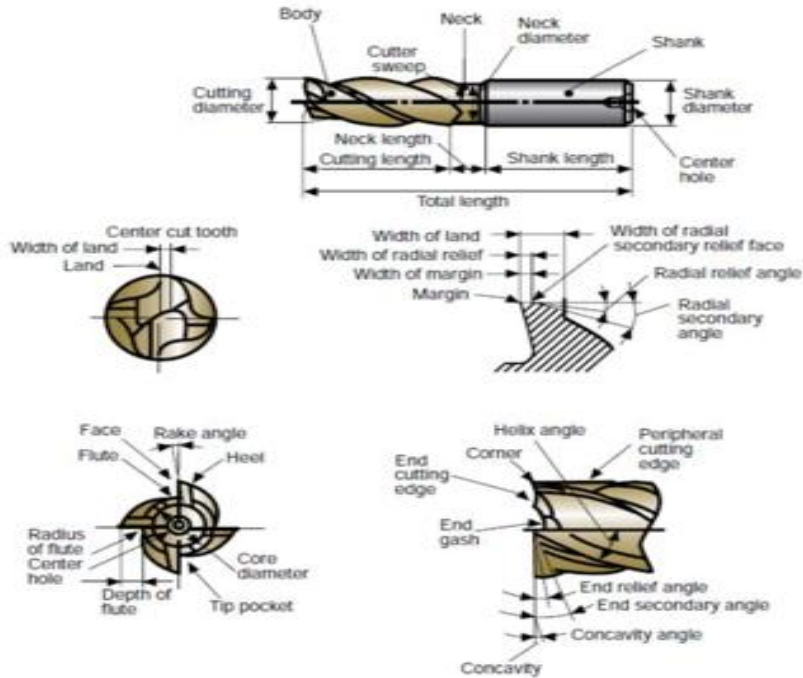


Endmills**Nomenclature**

- **Parallel Shank**
- **Taper Shank**
- **Slot Drills**
- **Woodruff Key Cutters**
- **T Slot Cutters**
- **Screwed Shank**
- **Hole Mills**
- **Roughing End Mills**
- **Roughing Shell End Mills**



Endmills – Parallel Shank

BS 122 (Inches)



| Diameter | Shank dia | Cutting Edge Length | Overall Length |
|----------|-----------|---------------------|----------------|
| 1/8 | 1/4 | 3/8 | 1.7/8 |
| 5/32 | 1/4 | 3/8 | 1.7/8 |
| 3/16 | 1/4 | 1/2 | 2 |
| 7/32 | 1/4 | 1/2 | 2 |
| 1/4 | 1/4 | 5/8 | 2.1/8 |
| 5/16 | 3/8 | 3/4 | 2.1/2 |
| 3/8 | 3/8 | 7/8 | 2.5/8 |
| 7/16 | 1/2 | 7/8 | 2.5/8 |
| 1/2 | 1/2 | 1 | 2.3/4 |
| 9/16 | 1/2 | 1.1/8 | 2.7/8 |
| 5/8 | 5/8 | 1.1/4 | 3.1/4 |
| 11/16 | 5/8 | 1.3/8 | 3.3/8 |
| 3/4 | 5/8 | 1.1/2 | 3.1/2 |
| 13/16 | 3/4 | 1.5/8 | 3.5/8 |
| 7/8 | 3/4 | 1.5/8 | 3.5/8 |

| Diameter | Shank dia | Cutting Edge Length | Overall Length |
|----------|-----------|---------------------|----------------|
| 1 | 3/4 | 1.3/4 | 3.3/4 |
| 1.1/8 | 1 | 1.7/8 | 4.1/8 |
| 1.1/4 | 1 | 2 | 4.1/4 |
| 1.3/8 | 1 | 2.1/8 | 4.5/8 |
| 1.1/2 | 1 | 2.1/4 | 4.3/4 |
| 1.5/8 | 1.1/4 | 2.3/8 | 4.7/8 |
| 1.3/4 | 1.1/4 | 2.1/2 | 5.1/8 |
| 1.7/8 | 1.1/4 | 2.5/8 | 5.1/4 |
| 2 | 1.1/2 | 3 | 5.1/2 |
| 2.1/8 | 1.1/2 | 3 | 5.1/2 |
| 2.1/4 | 1.1/2 | 3 | 5.5/8 |
| 2.3/8 | 1.1/2 | 3.1/4 | 5.7/8 |
| 2.1/2 | 1.1/2 | 3.1/2 | 6.1/8 |
| 2.3/4 | 1.1/2 | 3.1/2 | 6.1/2 |
| 3 | 2 | 3.1/2 | 6.1/2 |

