

## IB | IMPERIAL HEXAGON AF SIZE REDUCER BUSHES



- ▶ Economical solution of reducing female hexagon AF size of TWH-NRH imperial ratchet head
- ▶ Select the outside AF size (i.e. ratchet head AF size) and required inside AF size to determine the IB model number
- ▶ Note that wall thickness 'W' dimension of reducer bush must be added to the minimum radius dimension of the ratchet head

| Outside<br>AF size | Inside<br>AF size | For TWH27NRH    |         | For TWH54NRH    |         | For TWH120NRH   |         | For TWH210NRH   |         | For TWH430NRH   |         |
|--------------------|-------------------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|---------|
|                    |                   | Model<br>number | W<br>mm | Model<br>number | W<br>mm | Model<br>number | W<br>mm | Model<br>number | W<br>mm | Model<br>number | W<br>mm |
| 1 1/4"             | 1 1/16"           | IB27-104-101    | 2.4     |                 |         |                 |         |                 |         |                 |         |
| 1 7/16"            | 1 1/16"           | IB27-107-101    | 4.8     |                 |         |                 |         |                 |         |                 |         |
| 1 7/16"            | 1 1/4"            | IB27-107-104    | 2.4     |                 |         |                 |         |                 |         |                 |         |
| 1 5/8"             | 1 1/4"            | IB27-110-104    | 4.8     | IB54-110-104    | 4.8     |                 |         |                 |         |                 |         |
| 1 5/8"             | 1 7/16"           | IB27-110-107    | 2.4     | IB54-110-107    | 2.4     |                 |         |                 |         |                 |         |
| 1 13/16"           | 1 7/16"           | IB27-113-107    | 4.8     | IB54-113-107    | 4.8     |                 |         |                 |         |                 |         |
| 1 13/16"           | 1 5/8"            | IB27-113-110    | 2.4     | IB54-113-110    | 2.4     |                 |         |                 |         |                 |         |
| 2"                 | 1 5/8"            | IB27-200-110    | 4.8     | IB54-200-110    | 4.8     |                 |         |                 |         |                 |         |
| 2"                 | 1 13/16"          | IB27-200-113    | 2.4     | IB54-200-113    | 2.4     |                 |         |                 |         |                 |         |
| 2 3/16"            | 1 5/8"            | IB27-203-110    | 7.2     | IB54-203-110    | 7.2     |                 |         |                 |         |                 |         |
| 2 3/16"            | 1 13/16"          | IB27-203-113    | 4.8     | IB54-203-113    | 4.8     |                 |         |                 |         |                 |         |
| 2 3/16"            | 2"                | IB27-203-200    | 2.4     | IB54-203-200    | 2.4     |                 |         |                 |         |                 |         |
| 2 3/8"             | 1 13/16"          | IB27-206-113    | 7.2     | IB54-206-113    | 7.2     |                 |         |                 |         |                 |         |
| 2 3/8"             | 2"                | IB27-206-200    | 4.8     | IB54-206-200    | 4.8     |                 |         |                 |         |                 |         |
| 2 3/8"             | 2 3/16"           | IB27-206-203    | 2.4     | IB54-206-203    | 2.4     | IB120-206-203   | 2.4     |                 |         |                 |         |
| 2 9/16"            | 2"                |                 |         | IB54-209-200    | 7.2     | not available   | -       |                 |         |                 |         |
| 2 9/16"            | 2 3/16"           |                 |         | IB54-209-203    | 4.8     | IB120-209-203   | 4.8     |                 |         |                 |         |
| 2 9/16"            | 2 3/8"            |                 |         | IB54-209-206    | 2.4     | IB120-209-206   | 2.4     |                 |         |                 |         |
| 2 3/4"             | 2 3/16"           |                 |         | IB54-212-203    | 7.2     | IB120-212-203   | 7.2     |                 |         |                 |         |
| 2 3/4"             | 2 3/8"            |                 |         | IB54-212-206    | 4.8     | IB120-212-206   | 4.8     |                 |         |                 |         |
