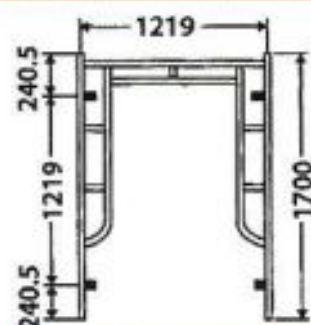
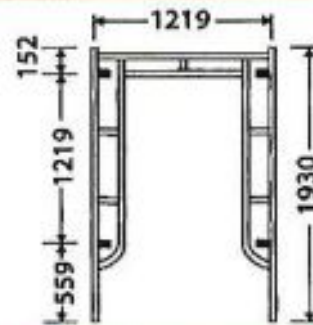


M 101 Vertical Frame



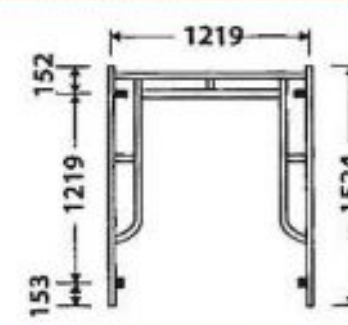
Width 1219 Height 1700

M 101A Vertical Frame



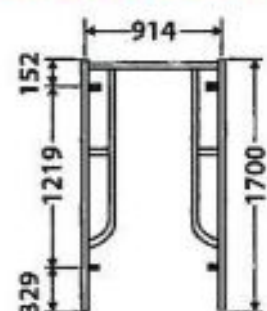
Width 1219 Height 1930

M 102 Vertical Frame



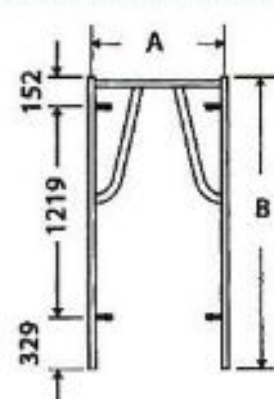
Width 1219 Height 1524

M 103 Vertical Frame



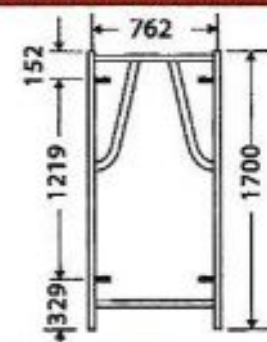
Width 914 Height 1700

M 104 Vertical Frame



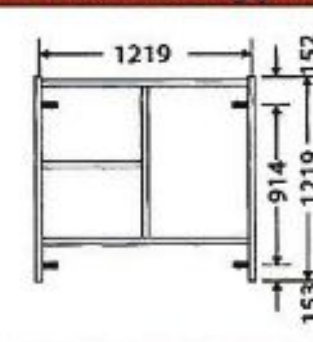
Code	Width A	Height B
M 104	762	1700
M 104A	762	1524
M 104B	762	1219
M 104C	762	914
M 104D	762	490
M 104H	762	2000

