		
24	BP700x19		

Type : D (Directly Welded to Steel Structure w/o Base Plate)



Member Size	H	Member Size	H
PIPE 1	90	SECTION L50x6	110
11/2	100	L65x6	130
2	110	L75x9	140
3	140	C100x50x5	150
4	170	C125x65x6	170
6	220	C150x75x6.5	220
8	270	H125x6.5/9	170
10	330	H150x7/10	220
12	380	H200x8/12	270
14	430	H250x9/14	330
16	480	H300x12/12	380
18	530		
20	580		
24	680		

Type : E (Equipment Lug)



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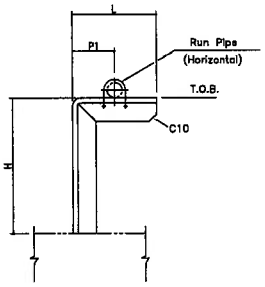
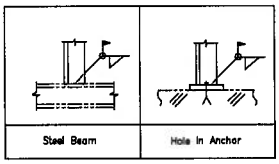
Attachment : F Type



Note:
1. Dimension (H) Shall Be Adjusted At Site



Equiv.Pipe Size (inch)	Dimension H (MM)						
	A 200	B 400	C 600	D 800	E 1000	F 1200	G 1400
1/2	L50	L50	L50	–	–	–	–
3/4				–	–	–	–
1				–	–	–	–
1 1/2	L65	L65	L65	–	–	–	–
2				–	–	–	–

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F-TYPE

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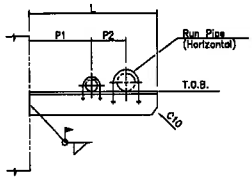
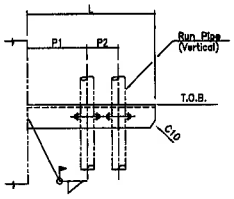
Attachment : I Type



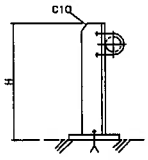
Angle Steel
Channel Steel



Angle Steel
Channel Steel

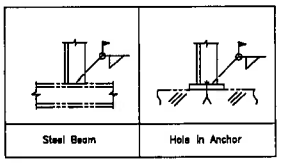
Equiv.Pipe Size (inch)	Dimension L (MM)									
	A 200	B 400	C 600	D 800	E 1000	F 1200	G 1400	H 1600	I 1800	J 2000
1/2	L50	L50	L50	–	–	–	–	–	–	–
3/4				–	–	–	–	–	–	–
1				–	–	–	–	–	–	–
1 1/2	L50	L50	–	–	–	–	–	–	–	–
2			L65	–	–	–	–	–	–	–
3	L65	L65	L75	–	–	–	–	–	–	–
4						–	–	–	–	–
6	L75	L75		L90	L90	[125	[125	[125	–	–
8									[150	[150
10	–	–	[125	[150	[150	[150	[150	[180	[180	[180
12	–	–								
14	–	–	[150	[150		[180	[180		–	–
16	–	–	–	–	[200	[200	[200	[200	–	–
18	–	–	–	–					–	–

Attachment : I Type



Hole In Anchor

Note:
1. Dimension (H) Shall Be Adjusted At Site



Equiv.Pipe Size (inch)	Dimension H (MM)						
	A 200	B 400	C 600	D 800	E 1000	F 1200	G 1400
1/2	L50	L50	L50	–	–	–	–
3/4				–	–	–	–
1				–	–	–	–
1 1/2	L65	L65	L65	–	–	–	–
2				–	–	–	–