| 2 3/4"             | 2 9/16"           |                 |         | IB54-212-209    | 2.4     | IB120-212-209   | 2.4     |                 |         |                 |         |
| 2 15/16"           | 2 3/8"            |                 |         | IB54-215-206    | 7.2     | IB120-215-206   | 7.2     |                 |         |                 |         |
| 2 15/16"           | 2 9/16"           |                 |         | IB54-215-209    | 4.8     | IB120-215-209   | 4.8     |                 |         |                 |         |
| 2 15/16"           | 2 3/4"            |                 |         | IB54-215-212    | 2.4     | IB120-215-212   | 2.4     | IB210-215-212   | 2.4     |                 |         |
| 3 1/8"             | 2 9/16"           |                 |         | IB54-302-209    | 7.2     | IB120-302-209   | 7.2     | not available   | -       |                 |         |
| 3 1/8"             | 2 3/4"            |                 |         | IB54-302-212    | 4.8     | IB120-302-212   | 4.8     | IB210-302-212   | 4.8     |                 |         |
| 3 1/8"             | 2 15/16"          |                 |         | IB54-302-215    | 2.4     | IB120-302-215   | 2.4     | IB210-302-215   | 2.4     |                 |         |
| 3 1/2"             | 2 15/16"          |                 |         |                 |         | IB120-308-215   | 7.2     | IB210-308-215   | 7.2     |                 |         |
| 3 1/2"             | 3 1/8"            |                 |         |                 |         | IB120-308-302   | 4.8     | IB210-308-302   | 4.8     | IB430-308-302   | 4.8     |
| 3 7/8"             | 3 1/8"            |                 |         |                 |         | IB120-314-302   | 9.5     | IB210-314-302   | 9.5     | IB430-314-302   | 9.5     |
| 3 7/8"             | 3 1/2"            |                 |         |                 |         | IB120-314-308   | 4.8     | IB210-314-308   | 4.8     | IB430-314-308   | 4.8     |
| 4 1/4"             | 3 1/2"            |                 |         |                 |         |                 |         | IB210-404-308   | 9.5     | IB430-404-308   | 9.5     |
| 4 1/4"             | 3 7/8"            |                 |         |                 |         |                 |         | IB210-404-314   | 4.8     | IB430-404-314   | 4.8     |
| 4 5/8"             | 3 7/8"            |                 |         |                 |         |                 |         | IB210-410-314   | 9.5     | IB430-410-314   | 9.5     |
| 4 5/8"             | 4 1/4"            |                 |         |                 |         |                 |         | IB210-410-404   | 4.8     | IB430-410-404   | 4.8     |
| 5"                 | 4 1/4"            |                 |         |                 |         |                 |         |                 |         | IB430-500-404   | 9.5     |
| 5"                 | 4 5/8"            |                 |         |                 |         |                 |         |                 |         | IB430-500-410   | 4.8     |
| 5 3/8"             | 4 5/8"            |                 |         |                 |         |                 |         |                 |         | IB430-506-410   | 9.5     |
| 5 3/8"             | 5"                |                 |         |                 |         |                 |         |                 |         | IB430-506-500   | 4.8     |
| 5 3/4"             | 5"                |                 |         |                 |         |                 |         |                 |         | IB430-512-500   | 9.5     |
| 5 3/4"             | 5 3/8"            |                 |         |                 |         |                 |         |                 |         | IB430-512-506   | 4.8     |
| 6 1/8"             | 5 3/8"            |                 |         |                 |         |                 |         |                 |         | IB430-602-506   | 9.5     |
| 6 1/8"             | 5 3/4"            |                 |         |                 |         |                 |         |                 |         | IB430-602-512   | 4.8     |
| 6 1/2"             | 5 3/4"            |                 |         |                 |         |                 |         |                 |         | IB430-608-512   | 9.5     |
| 6 1/2"             | 6 1/8"            |                 |         |                 |         |                 |         |                 |         | IB430-608-602   | 4.8     |