M 105 Vertical Frame



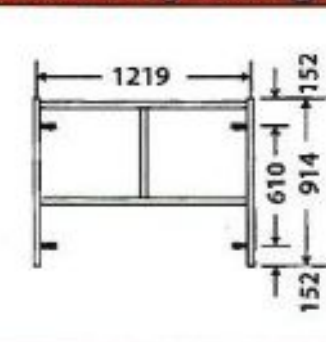
Width 762 Height 1700

M 103 Ladder Type Frame



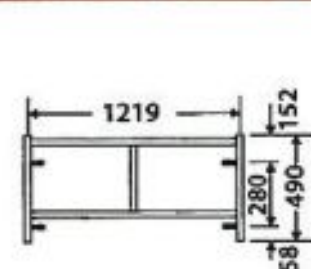
Width 1219 Height 1219

M 109 Ht. Adjusting Frame



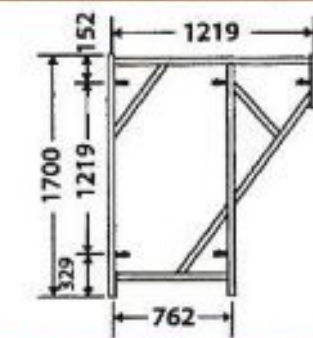
Width 1219 Height 914

M 110 Ht. Adjusting Frame



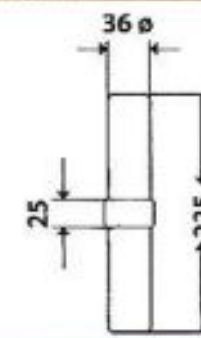
Width 1219 Height 490

M 121 Vertical Variation Frame



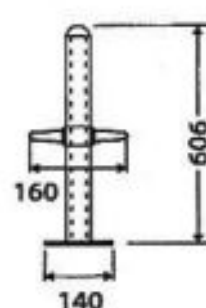
Width 762/1219 Height 1700

M 701 Joint Pin



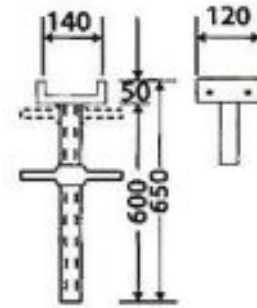
Dia 36 Length 225

M 601 Jack Base



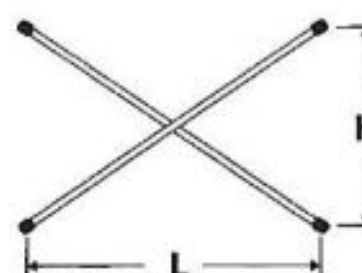
Dia 32 Height 606

M 602 U Head



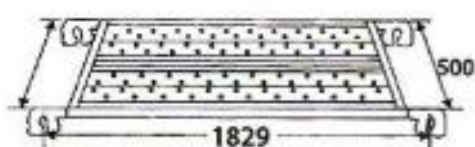
Dia 32 Height 606

M 301 Cross Brace



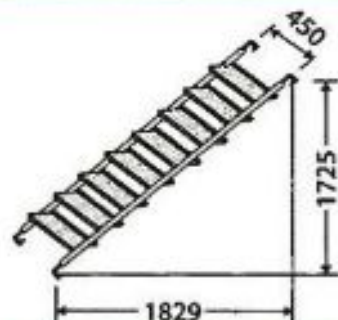
Code	Length L	Height H
M 301A	1829	1219
M 301B	1829	914
M 301C	1829	610
M 301D	1829	280
M 301E	1219	1219
M 301F	1219	610
M 301G	1219	280
M 301H	1524	1219
M 301J	1524	610
M 301L	2100	1219

M 205 Walking Board



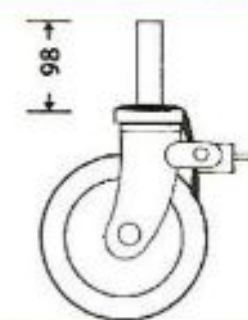
Length	Height
(a) 1829	500
(b) 1829	450

M 514 Stair



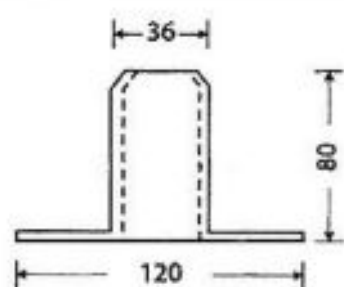
Width	Height
450	1725

M 603 Caster



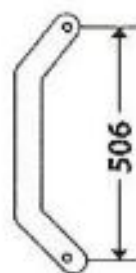
Dia
(a) 150 (6")
(b) 200 (8")

