

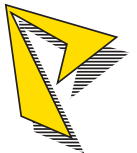
# Special Tooling

Round Emboss Tool

System

## Salvagnini

# PASS STANZTECHNIK AG



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	<div style="display: flex; justify-content: space-around; align-items: center;"> <input type="checkbox"/> <b>Order</b> <input type="checkbox"/> <b>Quote</b> </div> <p><b>Dates:</b></p> <p>Machine Type: _____</p> <p>Sheet Thickness: _____</p> <p>Sheet Material: _____</p> <p>Distance between Embosses: _____</p> <p>Other: _____</p> <hr/> <p><b>Part Sketch:</b></p> <div style="border: 1px solid black; height: 200px; width: 100%; background-image: linear-gradient(to right, lightgray 1px, transparent 1px), linear-gradient(to bottom, lightgray 1px, transparent 1px); background-size: 20px 20px;"> </div>
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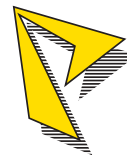
# Special Tooling

Fully Guided Cluster Punch  
(Solid Base)

System

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# Special Tooling

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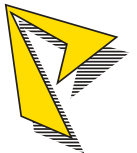
# Special Tooling

Fully Guided Springloaded  
Cluster Punch

System

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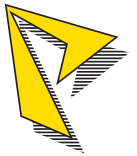
# Special Tooling

Extrusion Tool

System

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# Special Tooling

Cluster Punch  
with Machine Stripper

System

## Salvagnini

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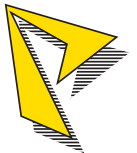
# Special Tooling

Fully Guided Springloaded  
Cluster Punch

System

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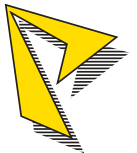
# Special Tooling

Obround Emboss Tool

System

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# Special Tooling

Louver Tool

System

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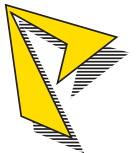
# Special Tooling

Lance and Form Tool

System

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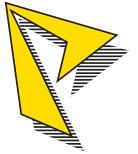
# Special Tooling

Countersink Tool

System

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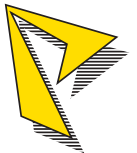
# Special Tooling

Shear Button Tool

System

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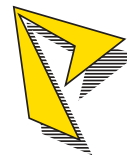
# Special Tooling

Cluster Punch  
with Machine Stripper

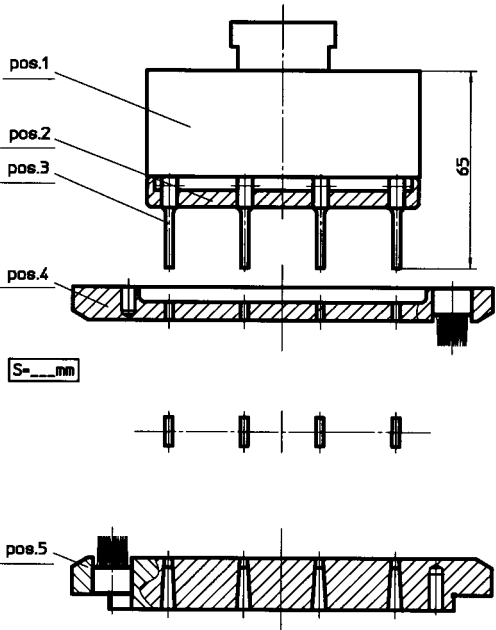

System

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# Special Tooling

Fully Guided Springloaded  
Cluster Punch

System

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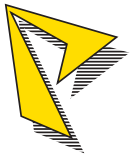
# Special Tooling

Round Emboss Tool

System

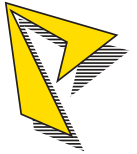
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## Suggestions to increase tool life

### Improving tool steel or hardness

Best results are generally attained with good HSS tool steel. However, if tools break or break at the cutting edges due to high punching powers (typically when working with thick or high tensile steels), tool life can be increased by surface treating or coating the tools.

### Tools with chamfered profiled edges

If edges are breaking, a chamfered profile edge is recommended.

### Using coated tools

If cutting edges are galling too fast when working with abrasive materials or tools break due to high punch pull-out forces, then a TiN or TiCN coating is recommended.

Hardness of TiN coating is 2,400 HV and 3,000 HV for TiCN. Coated tools attain a very high tool life. However they are very sensitive to contamination on the sheet such as dirt, scale, etc. (on the surface or as inclusions). Once the coating is destroyed, the tools are no longer usable.

