

### ● Toolholder Dimensions

| Description                                                                                                                         | Std. |   | Dimension (mm) |     |     |    |     |     |                |   |     | Width (mm) | Face Grooving<br>Dia. øD |      | Spare Parts                                                                         |                                                                                     |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------|------|---|----------------|-----|-----|----|-----|-----|----------------|---|-----|------------|--------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|--|
|                                                                                                                                     | R    | L | H1=h           | H2  | H3  | B  | L1  | L2  | F              | S | T   | W          | MIN.                     | MAX. |  |  |  |  |
|                                                                                                                                     |      |   |                |     |     |    |     |     |                |   |     |            |                          |      |                                                                                     |                                                                                     |  |  |
| KFMS <sup>R/L</sup><br>2020K2535-5<br>2020K3550-5<br>2020K5075-5<br>2020K75115-5<br>2020K115180-5<br>2020K180235-5<br>2020K235800-5 | ●    |   | 20             | -   | 10  | 20 | 125 | 39  | 20.7<br>(21.2) | - | 20  | 5<br>(6)   | 25                       | 35   | HH5X20                                                                              | LW-4                                                                                |  |  |
|                                                                                                                                     | ●    |   |                |     |     |    |     | 35  |                |   | 50  |            |                          |      |                                                                                     |                                                                                     |  |  |
|                                                                                                                                     | ●    |   |                |     |     |    |     | 50  |                |   | 75  |            |                          |      |                                                                                     |                                                                                     |  |  |
|                                                                                                                                     | ●    |   |                | 75  | 115 |    |     | 25  |                |   |     |            |                          |      |                                                                                     |                                                                                     |  |  |
|                                                                                                                                     | ●    |   |                | 115 | 180 |    |     |     |                |   |     |            |                          |      |                                                                                     |                                                                                     |  |  |
|                                                                                                                                     | ●    |   |                | 180 | 235 |    |     |     |                |   |     |            |                          |      |                                                                                     |                                                                                     |  |  |
|                                                                                                                                     | ●    |   |                | 235 | ∞   |    |     |     |                |   |     |            |                          |      |                                                                                     |                                                                                     |  |  |
| 2525M2535-5                                                                                                                         | ●    | ● | 25             | -   | 10  | 25 | 150 | 39  | 25.7<br>(26.2) | - | 20  | 5<br>(6)   | 25                       | 35   | HH5X25                                                                              | LW-4                                                                                |  |  |
| 2525M3550-5                                                                                                                         | ●    | ● |                |     |     |    |     | 35  |                |   | 50  |            |                          |      |                                                                                     |                                                                                     |  |  |
| 2525M5075-5                                                                                                                         | ●    | ● |                |     |     |    |     | 50  |                |   | 75  |            |                          |      |                                                                                     |                                                                                     |  |  |
| 2525M75115-5                                                                                                                        | ●    | ● |                |     |     |    |     | 75  |                |   | 115 |            |                          |      |                                                                                     |                                                                                     |  |  |
| 2525M115180-5                                                                                                                       | ●    | ● |                |     |     |    |     | 115 |                |   | 180 |            |                          |      |                                                                                     |                                                                                     |  |  |
| 2525M180235-5                                                                                                                       | ●    | ● |                |     |     |    |     | 180 |                |   | 235 |            |                          |      |                                                                                     |                                                                                     |  |  |
| 2525M235800-5                                                                                                                       | ●    | ● |                |     |     |    |     | 235 |                |   | ∞   |            |                          |      |                                                                                     |                                                                                     |  |  |

• Dimension T shows available grooving depth.

- Face Grooving Dia.  $\phi D$ : The diameter range of the initial groove.

• For KEMS<sup>®</sup>/.....-5 Toolholder can hold a 6mm width insert. ( ) value shows the dimension of a 6mm width insert.

### ◆ Selection of Toolholder & Insert

Selection of Toolholder & Insert

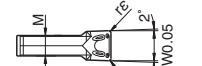
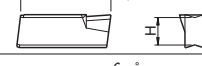
| Toolholder | R-hand    |
|------------|-----------|
| Insert     | (No Hand) |

| Toolholder | L-hand    |
|------------|-----------|
| Insert     | (No Hand) |

### ■ Applicable Inserts (mm)

| Description            | L  | H   |
|------------------------|----|-----|
| FMM30-03<br>} FMM60-04 | 12 | 3.5 |
| FMN3<br>} FMN6         | 12 | 3.5 |