| 6 7/8"             | 6 1/8"            |                 |         |                 |         |                 |         |                 |         | IB430-614-602   | 9.5     |
| 6 7/8"             | 6 1/2"            |                 |         |                 |         |                 |         |                 |         | IB430-614-608   | 4.8     |

**MB | METRIC HEXAGON AF SIZE REDUCER BUSHES**


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- ▶ Select the outside AF size (i.e. ratchet head AF size) and required inside AF size to determine the MB model number
- ▶ Note that wall thickness 'W' dimension of reducer bush must be added to the minimum radius dimension of the ratchet head

| Outside AF size | Inside AF size | For TWH27NRH |      | For TWH54NRH |      | For TWH120NRH |      | For TWH210NRH |      | For TWH430NRH |      |
|-----------------|----------------|--------------|------|--------------|------|---------------|------|---------------|------|---------------|------|
|                 |                | Model number | W mm | Model number | W mm | Model number  | W mm | Model number  | W mm | Model number  | W mm |
| 30              | 24             | MB27-30-24   | 3    |              |      |               |      |               |      |               |      |
| 32              | 24             | MB27-32-24   | 3    |              |      |               |      |               |      |               |      |
| 32              | 27             | MB27-32-27   | 3    |              |      |               |      |               |      |               |      |
| 36              | 30             | MB27-36-30   | 3    | MB54-36-30   | 3    |               |      |               |      |               |      |
| 41              | 36             | MB27-41-36   | 2.5  | MB54-41-36   | 2.5  |               |      |               |      |               |      |
| 46              | 36             | MB27-46-36   | 5    | MB54-46-36   | 5    |               |      |               |      |               |      |
| 46              | 41             | MB27-46-41   | 2.5  | MB54-46-41   | 2.5  |               |      |               |      |               |      |
| 50              | 41             | MB27-50-41   | 4.5  | MB54-50-41   | 4.5  |               |      |               |      |               |      |
| 50              | 46             | MB27-50-46   | 2    | MB54-50-46   | 2    |               |      |               |      |               |      |
| 55              | 41             | MB27-55-41   | 7    | MB54-55-41   | 7    |               |      |               |      |               |      |
| 55              | 46             | MB27-55-46   | 4.5  | MB54-55-46   | 4.5  |               |      |               |      |               |      |
| 55              | 50             | MB27-55-50   | 2.5  | MB54-55-50   | 2.5  | MB120-55-50   | 2.5  |               |      |               |      |
| 60              | 46             | MB27-60-46   | 7    | MB54-60-46   | 7    | not available | -    |               |      |               |      |
| 60              | 50             | MB27-60-50   | 5    | MB54-60-50   | 5    | MB120-60-50   | 5    |               |      |               |      |
| 60              | 55             | MB27-60-55   | 2.5  | MB54-60-55   | 2.5  | MB120-60-55   | 2.5  |               |      |               |      |
| 65              | 50             |              |      | MB54-65-50   | 7.5  | MB120-65-50   | 7.5  |               |      |               |      |
| 65              | 55             |              |      | MB54-65-55   | 5    | MB120-65-55   | 5    |               |      |               |      |
| 65              | 60             |              |      | MB54-65-60   | 2.5  | MB120-65-60   | 2.5  |               |      |               |      |
| 70              | 55             |              |      | MB54-70-55   | 7.5  | MB120-70-55   | 7.5  |               |      |               |      |
| 70              | 60             |              |      | MB54-70-60   | 5    | MB120-70-60   | 5    |               |      |               |      |
| 70              | 65             |              |      | MB54-70-65   | 2.5  | MB120-70-65   | 2.5  |               |      |               |      |
| 75              | 60             |              |      | MB54-75-60   | 7.5  | MB120-75-60   | 7.5  |               |      |               |      |
| 75              | 65             |              |      | MB54-75-65   | 5    | MB120-75-65   | 5    |               |      |               |      |
