



## Declaration of Performance

## IG TITAN MAX SYSTEM

**Product Identification:** IG TITAN MAX System (TITAN MAX 270, TITAN MAX 410, TITAN MAX 480, TITAN MAX 530, TITAN MAX 620, TITAN MAX 680 & TITAN MAX 860)

**Intended Use:** TITAN MAX is a structural stainless steel construction product intended for use within cavity wall construction in steel or concrete buildings. The components can be made from cold formed or hot rolled plate.

**Manufacturer:** IG Masonry Support Systems Inc., 108 Lakeland Avenue, Dover, Delaware, United States, DE 19901

| TITAN MAX 270                            |                        |                           |                            |                                   |                             |                                |                                                               |            |    |       |     |       |     |       |     |       |     |            |            |            |  |
|------------------------------------------|------------------------|---------------------------|----------------------------|-----------------------------------|-----------------------------|--------------------------------|---------------------------------------------------------------|------------|----|-------|-----|-------|-----|-------|-----|-------|-----|------------|------------|------------|--|
| Anchor Type                              | Fixing to              | Load Bearing Zone in [mm] | Min Slab Thickness in [mm] | Effective Embedment Depth in [mm] | Drill Hole Diameter in [mm] | Installation Torque lb-ft [Nm] | mm                                                            | 63         | 76 | 89    | 102 | 114   | 127 | 140   | 152 | 165   | 178 | 191        | 203        |            |  |
|                                          |                        |                           |                            |                                   |                             |                                | in                                                            | 2-1/2      | 3  | 3-1/2 | 4   | 4-1/2 | 5   | 5-1/2 | 6   | 6-1/2 | 7   | 7-1/2      | 8          |            |  |
| HILTI - KWIK BOLT TZ2 1/2"x 4-1/2"       | Concrete               | 5-3/8 [135]               | 8 [203]                    | 2-1/2 [63.5]                      | 1/2 [12.7]                  | 40 [54]                        | Maximum Unfactored load per cavity widths<br><br>lb/ft [kN/m] | 270 [3.94] |    |       |     |       |     |       |     |       |     | 243 [3.55] | 215 [3.15] | 203 [2.96] |  |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Concrete*              | 5-3/8 [135]               | 8 [203]                    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                               | 270 [3.94] |    |       |     |       |     |       |     |       |     |            |            |            |  |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Grout-filled CMU**     | 5-3/8 [135]               | CMU Block 8" x 8" x 16"    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                               | 270 [3.94] |    |       |     |       |     |       |     |       |     |            |            |            |  |
| HBC-C-N M12 8.8F                         | HILTI HAC-V-35 Channel | 5-3/8 [135]               | 8 [203]                    | 3-9/16 [91]                       | No drilling required        | 55 [75]                        |                                                               | 270 [3.94] |    |       |     |       |     |       |     |       |     |            |            |            |  |
| Set Screw                                | Steel - Wing Plates    | 5-3/8 [135]               | —                          | —                                 | 9/16 [14]                   | 54 [73]                        |                                                               | 270 [3.94] |    |       |     |       |     |       |     |       |     |            |            |            |  |
| Blindbolt - HD Bolt                      | Steel - Box Sections   | 5-3/8 [135]               | —                          | —                                 | 1/2 [12.7]                  | 22 [30]                        |                                                               | 270 [3.94] |    |       |     |       |     |       |     |       |     |            |            |            |  |

