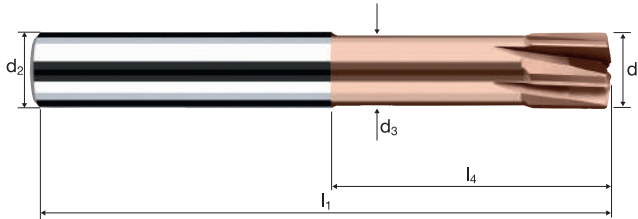


# High feed end mills XFeed-H

Cylindrical neck, 4.5xd

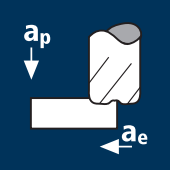







|    |           |    |
|----|-----------|----|
| HM | $\lambda$ | 0° |
| XA | $\gamma$  | 0° |
|    | HFC       |    |
|    |           |    |
|    |           |    |
|    |           |    |



|  |  |  |  |       |       |      |  |  |     |
|--|--|--|--|-------|-------|------|--|--|-----|
|  |  |  |  | HRC   | HRC   | HRC  |  |  | HSS |
|  |  |  |  | 48-56 | 56-60 | > 60 |  |  |     |

| Ø<br>Code | $d_1$<br>e8 | $d_2$<br>h5 | $d_3$ | $l_1$ | $l_3$ | $l_4$ | ap <sub>max</sub> | R <sub>theo.</sub> | $\alpha$ | z | DURO-Si |
|-----------|-------------|-------------|-------|-------|-------|-------|-------------------|--------------------|----------|---|---------|
|           |             |             |       |       |       |       |                   |                    |          |   | H7612   |
| 100       | 1.00        | 6.00        | 0.95  | 61    | 4.50  | 14.58 | 0.04              | 0.09               | 10.0°    | 4 | ●       |
| 140       | 2.00        | 6.00        | 1.90  | 61    | 9.00  | 17.31 | 0.08              | 0.18               | 6.8°     | 4 | ●       |
| 180       | 3.00        | 6.00        | 2.80  | 61    | 13.50 | 20.13 | 0.12              | 0.27               | 4.5°     | 4 | ●       |
| 220       | 4.00        | 6.00        | 3.70  | 66    | 18.00 | 22.95 | 0.16              | 0.36               | 2.7°     | 4 | ●       |
| 260       | 5.00        | 6.00        | 4.60  | 66    | 22.50 | 25.77 | 0.20              | 0.45               | 1.3°     | 4 | ●       |
| 300       | 6.00        | 6.00        | 5.50  | 69    | 30.34 | 31.00 | 0.25              | 0.54               | 0.0°     | 6 | ●       |
| 391       | 8.00        | 8.00        | 7.40  | 80    | 39.29 | 40.00 | 0.33              | 0.72               | 0.0°     | 6 | ●       |
| 450       | 10.00       | 10.00       | 9.20  | 90    | 47.20 | 48.00 | 0.41              | 0.90               | 0.0°     | 6 | ●       |
| 501       | 12.00       | 12.00       | 11.00 | 105   | 54.13 | 55.00 | 0.50              | 1.08               | 0.0°     | 6 | ●       |
| 610       | 16.00       | 16.00       | 15.00 | 125   | 74.13 | 75.00 | 0.69              | 1.44               | 0.0°     | 6 | ●       |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |
|           |             |             |       |       |       |       |                   |                    |          |   |         |

