

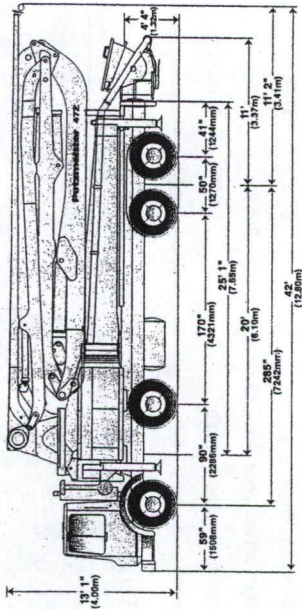
Section 2

Staging, Equipment Analysis and Traffic Control

EXHIBIT 2.2.A

**Pump Specifications
(6 pages)**

47Z-Meter • Truck-Mounted Concrete Boom Pump



Model Overview

- Vertical reach **151' 3"** (46.10m)
- Horizontal reach **138' 1"** (42.08m)
- Reach from front of truck **128' 2"** (39.07m)
- Reach depth **105' 8"** (32.21m)
- Unfolding height **31' 2"** (9.50m)
- Available pump cells **.16H, .20H**
- Front axle weight **37,370 lbs** (16,966kg)
- Rear axle weight **39,270 lbs** (17,829kg)
- Approx total weight **76,640 lbs** (34,795kg)

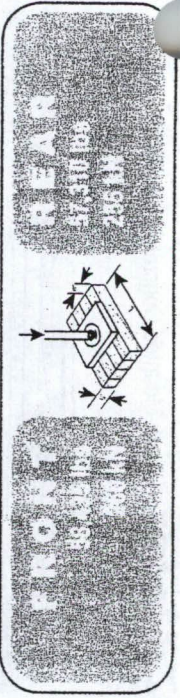
Based on Model MACK MR 688S with .16H pump cell.

Boom Specifications • Z-Fold Design

- 1st section length **29' 2"** (8.90m)
- 2nd section length **25' 11"** (7.90m)
- 3rd section length **24' 7"** (7.49m)
- 4th section length **27' 3"** (8.31m)
- 5th section length **31' 2"** (9.50m)
- Maximum end hose weight allowance **280 lbs** (127kg)
- Maximum end hose length **10'** (3.00m)

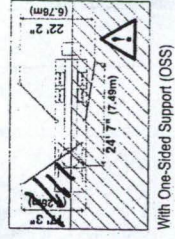
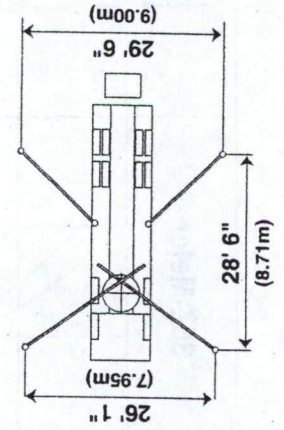
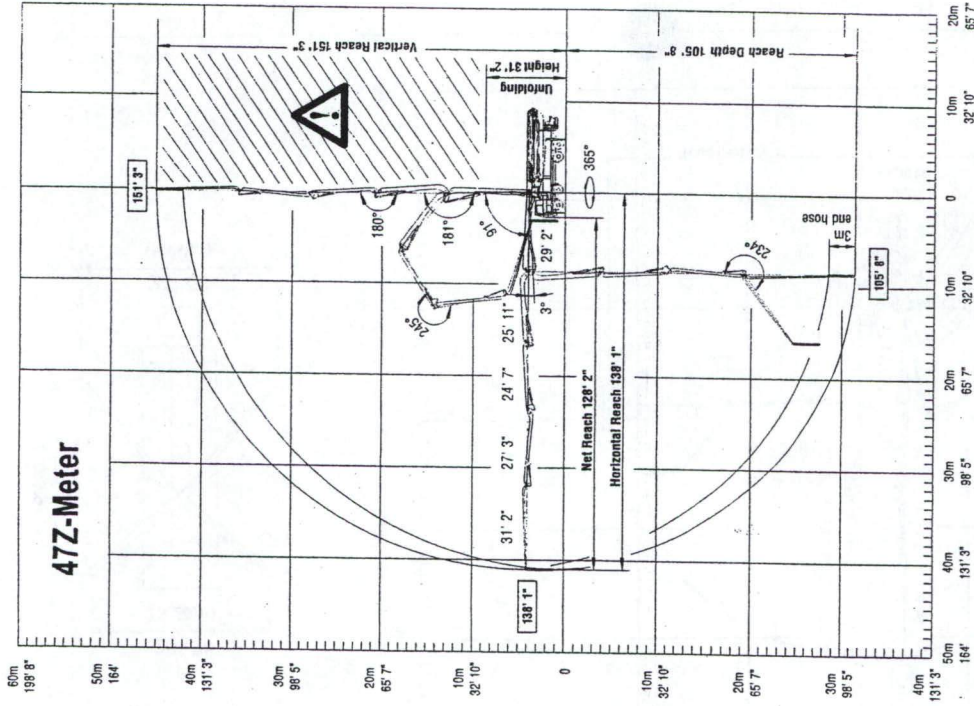
Note: PMA provides 3m single end hose. Please follow end hose weight guidelines listed in operational manual.