| TITAN MAX 410                            |                        |                           |                            |                                   |                             |                                |                                           |            |    |       |     |       |     |       |     |       |     |            |            |            |            |
|------------------------------------------|------------------------|---------------------------|----------------------------|-----------------------------------|-----------------------------|--------------------------------|-------------------------------------------|------------|----|-------|-----|-------|-----|-------|-----|-------|-----|------------|------------|------------|------------|
| Anchor Type                              | Fixing to              | Load Bearing Zone in [mm] | Min Slab Thickness in [mm] | Effective Embedment Depth in [mm] | Drill Hole Diameter in [mm] | Installation Torque lb-ft [Nm] | mm                                        | 63         | 76 | 89    | 102 | 114   | 127 | 140   | 152 | 165   | 178 | 191        | 203        |            |            |
|                                          |                        |                           |                            |                                   |                             |                                | in                                        | 2-1/2      | 3  | 3-1/2 | 4   | 4-1/2 | 5   | 5-1/2 | 6   | 6-1/2 | 7   | 7-1/2      | 8          |            |            |
| HILTI - KWIK BOLT TZ2 1/2"x 4-1/2"       | Concrete               | 5-3/8 [135]               | 8 [203]                    | 2-1/2 [63.5]                      | 1/2 [12.7]                  | 40 [54]                        | Maximum Unfactored load per cavity widths | 410 [5.98] |    |       |     |       |     |       |     |       |     | 368 [5.38] | 327 [4.78] | 307 [4.49] |            |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Concrete*              | 5-3/8 [135]               | 8 [203]                    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                           | 410 [5.98] |    |       |     |       |     |       |     |       |     |            |            |            |            |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Grout-filled CMU**     | 5-3/8 [135]               | CMU Block 8" x 8" x 16"    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                           | 410 [5.98] |    |       |     |       |     |       |     |       |     |            |            |            | 390 [5.70] |
| HBC-C-N M12 8.8F                         | HILTI HAC-V-35 Channel | 5-3/8 [135]               | 8 [203]                    | 3-9/16 [91]                       | No drilling required        | 55 [75]                        |                                           | 410 [5.98] |    |       |     |       |     |       |     |       |     |            |            |            |            |
| Set Screw                                | Steel - Wing Plates    | 5-3/8 [135]               | —                          | —                                 | 9/16 [14]                   | 54 [73]                        |                                           | 410 [5.98] |    |       |     |       |     |       |     |       |     |            |            |            |            |
| Blindbolt - HD Bolt                      | Steel - Box Sections   | 5-3/8 [135]               | —                          | —                                 | 1/2 [12.7]                  | 22 [30]                        |                                           | 410 [5.98] |    |       |     |       |     |       |     |       |     |            |            |            |            |

## TITAN MAX 480

| Anchor Type                              | Fixing to              | Load Bearing Zone in [mm] | Min Slab Thickness in [mm] | Effective Embedment Depth in [mm] | Drill Hole Diameter in [mm] | Installation Torque lb-ft [Nm] | mm                                                            | 63         | 76 | 89    | 102 | 114        | 127        | 140        | 152        | 165        | 178        | 191        | 203        |
|------------------------------------------|------------------------|---------------------------|----------------------------|-----------------------------------|-----------------------------|--------------------------------|---------------------------------------------------------------|------------|----|-------|-----|------------|------------|------------|------------|------------|------------|------------|------------|
|                                          |                        |                           |                            |                                   |                             |                                | in                                                            | 2-1/2      | 3  | 3-1/2 | 4   | 4-1/2      | 5          | 5-1/2      | 6          | 6-1/2      | 7          | 7-1/2      | 8          |
| HILTI - KWIK BOLT TZ2 1/2" x 4-1/2"      | Concrete               | 5-3/8 [135]               | 8 [203]                    | 2-1/2 [63.5]                      | 1/2 [12.7]                  | 40 [54]                        | Maximum Unfactored load per cavity widths<br><br>lb/ft [kN/m] | 480 [7.00] |    |       |     |            |            |            |            |            | 430 [6.30] | 383 [5.60] | 360 [5.25] |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Concrete*              | 5-3/8 [135]               | 8 [203]                    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                               | 480 [7.00] |    |       |     |            |            |            |            |            |            |            |            |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Grout-filled CMU**     | 5-3/8 [135]               | CMU Block 8" x 8" x 16"    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                               | 480 [7.00] |    |       |     | 470 [6.80] | 450 [6.50] | 440 [6.40] | 430 [6.27] | 411 [6.00] |            |            |            |
| HBC-C-N M12 8.8F                         | HILTI HAC-V-35 Channel | 5-3/8 [135]               | 8 [203]                    | 3-9/16 [91]                       | No drilling required        | 55 [75]                        |                                                               | 480 [7.00] |    |       |     |            |            |            |            |            | 430 [6.30] |            |            |
| Set Screw                                | Steel - Wing Plates    | 5-3/8 [135]               | —                          | —                                 | 9/16 [14]                   | 54 [73]                        |                                                               | 480 [7.00] |    |       |     |            |            |            |            |            |            |            |            |
| Blindbolt - HD Bolt                      | Steel - Box Sections   | 5-3/8 [135]               | —                          | —                                 | 1/2 [12.7]                  | 22 [30]                        |                                                               | 480 [7.00] |    |       |     |            |            |            |            |            |            |            |            |

