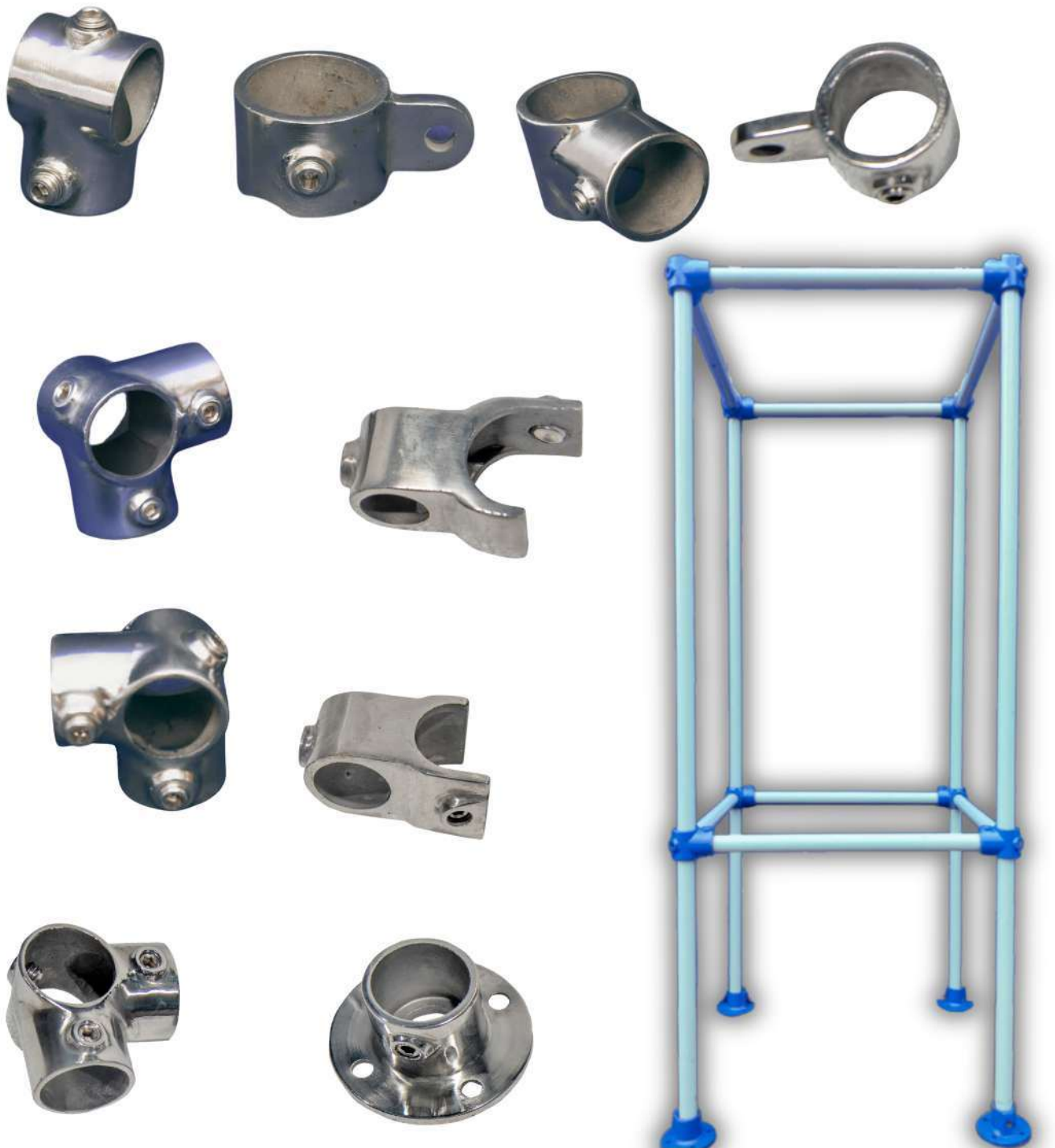


STRUCTURE AND SUPPORT



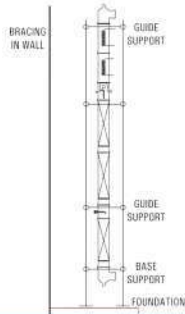
Usually, Glass Plants are supported in a tubular structure formed with galvanized steel tubes or mild steel with epoxy coated or stainless steel 304 & 316. This type of structure is proved robust and flexible.



