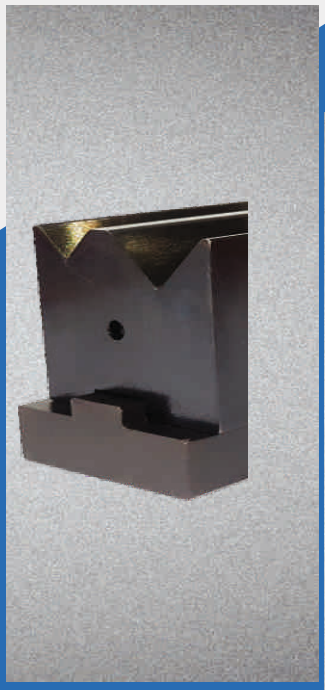
www.mltechnologies.co.in

# PRESS BRAKE TOOLS



## Sheet Metal Bending Press Brake Tools

- Straight Punches
- Gooseneck Punches
- Self-Centering Die Blocks
- Multi Vee Die Blocks
- Hemming Die and Punches
- Radius Punch Inserts
- Forming Tools
  - Curling Tools
  - Joggle Tools
  - Corrugation Tools
  - Adjustable Vee Die

## Shear Blades

- Heavy Duty Shear Blades
- Carbide Blades

MLT

Cad/Cam | Toolings | Accessories

**ML TECHNOLOGIES**

DESIGNERS AND MFG. OF POWER PRESS AND PRESS BREAK TOOLS

INDEX



Cad/Cam | Toolings | Accessories

# ML TECHNOLOGIES

DESIGNERS AND MFG. OF POWER PRESS AND PRESS BREAK TOOLS

PROFILE

## COMPANY PROFILE :

**Farohar Engineering** formerly known as Technica is managed by a well-qualified group of engineers with 15 years experience in quality control and manufacturing in machine tool division of Godrej & Boyce Mfg. Co. Bombay.

**Farohar Engineering** is engaged in design consultancy, drawings and manufacturing activities especially in the area of Press Brake Tooling.

Farohar Press brake toolings are hardened and ground tools.

Our CrMnMo++ grade tools are manufactured from imported tool steel specially made for high performance Press Brake Tools.

Tools are toughened to 30+2 HRc. throughout for maximum toughness and rigidity of tool, which also allows permissible deflection and increases tool life.

Our tools are hardened upto 52+2 HRc. on tip of punches and entire top surface of die to increase wear resistance and give maximum tool life.

Though we offer segmented tooling all our tools are manufactured in single setting. Final operation of grinding is done on 4500 mm long Italian surface grinding machine to achieve accuracy within 20 microns.

Regrinding of Press Brake Tools and Shear Blades is also offered as Job work to our clients. Same is done against moderate wear to restore tool to its full capacity after significant use over years.

## LIST OF MACHINERY AND FACILITY AVAILABLE :

| NO. | MACHINE NAME | MACHINE CAPACITY L W H |
|---|---|---|
| 01 | Yamara VMC | 3000 x 1000 x 600 mm |
| 02 | Yamara VMC | 2000 x 1500 x 1000 mm |
| 03 | BFW YMC | 1050 x 610 x 610 mm |
| 04 | Favretto Double Column Surface Grinder | 4000 x 1200 x 900 mm |
| 05 | Cantaluppi Surface Grinder 4500 Stroke | 4500 x 750 x 500 mm |
| 06 | Surface Grinder - Tos Vertical Spindle | 3000 x 850 x 500 mm |
| 07 | Surface Grinder - Cantaluppi 2500 Stroke | 2500 x 500 x 500 mm |
| 08 | Bolhm (Germany) Surface Grinder | 1500 x 350 x 400 mm |
| 09 | Alex Rotary Grinder | 700 mm dia table x 300 (h) |
| 10 | Pensotti Italian Plano Miller | 3500 x 1500 x 800 mm |
| 11 | Norton (USA) Surface Grinder | 800 x 400 x 300 mm |
| 12 | Electrical Furnace | 3000 x 1000 x 250 mm |
| 13 | Induction Hardening Facility | 1500 X 1500 mm |
| 14 | Inspection Table Grade 'O' | |
| 15 | Jet Black Coating | |
| 16 | Laser Etching | |
| 17 | Full range of all required measuring equipment which are regularly calibrated by NABL labs | |

## SOME OF OUR REGULAR CUSTOMERS :

- **Godrej & Boyce Mfg. Co. Ltd.**
- **Ahura Mazda Mfg. Co. Ltd.**
- **Sulzer India Ltd.**
- **Meghdoot Refrigeration**
- **Transrail Lighting**
- **American Tanks & Fabricator (ATF)**
- **Ultra**
- **JCB**
- **TATA - Hitachi**
- **Danieli India Ltd.**
- **Hindalco Ltd.**
- **Jindal Iron & Steel Co. Ltd., Jindal Strips Ltd.**
- **Blue Star Ltd.**
- **Bharat Earth Movers Ltd. (B.E.M.L.)**
- **Raj Jog Weltech**
- **Symatic Eng.**
- **Bhushan Steel Ind.**
- **Crompton Greaves Ltd.**

.