## TITAN MAX 530

| Anchor Type                              | Fixing to              | Load Bearing Zone in [mm] | Min Slab Thickness in [mm] | Effective Embedment Depth in [mm] | Drill Hole Diameter in [mm] | Installation Torque lb-ft [Nm] | mm                                                            | 63         | 76 | 89    | 102 | 114        | 127        | 140        | 152        | 165        | 178        | 191        | 203        |
|------------------------------------------|------------------------|---------------------------|----------------------------|-----------------------------------|-----------------------------|--------------------------------|---------------------------------------------------------------|------------|----|-------|-----|------------|------------|------------|------------|------------|------------|------------|------------|
|                                          |                        |                           |                            |                                   |                             |                                | in                                                            | 2-1/2      | 3  | 3-1/2 | 4   | 4-1/2      | 5          | 5-1/2      | 6          | 6-1/2      | 7          | 7-1/2      | 8          |
| HILTI - KWIK BOLT TZ2 1/2" x 4-1/2"      | Concrete               | 5-3/8 [135]               | 8 [203]                    | 2-1/2 [63.5]                      | 1/2 [12.7]                  | 40 [54]                        | Maximum Unfactored load per cavity widths<br><br>lb/ft [kN/m] | 530 [7.73] |    |       |     |            |            |            |            | 520 [7.58] | 477 [6.96] | 423 [6.18] | 397 [5.80] |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Concrete*              | 5-3/8 [135]               | 8 [203]                    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                               | 530 [7.73] |    |       |     |            |            |            |            |            |            |            |            |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Grout-filled CMU**     | 5-3/8 [135]               | CMU Block 8" x 8" x 16"    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                               | 530 [7.73] |    |       |     | 520 [7.58] | 510 [7.44] | 490 [7.15] | 480 [7.00] | 460 [6.70] | 450 [6.56] |            |            |
| HBC-C-N M12 8.8F                         | HILTI HAC-V-35 Channel | 5-3/8 [135]               | 8 [203]                    | 3-9/16 [91]                       | No drilling required        | 55 [75]                        |                                                               | 530 [7.73] |    |       |     |            |            |            |            | 477 [6.96] |            |            |            |
| Set Screw                                | Steel - Wing Plates    | 5-3/8 [135]               | —                          | —                                 | 9/16 [14]                   | 54 [73]                        |                                                               | 530 [7.73] |    |       |     |            |            |            |            |            |            |            |            |
| Blindbolt - HD Bolt                      | Steel - Box Sections   | 5-3/8 [135]               | —                          | —                                 | 1/2 [12.7]                  | 22 [30]                        |                                                               | 530 [7.73] |    |       |     |            |            |            |            |            |            |            |            |