PAGE_A-03

I-TYPE

TITLE
STEEL MEMBER SELECTION GUIDE / M-TYPE SUPPORT

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Attachment : MH Type

Equiv.Pipe Size (inch	Dimension L (MM)	Dimension H (MM) A 200	B 400	C 600	D 800	E 1000	F 1200	G 1400	H 1600	I 1800	J 2000	K 2200
8	D 400	L75	L75	L75	L75	L75	L75	L75	L75	L75	L75	L75
	E 500											
	F 600											
	G 700	L90	L90	L90	L90	L90	L90	L90	L90	L90	L90	L90
	H 800											
	I 900											
	J 1000											
	K 1100											
	L 1200											
	M 1300	[125	[125	[125	[125	[125	[125	[125	[125	[125	[125	[125
	N 1400											
	O 1500											
	P 1600											
10	D 400	L90	L90	L90	L90	L90	L90	L90	L90	L90	L90	L90
	E 500											
	F 600											
	G 700											
	H 800											
	I 900											
	J 1000	[125	[125	[125	[125	[125	[125	[125	[125	[125	[125	[125
	K 1100											
	L 1200											
	M 1300											
	N 1400											
	O 1500											
	P 1600											
12	E 500	L90	L90	L90	L90	L90	L90	L90	L90	L90	L90	L90
	F 600	[125	[125	[125	[125	[125	[125	[125	[125	[125	[125	[125
	G 700											
	H 800											
	I 900											
	J 1000											
	K 1100											
	L 1200											
	M 1300											
	N 1400	[150	[150	[150	[150	[150	[150	[150	[150	[150	[150	[150
	O 1500											
	P 1600											
	Q 1700											
14	E 500	[125	[125	[125	[125	[125	[125	[125	[125	[125	[125	[125
	F 600											
	G 700											
	H 800											
	I 900	[150	[150	[150	[150	[150	[150	[150	[150	[150	[150	[150
	J 1000											
	K 1100											
	L 1200											
	M 1300											
	N 1400											
	O 1500											
	P 1600											

Attachment : MH Type

Equiv.Pipe Size (inch)	Dimension L (MM)	Dimension H (MM) A 200	B 400	C 600	D 800	E 1000	F 1200	G 1400	H 1600	I 1800	J 2000	K 2200
14	Q 1700	[180	[180	[180	[180	[180	[180	[180	[180	[180	[180	[180
	R 1800											
	S 1900											
	T 2000											
	U 2100											
	V 2200											
	W 2300											
16	F 600	[125	[125	[125	[125	[125	[125	[150	[150	[150	[150	[150
	G 700											
	H 800											
	I 900	[150	[150	[150	[150	[150	[150					
	J 1000											
	K 1100											
	L 1200											
	M 1300											
	N 1400											
	O 1500	[180	[180	[180	[180	[180	[180	[180	[180	[180	[180	[180
	P 1600											
	Q 1700											
	R 1800											
	S 1900											
	T 2000											
	U 2100	[200	[200	[200	[200	[200	[200	[200	[200	[200	[200	[200
	V 2200											
	W 2300											
	X 2400											
18	F 600	[150	[150	[150	[150	[150	[150	[180	[180	[180	[180	[180
	G 700											
	H 800											
	I 900	[180	[180	[180	[180	[180	[180					
	J 1000											
	K 1100											
	L 1200											
	M 1300											
	N 1400											
	O 1500	[200	[200	[200	[200	[200	[200	[200	[200	[200	[200	[200
	P 1600											
	Q 1700											
	R 1800											
	S 1900											
	T 2000											
	U 2100											
	V 2200											
	W 2300											
	X 2400											

TITLE
STEEL MEMBER SELECTION GUIDE / M-TYPE SUPPORT

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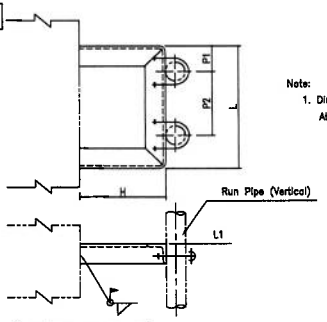
Attachment : MV Type



Note:
1. Dimension (H) Shall Be Adjusted At Site

Equiv.Pipe Size (inch	Dimension L (MM)	Dimension H (MM) A 200	B 400	C 600
1/2	A 100	L 40	L 40	–
	B 200			–
	C 300			–
3/4	A 100	L 50	L 50	L 50
	B 200			
	C 300			
	D 400			
1	A 100	L 40	L 40	–
	B 200	L 50	L 50	L 50
	C 300			
	D 400			
	E 500			
1 1/2	B 200			
	C 300			
	D 400			
	E 500	L 65	L 65	L 65
	F 600			
	G 700			
2	B 200	L 50	L 50	L 50
	C 300			
	D 400			
	E 500	L 65	L 65	L 65
	F 600			
	G 700			
3	B 200			
	C 300			
	D 400			
	E 500			
	F 600			L 75
	G 700			