## IMAGES OF PLANT AND MACHINERY

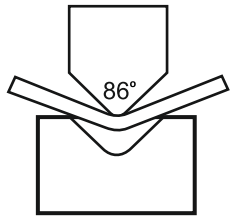

Figure 1 . Italian 4.5 meter Long Surface Grinding Machine

Figure 2 . Italian Sideway Grinding Machine Accuracy within 5 microns

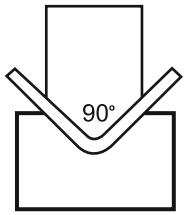
# LOAD CALCULATION FOR AIR BENDING

| t (mm) | 4 mm or Less | 3 to 8 mm | 9 to 12 mm | 12 mm onwards |
|---|---|---|---|---|
| V (mm) | 6 X t | 8 X t | 10 X t | 12 X t |

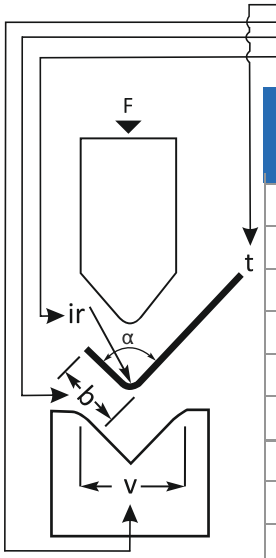
The above formula are for reference only. For more detailed information refer to the chart below.




Air Bending
F=F




Bottom Bending
F=3 to 5 times F




$$F=1.4X\ \frac{s \times w \times t^2}{1000 \times v}$$

*below calculation is for air bending, V=8t and angle = 86°

| IR mm | B mm | V mm | t (mm) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.5 | 0.8 | 1 | 1.2 | 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 |
| 1 | 4.7 | 6 | 2.6 | 6.9 | 10.6 | 15.3 | | | | | | | | | | | |
| 1.3 | 6.2 | 8 | 2.0 | 5.5 | 8.0 | 11.5 | 18.0 | | | | | | | | | | |
| 1.6 | 8 | 10 | | 4.1 | 6.5 | 9.5 | 14.5 | 26.0 | | | | | | | | | |
| 2 | 9.5 | 12 | | | 5.5 | 8.0 | 12.0 | 21.5 | 33.5 | | | | | | | | |
| 2.6 | 13 | 16 | | | | 6.0 | 9.0 | 16.0 | 25.0 | 36.0 | | | | | | | |
| 3.3 | 16 | 20 | | | | | 7.5 | 13.0 | 20.0 | 29.0 | 52.0 | | | | | | |
| 3.8 | 19 | 24 | | | | | | 10.6 | 16.6 | 24.0 | 42.6 | 66.6 | | | | | |
| 4.7 | 24 | 30 | | | | | | | 14.0 | 19.0 | 34.0 | 54.0 | 77.0 | | | | |
| 6.2 | 31 | 40 | | | | | | | | 15.0 | 26.0 | 40.0 | 58.0 | 103.0 | | | |
| 7.8 | 39 | 50 | | | | | | | | | 21.0 | 32.0 | 46.0 | 82.0 | 128.0 | | |
| 9.3 | 47 | 60 | | | | | | | | | | 27.0 | 39.0 | 69.0 | 107.0 | | |
| 12.5 | 62 | 80 | | | | | | | | | | | 29.0 | 52.0 | 80.0 | 116.0 | 180.0 |
| 15.6 | 77 | 100 | | | | | | | | | | | | 41.0 | 64.0 | 93.0 | 144.0 |
| 18.7 | 93 | 120 | | | | | | | | | | | | | 54.0 | 77.0 | 120.0 |
| 21.9 | 108 | 140 | | | | | | | | | | | | | | 66.0 | 103.0 |
| 25 | 124 | 160 | | | | | | | | | | | | | | | 90.0 |

F (T/m)

= Optimal

| Flange Length Calculation | |
|---|---|
| Angle α | factor f |
| 150° | 0.57 |
| 135° | 0.59 |
| 120° | 0.63 |
| 90° | 0.77 |
| 60° | 1.10 |
| 45° | 1.43 |
| 30° | 2.00 |

$$b = f \times v$$

b= min. flange length depends on angle to be bent

**t =** Sheet metal thickness (mm)
**F =** Bending force(T/m)
**ir =** Inner radius (mm)
**b =** min. flange length (mm)
**v =** Die vee opening (mm)
**s =** Tensile strength of sheetmetal (kg/mm²)
**w =** Span (bending length in mm)

| | | |
|---|---|---|
| **Aluminium** | 30 Kg/mm² | F = F x 0.65 |
| **Mild Steel** | 45 Kg/mm² | F = F |
| **Stainless Steel** | 70 Kg/mm² | F = F x 1.6 |

