FFQ4-12 Milling Family is Expanding
Following its successful introduction in 2015 (NPA 55-2015) and the consequent market demand, ISCAR is expanding the tool and insert options of the FFQ4-12 Milling Family to include new tools and insert geometries.

The FFQ4-12 tools carry square single-sided inserts with 4 cutting edges, designed for reducing cutting forces when used on low power machines or long overhang applications.

The new FFQ4 D...-12 shell mill cutters feature a coarse-pitch option for 40 and 50 mm cutters and for 52 and 66 mm cutters, which extends the range of application options for roughing operations in the die & mold and aerospace industries, and in general engineering.

**FFQ4 SOMT 125... Insert Features**

- Single-sided square insert with 4 cutting edges
- Available with five cutting geometries for optimal machining of different materials:
  - **FFQ4 SOMT 12516T** for steel, ferritic and martensitic stainless steel, cast iron and hardened steel
  - **FFQ4 SOMT 12516HP** for austenitic stainless steel and high temperature alloys
  - **FFQ4 SOMT 120516T20** for grey and nodular cast iron
  - **FFQ4 SOMT 1205RM-T** for interrupted cut and for machining near straight wall shoulders of steel, ferritic and martensitic stainless steel, cast iron and hardened steel
  - **FFQ4 SOMT 1205RM-HP** for interrupted cut and for machining near straight wall shoulders of austenitic stainless steel and high temperature alloys

- The FFQ4 inserts are produced from ISCAR’s latest SUMOTEC carbide grades, ensuring high productivity
FFQ4 D...-12 Tool Features

- 9° cutting edge angle
- Positive axial rake angle
- Ramping down capability
- 3.1 mm radius for programming
- Fine pitch and coarse pitch cutter versions
- Internal coolant holes directed to each cutting edge
- Cutter body with a special protective polished coating for uninterrupted chip flow and protection from corrosion and wear
**New Product Announcement**

**MILLING**

**METRIC**

**MARCH 2018**

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**FFQ4 D-12**

Fast Feed Face Mills Carrying Single-Sided Inserts with 4 Cutting Edges

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<table>
<thead>
<tr>
<th>Designation</th>
<th>D</th>
<th>D1</th>
<th>a₀</th>
<th>a₀(1)</th>
<th>Z</th>
<th>L</th>
<th>D₀</th>
<th>Dₐ</th>
<th>Arbor</th>
<th>R₀ f!</th>
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<td>1.50</td>
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<td>22.00</td>
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<td>NEW FFQ4 D052-5-22-12</td>
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<td>5</td>
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<tr>
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<td>60.00</td>
<td>27.00</td>
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<tr>
<td>NEW FFQ4 D080-7-27-12</td>
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</table>

* Radius for programming 3.1 mm

(1) Plunging width

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**Spare Parts**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Screw</th>
<th>T-Handle</th>
<th>Torx Blade</th>
<th>Screw 1</th>
<th>Shell clamping power screw</th>
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<td>FFQ4 D040-3-16-12</td>
<td>SR M4X0.7-L9.6 IP15</td>
<td>SW6-T</td>
<td>BLD IP15/S7</td>
<td>SR PS 118-0416</td>
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<td>FFQ4 D040-4-16-12</td>
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<td>SW6-T</td>
<td>BLD IP15/S7</td>
<td>SR PS 118-0416</td>
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<td>SR M4X0.7-L9.6 IP15</td>
<td>SW6-T</td>
<td>BLD IP15/S7</td>
<td>SR M10X35 DIN912</td>
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<tr>
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<td>SR M4X0.7-L9.6 IP15</td>
<td>SW6-T</td>
<td>BLD IP15/S7</td>
<td>SR M10X35 DIN912</td>
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<td>FFQ4 D052-5-22-12</td>
<td>SR M4X0.7-L9.6 IP15</td>
<td>SW6-T</td>
<td>BLD IP15/S7</td>
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<td>SR M4X0.7-L9.6 IP15</td>
<td>SW6-T</td>
<td>BLD IP15/S7</td>
<td>SR M10X35 DIN912</td>
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<td>FFQ4 D100-8-32-12</td>
<td>SR M4X0.7-L9.6 IP15</td>
<td>SW6-T</td>
<td>BLD IP15/S7</td>
<td>SR M10X35 DIN912</td>
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**Member IMC Group**
FFQ SOMT 1205
Square Single-Sided Inserts with 4 Cutting Edges for Fast Feed Milling

**Workpiece Material**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions</th>
<th>Tough → Hard</th>
<th>Recommended Machining Data</th>
<th>ISO class DIN/ISO 519</th>
</tr>
</thead>
</table>
| FFQ4 SOMT 1205RM-HP          | 12.70      | 5.20         | 1.60                       | IC808, IC830, IC850, IC908, IC1010 | New
| FFQ4 SOMT 1205RM-T           | 12.70      | 5.20         | 1.60                       | IC808, IC830, IC850, IC908, IC1010 | New
| FFQ4 SOMT 120516HP           | 12.70      | 5.20         | 1.60                       | IC808, IC830, IC850, IC908, IC1010 | New
| FFQ4 SOMT 120516T            | 12.70      | 5.20         | 1.60                       | IC808, IC830, IC850, IC908, IC1010 | New
| FFQ4 SOMT 120516T20          | 12.70      | 5.20         | 1.60                       | IC808, IC830, IC850, IC908, IC1010 | New