Outrigger Loads • Front and Rear



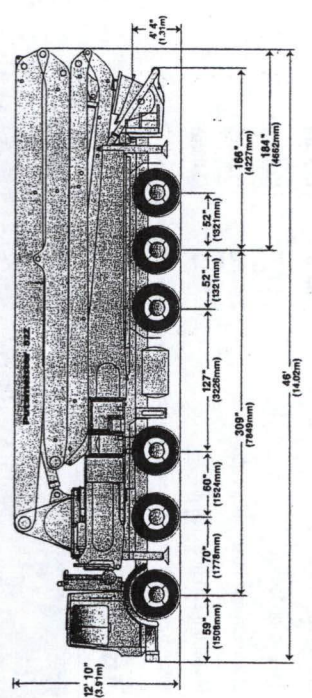
47Z-Meter

47Z-Meter



With One-Sided Support (OSS)

52Z-Meter • Truck-Mounted Concrete Boom Pump



Model Overview

- Vertical reach **169' 7"** (51.69m)
- Horizontal reach **157' 6"** (48.01m)
- Reach from front of truck **147' 2"** (44.86m)
- Reach depth **121' 5"** (37.01m)
- Unfolding height **33' 2"** (10.11m)
- Available pump cells **.16H**
- Front axle weight **47,520 lbs** (21,574kg)
- Rear axle weight **56,220 lbs** (25,524kg)
- Approx total weight **103,740 lbs** (47,098kg)

Based on Model MACK MR 688S with .16H pump cell.

Boom Specifications • Multi-Z Design

- 1st section length **35' 1"** (10.69m)
- 2nd section length **30' 6"** (9.30m)
- 3rd section length **30' 8"** (9.35m)
- 4th section length **30' 8"** (9.35m)
- 5th section length **30' 6"** (9.30m)
- Maximum end hose weight allowance **365 lbs** (166kg)
- Maximum end hose length **13' 1"** (4.00m)

Note: PMA provides 3m single end hose. Please follow end hose weight guidelines listed in operational manual.