## TITAN MAX 620

| Anchor Type                              | Fixing to              | Load Bearing Zone<br>in [mm] | Min Slab Thickness<br>in [mm] | Effective Embedment<br>Depth in [mm] | Drill Hole<br>Diameter in [mm] | Installation Torque<br>lb-ft [Nm] | mm                                                                        | 63         | 76 | 89            | 102           | 114           | 127           | 140           | 152           | 165           | 178           | 191           | 203           |               |
|------------------------------------------|------------------------|------------------------------|-------------------------------|--------------------------------------|--------------------------------|-----------------------------------|---------------------------------------------------------------------------|------------|----|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                          |                        |                              |                               |                                      |                                |                                   | in                                                                        | 2-1/2      | 3  | 3-1/2         | 4             | 4-1/2         | 5             | 5-1/2         | 6             | 6-1/2         | 7             | 7-1/2         | 8             |               |
| HILTI - KWIK BOLT TZ2 1/2"x 4-1/2"       | Concrete               | 5-3/8 [135]                  | 8 [203]                       | 2-1/2 [63.5]                         | 1/2 [12.7]                     | 40 [54]                           | Maximum<br>Unfactored<br>load per<br>cavity widths<br><br>lb/ft<br>[kN/m] | 620 [9.05] |    |               |               |               |               |               |               | 590<br>[8.60] | 560<br>[8.17] | 540<br>[7.88] | 496<br>[7.24] | 465<br>[6.79] |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Concrete*              | 5-3/8 [135]                  | 8 [203]                       | 6-3/8 [162]                          | 9/16 [14.28]                   | 30 [40]                           |                                                                           | 620 [9.05] |    |               |               |               |               |               |               | 558<br>[8.15] |               |               |               |               |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Grout-filled CMU**     | 5-3/8 [135]                  | CMU Block<br>8" x 8" x 16"    | 6-3/8 [162]                          | 9/16 [14.28]                   | 30 [40]                           |                                                                           | 620 [9.05] |    | 610<br>[8.90] | 590<br>[8.60] | 570<br>[8.30] | 550<br>[8.00] | 540<br>[7.88] | 520<br>[7.58] | 500<br>[7.29] | 490<br>[7.15] | 470<br>[6.85] | 460<br>[6.71] |               |
| HBC-C-N M12 8.8F                         | HILTI HAC-V-35 Channel | 5-3/8 [135]                  | 8 [203]                       | 3-9/16 [91]                          | No drilling required           | 55 [75]                           |                                                                           | 620 [9.05] |    |               |               |               |               |               |               | 558<br>[8.15] | 496<br>[7.24] | 465<br>[6.79] |               |               |
| Set Screw                                | Steel - Wing Plates    | 5-3/8 [135]                  | —                             | —                                    | 9/16 [14]                      | 54 [73]                           |                                                                           | 620 [9.05] |    |               |               |               |               |               |               |               |               |               |               |               |
| Blindbolt - HD Bolt                      | Steel - Box Sections   | 5-3/8 [135]                  | —                             | —                                    | 1/2 [12.7]                     | 22 [30]                           |                                                                           | 620 [9.05] |    |               |               |               |               |               |               |               |               |               |               |               |

| TITAN MAX 680                            |                        |                           |                            |                                   |                             |                                |                                                               |            |            |            |            |            |            |            |            |            |            |            |     |            |  |  |
|------------------------------------------|------------------------|---------------------------|----------------------------|-----------------------------------|-----------------------------|--------------------------------|---------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|------------|--|--|
| Anchor Type                              | Fixing to              | Load Bearing Zone in [mm] | Min Slab Thickness in [mm] | Effective Embedment Depth in [mm] | Drill Hole Diameter in [mm] | Installation Torque lb-ft [Nm] | mm                                                            | 63         | 76         | 89         | 102        | 114        | 127        | 140        | 152        | 165        | 178        | 191        | 203 |            |  |  |
|                                          |                        |                           |                            |                                   |                             |                                | in                                                            | 2-1/2      | 3          | 3-1/2      | 4          | 4-1/2      | 5          | 5-1/2      | 6          | 6-1/2      | 7          | 7-1/2      | 8   |            |  |  |
| HILTI - KWIK BOLT TZ2 1/2"x 4-1/2"       | Concrete               | 5-3/8 [135]               | 8 [203]                    | 2-1/2 [63.5]                      | 1/2 [12.7]                  | 40 [54]                        | Maximum Unfactored load per cavity widths<br><br>lb/ft [kN/m] | 680 [9.92] |            |            |            |            |            |            | 650 [9.48] | 620 [9.05] | 600 [8.75] | 544 [7.94] |     | 509 [7.44] |  |  |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Concrete*              | 5-3/8 [135]               | 8 [203]                    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                               | 680 [9.92] |            |            |            |            |            |            |            |            | 611 [8.93] |            |     |            |  |  |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Grout-filled CMU**     | 5-3/8 [135]               | CMU Block 8" x 8" x 16"    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                               | 680 [9.92] | 670 [9.77] | 650 [9.48] | 630 [9.19] | 610 [8.90] | 590 [8.60] | 570 [8.30] | 550 [8.00] | 540 [7.88] | 520 [7.50] |            |     |            |  |  |
| HBC-C-N M12 8.8F                         | HILTI HAC-V-35 Channel | 5-3/8 [135]               | 8 [203]                    | 3-9/16 [91]                       | No drilling required        | 55 [75]                        |                                                               | 680 [9.92] |            |            |            |            |            |            |            |            |            |            |     |            |  |  |
| Set Screw                                | Steel - Wing Plates    | 5-3/8 [135]               | —                          | —                                 | 9/16 [14]                   | 54 [73]                        |                                                               | 680 [9.92] |            |            |            |            |            |            |            |            | 611 [8.93] | 544 [7.94] |     |            |  |  |
| Blindbolt - HD Bolt                      | Steel - Box Sections   | 5-3/8 [135]               | —                          | —                                 | 1/2 [12.7]                  | 22 [30]                        |                                                               | 680 [9.92] |            |            |            |            |            |            |            |            |            |            |     |            |  |  |