# 5. PRESS BRAKE PUNCHES



Straight Punch

Semi Goose Neck Punch

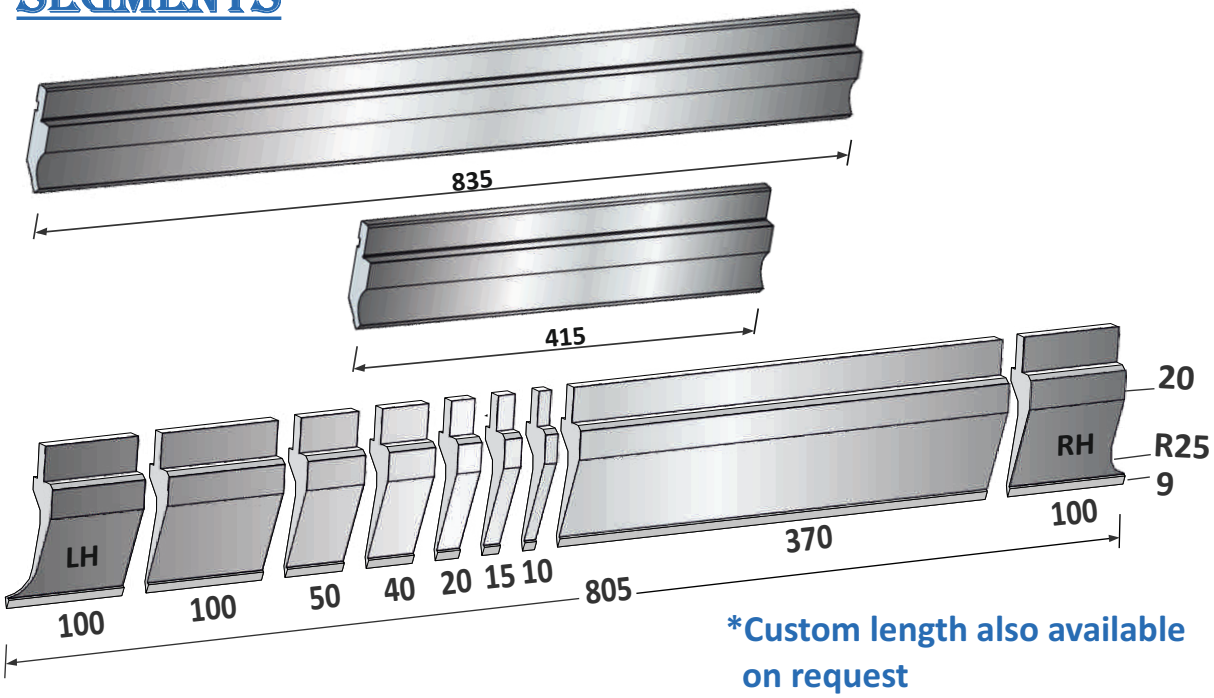
Goose Neck Punch

**INTRODUCTION :**

Punches can be manufactured in various shapes and sizes like Straight Punches, Gooseneck Punches, Profile Punches and Insert type variable radius punches. All types of punches can be modified with different bending angle and nose radius.

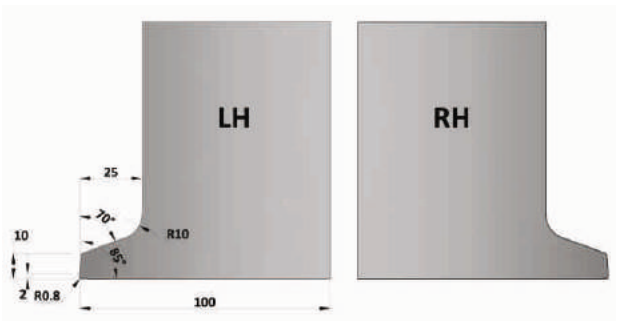
We also manufacture punches and profile punches to suit your components. Press brake punches length can be made as single length or segmented as required. 835, 415 and 805 (SEG) are our standard length options.

## SEGMENTS

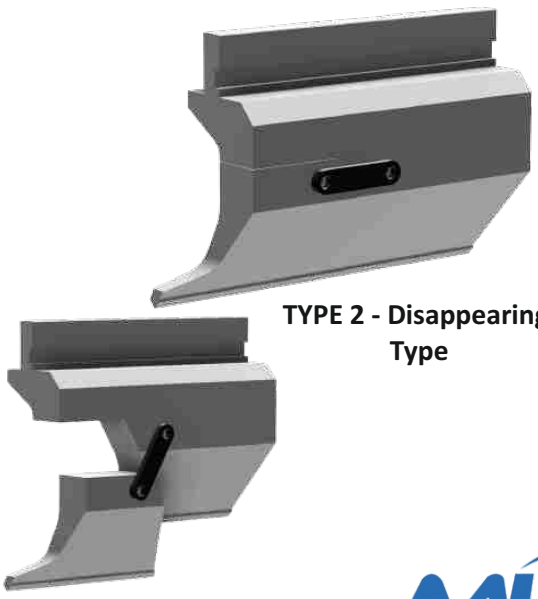



***Custom length also available on request**

**LH - RH SPECIAL HORN DETAILS:**




**TYPE 1 - Standard**

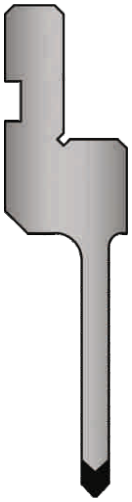


**TYPE 2 - Disappearing Type**

MLT Cad/Cam | Toolings | Accessories

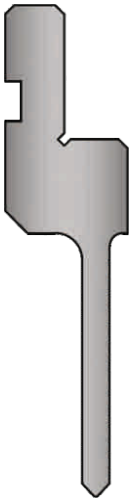
# MATERIAL OPTIONS





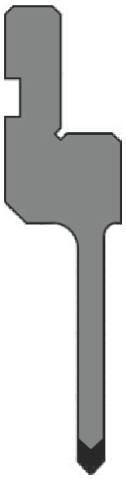
**M01 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc