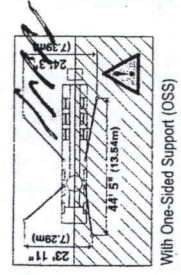
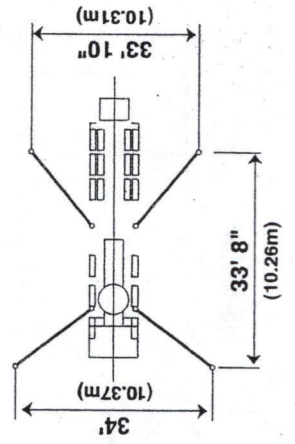
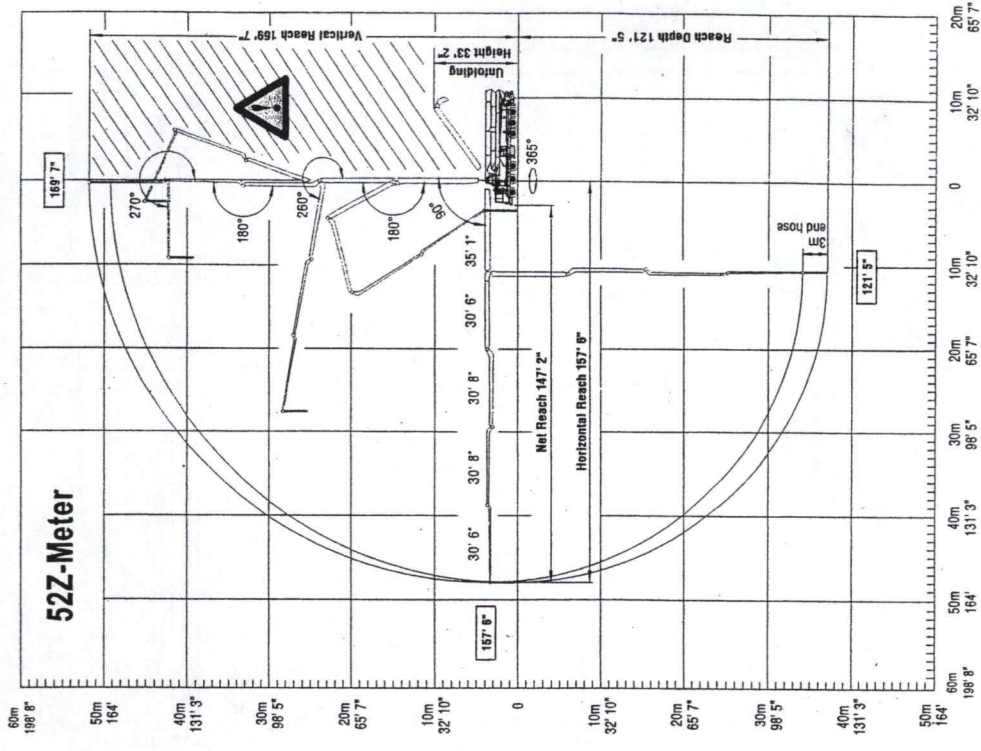
Outrigger Loads • Front and Rear

FRONT

76,875 lbs
342 kN

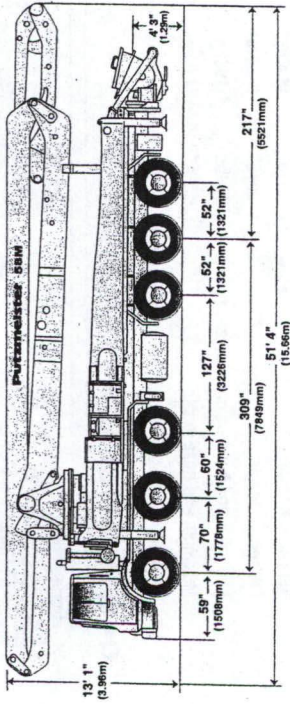
REAR

75,000 lbs
334 kN



With One-Sided Support (OSS)

58-Meter • Truck-Mounted Concrete Boom Pump



Model Overview

- Vertical reach 188' 1" (57.33m)
- Horizontal reach 174' 3" (53.11m)
- Reach from front of truck 162' 9" (49.61m)
- Reach depth 137' 10" (42.01m)
- Unfolding height 52' 2" (15.90m)
- Available pump cells .20H
- Front axle weight 57,380 lbs (26,051kg)
- Rear axle weight 54,480 lbs (24,734kg)
- Approx total weight 111,860 lbs (50,784kg)