|   |                                                             |  |  |  |   |   |   |                                                                                                                                                                                           |
|---|-------------------------------------------------------------|--|--|--|---|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P | Carbon Steel / Alloy Steel                                  |  |  |  | ● |   |   | Classification of usage<br>● : Continuous-Light Interruption / 1st Choice<br>☺ : Continuous-Light Interruption / 2nd Choice<br>● : Continuous / 1st Choice<br>○ : Continuous / 2nd Choice |
| M | Stainless Steel                                             |  |  |  | ● |   |   |                                                                                                                                                                                           |
| K | Cast Iron                                                   |  |  |  |   | ☺ | ☺ |                                                                                                                                                                                           |
| N | Non-ferrous Metals                                          |  |  |  |   |   | ● |                                                                                                                                                                                           |
| S | Titanium Alloy                                              |  |  |  |   |   | ● |                                                                                                                                                                                           |
| H | Hard materials (under 40HRC)<br>Hard materials (over 40HRC) |  |  |  | ○ |   |   |                                                                                                                                                                                           |

| Insert                                                                                                                                      |                                                                                     | Description | Dimension (mm) |      |     | Cermet | CVD<br>Coated Carbide | PVD<br>Coated Carbide |       |       | Carbide | Applicable<br>Toolholder   |                            |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|----------------|------|-----|--------|-----------------------|-----------------------|-------|-------|---------|----------------------------|----------------------------|
|                                                                                                                                             |                                                                                     |             | W              | rε   | M   | TN90   | CR9025                | PR915                 | PR930 | PR905 | KW10    |                            |                            |
| <br>Face Grooving<br>Chip Control Oriented /<br>M Class  |  | FMM 30-03   | 3.0            | 0.4  | 2.0 | ●      | ●                     | ●                     | ●     | ●     | ●       | KFMS <sup>®</sup> /L ... 3 |                            |
|                                                                                                                                             |                                                                                     | 40-04       | 4.0            |      | 2.6 | ●      | ●                     | ●                     | ●     | ●     | ●       | KFMS <sup>®</sup> /L ... 4 |                            |
|                                                                                                                                             |                                                                                     | 50-04       | 5.0            |      | 3.4 | ●      | ●                     | ●                     | ●     | ●     | ●       | KFMS <sup>®</sup> /L ... 5 |                            |
|                                                                                                                                             |                                                                                     | 60-04       | 6.0            |      | 4.0 | ●      | ●                     |                       | ●     | ●     | ●       |                            |                            |
| <br>Face Grooving<br>Sharp-Cutting<br>Oriented / M Class |  | FMN 3       | 3.0            | 0.25 | 2.0 | ●      | ●                     |                       | ●     | ●     | ●       | KFMS <sup>®</sup> /L ... 3 |                            |
|                                                                                                                                             |                                                                                     | 4           | 4.0            |      | 2.6 | ●      | ●                     |                       | ●     | ●     | ●       | ●                          | KFMS <sup>®</sup> /L ... 4 |
|                                                                                                                                             |                                                                                     | 5           | 5.0            |      | 3.4 | ●      | ●                     |                       | ●     | ●     | ●       | ●                          | KFMS <sup>®</sup> /L ... 5 |
|                                                                                                                                             |                                                                                     | 6           | 6.0            |      | 4.0 | ●      | ●                     |                       | ●     | ●     | ●       | ●                          |                            |

• FMN type inserts are only for Deep Grooving and not applicable for Traversing.

Recommended Cutting Conditions ➡ **G77**

◆ Limit of Traversing toward Center

Traversing towards the Center causes the toolholder to interfere with the groove wall depending on the initial cut's diameter.

|                                                                                                                   |                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Remaining Boss Dia..ød</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"></div> <div> <b>øD</b><br/> 25    26    27    28 and over </div> </div>                                                       |
|                                                                                                                   | <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;">Description</div> <div> <b>ød</b> </div> </div>                                                                               |
|                                                                                                                   | <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <b>KFMS<sup>®</sup> 2020K2530-3</b><br/> <b>KFMS<sup>®</sup> 2525M2530-3</b> </div> <div> 4    2    0    0 </div> </div>     |
|                                                                                                                   | <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <b>KFMS<sup>®</sup> 2020K2535-4</b><br/> <b>KFMS<sup>®</sup> 2525M2535-4</b> </div> <div> 6    3    0 </div> </div>          |
|                                                                                                                   | <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <b>KFMS<sup>®</sup> 2020K2535-5</b><br/> <b>KFMS<sup>®</sup> 2525M2535-5</b> </div> <div> 7    4    1 </div> </div>          |
|                                                                                                                   | <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <b>KFMS<sup>®</sup> 2020K2535-5</b><br/> <b>KFMS<sup>®</sup> 2525M2535-5</b> </div> <div> *(5)    *(2)    *(0) </div> </div> |

e.g.)  
KFMSR 2525M2530-3 with  $\varnothing 25$  as first cut towards the center, it will encounter rubbing of the holder cartridge when  $\varnothing d$  is 4.0mm.

\*( ) value shows the Dimension using FMM60-04 Insert.

● : Std. Item   ○ : Check Availability   R : Std. Item (R-hand Only)   L : Std. Item (L-hand Only)

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**Inserts are sold  
in 10 piece boxes.**

## G67