Endmills – Parallel Shank

Din 844 (mm)

| Diameter js14 | Shank dia | Short Series (K) | | Long Series (L) | |
|---------------|-----------|---------------------|----------------|---------------------|----------------|
| | | Cutting Edge Length | Overall Length | Cutting Edge Length | Overall Length |
| 3 | 6 | 8 | 52 | 12 | 56 |
| 4 | 6 | 11 | 55 | 19 | 63 |
| 5 | 6 | 13 | 57 | 24 | 68 |
| 6 | 6 | 13 | 57 | 24 | 68 |
| 7 | 10 | 16 | 66 | 30 | 80 |
| 8 | 10 | 19 | 69 | 38 | 88 |
| 10 | 10 | 22 | 72 | 45 | 95 |
| 12 | 12 | 26 | 83 | 53 | 110 |
| 14 | 12 | 26 | 83 | 53 | 110 |
| 16 | 16 | 32 | 92 | 63 | 123 |
| 18 | 16 | 32 | 92 | 63 | 123 |
| 20 | 20 | 38 | 104 | 75 | 141 |
| 22 | 20 | 38 | 104 | 75 | 141 |
| 25 | 25 | 45 | 121 | 90 | 166 |
| 28 | 25 | 45 | 121 | 90 | 166 |
| 32 | 32 | 53 | 133 | 106 | 186 |
| 36 | 32 | 53 | 133 | 106 | 186 |
| 40 | 40 | 63 | 155 | 125 | 217 |
| 45 | 40 | 63 | 155 | 125 | 217 |
| 50 | 50 | 75 | 177 | 150 | 252 |
| 56 | 50 | 75 | 177 | 150 | 252 |
| 63 | 50 | 90 | 192 | 180 | 282 |



**Endmills – Taper Shank – Tanged End (mm)**

| Diameter js14 | Standard Series | | Long Series | | Morse Taper No. |
|------------------|---------------------------|-------------------|---------------------------|-------------------|--------------------|
| | Cutting Edge Length | Overall Length | Cutting Edge Length | Overall Length | |
| 3.0 | 10 | 84 | – | – | 1 |
| 3.5 | 11 | 85 | – | – | 1 |
| 4.0 | 11 | 85 | – | – | 1 |
| 4.5 | 13 | 87 | – | – | 1 |
| 5.0 | 13 | 87 | – | – | 1 |
| 5.5 | 16 | 90 | – | – | 1 |
| 6.0 | 16 | 90 | 30 | 104 | 1 |
| 7.0 | 16 | 90 | 30 | 104 | 1 |
| 8.0 | 19 | 93 | 38 | 112 | 1 |
| 9.0 | 19 | 93 | 38 | 112 | 1 |
| 10.0 | 22 | 96 | 45 | 119 | 1 |
| 11.0 | 22 | 96 | 45 | 119 | 1 |
| 12.0 | 26 | 100 | 53 | 127 | 1 |
| 14.0 | 26 | 100 | 53 | 127 | 1 |
| 16.0 | 32 | 124 | 63 | 155 | 2 |
| 18.0 | 32 | 124 | 63 | 155 | 2 |
| 20.0 | 38 | 130 | 75 | 167 | 2 |
| 22.0 | 38 | 130 | 75 | 167 | 2 |
| 25.0 | 45 | 157 | 90 | 202 | 3 |
| 28.0 | 45 | 157 | 90 | 202 | 3 |
| 32.0 | 53 | 165 | 106 | 218 | 3 |
| 35.0 | 53 | 193 | 106 | 246 | 4 |
| 40.0 | 63 | 203 | 125 | 265 | 4 |
| 45.0 | 63 | 203 | 125 | 265 | 4 |
| 50.0 | 75 | 250 | 150 | 325 | 5 |
| 56.0 | 75 | 250 | 150 | 325 | 5 |
| 63.0 | 90 | 265 | 180 | 355 | 5 |

Endmills – Taper Shank – Tapped End (mm)

| Diameter js14 | Standard Series | | Long Series | | Morse Taper No. | Thread Size of Tapped Hole |
|------------------|---------------------------|-------------------|---------------------------|-------------------|--------------------|----------------------------------|
| | Cutting Edge Length | Overall Length | Cutting Edge Length | Overall Length | | |
| 6 | 13 | 83 | 24 | 94 | 1 | M6 |
| 7 | 16 | 86 | 30 | 100 | 1 | M6 |
| 8 | 19 | 89 | 38 | 108 | 1 | M6 |
| 9 | 19 | 89 | 38 | 108 | 1 | M6 |
| 10 | 22 | 92 | 45 | 115 | 1 | M6 |
| 11 | 22 | 92 | 45 | 115 | 1 | M6 |
| 12 | 26 | 96 | 53 | 123 | 1 | M6 |
| 14 | 26 | 96 | 53 | 123 | 1 | M6 |
| 16 | 32 | 117 | 63 | 148 | 2 | M10 |
| 18 | 32 | 117 | 63 | 148 | 2 | M10 |
| 20 | 38 | 123 | 75 | 160 | 2 | M10 |
| 22 | 38 | 123 | 75 | 160 | 2 | M10 |
| 25 | 45 | 147 | 90 | 192 | 3 | M12 |
| 28 | 45 | 147 | 90 | 192 | 3 | M12 |
| 32 | 53 | 155 | 106 | 208 | 3 | M12 |
| 36 | 53 | 178 | 106 | 231 | 4 | M16 |
| 40 | 63 | 188 | 125 | 250 | 4 | M16 |
| 45 | 63 | 188 | 125 | 250 | 4 | M16 |
| 50 | 75 | 233 | 150 | 308 | 5 | M20 |
| 56 | 75 | 233 | 150 | 308 | 5 | M20 |
| 63 | 90 | 248 | 180 | 338 | 5 | M20 |