Equiv.Pipe Size (inch	Dimension L (MM)	Dimension H (MM) A 200	B 400	C 600
4	C 300	L 65	L 65	L 65
	D 400			
	E 500			
	F 600	L 75	L 75	L 75
	G 700			
	H 800			
6	C 300	L 65	L 65	L 65
	D 400			
	E 500	L 75	L 75	L 75
	F 600			
	G 700			
	H 800			
	I 900			
8	D 400			
	E 500			
	F 600			
	G 700			
	H 800			
	I 900			
10	D 400	L 90	L 90	L 90
	E 500			
	F 600			
	G 700			
	H 800			
	I 900			
12	E 500			
	F 600			
	G 700			
	H 800			
	I 900			

TITLE
STEEL MEMBER SELECTION GUIDE / P-TYPE SUPPORT

DATE	2009/09/01
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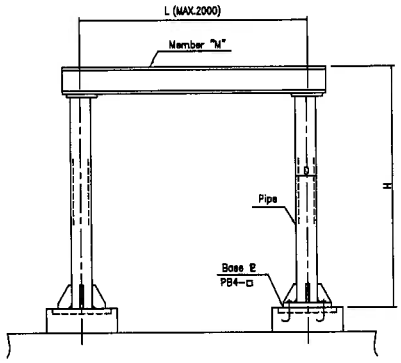
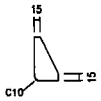
Attachment : P Type



For Embedded

For Anchor Bolt



Symbol	D"	Member"M"	H(MAX.)	Allo.Vert.Load (KN)
	3	H100X100X6	3000	13.0
	4	H100X100X8	4000	20.0
	6	H125X125X6.5	4000	42.0
	8	H150X150X7	4000	65.0

Note:
1.Dimension "L","H" Shall Be Designated For Support

TITLE
STEEL MEMBER SELECTION GUIDE / S-TYPE SUPPORT

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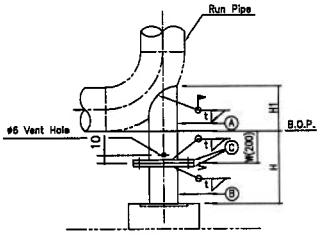
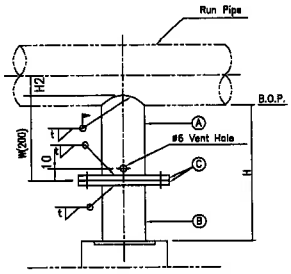
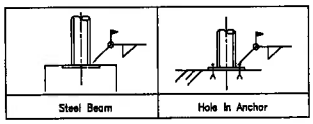
Attachment : S Type







Note:

1.Material

Ⓐ Pipe = Run Pipe SUS-TP304SS SCH10S
Run Pipe C.S-A53-GrB SCH20

Ⓑ Pipe = A53-GrB SCH20

Ⓒ Plate Flange = C.S

2.Dimension (H) Shall Be Ajusted On Site.

Run Pipe Size (inch)	Ⓐ, Ⓑ Pipe Size (inch)	Dimension (MM) H					H1	H2	Ⓒ
1 1/2	1	B 500	C 750				42	7	
2	1 1/2						65	12	
2 1/2	2						81	15	
3	2						86	12	
4	3			D 1000			130	22	
5	4				E 1250		143	17	
6	4						179	25	
8	6					F 1500	258	39	
10	6						285	29	
12	6						314	22	
14	8						394	36	
16	8						424	33	
18	10						500	45	
20	10						527	42	
22	12						605	45	
24	14						664	67	