**Cutting Recommendations for FFQ4-12 Fast Feed Face Mills**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Insert type</th>
<th>Carbine grade</th>
<th>D.O.C. [mm]</th>
<th>Cutting Speed Vc [m/min]</th>
<th>Feed fz [mm/tooth]</th>
<th>Coolant</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFQ4 SOMT 1205RM-HP</td>
<td>IC808</td>
<td>IC830, IC850, IC908, IC1010</td>
<td>1.5</td>
<td>0.5-1.0</td>
<td>150-220</td>
<td>1.5</td>
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<tr>
<td>FFQ4 SOMT 1205RM-T</td>
<td>IC808</td>
<td>IC830, IC850, IC908, IC1010</td>
<td>1.5</td>
<td>0.5-1.0</td>
<td>140-200</td>
<td>1.6</td>
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<td>FFQ4 SOMT 120516HP</td>
<td>IC808</td>
<td>IC830, IC850, IC908, IC1010</td>
<td>1.5</td>
<td>0.5-1.0</td>
<td>120-180</td>
<td>1.6</td>
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<tr>
<td>FFQ4 SOMT 120516T</td>
<td>IC808</td>
<td>IC830, IC850, IC908, IC1010</td>
<td>1.5</td>
<td>0.5-1.0</td>
<td>120-160</td>
<td>1.5</td>
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<tr>
<td>FFQ4 SOMT 120516T20</td>
<td>IC808</td>
<td>IC830, IC850, IC908, IC1010</td>
<td>1.5</td>
<td>0.5-1.0</td>
<td>100-150</td>
<td>1.4</td>
</tr>
</tbody>
</table>

For machining in unstable conditions, the recommended cutting data should be reduced by 20-30%.

**New Product Announcement**

**MILLING**

MARCH 2018 • METRIC 18-2018

**Workpiece Material**

- **Non-alloy steel**: 1-5 hardness, HB 130-180, IC808, IC830, IC850, IC908, IC1010
- **Low alloy steel**: 6-8 hardness, HB 260-300, IC808, IC830, IC850, IC908, IC1010
- **High alloy steel**: 9 hardness, HB 35-42, IC808, IC830, IC850, IC908, IC1010
- **Ferritic/martensitic stainless steel**: 10-11 hardness, HB 200-220, IC808, IC830, IC850, IC908, IC1010
- **Austenitic stainless steel**: 12-13 hardness, HB 200, IC808, IC830, IC850, IC908, IC1010
- **Grey cast iron**: 15-16 hardness, HB 250, IC808, IC830, IC850, IC908, IC1010
- **Nodular cast iron**: 17-18 hardness, HB 200, IC808, IC830, IC850, IC908, IC1010
- **High temperature alloys**: 33-35 hardness, HB 340, IC808, IC830, IC850, IC908, IC1010
- **Hardened steel**: 38 hardness, HB 35-49, IC808, IC830, IC850, IC908, IC1010

**Designation**

- **FFQ4 SOMT 1205RM-HP**: 12.70 x 5.20 x 1.60
- **FFQ4 SOMT 1205RM-T**: 12.70 x 5.20 x 1.60
- **FFQ4 SOMT 120516HP**: 12.70 x 5.20 x 1.60
- **FFQ4 SOMT 120516T**: 12.70 x 5.20 x 1.60
- **FFQ4 SOMT 120516T20**: 12.70 x 5.20 x 1.60

**Recommended Machining Data**

- **a0 (mm)**: 0.50-1.50, 0.50-1.50, 0.50-1.50, 0.50-1.50, 0.50-1.50
- **fz (mm/tooth)**: 0.40-1.80, 0.40-2.00, 0.40-1.80, 0.40-2.00, 0.40-2.00

**Cutting Recommendations**

- **Non-alloy steel**: IC808, IC830, IC850, IC908, IC1010
- **Low alloy steel**: IC808, IC830, IC850, IC908, IC1010
- **High alloy steel**: IC808, IC830, IC850, IC908, IC1010
- **Ferritic/martensitic stainless steel**: IC808, IC830, IC850, IC908, IC1010
- **Austenitic stainless steel**: IC808, IC830, IC850, IC908, IC1010
- **Grey cast iron**: IC808, IC830, IC850, IC908, IC1010
- **Nodular cast iron**: IC808, IC830, IC850, IC908, IC1010
- **High temperature alloys**: IC808, IC830, IC850, IC908, IC1010
- **Hardened steel**: IC808, IC830, IC850, IC908, IC1010

**Carbine grade**

- **WE**: IC808, IC830, IC850, IC908, IC1010
- **HE**: IC808, IC830, IC850, IC908, IC1010
- **HP**: IC808, IC830, IC850, IC908, IC1010
- **RM**: IC808, IC830, IC850, IC908, IC1010
- **T**: IC808, IC830, IC850, IC908, IC1010
- **T20**: IC808, IC830, IC850, IC908, IC1010

**Dimensions**

- **L**: 12.70 mm
- **S**: 5.20 mm
- **r**: 1.60 mm