Endmills – Parallel Shank Slot Drills - IS (mm)

| Diameter e8 | Shank Dia h8 | Cutting Edge Length | Overall Length |
|-------------|--------------|---------------------|----------------|
| 3 | 4 | 5 | 37 |
| 4 | 4 | 7 | 39 |
| 5 | 5 | 8 | 42 |
| 6 | 6 | 8 | 52 |
| 7 | 8 | 10 | 54 |
| 8 | 8 | 11 | 55 |
| 9 | 10 | 11 | 61 |
| 10 | 10 | 13 | 63 |
| 11 | 12 | 13 | 70 |
| 12 | 12 | 16 | 73 |
| 14 | 12 | 16 | 73 |
| 16 | 16 | 19 | 79 |
| 18 | 16 | 19 | 79 |

| Diameter e8 | Shank Dia h8 | Cutting Edge Length | Overall Length |
|-------------|--------------|---------------------|----------------|
| 20 | 20 | 22 | 88 |
| 22 | 20 | 22 | 88 |
| 25 | 25 | 26 | 102 |
| 28 | 25 | 26 | 102 |
| 32 | 32 | 32 | 112 |
| 36 | 32 | 32 | 112 |
| 40 | 40 | 38 | 130 |
| 45 | 40 | 38 | 130 |
| 50 | 50 | 45 | 147 |
| 56 | 50 | 45 | 147 |
| 63 | 50 | 53 | 155 |
| 71 | 63 | 53 | 165 |

Endmills – Parallel Shank Slot Drills DIN327 (mm)

| Diameter e8 | Shank Dia | Cutting Edge Length | Overall Length |
|-------------|-----------|---------------------|----------------|
| 3 | 6 | 5 | 49 |
| 4 | 6 | 7 | 51 |
| 5 | 6 | 8 | 52 |
| 6 | 6 | 8 | 52 |
| 7 | 10 | 10 | 60 |
| 8 | 10 | 11 | 61 |
| 10 | 10 | 13 | 63 |
| 12 | 12 | 16 | 73 |
| 14 | 12 | 16 | 73 |
| 16 | 16 | 19 | 79 |
| 18 | 16 | 19 | 79 |
| 20 | 20 | 22 | 88 |

| Diameter e8 | Shank Dia | Cutting Edge Length | Overall Length |
|-------------|-----------|---------------------|----------------|
| 22 | 20 | 22 | 88 |
| 24 | 25 | 26 | 102 |
| 25 | 25 | 26 | 102 |
| 28 | 25 | 26 | 102 |
| 32 | 32 | 32 | 112 |
| 36 | 32 | 32 | 112 |
| 40 | 40 | 38 | 130 |
| 45 | 40 | 38 | 130 |
| 50 | 50 | 45 | 147 |
| 56 | 50 | 45 | 147 |
| 63 | 50 | 53 | 155 |

Endmills – Parallel Shank Slot Drills BS 122 (inches)

| Diameter | Cutting Edge Length | Overall Length | Dia of Shank |
|----------|---------------------|----------------|--------------|
| 1/8 | 3/8 | 1.7/8 | 1/4 |
| 5/32 | 3/8 | 1.7/8 | 1/4 |
| 3/16 | 1/2 | 2 | 1/4 |
| 7/32 | 1/2 | 2 | 1/4 |
| 1/4 | 5/8 | 2.1/8 | 1/4 |
| 5/16 | 3/4 | 2.1/2 | 3/8 |
| 3/8 | 7/8 | 2.5/8 | 3/8 |
| 7/16 | 7/8 | 2.5/8 | 1/2 |
| 1/2 | 1 | 2.3/4 | 1/2 |

| Diameter | Cutting Edge Length | Overall Length | Dia of Shank |
|----------|---------------------|----------------|--------------|
| 9/16 | 1.1/8 | 2.7/8 | 1/2 |
| 5/8 | 1.1/4 | 3.1/4 | 5/8 |
| 11/16 | 1.3/8 | 3.3/8 | 5/8 |
| 3/4 | 1.1/2 | 3.1/2 | 5/8 |
| 7/8 | 1.5/8 | 3.5/8 | 3/4 |
| 1 | 1.3/4 | 3.3/4 | 3/4 |
| 1.1/8 | 1.7/8 | 4.1/8 | 1 |
| 1.1/4 | 2 | 4.1/4 | 1 |
| 1.3/8 | 2.1/8 | 4.5/8 | 1 |
| 1.1/2 | 2.1/4 | 4.3/4 | 1 |