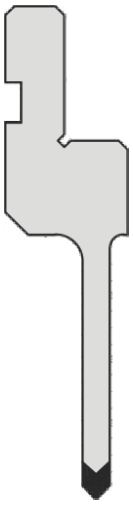
**M04 Toughened and Ground**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc



**M02 Standard**

42 CrMo4 : 750-900 N/mm²
52±2HRc



**M03 Economy Grade**

C45 :600-710 N/mm²
52±2HRc

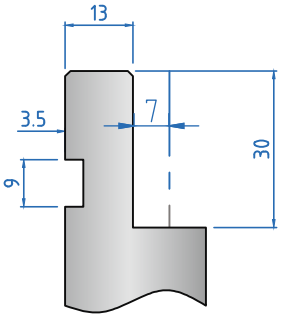
## DECODE

| SP01 | H90 | R0.8 | A86 | N01 | M01 |
|---|---|---|---|---|---|

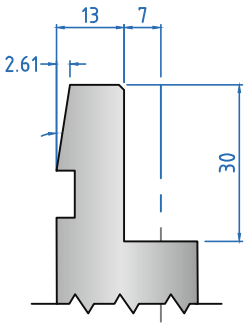
- SP01 — Straight Punch= SP; Semi Gooseneck Punch= SGNP; Gooseneck Punch= GNP; Profile Punch= PP
- H90 — Height of the punch excluding neck
- R0.8 — Punch tip radius
- A86 — Punch Angle
- N01 — Punch neck type refer page 9
- M01 — Material refer page 8