M 604 Base Plate



Dia	Height
36	80

M 801 Arm Lock



Length
506

Safety Net



Height	Length
5100	1829

Swivel /Fixed Clamp

Swivel Clamp

48.6 x 48.6

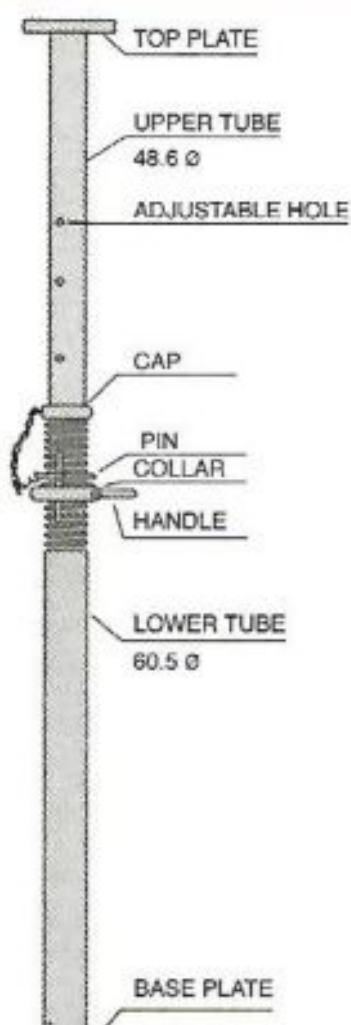
Fixed Clamp

48.6 x 48.6



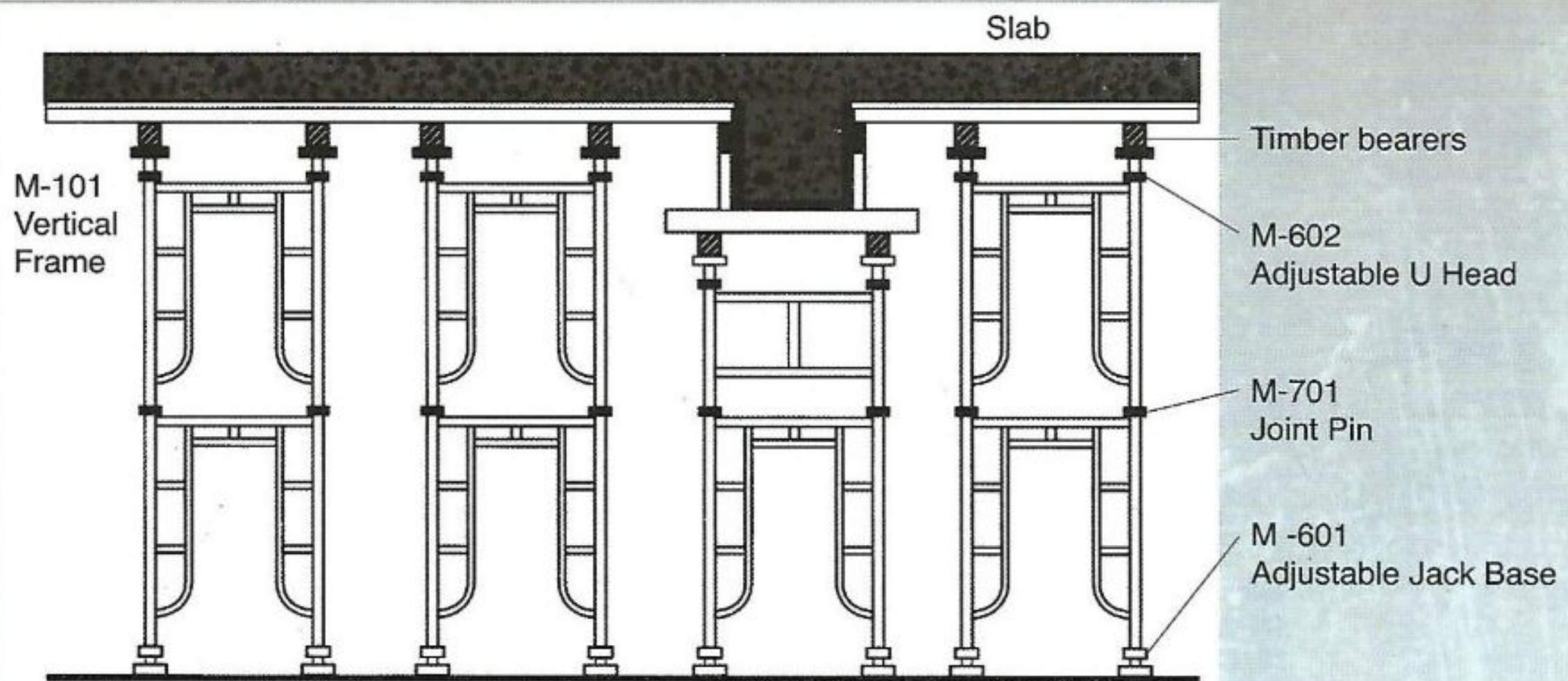
Steel Props

- Enhances the speed of construction
- Economy due to less number of props required
- Easy to assemble



MODEL	M-50	M-65	M-75	M-90
Weight (kg)	11	13	14	15
Max. Length (mm)	2,030	3,200	3,500	3,960
Min. Length (mm)	1,220	1,740	2,040	2,500
Adjustable Length (mm)	800	1,320	1,320	1,320
Adjustable Length or bolt (mm)	140	140	140	140
Safety load at max Length (kg)	2,200	2,200	2,200	2,200

Safety load is obtained subject to the props installed right vertically within 2 metres apart and at the minimum height.