TITLE
STEEL MEMBER SELECTION GUIDE / U-TYPE SUPPORT

DATE	2009/09/01
REV.	0

Attachment : U Type

Equiv.Pipe Size (inch)	Dimension L (MM)	Dimension H (MM) A 200	B 400	C 600	D 800	E 1000	F 1200	G 1400	H 1600	I 1800	J 2000	K 2200
8	D 400	L75	L75	L75	L75	L75	L75	L75	L75	L75	–	–
	E 500										–	–
	F 600										–	–
	G 700										–	–
	H 800	L90	L90	L90	L90	L90	L90	L90	L90	L90	–	–
	I 900										–	–
	J 1000										–	–
	K 1100										–	–
	L 1200										–	–
	M 1300										–	–
	N 1400	[125	[125	[125	[125	[125	[125	[125	[125	[125	–	–
	O 1500										–	–
	P 1600										–	–
10	D 400	–	–	L90	L90	L90	L90	L90	L90	L90	–	–
	E 500	–	–								–	–
	F 600	–	–								–	–
	G 700	L90	L90								–	–
	H 800										–	–
	I 900										–	–
	J 1000										–	–
	K 1100											
	L 1200										–	–
	M 1300										–	–
	N 1400	[125	[125	[125	[125	[125	[125	[125	[125	[125	–	–
	O 1500										–	–
	P 1600										–	–
12	E 500	–	L90	L90	L90	L90	L90	L90	L90	L90	–	–
	F 600	–									–	–
	G 700	–	[125	[125	[125	[125	[125	[125	[125	[125	–	–
	H 800	–									–	–
	I 900	–									–	–
	J 1000	–									–	–
	K 1100	[125									–	–
	L 1200										–	–
	M 1300											
	N 1400											
	O 1500	[150	[150	[150	[150	[150	[150	[150	[150	[150	[150	[150
	P 1600											
	Q 1700											
14	E 500	–	–	[125	[125	[125	[125	[125	[125	[125	[125	[125
	F 600	–	–									
	G 700	–	–									
	H 800	–	–									
	I 900	–	–									
	J 1000	–	–									
	K 1100	–	–	[150	[150	[150	[150	[150	[150	[150	[150	[150
	L 1200	–	–									
	M 1300	–	–									
	N 1400	–	–									
	O 1500	–	–									
	P 1600	–	–									

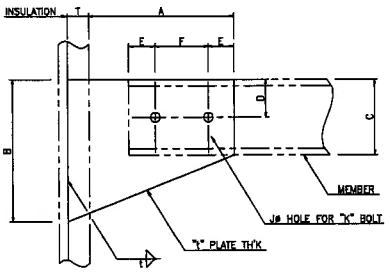
Equiv.Pipe Size (inch)	Dimension L (MM)	Dimension H (MM) A 200	B 400	C 600	D 800	E 1000	F 1200	G 1400	H 1600	I 1800	J 2000	K 2200
14	Q 1700	–	–	[180	[180	[180	[180	[180	[180	[180	[180	[180
	R 1800	–	–									
	S 1900	–	–									
	T 2000	–	–									
	U 2100	–	–									
	V 2200	–	–									
	W 2300	–	–									
	X 2400	–	–									
16	F 600	–	–	[150	[150	[150	[150	[150	[150	[150	[150	[150
	G 700	–	–									
	H 800	–	–									
	I 900	–	–									
	J 1000	–	–									
	K 1100	–	–									
	L 1200	–	–									
	M 1300	–	–									
	N 1400	–	–									
	O 1500	–	–	[180	[180	[180	[180	[180	[180	[180	[180	[180
	P 1600	–	–									
	Q 1700	–	–									
	R 1800	–	–									
	S 1900	–	–									
	T 2000	–	–	[200	[200	[200	[200	[200	[200	[200	[200	[200
	U 2100	–	–									
	V 2200	–	–									
	W 2300	–	–									
	X 2400	–	–									
18	F 600	–	–	[150	[150	[150	[150	[150	[150	[150	[150	[150
	G 700	–	–									
	H 800	–	–									
	I 900	–	–	[180	[180	[180	[180	[180	[180	[180	[180	[180
	J 1000	–	–									
	K 1100	–	–									
	L 1200	–	–									
	M 1300	–	–									
	N 1400	–	–									
	O 1500	–	–	[200	[200	[200	[200	[200	[200	[200	[200	[200
	P 1600	–	–									
	Q 1700	–	–									
	R 1800	–	–									
	S 1900	–	–									
	T 2000	–	–									
	U 2100	–	–									
	V 2200	–	–									
	W 2300	–	–									
	X 2400	–	–									