| Endmills – Key Slot Milling Cutters | | | | | IS | (mm) |
|-------------------------------------|-------------|-----------------|-------------------|--------------------------------|----|------|
| Diameter h11 | Width e8 | Dia.of shank | Overall Length | Woodruff Keys To IS 2294 | | |
| 10.5 | 2 | 6 | 50 | 2 x 3.7 | | |
| 10.5 | 2.5 | 6 | 50 | 2.5 x 3.7 | | |
| 10.5 | 3 | 6 | 50 | 3 x 3.7 | | |
| 13.5 | 3 | 10 | 56 | 3 x 5.0 | | |
| 13.5 | 4 | 10 | 56 | 4 x 5.0 | | |
| 16.5 | 3 | 10 | 56 | 3 x 6.5 | | |
| 16.5 | 4 | 10 | 56 | 4 x 6.5 | | |
| 16.5 | 5 | 10 | 56 | 5 x 6.5 | | |
| 19.5 | 4 | 10 | 56 | 4 x 7.5 | | |
| 19.5 | 5 | 10 | 56 | 5 x 7.5 | | |
| 19.5 | 6 | 10 | 63 | 6 x 7.5 | | |
| 22.5 | 5 | 10 | 63 | 5 x 9.0 | | |
| 22.5 | 6 | 10 | 63 | 6 x 9.0 | | |
| 22.5 | 8 | 10 | 63 | 8 x 9.0 | | |
| 25.5 | 6 | 10 | 63 | 6 x 10 | | |
| 28.5 | 6 | 10 | 63 | 6 x 11 | | |
| 28.5 | 8 | 10 | 63 | 8 x 11 | | |
| 28.5 | 10 | 12 | 71 | 10 x 11 | | |
| 32.5 | 8 | 10 | 63 | 8 x 13 | | |
| 32.5 | 10 | 12 | 71 | 10 x 13 | | |
| 45.5 | 10 | 12 | 71 | 10 x 16 | | |

| Endmills – Woodruff Key seats Cutters | | | | | DIN | (inches) | | | |
|---------------------------------------|-------------|-----------------|-------------------|---|-----------------|-------------|-----------------|-------------------|---|
| Diameter h11 | Width e8 | Dia.of shank | Overall Length | Woodruff Key Seats as per DIN 6888 | Diameter h11 | Width e8 | Dia.of shank | Overall Length | Woodruff Key Seats as per DIN 6888 |
| 10.5 | 2.0 | 6 | 50 | 2.0 x 3.7 | 22.5 | 5 | 10 | 56 | 5 x 9 |
| 10.5 | 2.5 | 6 | 50 | 2.5 x 3.7 | 22.5 | 6 | 10 | 56 | 6 x 9 |
| 10.5 | 3.0 | 6 | 50 | 3.0 x 3.7 | 22.5 | 8 | 10 | 56 | 8 x 9 |
| 13.5 | 3.0 | 10 | 56 | 3.0 x 5 | 25.5 | 6 | 10 | 56 | 6 x 10 |
| 13.5 | 4.0 | 10 | 56 | 4.0 x 5 | 28.5 | 6 | 10 | 56 | 6 x 11 |
| 16.5 | 3.0 | 10 | 56 | 3.0 x 6.5 | 28.5 | 8 | 10 | 56 | 8 x 11 |
| 16.5 | 4.0 | 10 | 56 | 4.0 x 6.5 | 28.5 | 10 | 12 | 63 | 10 x 11 |
| 16.5 | 5.0 | 10 | 56 | 5.0 x 6.5 | 32.5 | 7 | 10 | 56 | * |
| 19.5 | 4.0 | 10 | 56 | 4.0 x 7.5 | 32.5 | 8 | 10 | 56 | 8 x 13 |
| 19.5 | 5.0 | 10 | 56 | 5.0 x 7.5 | 32.5 | 10 | 12 | 63 | 10 x 13 |
| 19.5 | 6.0 | 10 | 56 | 6.0 x 7.5 | 45.5 | 10 | 12 | 63 | 10 x 16 |





| Endmills – T Slot Cutters | | | IS (mm) | | |
|---------------------------|------------------------|---------------------|----------------|----------------|----------------------------|
| Nominal Size of T-Slot | Diameter of Cutter h12 | Width of Cutter h12 | Overall Length | Morse Taper No | Thread size of Tapped Hole |
| 10 | 18 | 8 | 82 | 1 | M6 |
| 12 | 21 | 9 | 98 | 2 | M10 |
| 14 | 25 | 11 | 103 | 2 | M10 |
| 18 | 32 | 14 | 111 | 2 | M10 |
| 22 | 40 | 18 | 138 | 3 | M12 |
| 28 | 50 | 22 | 173 | 4 | M16 |
| 36 | 60 | 28 | 188 | 4 | M16 |
| 42 | 72 | 35 | 229 | 5 | M20 |
| 48 | 85 | 40 | 240 | 5 | M20 |
| 54 | 95 | 44 | 251 | 5 | M20 |