| Application  | Material  | d1<br>[mm] | z   | v <sub>c</sub><br>[m/min] | f <sub>s</sub><br>[mm] | a <sub>p</sub><br>[mm] | a <sub>e</sub><br>[mm] | n<br>[min <sup>-1</sup> ] | v <sub>r</sub><br>[mm/min] | Q<br>[cm <sup>3</sup> /min] |
|--|---|------------|---|---------------------------|------------------------|------------------------|------------------------|---------------------------|----------------------------|-----------------------------|
|  | Hardened tool steel<br>48 - 52 HRC<br><br>           | 2.00       | 4   | 130                       | 0.070                  | 0.060                  | 1.500                  | 20690                     | 5795                       | 0.5                         |
|  |   | 3.00       | 4   | 130                       | 0.105                  | 0.089                  | 2.250                  | 13795                     | 5795                       | 1.2                         |
|  |   | 4.00       | 4   | 130                       | 0.140                  | 0.140                  | 3.000                  | 10345                     | 5795                       | 2.4                         |
|  |   | 5.00       | 4   | 130                       | 0.175                  | 0.175                  | 3.750                  | 8275                      | 5795                       | 3.8                         |
|  |   | 6.00       | 6   | 95                        | 0.147                  | 0.210                  | 4.500                  | 5040                      | 4445                       | 4.2                         |
|  |   | 8.00       | 6   | 95                        | 0.196                  | 0.280                  | 6.000                  | 3780                      | 4445                       | 7.5                         |
|  |   | 10.00      | 6   | 95                        | 0.245                  | 0.350                  | 7.500                  | 3025                      | 4445                       | 11.7                        |
|  |   | 12.00      | 6   | 95                        | 0.294                  | 0.420                  | 9.000                  | 2520                      | 4445                       | 16.8                        |
|  |   | 16.00      | 6   | 95                        | 0.392                  | 0.560                  | 12.000                 | 1890                      | 4445                       | 29.9                        |
|  |   |            | Hardened tool steel<br>52 - 56 HRC<br><br> | 2.00                      | 4                      | 110                    | 0.070                  | 0.060                     | 1.500                      | 17505                       |
| 3.00   | 4   |            |   | 110                       | 0.105                  | 0.089                  | 2.250                  | 11670                     | 4900                       | 1.0                         |
| 4.00   | 4   |            |   | 110                       | 0.140                  | 0.140                  | 3.000                  | 8755                      | 4900                       | 2.1                         |
| 5.00   | 4   |            |   | 110                       | 0.175                  | 0.175                  | 3.750                  | 7005                      | 4900                       | 3.2                         |
| 6.00   | 6   |            |   | 80                        | 0.147                  | 0.210                  | 4.500                  | 4245                      | 3745                       | 3.5                         |
| 8.00   | 6   |            |   | 80                        | 0.196                  | 0.280                  | 6.000                  | 3185                      | 3745                       | 6.3                         |
| 10.00  | 6   |            |   | 80                        | 0.245                  | 0.350                  | 7.500                  | 2545                      | 3745                       | 9.8                         |
| 12.00  | 6   |            |   | 80                        | 0.294                  | 0.420                  | 9.000                  | 2120                      | 3745                       | 14.1                        |
| 16.00  | 6   |            |   | 80                        | 0.392                  | 0.560                  | 12.000                 | 1590                      | 3745                       | 25.2                        |
|  | Hardened tool steel<br>56 - 60 HRC<br><br>           |            |   | 2.00                      | 4                      | 65                     | 0.054                  | 0.051                     | 1.500                      | 10345                       |
|  |   | 3.00       | 4   | 65                        | 0.081                  | 0.077                  | 2.250                  | 6895                      | 2235                       | 0.4                         |
|  |   | 4.00       | 4   | 65                        | 0.108                  | 0.120                  | 3.000                  | 5175                      | 2235                       | 0.8                         |
|  |   | 5.00       | 4   | 65                        | 0.135                  | 0.150                  | 3.750                  | 4140                      | 2235                       | 1.3                         |
|  |   | 6.00       | 6   | 65                        | 0.144                  | 0.180                  | 4.500                  | 3450                      | 2980                       | 2.4                         |
|  |   | 8.00       | 6   | 65                        | 0.168                  | 0.240                  | 6.000                  | 2585                      | 2605                       | 3.8                         |
|  |   | 10.00      | 6   | 65                        | 0.180                  | 0.300                  | 7.500                  | 2070                      | 2235                       | 5.0                         |
|  |   | 12.00      | 6   | 65                        | 0.216                  | 0.360                  | 9.000                  | 1725                      | 2235                       | 7.2                         |
|  |   | 16.00      | 6   | 50                        | 0.240                  | 0.480                  | 12.000                 | 995                       | 1430                       | 8.3                         |
|  |   |            | Hardened tool steel<br>> 60 HRC<br><br>    | 2.00                      | 4                      | 50                     | 0.045                  | 0.040                     | 1.500                      | 7960                        |
| 3.00   | 4   |            |   | 50                        | 0.068                  | 0.075                  | 2.250                  | 5305                      | 1445                       | 0.2                         |
| 4.00   | 4   |            |   | 50                        | 0.090                  | 0.100                  | 3.000                  | 3980                      | 1430                       | 0.4                         |
| 5.00   | 4   |            |   | 50                        | 0.113                  | 0.125                  | 3.750                  | 3185                      | 1440                       | 0.7                         |
| 6.00   | 6   |            |   | 50                        | 0.120                  | 0.150                  | 4.500                  | 2655                      | 1910                       | 1.3                         |
| 8.00   | 6   |            |   | 50                        | 0.140                  | 0.200                  | 6.000                  | 1990                      | 1670                       | 2.0                         |
| 10.00  | 6   |            |   | 50                        | 0.150                  | 0.250                  | 7.500                  | 1590                      | 1430                       | 2.7                         |
| 12.00  | 6   |            |   | 50                        | 0.180                  | 0.300                  | 9.000                  | 1325                      | 1430                       | 3.9                         |
| 16.00  | 6   |            |   | 40                        | 0.200                  | 0.400                  | 12.000                 | 795                       | 955                        | 4.6                         |
|  | High speed steel,<br>hardened<br>64 - 70 HRC<br><br> |            |   | 2.00                      | 4                      | 30                     | 0.024                  | 0.032                     | 1.500                      | 4775                        |
|  |   | 3.00       | 4   | 30                        | 0.036                  | 0.060                  | 2.250                  | 3185                      | 460                        | 0.1                         |
|  |   | 4.00       | 4   | 30                        | 0.048                  | 0.080                  | 3.000                  | 2385                      | 460                        | 0.1                         |
|  |   | 5.00       | 4   | 30                        | 0.060                  | 0.100                  | 3.750                  | 1910                      | 460                        | 0.2                         |
|  |   | 6.00       | 6   | 30                        | 0.063                  | 0.120                  | 4.500                  | 1590                      | 600                        | 0.3                         |
|  |   | 8.00       | 6   | 30                        | 0.072                  | 0.160                  | 6.000                  | 1195                      | 515                        | 0.5                         |
|  |   | 10.00      | 6   | 30                        | 0.090                  | 0.200                  | 7.500                  | 955                       | 515                        | 0.8                         |
|  |   | 12.00      | 6   | 30                        | 0.108                  | 0.240                  | 9.000                  | 795                       | 515                        | 1.1                         |
|  |   | 16.00      | 6   | 25                        | 0.120                  | 0.320                  | 12.000                 | 495                       | 360                        | 1.4                         |