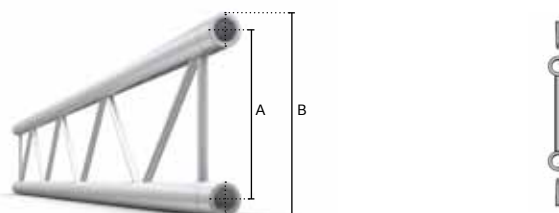


# M290 Heavy-Duty

- Certified 48mm tube heavy-duty M290 series truss range
- Keystone system used within PA & Rigging Towers & Roofs
- Durable construction with diagonal anti-twist end brace
- Fast connection for quick, simple and secure assembly
- Great free-span & loading characteristics (up to 20m / 65.61 ft)
- Connection kit supplied with every truss length & junction
- Compatible with 200/400/500/600 series cell clamps
- Compatible with Xtruss accessories
- Powder coat colour finish available on request

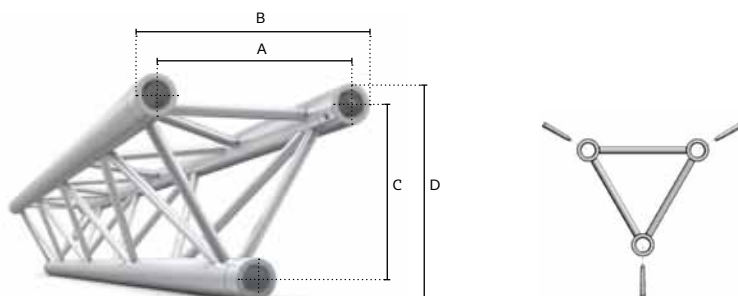
## DUO



### M290V

	Main Chords	Diagonals	Alloy	A	B	Coupler
BTV	48x3 (1.89x0.12)	16x2 (0.62x0.08)	EN - AW 6082 T6	240 (944)	288 (11.34)	CCB
BTVF	48x3 (1.89x0.12)	16x2 (0.62x0.08)	EN - AW 6082 T6	240 (944)	288 (11.34)	CCF
BTUV	48x3 (1.89x0.12)	20x2 (0.78x0.08)	EN - AW 6082 T6	240 (944)	288 (11.34)	CCU

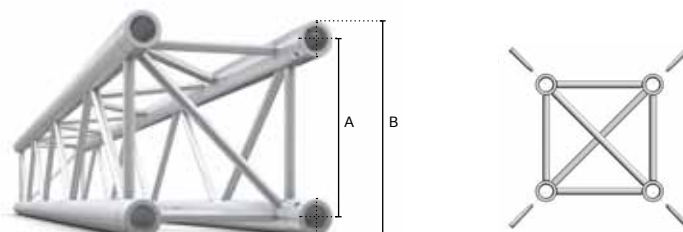
## TRIO



### M290V

	Main Chords	Diagonals	Alloy	A	B	C	D	Coupler
STV	48x3 (1.89x0.12)	16x2 (0.62x0.08)	EN - AW 6082 T6	240 (944)	288 (11.34)	207 (8.15)	255 (10.04)	CCB
STVF	48x3 (1.89x0.12)	16x2 (0.62x0.08)	EN - AW 6082 T6	240 (944)	288 (11.34)	207 (8.15)	255 (10.04)	CCF
STVU	48x3 (1.89x0.12)	20x2 (0.78x0.08)	EN - AW 6082 T6	240 (944)	288 (11.34)	207 (8.15)	255 (10.04)	CCU

## QUATRO



### M290V

	Main Chords	Diagonals	Alloy	A	B	Coupler
QTV	48x3 (1.89x0.12)	16x2 (0.62x0.08)	EN - AW 6082 T6	240 (944)	288 (11.34)	CCB
QTVF	48x3 (1.89x0.12)	16x2 (0.62x0.08)	EN - AW 6082 T6	240 (944)	288 (11.34)	CCF
QTVU	48x3 (1.89x0.12)	20x2 (0.78x0.08)	EN - AW 6082 T6	240 (944)	288 (11.34)	CCU