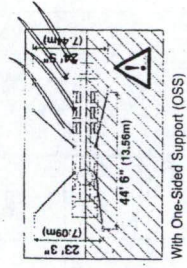
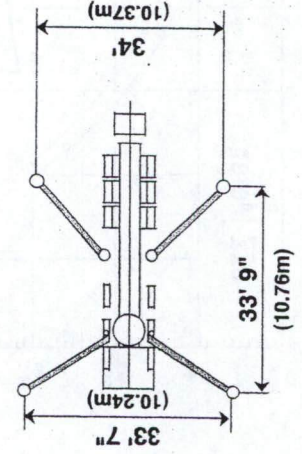
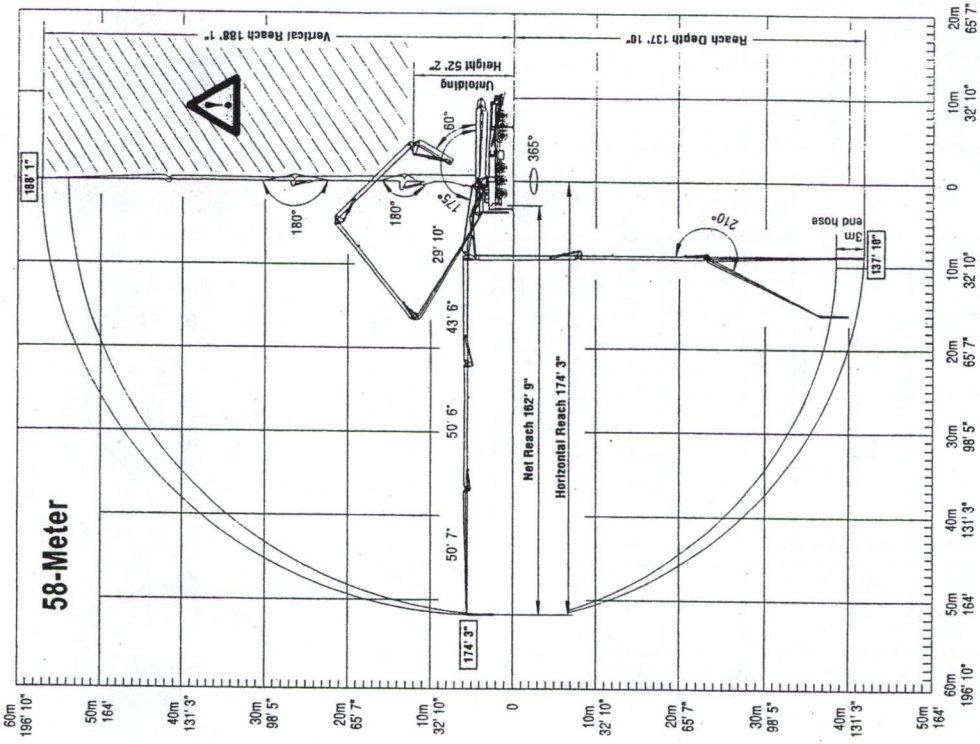
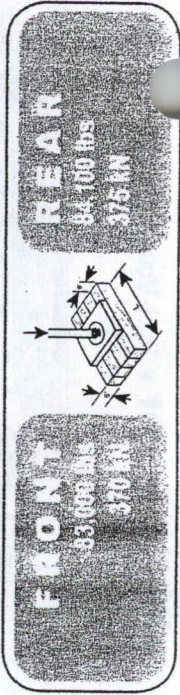
Based on Model MACK MR 688S with .20H pump cell.

Boom Specifications • Roll-and-Fold Design

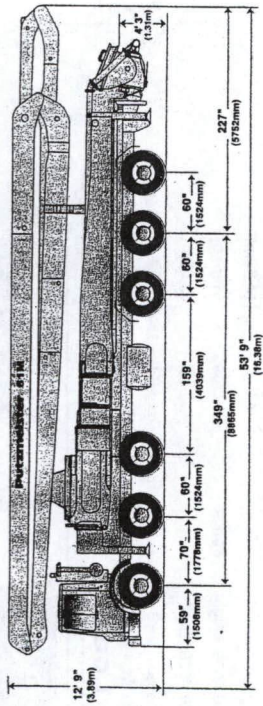
- 1st section length 29' 10" (9.09m)
- 2nd section length 43' 6" (13.26m)
- 3rd section length 50' 6" (15.39m)
- 4th section length 50' 7" (15.42m)
- Maximum end hose weight allowance 280 lbs (127kg)
- Maximum end hose length 10' (3.00m)

Note: PMA provides 3m single end hose. Please follow end hose weight guidelines listed in operational manual.

Outrigger Loads • Front and Rear



61-Meter • Truck-Mounted Concrete Boom Pump



Model Overview

- Vertical reach 197' 2" (60.10m)
- Horizontal reach 183' 9" (56.01m)
- Reach from front of truck 170' 9" (52.05m)
- Reach depth 145' 4" (44.30m)
- Unfolding height 54' 2" (16.52m)
- Available pump cells .16H, .20H
- Front axle weight 57,175 lbs (25,957kg)
- Rear axle weight 56,810 lbs (25,792kg)
- Approx total weight 113,985 lbs (51,749kg)

Based on Model MACK MR 688S with .16H pump cell.