| TITAN MAX 860                            |                        |                           |                            |                                   |                             |                                |                                                                           |             |             |             |             |             |             |             |             |             |             |            |            |  |  |
|------------------------------------------|------------------------|---------------------------|----------------------------|-----------------------------------|-----------------------------|--------------------------------|---------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|------------|--|--|
| Anchor Type                              | Fixing to              | Load Bearing Zone in [mm] | Min Slab Thickness in [mm] | Effective Embedment Depth in [mm] | Drill Hole Diameter in [mm] | Installation Torque lb-ft [Nm] | mm                                                                        | 63          | 76          | 89          | 102         | 114         | 127         | 140         | 152         | 165         | 178         | 191        | 203        |  |  |
|                                          |                        |                           |                            |                                   |                             |                                | in                                                                        | 2-1/2       | 3           | 3-1/2       | 4           | 4-1/2       | 5           | 5-1/2       | 6           | 6-1/2       | 7           | 7-1/2      | 8          |  |  |
| HILTI - KWIK BOLT TZ2 1/2"x 4-1/2"       | Concrete               | 5-3/8 [135]               | 8 [203]                    | 2-1/2 [63.5]                      | 1/2 [12.7]                  | 40 [54]                        | Maximum<br>Unfactored<br>load per<br>cavity widths<br><br>lb/ft<br>[kN/m] | 860 [12.55] |             |             |             | 840 [12.25] | 810 [11.82] | 760 [11.09] | 720 [10.50] | 690 [10.07] | 650 [9.48]  | 610 [8.90] | 580 [8.47] |  |  |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Concrete*              | 5-3/8 [135]               | 8 [203]                    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                                           | 860 [12.55] |             |             |             |             |             | 830 [12.11] | 800 [11.67] | 760 [11.09] | 700 [10.21] | 670 [9.77] | 640 [9.34] |  |  |
| HILTI - HY 200-R V3 + HAS-E-55 1/2" x 8" | Grout-filled CMU**     | 5-3/8 [135]               | CMU Block 8" x 8" x 16"    | 6-3/8 [162]                       | 9/16 [14.28]                | 30 [40]                        |                                                                           | 790 [11.53] | 770 [11.23] | 740 [10.80] | 720 [10.50] | 700 [10.21] | 680 [9.92]  | 660 [9.63]  | 640 [9.30]  | 620 [9.05]  | 600 [8.75]  | 580 [8.46] | 560 [8.17] |  |  |
| HBC-C-N M12 8.8F                         | HILTI HAC-V-35 Channel | 5-3/8 [135]               | 8 [203]                    | 3-9/16 [91]                       | No drilling required        | 55 [75]                        |                                                                           | 860 [12.55] |             |             |             |             |             |             |             |             |             |            |            |  |  |
| Set Screw                                | Steel - Wing Plates    | 5-3/8 [135]               | —                          | —                                 | 9/16 [14]                   | 54 [73]                        |                                                                           | 860 [12.55] |             |             |             |             |             |             |             |             | 700 [10.21] | 670 [9.77] | 640 [9.34] |  |  |
| Blindbolt - HD Bolt                      | Steel - Box Sections   | 5-3/8 [135]               | —                          | —                                 | 1/2 [12.7]                  | 22 [30]                        |                                                                           | 860 [12.55] |             |             |             |             |             |             |             |             |             |            |            |  |  |

Bracket design is assumed to be standard. For bracket drop, corner designs or higher loadings, please contact IG Masonry Support's Technical Team. Loadings are assumed for straight runs only with no lateral edge limitations.

\*Concrete strength assumed as 4000 Psi - Cracked Concrete Max Shimming 1/2" \*\*Grout strength assumed as 1500 Psi

The performance of the product identified above is in conformity with the set of declared performances.

This declaration is issued under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

**Owen Coyle, President**

Signed on 06/27/2025 at

IG Masonry Support Systems Inc., 108 Lakeland Avenue  
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