## STANDARD LENGTHS AND WEIGHTS AVAILABLE

	m (ft)	0.50 (1.64)	1.00 (3.28)	1.50 (4.92)	2.00 (6.56)	2.50 (8.20)	3.00 (9.84)	4.00 (13.12)	5.00 (16.41)
DUO	kg (lbs)	1.70 (3.9)	3.00 (6.75)	4.30 (9.57)	5.70 (12.57)	6.90 (15.21)	8.10 (17.86)	10.70 (23.7)	13.30 (29.34)
TRIO	kg (lbs)	2.90 (6.39)	5.00 (11.02)	7.10 (15.65)	9.30 (20.50)	11.40 (25.13)	13.50 (29.76)	18.00 (39.68)	22.00 (48.50)
QUATRO	kg (lbs)	4.10 (9.04)	7.00 (15.43)	9.90 (21.83)	12.50 (27.56)	15.50 (34.17)	18.30 (40.35)	24.00 (52.91)	29.70 (65.48)

Connection material (pins/clips/couplers) and packaging are not included in above weights

### M290V DUO

LOADING CHART

Span	m (ft)	3.00 (9.84)	4.00 (13.12)	5.00 (16.40)	6.00 (19.69)	7.00 (22.97)	8.00 (26.25)	9.00 (29.53)
Point load	kg (lbs)	666.90 (1470.26)	664.40 (1464.75)	648.80 (1430.36)	538.30 (1186.75)	459.00 (1011.92)	399.20 (880.08)	352.40 (776.91)
Deflection	mm (in)	4.30 (0.17)	10.10 (0.40)	19.30 (0.76)	27.90 (1.10)	38.00 (1.50)	49.70 (1.96)	63.10 (2.48)
Two point load	kg (lbs)	333.50 (735.24)	332.20 (732.37)	330.90 (729.51)	329.60 (726.64)	328.30 (723.78)	299.40 (660.06)	264.30 (582.68)
Deflection	mm (in)	3.60 (0.14)	8.60 (0.34)	16.80 (0.66)	29.00 (1.14)	46.10 (1.81)	63.10 (2.48)	79.90 (3.15)
Three point load	kg (lbs)	222.30 (490.09)	221.50 (488.32)	220.60 (486.34)	219.70 (484.36)	218.90 (482.59)	199.60 (440.04)	176.20 (388.45)
Deflection	mm (in)	3.40 (0.13)	8.00 (0.31)	15.60 (0.61)	27.00 (1.06)	42.90 (1.69)	58.70 (2.31)	74.40 (2.93)
Four point load	kg (lbs)	166.70 (367.51)	166.10 (366.19)	165.50 (364.86)	164.80 (363.32)	164.20 (362.00)	163.50 (360.46)	146.90 (323.86)
Deflection	mm (in)	3.20 (0.13)	7.70 (0.30)	15.00 (0.59)	25.80 (1.02)	41.00 (1.61)	61.20 (2.41)	78.80 (3.10)
Distrib. loading	kg (lbs)	222.30 (149.38)	166.10 (111.61)	132.40 (88.97)	109.90 (73.85)	93.80 (63.03)	81.80 (54.97)	72.40 (48.65)
Deflection	mm (in)	2.70 (0.11)	6.30 (0.25)	12.40 (0.49)	21.40 (0.84)	34.10 (1.34)	50.90 (2.00)	72.50 (2.85)