STRUCTURE AND SUPPORT



SUPPORTS OF COLUMN



Proper support is essential for glass plants and pipelines to avoid introducing unwanted stress on the glass. The support structure should be rigid, ensuring that the glass remains under compression when secured. Typically, glass plants and equipment are supported using a rectangular framework made from galvanized mild steel tubing, combined with cast iron fittings as described in this guide. This type of framework offers enough strength to support the glass components while maintaining flexibility for future adjustments or modifications. The following guidelines should be observed when supporting a glass unit within a tubular framework:

1. The structure must be rigid and braced back to a nearby wall or any solid feature to provide lateral stability.
2. All glass columns should be built starting from a fixed point, which must support the entire weight of the column.
3. Since glass columns and the supporting framework expand at different rates with temperature changes, the glass unit must be free to move vertically above the fixed point. Guide supports should be used above the fixed point to provide lateral support while allowing for this movement.

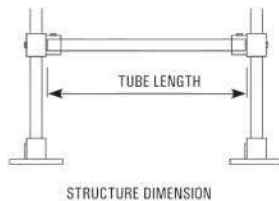
STRUCTURE TUBES

To prepare a structure, "B" class galvanized tubes, Mild Steel with Epoxy Coated, Stainless Steel 304 & 316 are used in size of 1/2", 1", 1.1/4", 1.1/2" and 2". Cut tubes are available in required length to form a standard size structure. Cut tubes are provided with rubber plug at both the ends.

NB Inches	NB mm	External Diameter
1/2"	15	19.5
1"	25	32.5
1.1/4"	30	41.5
1.1/2"	40	48.3
2"	50	60.3

Available cut lengths

Structure	NB (mm)				
Dimension	15	25	30	40	50



Cat. Ref. TBG (NBmm/Cut length)
for e.g. TBG 25/365

For vertical installation

2500	-	2500	-	-	-
3000	-	3000	3000	-	-
3500	-	3500	3500	-	-
4000	-	-	4000	-	-
000	-	6000	6000	6000	6000

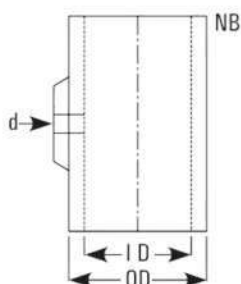
For frame

400	-	365	355	345	335
500	-	465	455	445	435
600	-	565	555	545	535
800	-	765	755	745	735
1000	-	965	955	945	935
1200	-	1165	1155	1145	1135
1500	-	1465	1455	1445	1435

For support

400	450	450	450	450	450
500	450	450	450	450	450
600	650	650	650	650	650
800	850	850	850	850	850
1000	1050	1050	1050	1050	1050
1200	1250	1250	1250	1250	1250

STRUCTURE FITTINGS



The following fittings are designed for use with galvanized tubes to create a tubular framework for a glass plant. These fittings are made from cast iron, and options are also available in Stainless Steel 304 and 316, compatible with the previously mentioned galvanized tubes.

These adjustable fittings come with grub screws, allowing them to be securely fixed in the desired position on the galvanized tube.

These fittings are specifically engineered to construct a tubular framework that offers flexibility for future modifications without the need for welding or hammering.

General data

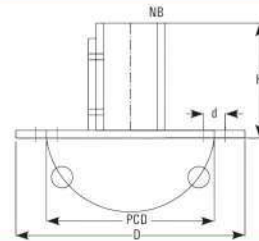
NB	TUBE DIA	ID	OD	d
25	32.5	35	45	1/2"
30	42.5	45	55	1/2"
40	48.3	51	61	1/2"
50	60.3	63	73	1/2"

STRUCTURE AND SUPPORT



These are to be used with vertical tubes at the bottom to create a foundation. Holes are provided for foundation.

Cat.Ref.	NB	D	H	PCD	dØ
BS25	25	150	75	110	4 x 14Ø
BS30	30	150	75	110	4 x 14Ø
BS40	40	150	75	110	4 x 14Ø
BS50	50	175	75	125	4 x 14Ø

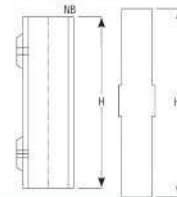


BASE



Couplers are used to couple the vertical tubes where more length is required.

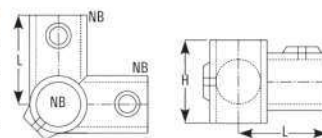
Cat.Ref.	NB	H	H1
CL25	25	150	200
CL30	30	150	200
CL40	40	150	200
CL50	50	150	200



COUPLER

Bends are used to create frame on vertical tubes.