TITLE
SUPPORT CLIP (LUG PLATE) DETAIL (LGP-A, B)

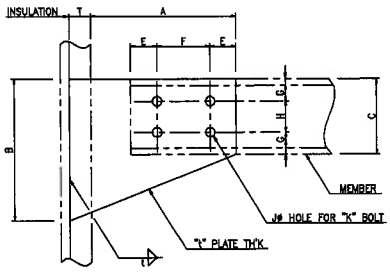
DATE	2011/03/01
REV.	1

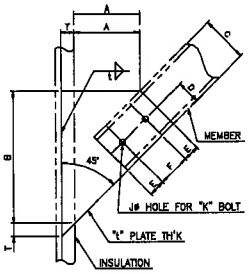
Attachment : Support Clip Detail

TYPE-A
(LGP-A-1,2,3,4,10)

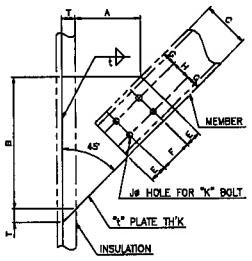


TYPE-A
(LGP-A-5,6,7,8,9)





TYPE-B
(LGP-B-1,2,3,4,10)



TYPE-B
(LGP-B-5,6,7,8,9)

(UNIT: MM)

TYPE NO.	MEMBER	A	B	C	D	E	F	G	H	J#	K	t
LGP-A-1	L-50X50X6	150	100	50	30	30	60	–	–	19	M16	9
-2	L-65X65X6	160	130	65	35		70	–	–	23	M20	
-3	L-75X75X9	160	140	75	40			–	–			
-4	[-100X50X5	170	160	100	50		80	–	–			10
-5	[-125X65X6	170	160	125	–			37.5	50			
-6	[-150X75X6.5	190	220	150	–		100	42.5	65			12
-7	[-180X75X7	210	260	180	–	35	110	45	90			
-8	[-200X80X7.5	220	300	200	–		120	50	100			
-9	I-250X90X11	250	350	250	–	40	140	60	130	25	M22	16
-10	L-90X90X10	210	180	90	55	45	90	–	–	23	M20	12

(UNIT: MM)

TYPE NO.	MEMBER	A	B	C	D	E	F	G	H	J#	K	t
LGP-B-1	L-50X50X6	115	185	50	30	30	60	–	–	19	M16	9
-2	L-65X65X6	120	215	65	35		70	–	–	23	M20	
-3	L-75X75X9		230	75	40			–	–			
-4	[-100X50X5	130	270	100	50		80	–	–			10
-5	[-125X65X6		305	125	–			37.5	50			
-6	[-150X75X6.5	145	355	150	–		100	42.5	65			12
-7	[-180X75X7	160	410	180	–	35	110	45	90			
-8	[-200X80X7.5	185	450	200	–		120	50	100			
-9	I-250X90X11	190	540	250	–	40	140	60	130	25	M22	16
-10	L-90X90X10	160	285	90	55	45	90	–	–	23	M20	12

