SU-matic – get your production into top gear!

SU-matic is a company belonging to the SUHNER Group employing over 700 employees worldwide. The SU-matic team is responsible within the Group for the development and production of multiple and adjustable angle heads.

SU-matic has built up thirty years’ experience in this field. During this period, over 40,000 units were produced, most of which are still in use under demanding conditions. Try our equipment and see for yourself!

In this issue we are delighted to present to you our multiple spindle drilling heads and angle milling heads.

We presume that you, too, are obliged to work ever more efficiently and cost-effectively to be able to maintain your market position in the face of stiff competition.

In this issue, we are presenting examples of realized solutions with multiple spindle drilling heads that may provide you with ideas for your own production line.

If you have any questions on the applications illustrated, or if you would like to discuss with us a particular machining problem you have, please do not hesitate to contact us.

Small investment with big effect

By equipping machining centers with multiple spindle and angle milling heads, productivity can be considerably increased.

Angle drilling and milling heads permit full machining of up to five workpiece sides.

Multiple spindle drilling heads result in considerably shorter machining and cycle times.

Productivity can be increased up to three to five times.
INFO TECH

**Multiple spindle drilling heads with internal cooling**

**Cool heads**

To satisfy the requirements of modern cutting tools, SU-matic has modified its entire multiple spindle program to enable the cooling fluid to pass via the tool. The design flexibility of the spindle – collet chuck, weldon, ABS, HSK, etc. – is not adversely affected by this. Special attention was paid to the internal flow of cooling fluid, both to give the lowest possible drop in working pressure and in order to adapt to the different requirements of the drive spindles and CNC machines. Cooling fluid pressures up to 100 bar and speeds up to 15,000 min⁻¹ are standard.

**Fast heads**

Using a novel design and by applying the most modern machine components, it is now possible to build multiple spindle heads permitting speeds that could till now only be achieved with high-speed spindles. Depending on operating time and type of lubrication, speeds of up to 20,000 min⁻¹ may be realized.

**Different hole patterns with the same head**

Even for small series, use of multiple spindle technology can be worthwhile. The more so if an adjustable head capable of producing different hole patterns is available.

**Lean heads**

Adopting standardized SU-matic inside drilling heads, transverse holes of very small diameter may be bored from the inside.

The swaging operation is no longer necessary.

**SU-matic chuck units**

… that SU-matic has an extensive program of concentric chuck units.

- Compact units suitable for all equipment, machining centers and special machines
- Pneumatic and hydraulic drives
- Two- and three-jaw construction
- Clamping force up to 19.2 kN
- Clamping travel per jaw 2.5–9 mm

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**Did you know…**

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<table>
<thead>
<tr>
<th>Type</th>
<th>Clamping force in kg</th>
<th>Travel</th>
<th>Weight kg</th>
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<tbody>
<tr>
<td>M 52</td>
<td>25</td>
<td>70</td>
<td>10</td>
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<tr>
<td>M 85</td>
<td>70</td>
<td>105</td>
<td>140</td>
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<tr>
<td>M 110</td>
<td>110</td>
<td>225</td>
<td>300</td>
</tr>
<tr>
<td>M 140</td>
<td>235</td>
<td>360</td>
<td>480</td>
</tr>
<tr>
<td>M 170</td>
<td>285</td>
<td>428</td>
<td>570</td>
</tr>
</tbody>
</table>

**Horizontal mounting:**

- 6 bar
- 9 bar
- 12 bar
- 20 bar

| M 52 | 25  | 70  | 10  |
| M 85 | 70  | 105 | 140 |
| M 110| 110 | 225 | 300 |
| M 140| 235 | 360 | 480 |
| M 170| 285 | 428 | 570 |

**Vertical mounting:**

| F 52 | 25  | 70  | 10  |
| F 85 | 70  | 105 | 140 |
| F 110| 110 | 225 | 300 |
| F 140| 235 | 360 | 480 |
| F 170| 285 | 428 | 570 |
Overview of angle heads

SU-matic offers a wide range of angle heads produced in-house on high-precision machines. These are tested under production conditions, inspected using a modern 3D inspection center and accompanied by a test report.

Choosing the right head for your application.

1. Specify the intended machine operation (e.g. milling Ø1.8 mm in steel of up to 700 N/mm² breaking strength)?
2. Enter the data for your preferred cutting program!
   - If you do not yet have a preferred cutting program, here are two supplier Internet addresses (list not necessarily exhaustive): www.titex.de or www.guehring.de.
3. Check whether the chosen head covers the desired speed and performance!
   - If you do not yet have a SU-matic catalog with the necessary data, send us a fax (see page 4).
   - We are also accessible on the Internet under: http://www.su-matic.ch.
4. Select the adapter, CNC taper, or VDI attachment to suit your machine!
   - All necessary information on adapters, drives, CNC tapers, VDI attachments, and collet chucks is given in our catalog.

Typical applications:
- 90° angle drilling, milling, and tapping heads
- Angle heads with opposing spindles
- Adjustable angle drilling, milling, and tapping heads
- Inside drilling heads for drilling and tapping operations

INFOTECH

90° angle drilling, milling, and tapping heads

Typical application:
- milling at 45° angle

Angle heads with opposing spindles

End machining of aluminum profiles or cast components

Adjustable angle drilling, milling, and tapping heads

Multiple angled holes bored in cylinder head

Inside drilling heads for drilling and tapping operations

Machining a transverse hole on the inside of a power-assisted steering for a pump casing
SU-matic worldwide

Your partner to contact

Your fax …

Please fax or send this info coupon to SU-matic.
Please provide me with further details on your products.
Please send me:

- SU-matic catalog for adjustable multiple spindle heads
- SU-matic catalog for fixed multiple spindle heads
- SU-matic catalog for angle heads
- SU-matic catalog for chuck units Available from September 2000
- Please phone me!
- I would like a visit from a SU-matic technical representative.

Company: __________________________________________
Name: _____________________________________________
Department: ________________________________________
Street: _____________________________________________
Zip code / city: ______________________________________
Country: __________________________________________
Phone: ____________________________________________
Fax: ______________________________________________