Endmills – Screwed Shank (Short) BS122 (mm)



| Diameter | Cutting Edge Length | Shank Diameter | Nominal Length below Chuck | Overall length |
|----------|---------------------|----------------|----------------------------|----------------|
| 3.0 | 9.5 | 6 | 16.5 | 54.0 |
| 3.5 | 12.5 | 6 | 19.5 | 57.0 |
| 4.0 | 12.5 | 6 | 19.5 | 57.0 |
| 4.5 | 12.5 | 6 | 19.5 | 57.0 |
| 5.0 | 16.0 | 6 | 23.0 | 60.5 |
| 5.5 | 16.0 | 6 | 23.0 | 60.5 |
| 6.0 | 16.0 | 6 | 23.0 | 60.5 |
| 6.5 | 16.0 | 10 | 22.5 | 60.5 |
| 7.0 | 15.0 | 10 | 22.5 | 60.5 |
| 7.5 | 18.0 | 10 | 25.5 | 63.5 |
| 8.0 | 18.0 | 10 | 25.5 | 63.5 |
| 8.5 | 21.0 | 10 | 28.5 | 66.5 |
| 9.0 | 21.0 | 10 | 28.5 | 66.5 |
| 9.5 | 21.0 | 10 | 28.5 | 66.5 |
| 10.0 | 21.0 | 10 | 28.5 | 66.5 |
| 10.5 | 19.0 | 12 | 28.5 | 66.5 |
| 11.0 | 19.0 | 12 | 28.5 | 66.5 |
| 11.5 | 22.5 | 12 | 32.0 | 70.0 |
| 12.0 | 24.0 | 12 | 32.0 | 70.0 |
| 13.0 | 24.5 | 12 | 32.0 | 70.0 |
| 14.0 | 28.5 | 12 | 35.0 | 73.0 |
| 15.0 | 26.5 | 16 | 38.0 | 77.0 |

| Diameter | Cutting Edge Length | Shank Diameter | Nominal Length below Chuck | Overall length |
|----------|---------------------|----------------|----------------------------|----------------|
| 16.0 | 26.5 | 16 | 38.0 | 77.0 |
| 17.0 | 32 | 16 | 41.0 | 80.0 |
| 18.0 | 35 | 16 | 41.0 | 80.0 |
| 19.0 | 38 | 16 | 44.5 | 83.5 |
| 20.0 | 38.0 | 16 | 44.5 | 83.5 |
| 21.0 | 38.0 | 25 | 42.5 | 95.0 |
| 22.0 | 41.5 | 25 | 46.0 | 98.5 |
| 23.0 | 41.5 | 25 | 46.0 | 98.5 |
| 24.0 | 41.5 | 25 | 46.0 | 98.5 |
| 25.0 | 44.5 | 25 | 49.0 | 101.5 |
| 26.0 | 43.0 | 25 | 49.0 | 101.5 |
| 28.0 | 46.0 | 25 | 52.0 | 104.5 |
| 30.0 | 46.0 | 25 | 52.0 | 104.5 |
| 32.0 | 49.0 | 25 | 55.5 | 108.0 |
| 34.0 | 49.0 | 25 | 55.5 | 108.0 |
| 35.0 | 52.5 | 25 | 58.5 | 111.0 |
| 36.0 | 52.5 | 25 | 58.5 | 111.0 |
| 38.0 | 55.5 | 25 | 62.0 | 114.5 |
| 40.0 | 58.5 | 25 | 65.0 | 117.5 |
| 42.0 | 60.5 | 25 | 65.0 | 117.5 |
| 44.0 | 63.5 | 25 | 68.0 | 120.5 |
| 45.0 | 63.5 | 25 | 68.0 | 120.5 |



Endmills – Screwed Shank (Short) BS122 (inches)

| Diameter | Cutting Edge Length | Shank Diameter | Nominal Length below Chuck | Overall length |
|----------|---------------------|----------------|----------------------------|----------------|
| 1/8 | 3/8 | 1/4 | 21/32 | 2.1/8 |
| 5/32 | 1/2 | 1/4 | 25/32 | 2.1/4 |
| 3/16 | 1/2 | 1/4 | 25/32 | 2.1/4 |
| 7/32 | 5/8 | 1/4 | 29/32 | 2.3/8 |
| 1/4 | 5/8 | 1/4 | 29/32 | 2.3/8 |
| 9/32 | 19/32 | 3/8 | 7/8 | 2.3/8 |
| 5/16 | 23/32 | 3/8 | 1 | 2.1/2 |
| 11/32 | 27/32 | 3/8 | 1.1/8 | 2.5/8 |
| 3/8 | 27/32 | 3/8 | 1.1/8 | 2.5/8 |
| 13/32 | 7/8 | 3/8 | 1.1/8 | 2.5/8 |
| 7/16 | 3/4 | 1/2 | 1.1/8 | 2.5/8 |
| 15/32 | 7/8 | 1/2 | 1.1/4 | 2.3/4 |
| 1/2 | 15/16 | 1/2 | 1.1/4 | 2.3/4 |
| 9/16 | 1.1/8 | 1/2 | 1.3/8 | 2.7/8 |
| 5/8 | 1.1/16 | 5/8 | 1.1/2 | 3.1/32 |
| 11/16 | 1.3/8 | 5/8 | 1.5/8 | 3.5/32 |
| 3/4 | 1.1/2 | 5/8 | 1.3/4 | 3.9/32 |
| 13/16 | 1.1/2 | 1 | 1.11/16 | 3.3/4 |
| 7/8 | 1.5/8 | 1 | 1.13/16 | 3.7/8 |
| 15/16 | 1.5/8 | 1 | 1.13/16 | 3.7/8 |
| 1 | 1.11/16 | 1 | 1.15/16 | 4 |
| 1.1/16 | 1.11/16 | 1 | 1.15/16 | 4 |