INSULATION TYPE : H, F, T, J

		H			U, V		S	B
R	RL : 04 PIPE RACK RR : AREA RS : 01 SPECIAL	PSH S101 S102						
		R_RR,RS						
G	GL : 04 PIPE RACK GR : AREA GO : O-TYPE SUPPORT GP : GUIDE FOR PUMP GC : GUIDE FOR STEAM TRAP GS : 01 SPECIAL	PSH S101 S102 GPS S112	PSH S101 S102 GPS S112	CLKA S401	PSH S101 S102 GPS S112 PLAN VIEW	CLKA S401		PSH S101 S102 GPS S112 1/2" TO 6"
		GL,GP	GR,GO,GS	GC	GL,GR	GC		GR
D	DL : 07 PIPE RACK DR : 04 AREA DP : 04 DIRECTIONAL FOR PUMP DC : DIRECTIONAL FOR STEAM TRAP	PSH S101 S102 PSS S122 GPS S112	PSH S101 S102 PSS S122 GPS S112	CLKB S401	PSB S105 S313 DNS 1/2" TO 2" 3" & LARGER			PSH S101 S102 PSS S122 GPS S112 1/2" TO 6"
		DL,DP	DR	DC	DL,DR			DR
S	SL : 07 PIPE RACK SR : 04 AREA	PSH S101 S102 PSS S122			PSH S101 S102 DNS S311 S312 GPS S112 1/2" TO 14" 16" & LARGER			
		SL,SR			SL,SR			

NOTE:

1. USE GP/DP FOR PIPE PIECE AFTER PUMP NOZZLE TO FLANGE. GP/DP USE GPS-1/2 FOR EASY MAINTENANCE.

LINE FOR GP/DP — LINE FOR AREA

REV. NO.	DATE	DESCRIPTION	DWN	CHK'D	APP'D	CRT'D

PIPE SUPPORT FUNCTION
HOT INSULATION, TRACE INSULATION

SCALE :	JOB NO. : HC4410	
PROJECT DRAWING NO.	SHEET	REVISION
TSA	1 of 2	0

INSULATION TYPE : NON
: P

		H				U, V	S	B
R	RL : 04 PIPE RACK RR : 04 AREA RC : CONDENSATE PP LINE RW : SLOPING LINE	1/2" TO 24"	PSH S103 26" & LARGER	PSH S101 S102				
		RL,RR	RL,RR	RW,RC				
G	GL : 04 PIPE RACK GR : 04 AREA GC : CONDENSATE PP LINE GO : O-TYPE SUPPORT AND U-BOLT REQUIRED GW : SLOPING LINE	GP S111 1/2" TO 24"	PSH S101 S102 GPS S112 26" & LARGER	PSH S101 S102 GPS S112 26" & LARGER	PSH S101 S102 GPS S112	CLKA S401 1/2" TO 24"	CLKA S401 1/2" TO 24"	PSH S101 S102< GPS S112 PLAN VIEW	CLKA S401 1/2" TO 6"	CLKA S401 1/2" TO 6"
		GL,GR	GL	GR	GW	GO	GR,GL,GO	GC	GR,GO	GR,GO
D	DL : 07 PIPE RACK DR : 04 AREA DU : AREA DD : SV DISCHARGE	CLKB S401 1/2" TO 24" - RIGID TYPE		CLKB S401 S121 PSL		CLKB S401 PLAN VIEW 1/2" TO 24" - RIGID TYPE	CLKB S401 1/2" TO 6"-RIGID TYPE	CLKB S401 1/2" TO 6" - RIGID TYPE
		DU		DD		DU	DU	DU
		PSL S121 GP S111 1/2" TO 24" - RIGID TYPE		PSH S101 S102 PSL S121 GPS S112 26" & LARGER				
		DL,DR		DL,DR				
S	SL : 07 PIPE RACK SR : 04 AREA	PSL S121 1/2" TO 24"		PSH S101 S102 PSL S121 26" & LARGER		CLKB DSS S401 S321 DNS S311 S312 1/2" TO 2" 3" TO 14" 16" & LARGER		
		SL,SR		SL,SR		SR		