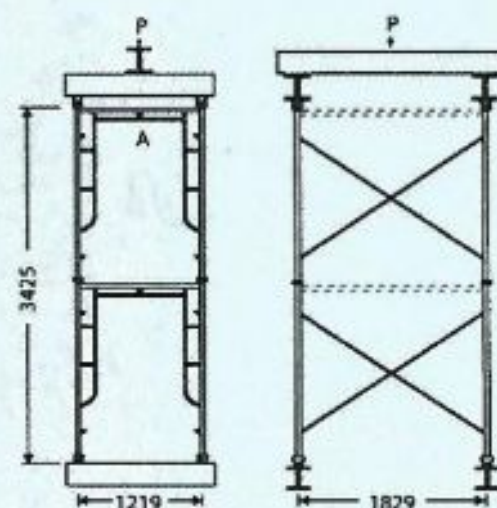
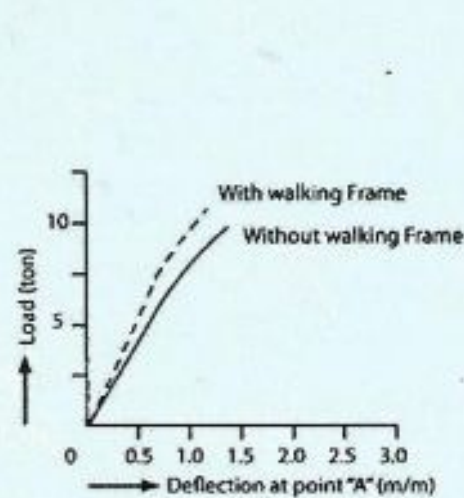
Elevation of scaffolding frames and accessories lay-out for use as shoring.

Technical Data

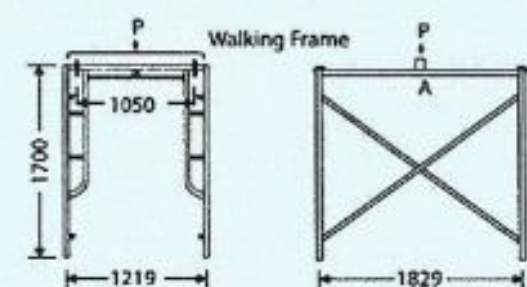
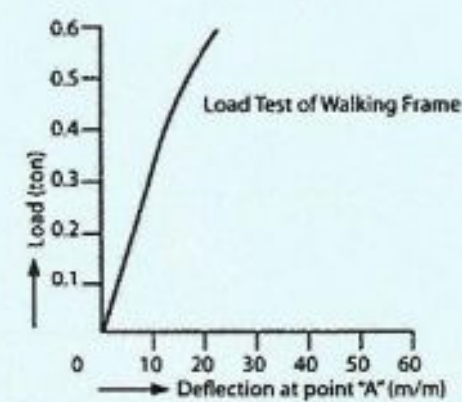
Point of Load						
Max load per frame p max	10 (t)	9.1	7.5	5	3	2.25
Allowable load	5 (t)	3.5	3	2	1.2	1

Reduction in strength depending on load point applied on frame.
NB: Square Tubing in size 100mm x 100mm for Load Point.