# STD PUNCH NECK HOLDINGS

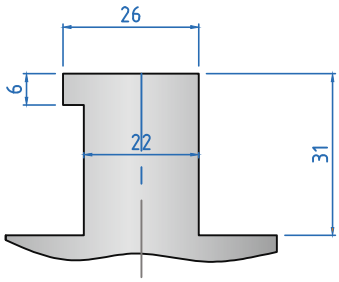




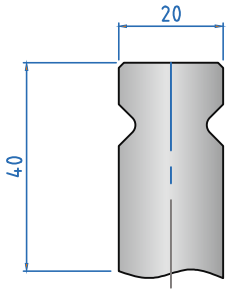

**N01** EUROPEAN



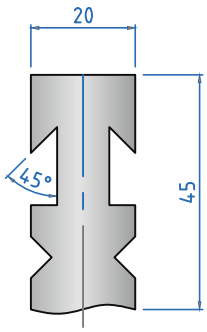

**N02** ONE TOUCH



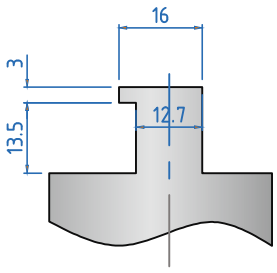

**N03** DARLE



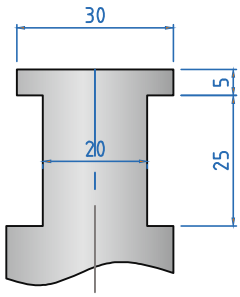

**N04** WILLA TYPE



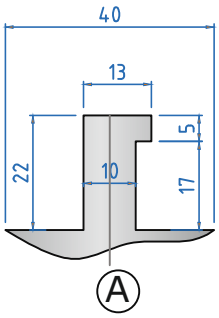

**N05** BYSTRONIC



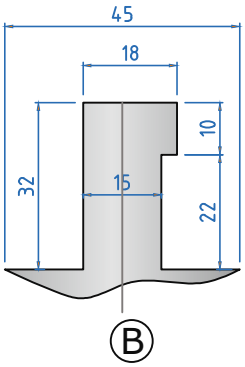

**N06** AMERICAN SAFETY



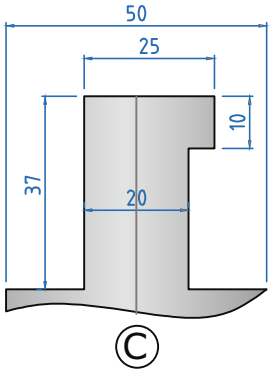

**N07** GASPARINI TYPE



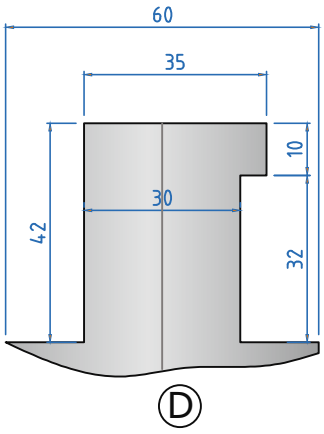

**N08** AMERICAN



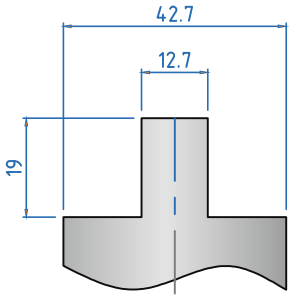

**N09** AMERICAN




**N10** AMERICAN



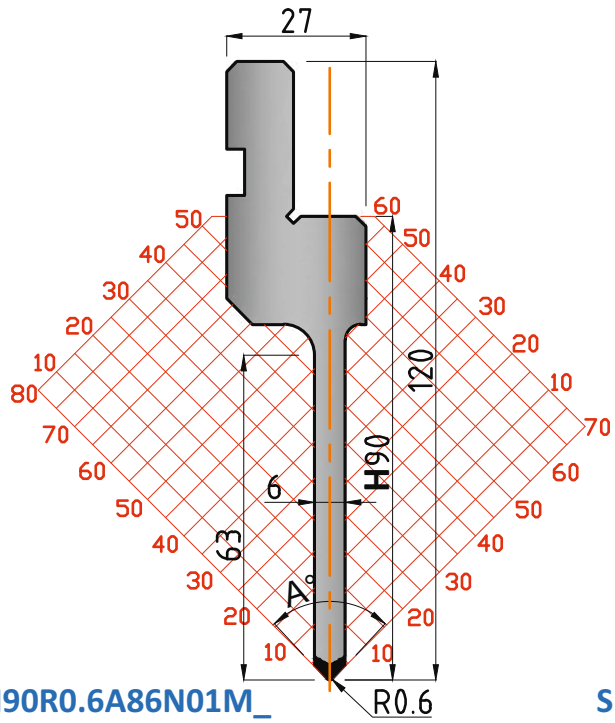

**N11** AMERICAN




**N12** AMERICAN STANDARD
(NO SAFETY HOOK)

# 5.1. STRAIGHT PUNCHES



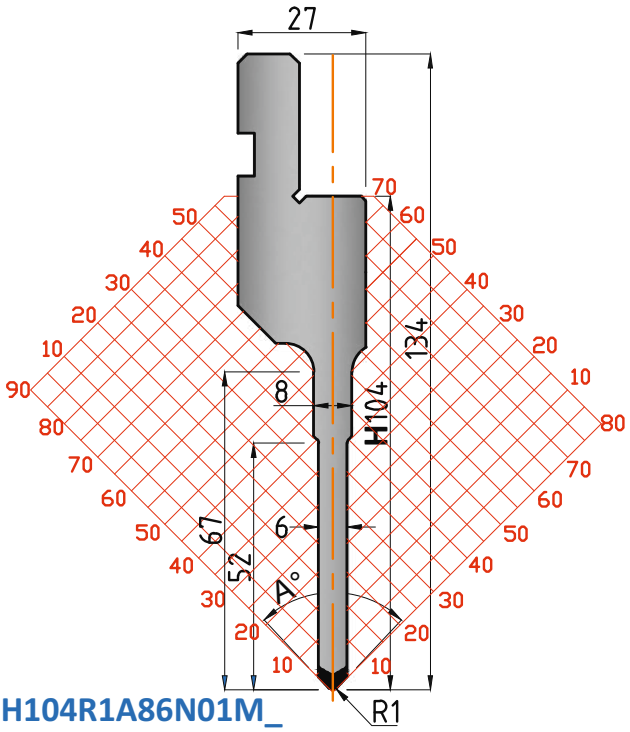



## SP01H90R0.6A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SP01 | 90 | 0.25 to 2.5 | 86° /60° | 50 |
| | 95 | | | 50 |

N=Neck Refer page 9

M=Material Refer page 8

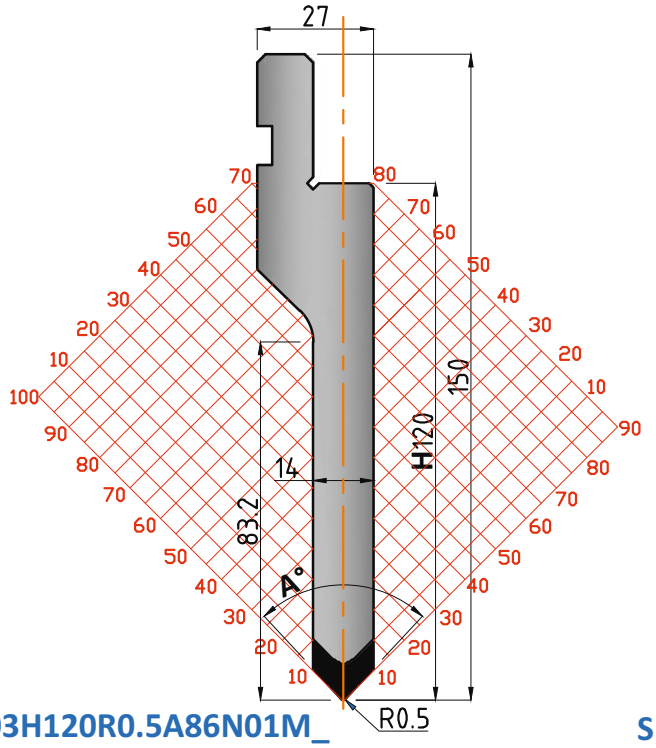



## SP02H104R1A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SP02 | 104 | 0.25 to 2.5 | 86° /60° | 50 |
| | 115 | | | 50 |