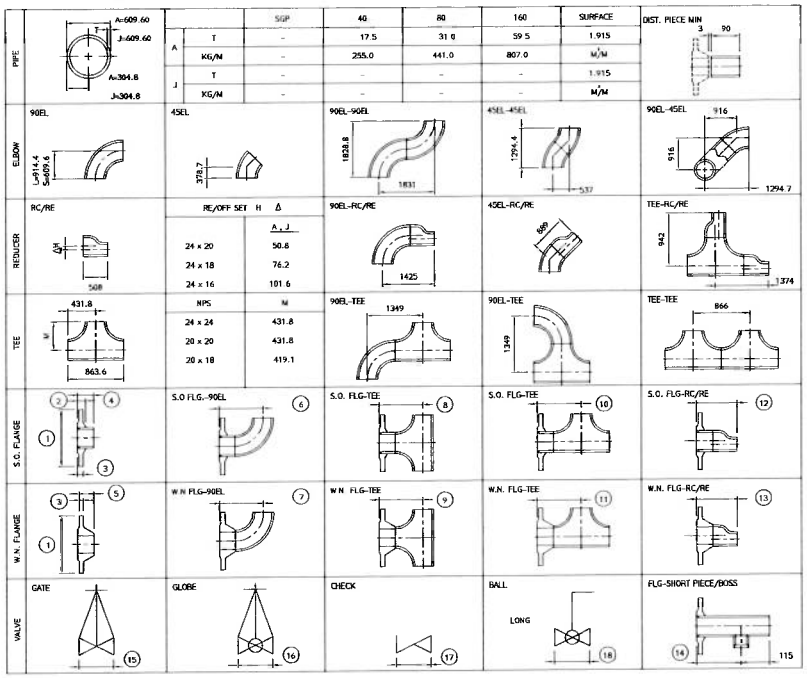
REV. NO.	DATE	DESCRIPTION	DWN.	CHK'D	APP'D	CRT'D

PIPE SUPPORT FUNCTION
NON-INSULATION, PERSONAL PROTECTION

SCALE :	JOB NO. : HC4410	
PROJECT DRAWING NO	SHEET	REVISION
TSA	2 of 2	0

DASH
Engineering Phils., Inc.