Load Test of Frame



Load Test of Walking Frame

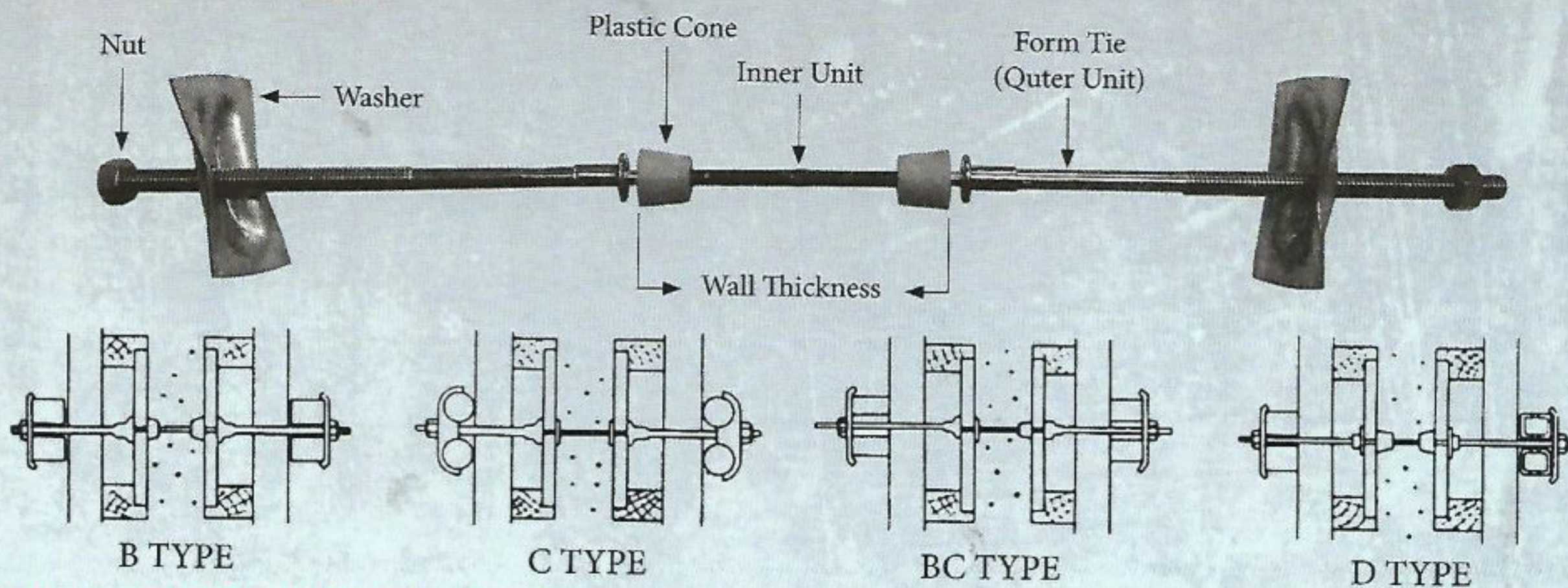


Deflection graph from result of test. Test methods (P=Load Point)

FORMTIE FORMWORK SYSTEM

The Form Tie system prevents breakage in the formwork, thus keeping concrete structures in good shape without discolouration. Besides ease of assembly and removal, the system saves construction costs as all parts are reusable except for the inner unit which is casted into the wall.

FORM TIE SYSTEM



FORM TIE COMPLETE SET REQUIREMENT



FORM TIE B type consist of: Form Tie B 2pcs., Inner Unit B 1 pc., Cone 2pcs, Washer 2 pcs, Nut 2 pcs



FORM TIE D type consist of: Form Tie D 2pcs., Inner Unit D 1 pc., Cone D 2pcs, Washer 2 pcs, Nut 2 pcs



FORM TIE BC type consist of: Form Tie B 2pcs., Inner Unit BC 1 pc., Cone 1pcs, Hexagon Nut 1 pc, Washer 2pcs, Nut 2 pcs



FORM TIE C type consist of: Form Tie B 2pcs., Inner Unit C 1 pc., Hexagon Nut 2 pcs, Washer 2pcs, Nut 2 pcs

INNER UNIT SPECIFICATION

Type	Dimensional Diagrams	Use
Inner Unit B		Both sides exposed W 3/8
Inner Unit C		Both sides finished W 3/8
Inner Unit BC		One sides finished and other side exposed W 3/8
Inner Unit D		Both sides exposed W 1/2

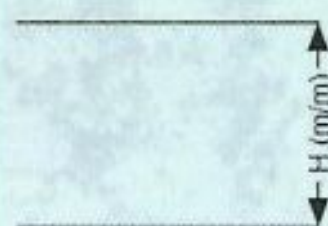
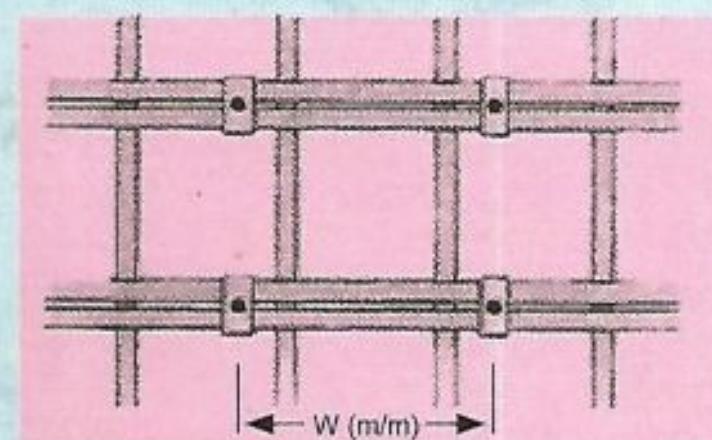
MECHANICAL CHARACTERISTIC OF FROM TIE