| 75              | 70             |              |      | MB54-75-70   | 2.5  | MB120-75-70   | 2.5  | MB210-75-70   | 2.5  |               |      |
| 80              | 65             |              |      | MB54-80-65   | 7.5  | MB120-80-65   | 7.5  | not available | -    |               |      |
| 80              | 70             |              |      | MB54-80-70   | 5    | MB120-80-70   | 5    | MB210-80-70   | 5    |               |      |
| 80              | 75             |              |      | MB54-80-75   | 2.5  | MB120-80-75   | 2.5  | MB210-80-75   | 2.5  |               |      |
| 85              | 70             |              |      |              |      | MB120-85-70   | 7.5  | MB210-85-70   | 7.5  |               |      |
| 85              | 75             |              |      |              |      | MB120-85-75   | 5    | MB210-85-75   | 5    |               |      |
| 85              | 80             |              |      |              |      | MB120-85-80   | 2.5  | MB210-85-80   | 2.5  | MB430-85-80   | 2.5  |
| 90              | 75             |              |      |              |      | MB120-90-75   | 7.5  | MB210-90-75   | 7.5  | not available | -    |
| 90              | 80             |              |      |              |      | MB120-90-80   | 5    | MB210-90-80   | 5    | MB430-90-80   | 5    |
| 90              | 85             |              |      |              |      | MB120-90-85   | 2.5  | MB210-90-85   | 2.5  | MB430-90-85   | 2.5  |
| 95              | 80             |              |      |              |      | MB120-95-80   | 7.5  | MB210-95-80   | 7.5  | MB430-95-80   | 7.5  |
| 95              | 85             |              |      |              |      | MB120-95-85   | 5    | MB210-95-85   | 5    | MB430-95-85   | 5    |
| 95              | 90             |              |      |              |      | MB120-95-90   | 2.5  | MB210-95-90   | 2.5  | MB430-95-90   | 2.5  |
| 100             | 85             |              |      |              |      | MB120-100-85  | 7.5  | MB210-100-85  | 7.5  | MB430-100-85  | 7.5  |
| 100             | 90             |              |      |              |      | MB120-100-90  | 5    | MB210-100-90  | 5    | MB430-100-90  | 5    |
| 100             | 95             |              |      |              |      | MB120-100-95  | 2.5  | MB210-100-95  | 2.5  | MB430-100-95  | 2.5  |
| 105             | 90             |              |      |              |      |               |      | MB210-105-90  | 7.5  | MB430-105-90  | 7.5  |
| 105             | 95             |              |      |              |      |               |      | MB210-105-95  | 5    | MB430-105-95  | 5    |
| 105             | 100            |              |      |              |      |               |      | MB210-105-100 | 2.5  | MB430-105-100 | 2.5  |
| 110             | 95             |              |      |              |      |               |      | MB210-110-95  | 7.5  | MB430-110-95  | 7.5  |
| 110             | 100            |              |      |              |      |               |      | MB210-110-100 | 5    | MB430-110-100 | 5    |
| 110             | 105            |              |      |              |      |               |      | MB210-110-105 | 2.5  | MB430-110-105 | 2.5  |
| 115             | 100            |              |      |              |      |               |      | MB210-115-100 | 7.5  | MB430-115-100 | 7.5  |
| 115             | 105            |              |      |              |      |               |      | MB210-115-105 | 5    | MB430-115-105 | 5    |
| 115             | 110            |              |      |              |      |               |      | MB210-115-110 | 2.5  | MB430-115-110 | 2.5  |
| 130             | 105            |              |      |              |      |               |      |               |      | MB430-130-105 | 12.5 |
| 130             | 110            |              |      |              |      |               |      |               |      | MB430-130-110 | 10   |
| 130             | 115            |              |      |              |      |               |      |               |      | MB430-130-115 | 7.5  |
| 145             | 110            |              |      |              |      |               |      |               |      | MB430-145-110 | 17.5 |
| 145             | 115            |              |      |              |      |               |      |               |      | MB430-145-115 | 15   |
| 145             | 130            |              |      |              |      |               |      |               |      | MB430-145-130 | 7.5  |