N=Neck Refer page 9

M=Material Refer page 8

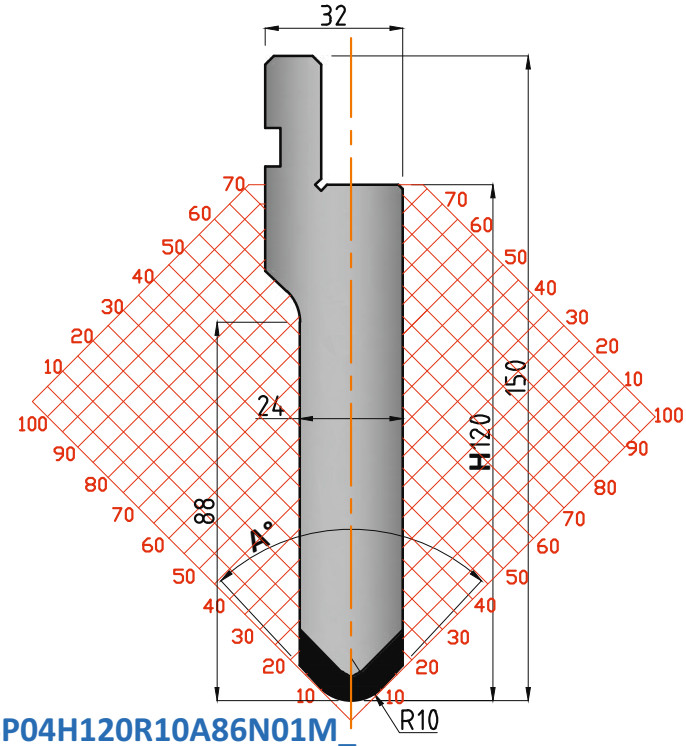



## SP03H120R0.5A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SP03 | 90 | 0.25 to 2.5 | 86° /60° | 100 |
| | 104 | | | 100 |
| | 120 | | | |

N=Neck Refer page 9

M=Material Refer page 8




## SP04H120R10A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SP04 | 90 | R3 Onwards | 86° /60° | 150 |
| | 104 | | | 150 |
| | 120 | | | |

N=Neck Refer page 9

M=Material Refer page 8

### MATERIAL OPTION :

**1 Toughened for Optimum Performance**
**for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

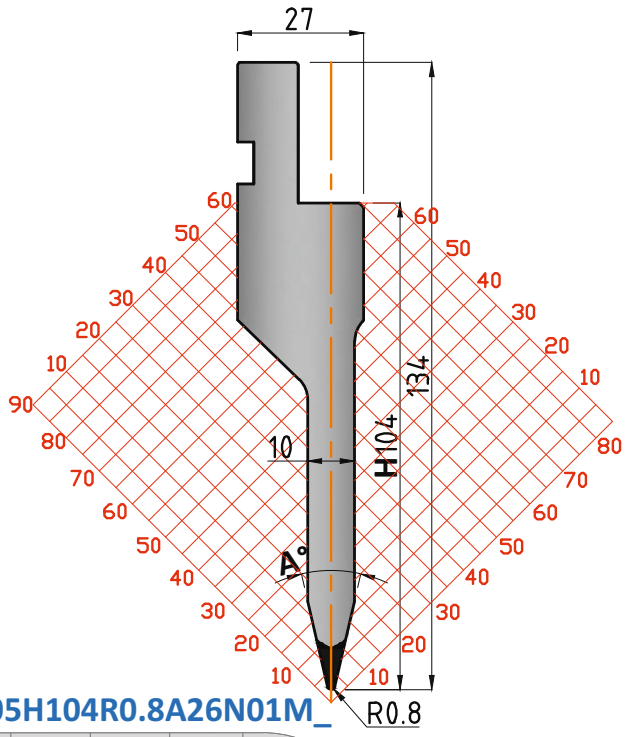
**2 Standard**

42 CrMo4 : 750-900 N/mm²
52±2HRc

**3 Economy Grade**

C45 :600-710 N/mm²
52±2HRc

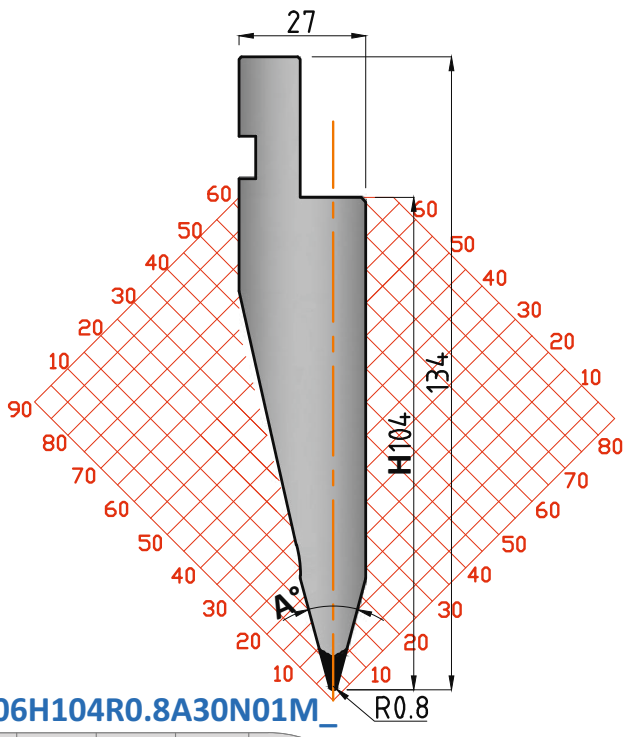
MLT Cad/Cam | Toolings | Accessories




## SP05H104R0.8A26N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SP05 | 104 | 0.25 to 2.5 | 26° | 80 |
| | 120 | | /30° | 80 |
| | 90 | | /45° | 80 |