Boom Specifications • Roll-and-Fold Design

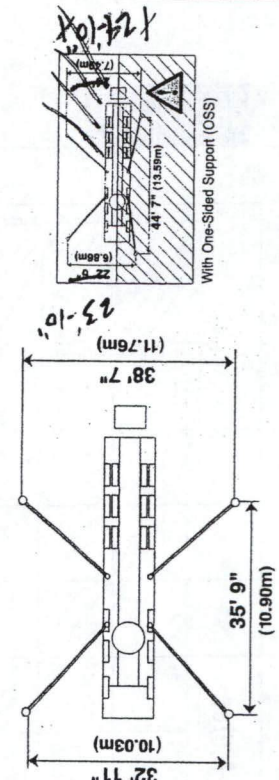
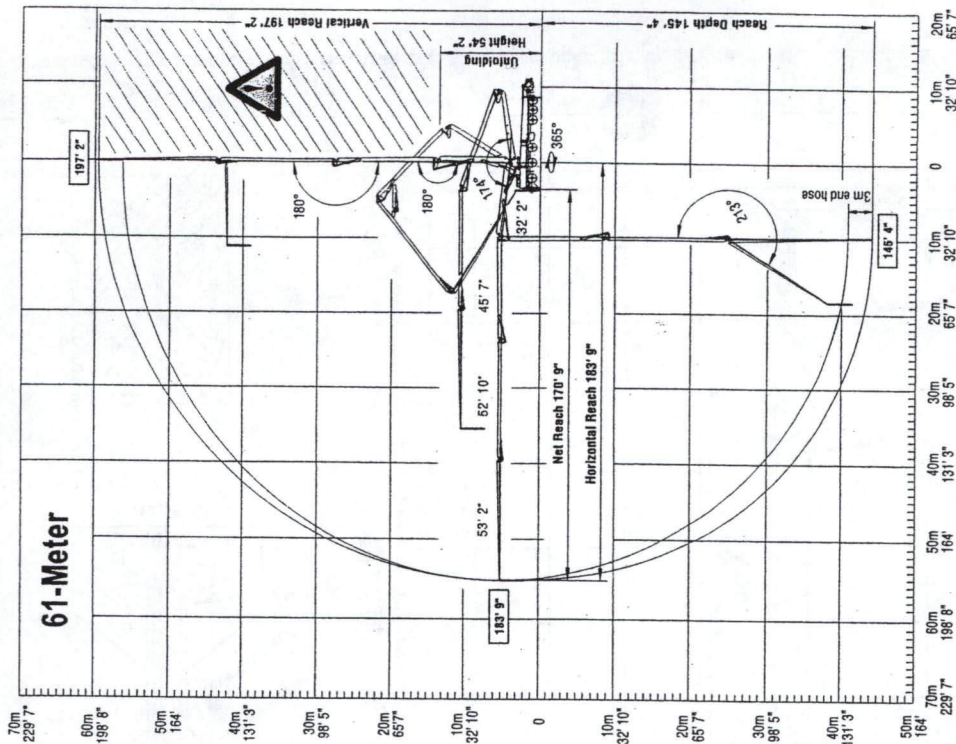
- 1st section length 32' 2" (10.57m)
- 2nd section length 45' 7" (13.89m)
- 3rd section length 52' 10" (16.10m)
- 4th section length 53' 2" (16.21m)
- Maximum end hose weight allowance 210 lbs (95kg)
- Maximum end hose length 10' (3.00m)

Note: PMA provides 3m single end hose. Please follow end hose weight guidelines listed in operational manual.

Outrigger Loads • Front and Rear

FRONT
89,925 lbs
400 kN

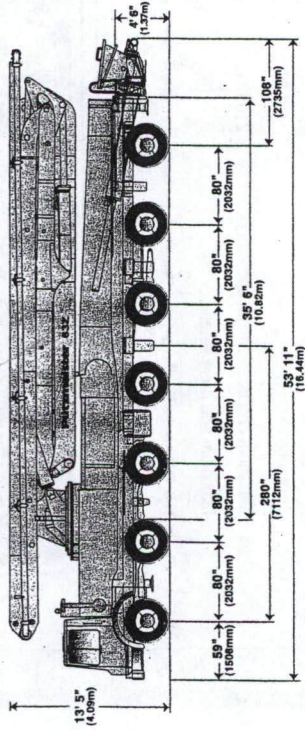
REAR
83,180 lbs
370 kN



61-Meter

61-Meter

63Z-Meter • Truck-Mounted Concrete Boom Pump



Model Overview

- Vertical reach 203' 9" (62.10m)
- Horizontal reach 190' 7" (58.10m)
- Reach from front of truck 176' 1" (53.67m)
- Reach depth 151' 11" (46.30m)
- Unfolding height 75' 6" (23.01m)
- Available pump cells .16H, .20H
- Front axle weight 54,920 lbs (24,934kg)
- Rear axle weight 75,340 lbs (34,204kg)
- Approx total weight 130,260 lbs (59,138kg)