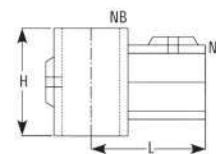
Cat.Ref.	NB	H	L
BN 25	25	55	55
BN30	30	65	70
BN40	40	70	80
BN50	50	85	95



BEND



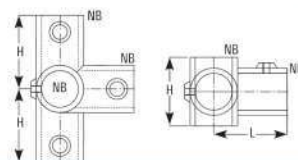
Cat.Ref.	NB	H	L
T25	25	50	55
T30	30	65	70
T40	40	70	80
T50	50	85	95



TEE

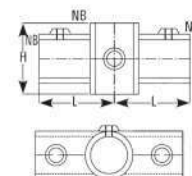


Cat.Ref.	NB	H	L
DBN 25	25	55	55
DBN 30	30	65	70
DBN 40	40	70	80
DBN 50	50	85	95



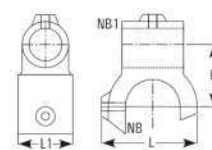
DOUBLE BEND

Cat.Ref.	NB	H	L
DT25	25	50	55
DT30	30	65	70
DT40	40	70	80
DT50	50	85	95



DOUBLE TEE

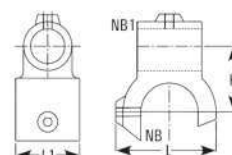
Cat.Ref.	NB	H	L	L1
EBT25	25	40	65	50
EBT30	30	52	75	60
EBT40	40	62	85	60
EBT50	50	72	95	60



EQUAL BRACKET



Cat.Ref.	NB	NB1	H	L	L1
UBT25/15	25	15	35	65	50
UBT30/15	30	15	40	75	60
UBT40/25	40	25	50	85	60
UBT50/25	50	25	55	95	60



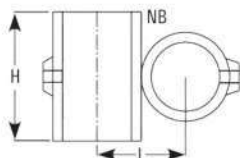
UNEQUAL BRACKET



STRUCTURE AND SUPPORT

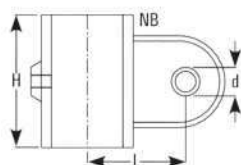


CROSS



Cat.Ref.	NB	H	L
X25	25	50	45
X30	30	65	55
X40	40	65	70
X50	50	65	85

SUPPORT



Cat.Ref.	NB	h	L	d
SPT15	15	40	35	13
SPT25	25	55	50	13
SPT30	30	55	57	13
SPT40	40	55	62	13
SPT50	50	55	67	13

PLUG



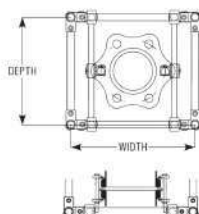
Cat. Ref.	NB
PLUG15	15
PLUG25	25
PLUG30	30
PLUG40	40
PLUG59	50

STUDS



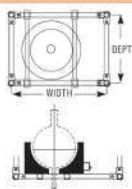
Cat.Ref.	d	L
STUD5/16-150	5/16"	150
STUD3/8-150	3/8"	150
STUD1/2-200	1/2"	200

STRUCTURE DIMENSIONS



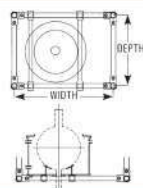
FOR COLUMN

DN	Recommended tube size NB (mm)	Minimum Structure size Depth X Width
80	25	500 x 500
100	25	500 x 500
150	25,30	600 x 600
225	30	800 x 800
300	30	800 x 800
400	30	1000 x 1000
450	30,40	1000 x 1000
600	40,50	1200 x 1200



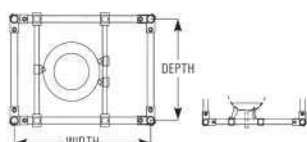
FOR VESSEL (In heating mental)

Size (Litres)	Recommended tube size NB (mm)	Minimum Structure size Depth X Width
20	25	400 x 600
50	25	600 x 800
100	25,30	800 x 800
200	30	800 x 1000



FOR VESSEL (In heating bath)

Size (Litres)	Recommended tube size NB (mm)	Minimum Structure size Depth X Width
20	25	500 x 600
50	25	600 x 800
100	25,30	800 x 1000
200	30	800 x 1200



FOR VESSEL (In vessel holder)

Size (Litres)	Recommended tube size NB (mm)	Minimum Structure size Depth X Width
20	25	500 x 600
50	25	600 x 800
100	25,30	1000 x 1000
200	30	1000 x 1000