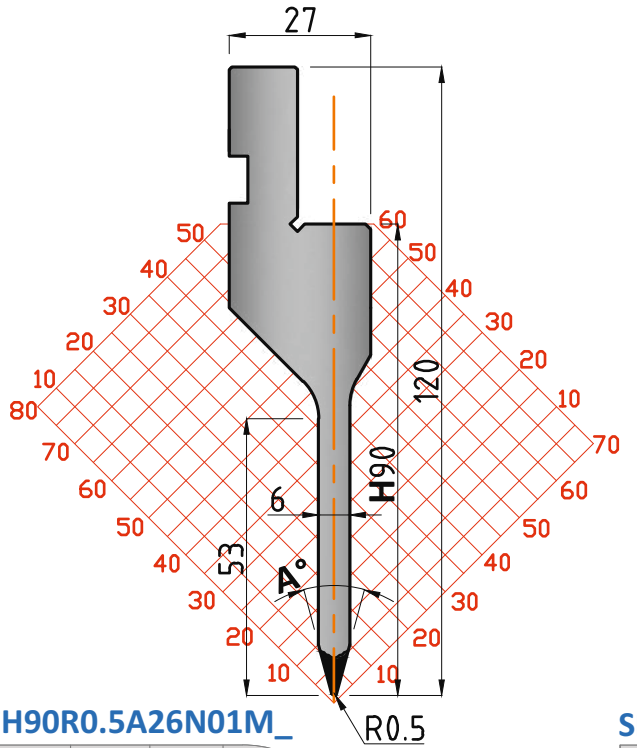
N=Neck Refer page 9
M=Material Refer page 8




## SP06H104R0.8A30N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SP06 | 104 | 0.25 to 2.5 | 26° | 100 |
| | 120 | | /30° | 100 |
| | 90 | | /45° | 100 |

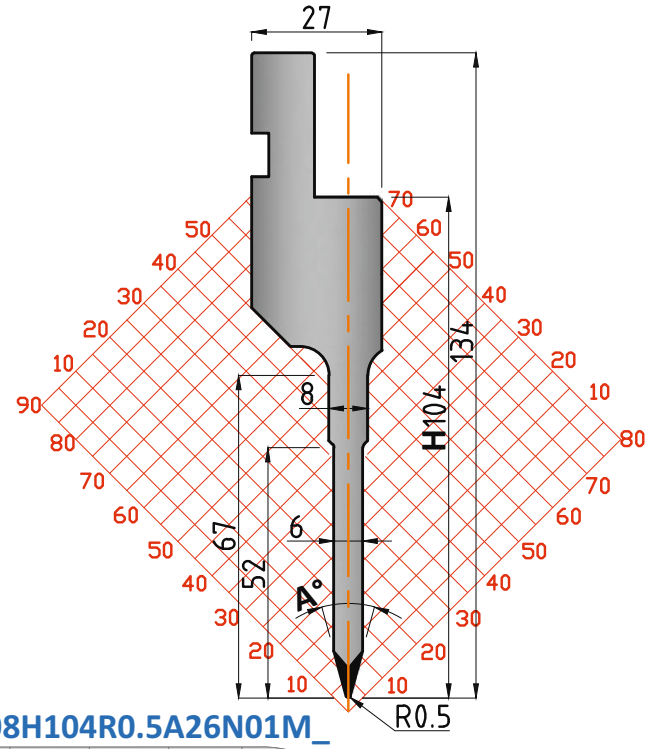
N=Neck Refer page 9
M=Material Refer page 8




## SP07H90R0.5A26N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SP07 | 90 | 0.25 to 2.5 | 26° | 50 |
| | 95 | | /30° | 50 |
| | | | /45° | |

N=Neck Refer page 9
M=Material Refer page 8




## SP08H104R0.5A26N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SP08 | 104 | 0.25 to 2.5 | 26° | 50 |
| | 115 | | /30° | 50 |
| | | | /45° | |

N=Neck Refer page 9
M=Material Refer page 8

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance**
**for 1.3 times max Load & 1.5 times tool life**
CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

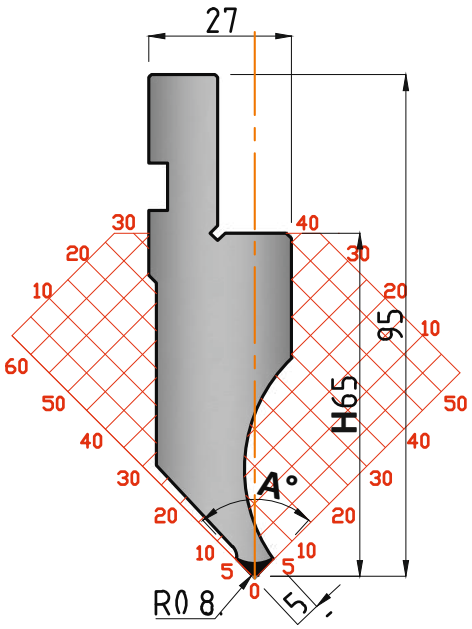
**2 Standard**
42 CrMo4 : 750-900 N/mm²
52±2HRc