1. Mechanical Properties of All Types of Inner Units

Type	Dia	Cross Sectional Area mm ²	Rupture Strength kg/pcs	Safe Working loads kg/pcs	Breakage
B	W5/16	34.3	2000	1400	Threaded Portion
C	W5/16	34.3	2000	1400	Threaded Portion
BC	W5/16	34.3	2000	1400	Threaded Portion
B	W3/8	50.4	3000	2100	*
D	W1/2	89.6	4000	2800	*

2. Allowable Strength of Inner Unit

When using steel as the material, designing must be based on the strength within the yield point on the safe side. In general, the yield point of Steel is considered to be within 70-80% of the rupture strength, but in case of the Inner Unit, because it is workhardened, the rupture strength and the yield point are almost the same. Therefore, to be on the safe side, 70% is the percentage to be considered.



Form Tie Pitch

Quantity of Form Tie/per m²

Side Pressure/ m ²	2t/m ²	3t/m ²	4t/m ²	5t/m ²	6t/m ²	7t/m ²
Type						
Inner unit W5/16	1.42	2.14	2.85	3.57	4.28	5.00
W3/8	0.95	1.42	1.90	2.38	2.85	3.33
W1/2	0.71	1.07	1.42	1.78	2.14	2.50

TENSILE STRENGTH OF INNER UNIT

4t/m²

W5/16	500	550	600	650	700	750	800	850	900
500	1000	1100	1200	1300	1400	1500	1600	1700	1800
550	1100	1210	1320	1430	1540	1650	1760	1870	1980
600	1200	1320	1440	1560	1680	1800	1920	2040	2160
650	1300	1430	1560	1690	1820	1950	2080	2210	2340
700	1400	1540	1680	1820	1960	2100	2240	2380	2520
750	1500	1650	1800	1950	2100	2250	2400	2550	2700
800	1600	1760	1920	2080	2240	2400	2560	2720	2880
850	1700	1870	2040	2210	2380	2550	2720	2890	3060
900	1800	1980	2160	2340	2520	2700	2880	3060	3240

5t/m²

W5/16	500	550	600	650	700	750	800	850	900
500	1250	1375	1500	1625	1750	1875	2000	2125	2250
550	1375	1513	1650	1788	1925	2063	2200	2338	2475
600	1500	1650	1800	1950	2100	2250	2400	2550	2700
650	1625	1788	1950	2113	2275	2438	2600	2763	2925
700	1750	1925	2100	2275	2450	2625	2800	2975	3150
750	1875	2063	2250	2438	2625	2813	3000	3188	3375
800	2000	2200	2400	2600	2800	3000	3200	3400	3600
850	2125	2338	2550	2763	2975	3188	3400	3613	3825
900	2250	2475	2700	2925	3150	3375	3600	3825	4050

6t/m²

W5/16	500	550	600	650	700	750	800	850	900
500	1500	1650	1800	1950	2100	2250	2400	2550	2700
550	1650	1815	1980	2145	2310	2475	2640	2805	2970
600	1800	1980	2160	2340	2520	2700	2880	3060	3240
650	1950	2145	2340	2535	2730	2925	3120	3315	3510
700	2100	2310	2520	2730	2940	3150	3360	3570	3780
750	2250	2475	2700	2925	3150	3375	3600	3825	4050
800	2400	2640	2880	3120	3360	3600	3840	4080	4320
850	2550	2805	3060	3315	3570	3825	4080	4335	4590
900	2700	2970	3240	3510	3780	4050	4320	4590	4860

7t/m²

W5/16	500	550	600	650	700	750	800	850	900
500	1750	1925	2100	2275	2450	2625	2800	2975	3150
550	1925	2118	2310	2503	2695	2888	3080	3273	3465
600	2100	2310	2520	2730	2940	3150	3360	3570	3780
650	2275	2503	2730	2958	3185	3413	3640	3868	4095
700	2450	2695	2940	3185	3430	3675	3920	4165	4410
750	2625	2888	3150	3413	3675	3938	4200	4463	4725
800	2800	3080	3360	3640	3920	4200	4480	4760	5040
850	2975	3255	3570	3868	4165	4463	4760	5078	5355
900	3150	3465	3780	4095	4410	4725	5040	5355	5670