| Diameter | Cutting Edge Length | Shank Diameter | Nominal Length below Chuck | Overall length |
|----------|---------------------|----------------|----------------------------|----------------|
| 1.1/8 | 1.13/16 | 1 | 2.1/16 | 4.1/8 |
| 1.3/16 | 1.13/16 | 1 | 2.1/16 | 4.1/8 |
| 1.1/4 | 1.15/16 | 1 | 2.3/16 | 4.1/4 |
| 1.5/16 | 1.15/16 | 1 | 2.3/16 | 4.1/4 |
| 1.3/8 | 2.1/16 | 1 | 2.5/16 | 4.3/8 |
| 1.7/16 | 2.1/16 | 1 | 2.5/16 | 4.3/8 |
| 1.1/2 | 2.3/16 | 1 | 2.7/16 | 4.1/2 |
| 1.5/8 | 2.3/8 | 1 | 2.9/16 | 4.5/8 |
| 1.3/4 | 2.1/2 | 1 | 2.11/16 | 4.3/4 |
| 1.7/8 | 2.5/8 | 1 | 2.13/16 | 4.7/8 |
| 2 | 2.3/4 | 1 | 2.15/16 | 5 |





Endmills – Screwed Shank (Long) BS122 (mm)

| Diameter | Cutting Edge Length | Shank Diameter | Nominal Length below Chuck | Overall length |
|----------|---------------------|----------------|----------------------------|----------------|
| 3.0 | 19.0 | 6 | 26.0 | 63.5 |
| 3.5 | 25.5 | 6 | 32.5 | 70.0 |
| 4.0 | 25.5 | 6 | 32.5 | 70.0 |
| 4.5 | 25.5 | 6 | 32.5 | 70.0 |
| 5.0 | 31.5 | 6 | 38.5 | 76.0 |
| 5.5 | 31.5 | 6 | 38.5 | 76.0 |
| 6.0 | 31.5 | 6 | 38.5 | 76.0 |
| 6.5 | 35.0 | 10 | 41.5 | 79.5 |
| 7.0 | 34.0 | 10 | 41.5 | 79.5 |
| 7.5 | 34.0 | 10 | 41.5 | 79.5 |
| 8.0 | 34.0 | 10 | 41.5 | 79.5 |
| 8.5 | 37.0 | 10 | 44.5 | 82.5 |
| 9.0 | 37.0 | 10 | 44.5 | 82.5 |
| 10.0 | 37.0 | 10 | 44.5 | 82.5 |
| 11.0 | 41.5 | 12 | 51.0 | 89.0 |
| 12.0 | 49.5 | 12 | 57.0 | 95.0 |
| 13.0 | 50.0 | 12 | 57.0 | 95.0 |
| 14.0 | 57.0 | 12 | 63.5 | 101.5 |
| 15.0 | 58.5 | 16 | 69.5 | 108.5 |
| 16.0 | 58.5 | 16 | 69.5 | 108.5 |
| 17.0 | 67.0 | 16 | 76.0 | 115.0 |

| Diameter | Cutting Edge Length | Shank Diameter | Nominal Length below Chuck | Overall length |
|----------|---------------------|----------------|----------------------------|----------------|
| 18 | 70.0 | 16 | 76.0 | 115.0 |
| 19 | 76.0 | 16 | 82.5 | 121.5 |
| 20 | 76.0 | 16 | 82.5 | 121.5 |
| 22 | 85.5 | 25 | 90.5 | 143.0 |
| 24 | 92.0 | 25 | 96.5 | 149.0 |
| 25 | 100.0 | 25 | 104.5 | 157.0 |
| 26 | 98.5 | 25 | 104.5 | 157.0 |
| 28 | 98.5 | 25 | 104.5 | 157.0 |
| 30 | 98.5 | 25 | 104.5 | 157.0 |
| 32 | 100.0 | 25 | 106.5 | 159.0 |
| 34 | 100.0 | 25 | 106.5 | 159.0 |
| 35 | 100.0 | 25 | 106.5 | 159.0 |
| 36 | 100.0 | 25 | 106.5 | 159.0 |
| 38 | 100.0 | 25 | 106.5 | 159.0 |
| 40 | 101.5 | 25 | 106.5 | 159.0 |
| 45 | 101.5 | 25 | 106.5 | 159.0 |