Grinding of coated tools is possible. You can find PASS TiN and TiCN coating options in our catalog.

# Tool System

## Overview

System

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## PASS STANZTECHNIK AG



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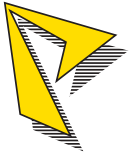
E-Mail: [info@pass-ag.com](mailto:info@pass-ag.com)

Internet: [www.pass-ag.com](http://www.pass-ag.com)

Overview	Tool quantity per Head				
Punching Heads	H2	H3	H4	H5	H6
7-t station to 33 mm	40	56	24	24	40
26-t station up to 90 x 90 mm	4	4	12	8	8
Opt. 12-t station up to 60 mm	5	6	6	5	6
Opt. 8-t embossing station with piston from below up to 60 mm	5	6	6	5	6
Opt. 12-t rotation station up to 60 mm	6	6	6	6	6
Opt. 3-t Polypunch station with 6 tools up to 33 mm	30	36	36	30	36
Opt. 5-t embossing station with piston from below up to 33 mm	5	5	1	3	3
Maximum amount of tools	74	96	72	62	84

# Shear Types

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System

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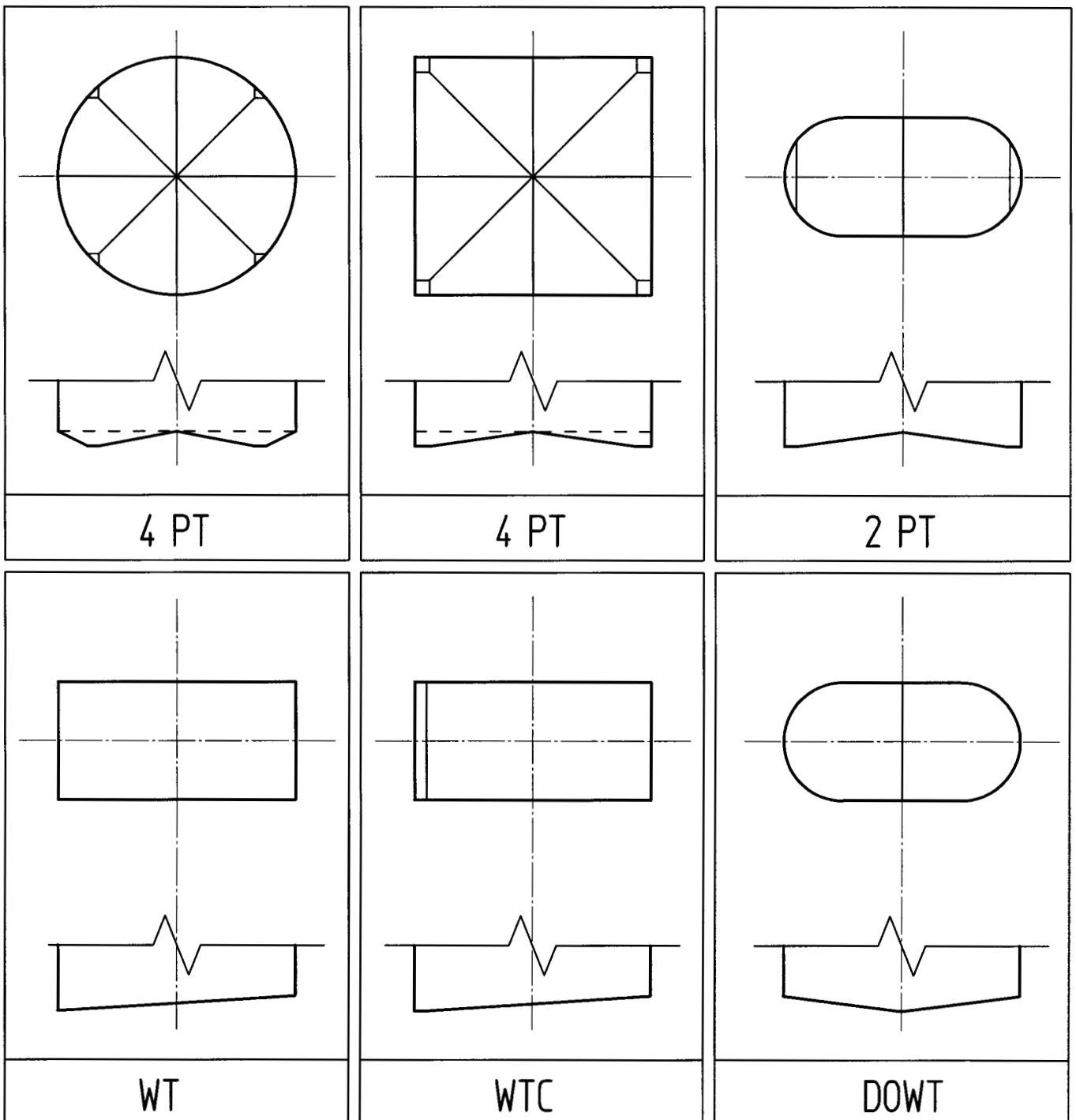
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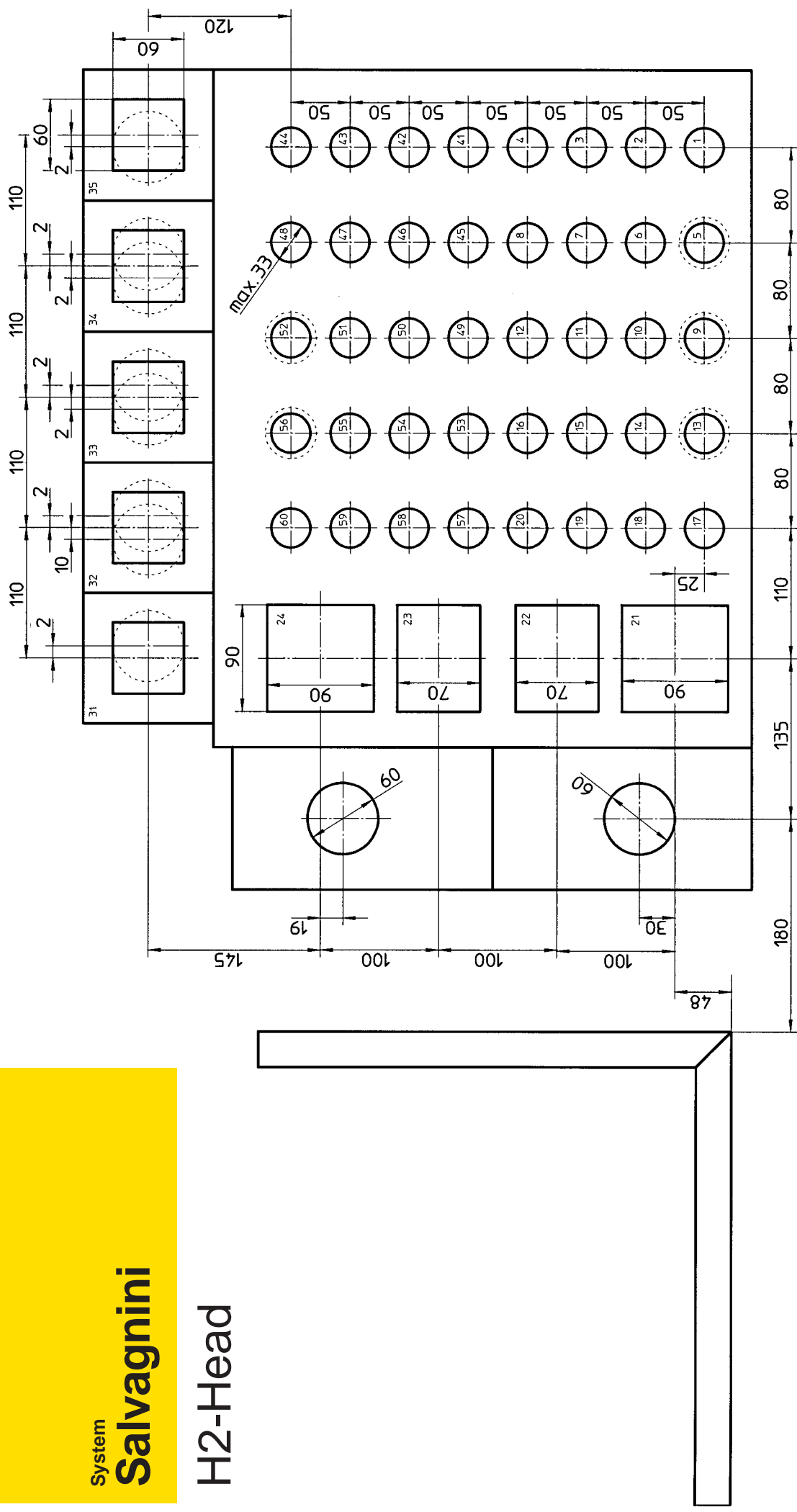