ENGINEERING STANDARD PIPING COMPONENT DIMENSIONAL STANDARD	LINE SIZE 24 B

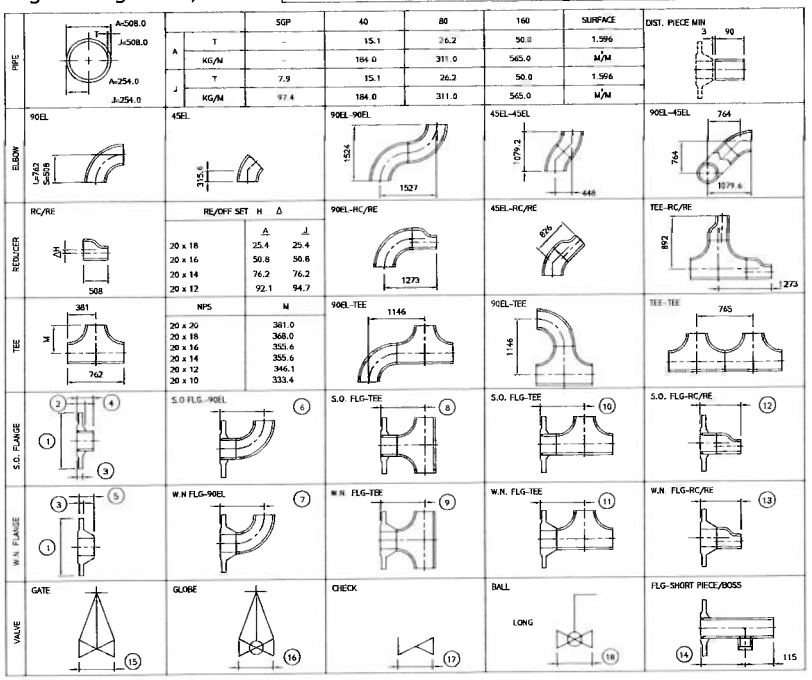


			SGP	40	80	160	SURFACE
A	T		-	17.5	31 0	59 5	1.915
	KG/M		-	255.0	441.0	807.0	M/M
J	T		-	-	-	-	1.915
	KG/M		-	-	-	-	M/M

	ANSI										JIS	
	150 RF	300 RF	600 RF	900 RF	1500 RF	300 RJ	600 RJ	900 RJ	1500 RJ	2500 RJ	10 RF	20 RF
1	815	915	940	1040	1170	915	940	1040	1170	-	795	845
2	83.0	106.0	146.4	209.6	-	-	-	-	-	-	52	96
3	48.0	70 0	108.4	146.4	209.9	81.1	113.1	155.9	224 1	-	32	54
4	176	199	-	-	-	-	-	-	-	-	145	189
5	152.4	168.3	209.6	298.5	412.8	179.4	214.3	308.0	427.0	-	-	-
6	1093	1116	-	-	-	-	-	-	-	-	1062	1106
7	1069	1085	1127	1215	1330	1096	1131	1225	1344	-	-	-
8	610	633	-	-	-	-	-	-	-	-	579	623
9	587	603	644	733	847	614	649	742	861	-	-	-
10	610	633	-	-	-	-	-	-	-	-	579	623
11	587	603	644	733	847	614	649	742	861	-	-	-
12	687	710	-	-	-	-	-	-	-	-	656	700
13	663	679	720	809	923	690	725	819	938	-	-	-
14	205	230	-	-	-	-	-	-	-	-	175	220
15	508	1143	1397	1549	1943	1165	1407	1568	1972	-	508(508)	1143
16	-	-	-	-	-	-	-	-	-	-	-	-
17	1295	1346	1397	1549	1943	1368	1407	1568	1972	-	-	-
18	1067	1143	1397	1549	-	1165	1407	1568	-	-	-	-
BOLT DIA	U1 1/4	U1 1/2	U1 7/8	U2 1/2	U3 1/2	U1 1/2	U1 7/8	U2 1/2	U3 1/2	-	M30	M34
BOLT NO.	20	24	24	20	16	24	24	20	16	-	24	24

DASH
Engineering Phils., Inc.

ENGINEERING STANDARD PIPING COMPONENT DIMENSIONAL STANDARD	LINE SIZE 20 B



			SGP	40	80	160	SURFACE
A	T		-	15.1	26.2	50.0	1.596
	KG/M		-	184.0	311.0	565.0	M/M
J	T		7.9	15.1	26.2	50.0	1.596
	KG/M		97.4	184.0	311.0	565.0	M/M

	A	J
20 x 18	25.4	25.4
20 x 16	50.8	50.8
20 x 14	76.2	76.2
20 x 12	92.1	94.7

	ANSI										JIS	
	150 RF	300 RF	600 RF	900 RF	1500 RF	300 RJ	600 RJ	900 RJ	1500 RJ	2500 RJ	10 RF	20 RF
1	700	775	815	855	985	775	815	855	985	-	675	730
2	73.0	95.0	133.4	165.4	-	-	-	-	-	-	48	84
3	43.0	63.5	95.4	114 4	184 4	73.0	98.5	120.7	195.5	-	30	50
4	166	188	-	-	-	-	-	-	-	-	141	177
5	144.5	161.9	196.9	254.0	362.0	171.4	200.0	260.3	373.1	-	-	-
6	931	953	-	-	-	-	-	-	-	-	906	942
7	909	926	961	1019	1127	936	965	1025	1138	-	-	-
8	550	572	-	-	-	-	-	-	-	-	525	561
9	528	545	580	636	746	555	584	644	757	-	-	-
10	550	572	-	-	-	-	-	-	-	-	525	561
11	528	545	580	638	746	555	584	644	757	-	-	-
12	677	699	-	-	-	-	-	-	-	-	652	688
13	655	672	707	765	873	682	711	771	884	-	-	-
14	195	220	-	-	-	-	-	-	-	-	170	205
15	457	991	1194	1321	1664	1010	1200	1334	1686	-	457(457)	991
16	-	-	-	-	-	-	-	-	-	-	-	-
17	978	1016	1194	1321	1664	1035	1200	1334	1686	-	-	-
18	914	991	-	1321	-	1010	1200	1334	-	-	-	-
BOLT DIA	U1 1/8	U1 1/4	U1 5/8	U2	U3	U1 1/4	U1 5/8	U2	U3	-	M24	M30
BOLT NO.	16	24	24	20	16	24	24	20	16	-	20	20