☐ W 5/16 ☒ W 3/8
☒ W 1/2 ☐ High Tensile W 3/8

PLASTIC CONE

TYPE B	Panel	Diagrams		Remarks
		A (m/m)	B	
	Metal Form	For Metal	W5/16	a. There are two diameters for inner units i. e. W5/16 and W3/8 b. A - Panel thickness B - Inner unit diameter
			W3/8	
	Ply Wood Panel	12	W5/16	
			W3/8	
		16	W5/16	
			W3/8	
		24	W5/16	
			W3/8	

How to Order : Please specify concrete panel thickness (A) and inner unit diameter (B).
(Ex. Plastic cone B 12m/m X W 5/16)

PLASTIC CONE FOR BEAM

Cone	Metal	Axes
	12 m/m	
	16 m/m	
	24 m/m (A m/m)	

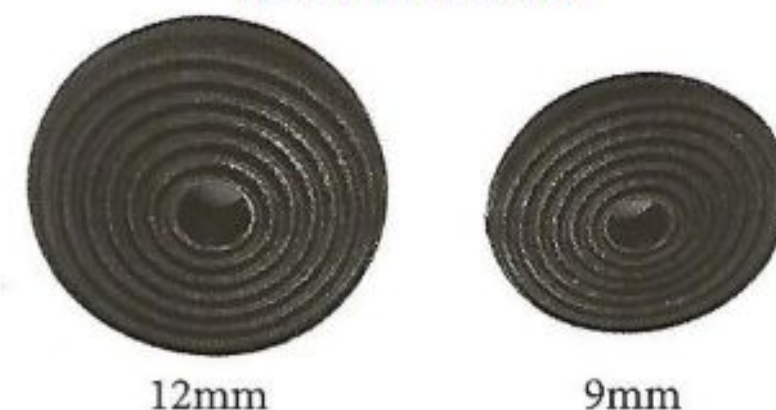
How to Order : Please specify panel thickness (A) and Inner Unit diameter (B).

TYPE D

	Inner Unit W1/2 is only used.
--	-------------------------------

Plastic Cone D is O. K.

RUBBER RING



12mm

9mm

ACCESSORY TOOLS

Form Tie Spanner

To be used to fasten Form Tie and Inner Unit when remove them.



Box Spanner D and B

To be used to remove cone



3-Shape



Flat Rib Washer



Flat Rib Washer



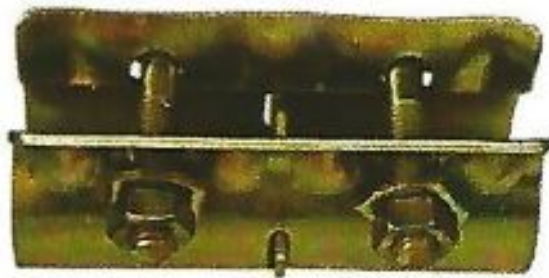
Beam Clamp (BS1139 / EN.74.)



Double Coupler (BS1139 / EN.74.)



Swivel Coupler (BS1139 / EN.74.)



Sleeve Coupler (BS1139 / EN.74.)



Bone Joint (BS1139 / EN.74.)



Toe Board Clamp



Put Log (BS1139 / EN.74.)

Thickness 4.0mm B.S 1139



Thickness 2.4mm JIS



Thickness 2.0mm JIS



Pipes

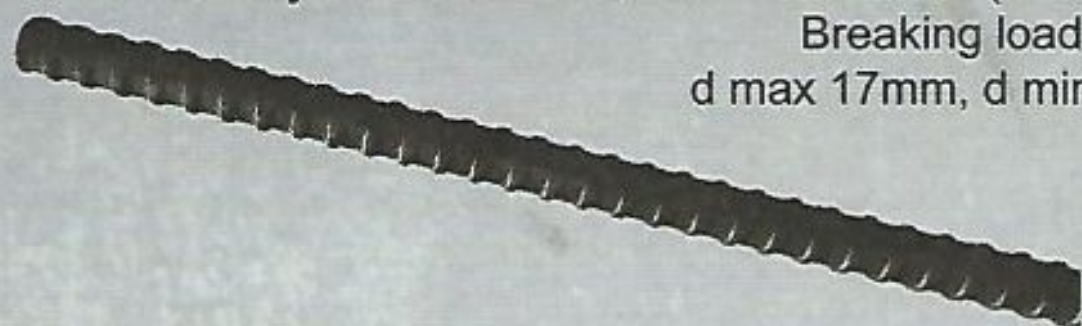


Metal Deck

Dywidag form ties are suitable for all giant and small-board formwork. Regardless of the system. Their high loadbearing capacity, produced by their forged design, permits extreme loadability and large tie spacing. In addition, the long service life of DYWIDAG form ties is convincing.