# Punching Head

System

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## H2-Head





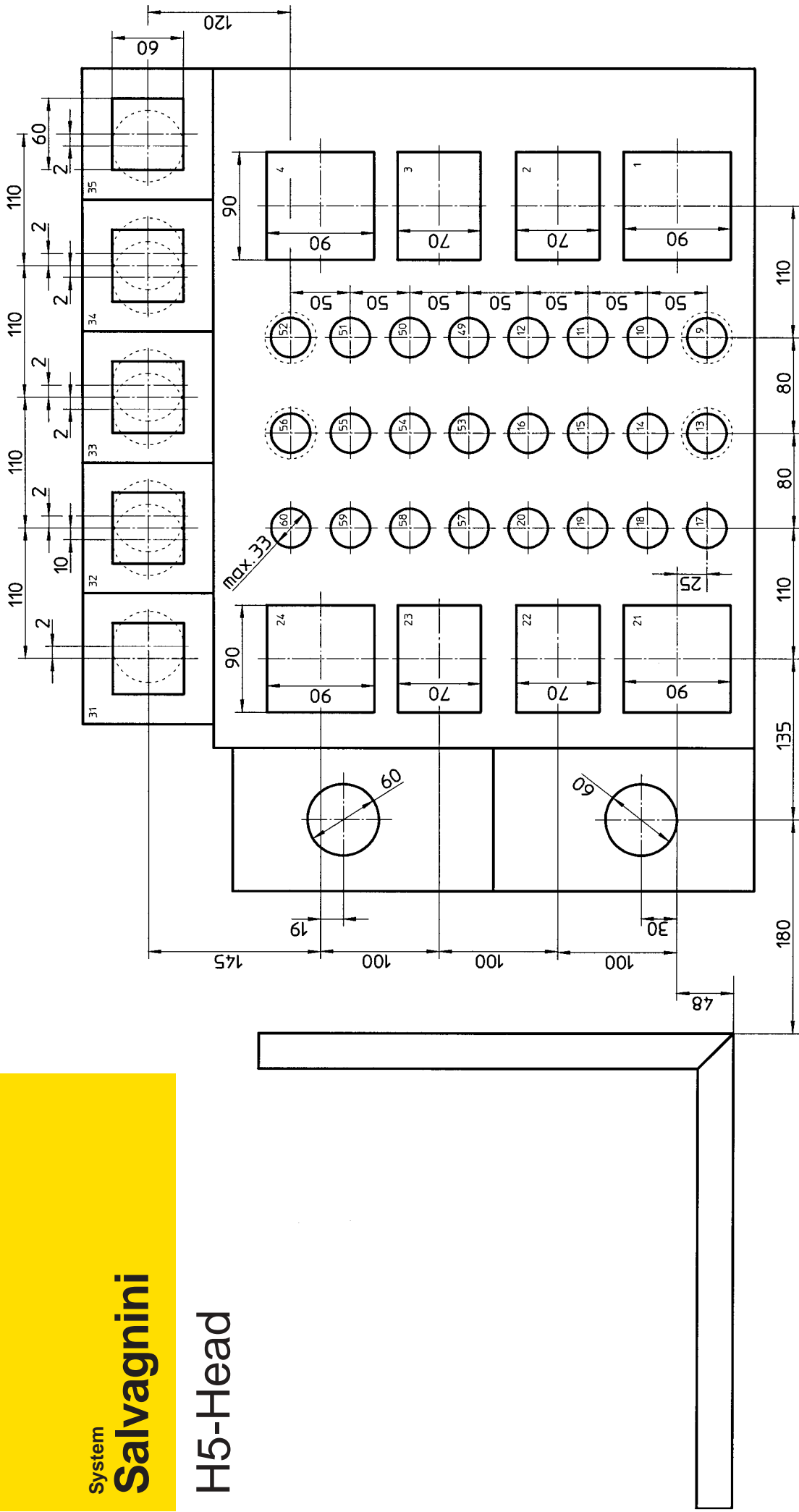


# Punching Head

System

# Salvagnini

## H5-Head





Punching Head

System

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System 2

