



Multi-Set II® Drop-In Anchors

Internally Threaded Heavy Duty Anchoring Systems

Technical Data

Ultimate Shear and Tension Values (Lbs/kN) In Concrete*

| Bolt Dia. In. (mm) | Anchor Dia. In. (mm) | Minimum Embedment Depth In. (mm) | Anchor Type | f'c = 2000 PSI (13.8 MPa) | | f'c = 4000 PSI (26.6 MPa) | | f'c = 6000 PSI (41.4 MPa) | |
|-----------------------|-------------------------|-------------------------------------|-----------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|
| | | | | Tension Lbs. (kN) | Shear Lbs. (kN) | Tension Lbs. (kN) | Shear Lbs. (kN) | Tension Lbs. (kN) | Shear Lbs. (kN) |
| 1/4" (6.4) | 3/8 (9.5) | 1 (25.4) | RM or RL-Carbon | 1,680 (7.5) | 1,080 (4.8) | 2,360 (10.5) | 1,200 (5.3) | 2,980 (13.3) | 1,300 (5.8) |
| 3/8 (9.5) | 1/2 (12.7) | 1-5/8 (41.3) | or | 2,980 (13.3) | 3,160 (14.1) | 3,800 (16.9) | 2,500 (11.1) | 6,240 (27.8) | 1,860 (8.3) |
| 1/2 (12.7) | 1/2 (12.7) | 2 (50.8) | SRM-18-8 S.S. | 3,300 (14.7) | 4,580 (20.4) | 5,840 (26.0) | 3,500 (15.6) | 8,300 (36.9) | 2,400 (10.7) |
| 5/8 (15.9) | 5/8 (15.9) | 2-1/2 (63.5) | or | 5,500 (24.5) | 7,440 (33.1) | 8,640 (38.4) | 5,540 (24.6) | 11,020 (49.0) | 3,640 (16.2) |
| 3/4 (19.1) | 3/4 (19.1) | 3-3/16 (81.0) | SSRM-316 S.S. | 8,280 (36.8) | 10,480 (46.6) | 9,480 (42.2) | 7,680 (34.2) | 12,260 (54.5) | 4,860 (21.6) |

* Allowable values are based upon a 4 to 1 safety factor. Divide by 4 for allowable load values.

Ultimate Shear and Tension Values (Lbs/kN) In Lightweight Concrete*

| Bolt Dia. In. (mm) | Anchor Dia. In. (mm) | Minimum Embedment Depth In. (mm) | Anchor Type | Lightweight Concrete f'c = 3000 PSI (20.7 MPa) | | Lower Flute Of Steel Deck with Lightweight Concrete Fill f'c = 3000 PSI (20.7 MPa) | |
|-----------------------|-------------------------|-------------------------------------|------------------|---|--------------------|--|--------------------|
| | | | | Tension Lbs. (kN) | Shear Lbs. (kN) | Tension Lbs. (kN) | Shear Lbs. (kN) |
| 3/8 (9.5) | 1/2 (12.7) | 1-5/8 (39.7) | RM or RL-Carbon | 3,860 (17.2) | 4,420 (19.6) | 3,340 (14.9) | 4,420 (19.6) |
| 1/2 (12.7) | 5/8 (15.9) | 2 (50.8) | or | 4,080 (18.1) | 5,640 (25.1) | 3,200 (14.2) | 4,940 (22.0) |
| 5/8 (15.9) | 7/8 (22.2) | 2-1/2 (63.5) | SRM-18-8 S.S. or | 6,280 (27.9) | 10,440 (46.4) | 5,960 (26.5) | 5,840 (26.0) |
| 3/4 (19.1) | 1 (25.4) | 3-3/16 (81.0) | SSRM-316 S.S. | 11,000 (48.9) | 15,780 (70.2) | 8,180 (36.4) | 9,120 (40.6) |

* Allowable values are based upon a 4 to 1 safety factor. Divide by 4 for allowable load values.

Ultimate Shear and Tension Values (Lbs/kN) For RX-38 (3/4 Embedment)*

| Size In. (mm) | Anchor Dia. In. (mm) | Embedment In. (mm) | f'c = 3000 PSI (20.7 MPa) | | f'c = 3000 PSI (20.7 MPa) | |
|------------------|-------------------------|-----------------------|---------------------------|--------------------|---------------------------|--------------------|
| | | | Tension Lbs. (kN) | Shear Lbs. (kN) | Tension Lbs. (kN) | Shear Lbs. (kN) |
| 3/8 (9.5) | 1/2 (12.7) | 3/4 (19.1) | 1,987 (8.8) | 2,903 (12.9) | 1,908 (8.5) | 2,525 (11.2) |

* The tabulated values are for RX-38 anchors installed at minimum of 12-diameters on center and minimum edge distance of six-diameters for 100% anchor efficiency. Spacing and edge distance may be reduced to six-diameters spacing and three-diameter edge distance provided the values are reduced 50%. Linear interpolation may be used for intermediate spacings and edge margins.

* Allowable values are based upon a 4 to 1 safety factor. Divide by 4 for allowable load values.

Recommended Spacing And Edge Distance Requirements*

| Bolt Dia. In. (mm) | Anchor Dia. In. (mm) | Embedment Depth In. (mm) | Anchor Type | Edge Distance Required To Obtain Max. Working Load In. (mm) | Min. Edge Distance At Which Load Factor Applied = .80 For Tension = .70 For Shear In. (mm) | Spacing Required to Obtain Max. Working Load In. (mm) | Min. Allowable Spacing Between Anchors Load Factor Applied = .80 For Tension = .70 For Shear In. (mm) |
|-----------------------|-------------------------|-----------------------------|------------------|--|---|--|--|
| | | | | | | | |
| 3/8 (9.5) | 1/2 (12.7) | 1-5/8 (39.7) | or | 2-7/8 (73.0) | 1-7/16 (36.5) | 5-11/16 (144.5) | 2-7/8 (73.0) |
| 1/2 (12.7) | 5/8 (15.9) | 2 (50.8) | SRM-18-8 S.S. or | 3-1/2 (88.9) | 1-3/4 (44.5) | 7 (177.8) | 3-1/2 (88.9) |
| 5/8 (15.9) | 7/8 (22.2) | 2-1/2 (63.5) | SSRM-316 S.S. | 4-3/8 (111.1) | 2-3/16 (55.6) | 8-3/4 (222.3) | 4-3/8 (111.1) |
| 3/4 (19.1) | 1 (25.4) | 3-3/16 (81.0) | | 5-5/8 (142.9) | 2-13/16 (71.4) | 11-3/8 (284.2) | 5-5/8 (142.9) |

* Spacing and edge distances shall be divided by 0.75 when anchors are placed in structural lightweight concrete. Linear interpolation may be used for intermediate spacing and edge distances.