Endmills – Screwed Shank (Long) BS122 (inches)

| Diameter | Cutting Edge Length | Shank Diameter | Nominal Length below Chuck | Overall length |
|----------|---------------------|----------------|----------------------------|----------------|
| 1/8 | 3/4 | 1/4 | 1.17/32 | 2.1/2 |
| 5/32 | 1 | 1/4 | 1.9/32 | 2.3/4 |
| 3/16 | 1 | 1/4 | 1.9/32 | 2.3/4 |
| 7/32 | 1.1/4 | 1/4 | 1.17/32 | 3 |
| 1/4 | 1.1/4 | 1/4 | 1.17/32 | 3 |
| 9/32 | 1.11/32 | 3/8 | 1.5/8 | 3.1/8 |
| 5/16 | 1.11/32 | 3/8 | 1.5/8 | 3.1/8 |
| 11/32 | 1.15/32 | 3/8 | 1.3/4 | 3.1/4 |
| 3/8 | 1.15/32 | 3/8 | 1.3/4 | 3.1/4 |
| 13/32 | 1.1/2 | 3/8 | 1.3/4 | 3.1/4 |
| 7/16 | 1.5/8 | 1/2 | 2 | 3.1/2 |
| 15/32 | 1.7/8 | 1/2 | 2.1/4 | 3.3/4 |
| 1/2 | 1.15/16 | 1/2 | 2.1/4 | 3.3/4 |
| 9/16 | 2.1/4 | 1/2 | 2.1/2 | 4 |
| 5/8 | 2.5/16 | 5/8 | 2.3/4 | 4.9/32 |
| 11/16 | 2.3/4 | 5/8 | 3 | 4.17/32 |
| 3/4 | 3 | 5/8 | 3.1/4 | 4.25/32 |
| 13/16 | 3.1/16 | 1 | 3.5/16 | 5.3/8 |
| 7/8 | 3.3/8 | 1 | 3.9/16 | 5.5/8 |
| 15/16 | 3.5/8 | 1 | 3.13/16 | 5.7/8 |

| Diameter | Cutting Edge Length | Shank Diameter | Nominal Length below Chuck | Overall length |
|----------|---------------------|----------------|----------------------------|----------------|
| 1 | 3.15/16 | 1 | 4.1/8 | 6.3/16 |
| 1.1/16 | 3.7/8 | 1 | 4.1/8 | 6.3/16 |
| 1.1/8 | 3.7/8 | 1 | 4.1/8 | 6.3/16 |
| 1.3/16 | 3.7/8 | 1 | 4.1/8 | 6.3/16 |
| 1.1/4 | 3.15/16 | 1 | 4.3/16 | 6.1/4 |
| 1.5/16 | 3.15/16 | 1 | 4.3/16 | 6.1/4 |
| 1.3/8 | 3.15/16 | 1 | 4.3/16 | 6.1/4 |
| 1.7/16 | 3.15/16 | 1 | 4.3/16 | 6.1/4 |
| 1.1/2 | 3.15/16 | 1 | 4.3/16 | 6.1/4 |
| 1.5/8 | 4 | 1 | 4.3/16 | 6.1/4 |
| 1.3/4 | 4 | 1 | 4.3/16 | 6.1/4 |
| 1.7/8 | 4 | 1 | 4.3/16 | 6.1/4 |
| 2 | 4 | 1 | 4.3/16 | 6.1/4 |





| Endmills – Hole Mills (Type A) | | | | IS (mm) | | | |
|--------------------------------|---------------------|----------------|----------------|-------------|---------------------|----------------|----------------|
| Diameter h7 | Cutting Edge Length | Overall Length | Morse Taper No | Diameter h7 | Cutting Edge Length | Overall Length | Morse Taper No |
| 5.9 | 25 | 110 | 1 | 26.7 | 60 | 220 | 3 |
| 7.9 | 25 | 120 | 1 | 27.7 | 60 | 220 | 3 |
| 9.9 | 30 | 125 | 1 | 29.7 | 60 | 220 | 3 |
| 11.8 | 35 | 140 | 1 | 31.7 | 60 | 220 | 3 |
| 12.8 | 35 | 140 | 1 | 33.7 | 60 | 250 | 4 |
| 13.8 | 35 | 160 | 1 | 34.7 | 60 | 250 | 4 |
| 14.8 | 35 | 160 | 2 | 35.7 | 60 | 250 | 4 |
| 15.8 | 40 | 160 | 2 | 37.7 | 60 | 250 | 4 |
| 17.8 | 45 | 180 | 2 | 39.7 | 60 | 250 | 4 |
| 19.8 | 45 | 180 | 2 | 41.6 | 60 | 250 | 4 |
| 21.7 | 45 | 200 | 2 | 44.6 | 60 | 250 | 4 |
| 23.7 | 55 | 200 | 3 | 46.6 | 60 | 280 | 4 |
| 24.7 | 55 | 200 | 3 | 47.6 | 60 | 280 | 4 |
| 25.7 | 60 | 200 | 3 | 49.6 | 60 | 280 | 4 |