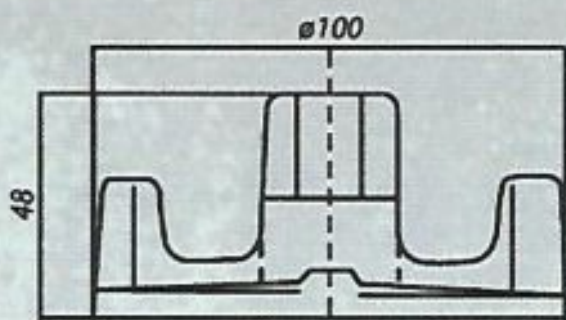
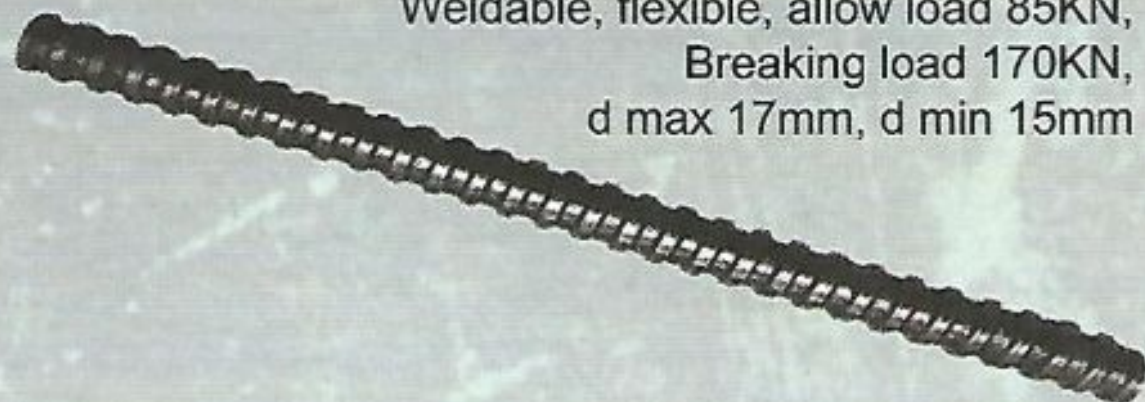
Steel Tie Rod, Dywidag 15mmØ

Quality : ST 885/1080, allow load 90KN (DIN 18216)
Breaking load 190KN
d max 17mm, d min 15mm



Steel Tie Rod, 15mmØ

Weldable, flexible, allow load 85KN,
Breaking load 170KN,
d max 17mm, d min 15mm



Anchor / Tie Nut 100mm

Forged with DYWIDAG thread. Support surface 100mm.
Hot-dip galvanized. Flange Nut D15/100.

Flange 100mm , SW 26, Quality : GTW 45, allow load 90KN (DIN 18216)



Wing Nut D 15

With two wings, forged
with DYWIDAG thread.

Hot-dip galvanized

SW 26, Quality : GTW 45,
allow load 90KN (DIN 18216)

Hexagonal Nut D 15

Steel quality : C 35 weldable,
SW 30 allow load 90KN
(DIN 18216),

Length : 30mm, 50mm, 70mm

Waterstop - centers

Steel cone, with check-lever D15/105* plate with extra-wide base

length : 105mm, SW 30, steel quality :
9 SMnPb28k with galvanised movable plate
0 max. 80mm, concrete overlap 55mm,
allow. load 90 kN (DIN 18216)



Steele cone, with check-lever D15/75* large plate

length : 75mm, SW 24, steel quality :
C35, with galvanised movable plate 0 max.
60mm, concrete overlap 40mm, allow.
load 90kN (DIN 18216)



Waterstop-center D 15* with locking-device-small disc

length : 110mm, disc Ø 65mm,
GTW 45, SW 30,
with extension 26 Ø x 10mm,
allow. load 90kN (DIN 18216)
weight : 0.53kg



Waterstop-center D 15* with locking-device-large disc

length : 130mm, disc Ø 110mm,
GTW 45, suitable for plastic
tubes 26/22 mm,
tie rods are reusable,
allow. load 90kN (DIN 18216)
weight : 0.95kg