DUO figures are based on use in vertical mode and stabilized every 1m

### M290V TRIO

LOADING CHART

Span	m (ft)	4.00 (13.12)	6.00 (19.69)	8.00 (26.25)	10.00 (32.81)	12.00 (39.37)	14.00 (45.93)	16.00 (52.49)
Point load	kg (lbs)	700.50 (1544.34)	459.80 (1013.68)	337.30 (743.62)	262.10 (577.83)	210.50 (464.07)	172.40 (380.08)	142.80 (314.82)
Deflection	mm (in)	10.60 (0.42)	24.00 (0.94)	43.10 (1.70)	68.00 (2.68)	99.20 (3.91)	137.00 (5.39)	182.00 (7.17)
Two point load	kg (lbs)	525.40 (1158.31)	344.90 (760.37)	253.00 (557.77)	196.60 (433.43)	157.90 (348.11)	129.30 (285.06)	107.10 (236.11)
Deflection	mm (in)	13.50 (0.53)	30.50 (1.20)	54.30 (2.14)	85.00 (3.35)	122.70 (4.83)	167.60 (6.60)	219.80 (8.65)
Three point load	kg (lbs)	350.20 (772.06)	229.90 (506.84)	168.70 (371.92)	131.00 (288.81)	105.30 (232.15)	86.20 (190.04)	71.40 (157.41)
Deflection	mm (in)	12.60 (0.50)	28.40 (1.12)	50.60 (1.99)	79.50 (3.13)	115.10 (4.53)	157.70 (6.21)	207.50 (8.17)
Four point load	kg (lbs)	287.80 (634.49)	191.60 (422.41)	140.50 (309.75)	109.20 (240.74)	87.70 (193.35)	71.80 (158.29)	59.50 (131.17)
Deflection	mm (in)	13.20 (0.52)	30.10 (1.19)	53.60 (2.11)	83.90 (3.30)	121.20 (4.77)	165.70 (6.52)	217.40 (8.56)
Distrib. loading	kg (lbs)	287.80 (193.39)	153.30 (103.01)	84.30 (56.65)	52.40 (35.21)	35.10 (23.59)	24.60 (16.53)	17.80 (11.96)
Deflection	mm (in)	10.90 (0.43)	29.80 (1.17)	53.10 (2.09)	83.30 (3.28)	120.40 (4.74)	164.60 (6.48)	216.00 (8.50)

TRIO figures are based on use in apex up/down orientation

### M290V QUATRO

LOADING CHART

Span	m (ft)	4.00 (13.12)	6.00 (19.69)	8.00 (26.25)	10.00 (32.81)	12.00 (39.37)	14.00 (45.93)	16.00 (52.49)
Point load	kg (lbs)	1328.00 (2927.74)	1076.00 (2372.17)	797.70 (1758.63)	628.60 (1385.82)	514.10 (1133.40)	430.80 (949.75)	366.90 (808.88)
Deflection	mm (in)	10.10 (0.40)	27.90 (1.10)	49.70 (1.96)	78.20 (3.08)	113.30 (4.46)	155.50 (6.12)	205.00 (8.07)
Two point load	kg (lbs)	664.00 (1463.87)	658.70 (1452.18)	598.30 (1319.02)	471.40 (1039.26)	385.60 (850.10)	323.10 (712.31)	275.20 (606.71)
Deflection	mm (in)	8.60 (0.34)	29.00 (1.14)	63.10 (2.48)	98.70 (3.89)	142.30v (5.60)	194.00 (7.64)	254.00 (10.00)
Three point load	kg (lbs)	442.70 (975.99)	439.10 (968.05)	398.90 (879.42)	314.30 (692.91)	257.00 (566.59)	215.40 (474.88)	183.50 (404.55)
Deflection	mm (in)	8.00 (0.31)	27.00 (1.06)	58.70 (2.31)	92.00 (3.62)	132.90 (5.23)	181.50 (7.15)	238.00 (9.37)
Four point load	kg (lbs)	332.00 (731.93)	329.30 (725.98)	326.70 (720.25)	261.90 (577.39)	214.20 (472.23)	179.50 (395.73)	152.90 (337.09)
Deflection	mm (in)	7.70 (0.30)	25.80 (1.02)	61.20 (2.41)	97.40 (3.83)	140.50 (5.53)	191.60 (7.54)	250.80 (9.87)
Distrib. loading	kg (lbs)	332.00 (223.09)	219.60 (147.56)	163.30 (109.73)	125.70 (84.47)	85.70 (57.59)	61.50 (41.33)	45.90 (30.84)
Deflection	mm (in)	6.30 (0.25)	21.40 (0.84)	50.90 (2.00)	96.60 (3.80)	139.40 (5.49)	190.20 (7.49)	249.10 (9.81)

Point load

Two point load

Three point load

Four point load

Distributed point load

All truss loading calculations and TUV certifications are based on:

Truss supported or suspended at both ends • Static loadings only • Loads applied in the node points • Included self weight of the trusses • Spans made of different truss length • Interaction of bending moment and shear force at connector • Structural calculations based on DIN EN 1999-1-1 and DIN EN 1999-1-1/A2 made in 2014 • To comply with BS 7905-2 / ANSI E1.2-2006 / CWA 15902-2 all loading data should be multiplied by 0.85 • For any other application or in case of an assembled structure, contact Milos or a structural engineer • Safety factors used – self weight 1.35 / loading 1.5