| Diameter | | Cutting Edge Length | Overall Length | Morse Taper No. |
|--------------|---------------|---------------------|----------------|-----------------|
| Roughing h6' | Finishing m6' | | | |
| 5.9 | 6 | 25 | 150 | 1 |
| 7.9 | 8 | 25 | 170 | 1 |
| 9.9 | 10 | 30 | 180 | 1 |
| 11.8 | 12 | 35 | 190 | 1 |
| 12.8 | 13 | 35 | 200 | 1 |
| 13.8 | 14 | 35 | 200 | 1 |
| 14.8 | 15 | 35 | 210 | 2 |
| 15.8 | 16 | 40 | 230 | 2 |
| 17.8 | 18 | 45 | 235 | 2 |
| 19.8 | 20 | 45 | 245 | 2 |
| 21.7 | 22 | 45 | 255 | 2 |
| 23.7 | 24 | 55 | 290 | 3 |
| 24.7 | 25 | 55 | 290 | 3 |
| 25.7 | 26 | 60 | 305 | 3 |
| 26.7 | 27 | 60 | 305 | 3 |
| 27.7 | 28 | 60 | 305 | 3 |
| 29.7 | 30 | 60 | 320 | 3 |
| 31.7 | 32 | 60 | 320 | 3 |
| 33.7 | 34 | 60 | 360 | 4 |
| 34.7 | 35 | 60 | 360 | 4 |
| 35.7 | 36 | 60 | 360 | 4 |
| 37.7 | 38 | 60 | 390 | 4 |
| 39.7 | 40 | 60 | 390 | 4 |
| 41.6 | 42 | 60 | 390 | 4 |





| Endmills – Roughing (Taper Shank-Tapped) IS (mm) | | | | |
|--|---------------------------|-------------------|--------------------|----------------------------------|
| Diameter js 14 | Cutting Edge Length | Overall Length | Morse Taper No. | Thread Size of tapped hole |
| 10 | 22 | 92 | 1 | M6 |
| 11 | 22 | 92 | 1 | M6 |
| 12 | 26 | 96 | 1 | M6 |
| 14 | 26 | 96 | 1 | M6 |
| 16 | 32 | 117 | 2 | M10 |
| 18 | 32 | 117 | 2 | M10 |
| 20 | 38 | 123 | 2 | M10 |
| 22 | 38 | 123 | 2 | M10 |
| 25 | 45 | 147 | 3 | M12 |
| 28 | 45 | 147 | 3 | M12 |
| 32 | 53 | 155 | 3 | M12 |
| 36 | 53 | 178 | 4 | M16 |
| 40 | 63 | 188 | 4 | M16 |
| 45 | 63 | 188 | 4 | M16 |
| 50 | 75 | 233 | 5 | M20 |
| 56 | 75 | 233 | 5 | M20 |
| 63 | 90 | 248 | 5 | M20 |

| Endmills – Roughing (Parallel Shank) IS (mm) | | | |
|--|-------------------|------------------------|----------------|
| Diameter js14' | Shank Dia 'h8' | Standard Series | |
| | | Cutting Edge Length | Overall Length |
| 6 | 6 | 13 | 57 |
| 8 | 8 | 19 | 63 |
| 10 | 10 | 22 | 72 |
| 11 | 12 | 22 | 79 |
| 12 | 12 | 26 | 83 |
| 14 | 12 | 26 | 83 |
| 16 | 16 | 32 | 92 |
| 18 | 16 | 32 | 92 |
| 20 | 20 | 38 | 104 |
| 22 | 20 | 38 | 104 |
| 25 | 25 | 45 | 121 |
| 28 | 25 | 45 | 121 |
| 32 | 32 | 53 | 133 |
| 36 | 32 | 53 | 133 |
| 40 | 40 | 63 | 155 |
| 45 | 40 | 63 | 155 |
| 50 | 50 | 75 | 177 |
| 56 | 50 | 75 | 177 |
| 63 | 50 | 90 | 192 |
| 71 | 63 | 90 | 202 |

| Endmills – Roughing Shell IS (mm) | | | | | |
|-----------------------------------|--------------|--------------|-------------------|--------------|--------------|
| Diameter js16' | Bore 'H7' | Width k16 | Diameter js16' | Bore 'H7' | Width k16 |
| 40 | 16 | 32 | 100 | 32 | 50 |
| 50 | 22 | 36 | 125 | 40 | 56 |
| 63 | 27 | 40 | 160 | 50 | 63 |
| 80 | 27 | 45 | | | |