Based on Model MACK MR 668S with .16H pump cell.

Boom Specifications • Z-Fold Design

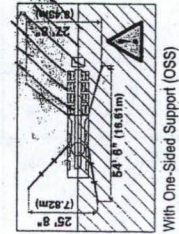
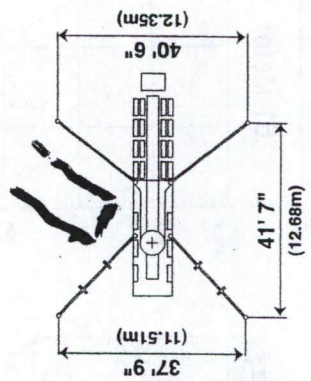
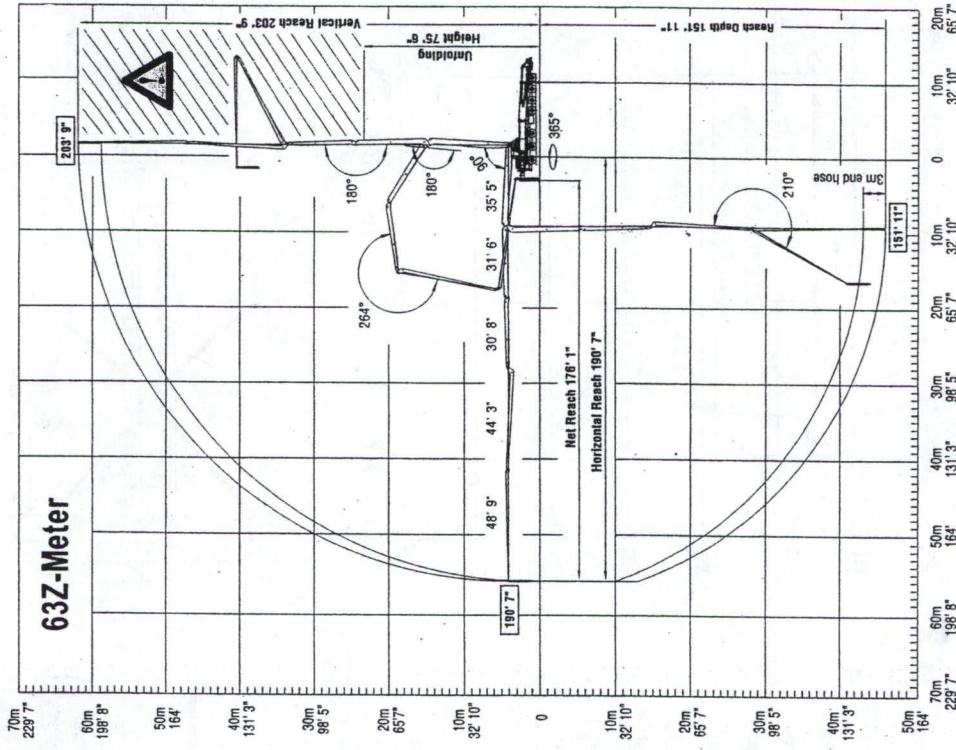
- 1st section length 35' 5" (10.80m)
- 2nd section length 31' 6" (9.60m)
- 3rd section length 30' 8" (9.35m)
- 4th section length 44' 3" (13.49m)
- 5th section length 48' 9" (14.86m)
- Maximum end hose weight allowance 210 lbs (95kg)
- Maximum end hose length 10' (3.00m)

Note: PMA provides 3m single end hose. Please follow end hose weight guidelines listed in operational manual.

Outrigger Loads • Front and Rear

FRONT
97,800 lbs
435 kN

REAR
92,200 lbs
410 kN



With One-Sided Support (OSS)