**3 Economy Grade**
C45 :600-710 N/mm²
52±2HRc

MLT Cad/Cam | Toolings | Accessories

# 5.2. SEMI GOOSENECK PUNCHES

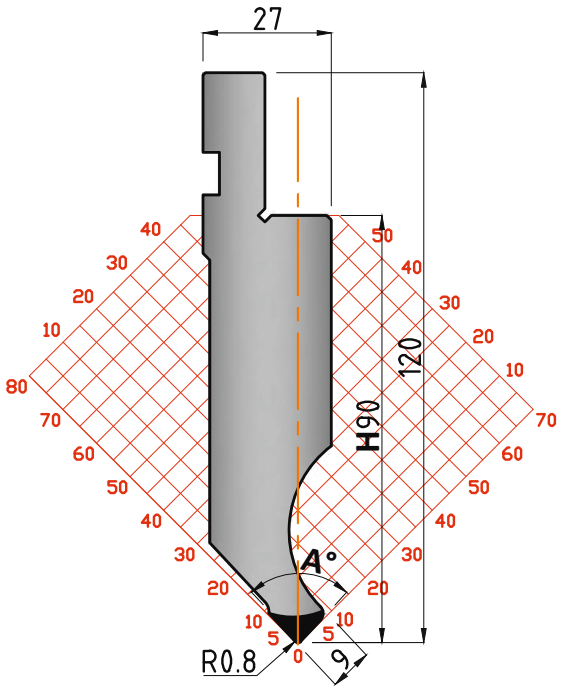





## SGNP01H65R0.8A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP01 | 65 | 0.25 to 2.5 | 86° /60° | 80 |
| | 90 | | | 80 |
| | 104 | | | 80 |

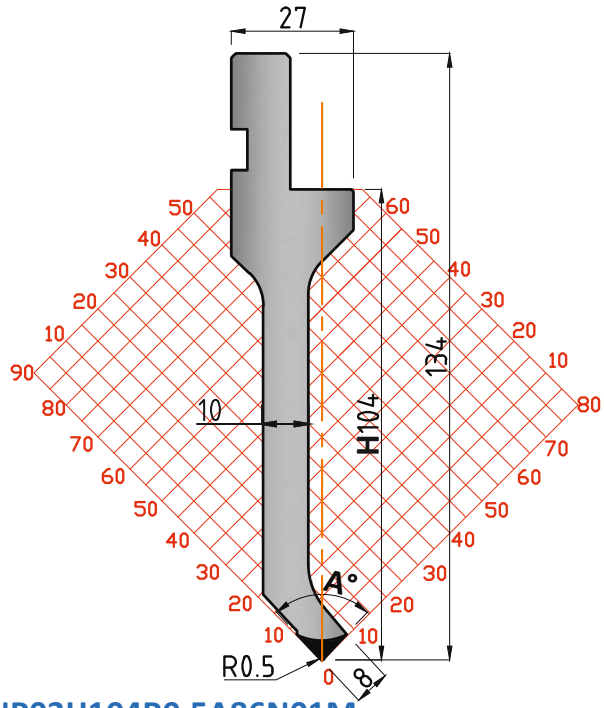
N=Neck Refer page 9
M=Material Refer page 8




## SGNP02H90R0.8A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP02 | 90 | 0.25 to 2.5 | 86° /60° | 100 |
| | 104 | | | 100 |
| | 120 | | | 100 |

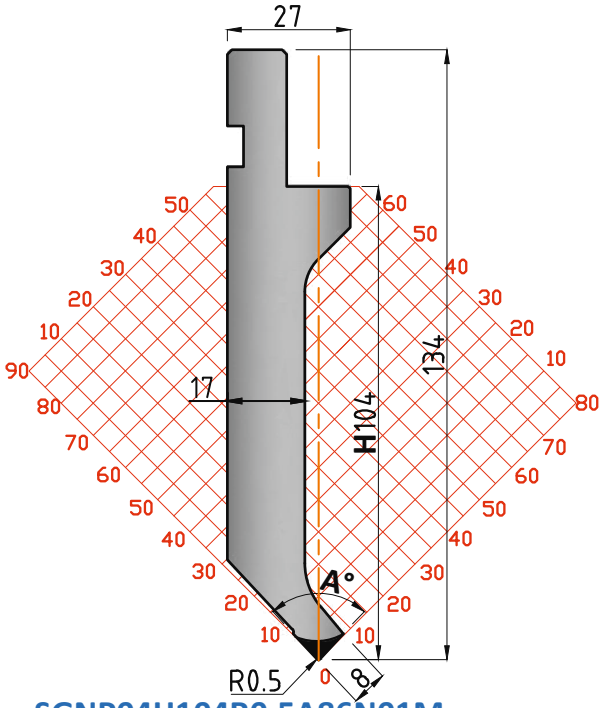
N=Neck Refer page 9
M=Material Refer page 8




## SGNP03H104R0.5A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP03 | 104 | 0.25 to 2.5 | 86° /60° | 50 |
| | 120 | | | 50 |
| | 90 | | | 50 |

N=Neck Refer page 9
M=Material Refer page 8




## SGNP04H104R0.5A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP04 | 90 | 0.25 to 2.5 | 86° /60° | 80 |
| | 104 | | | 80 |
| | 120 | | | 80 |

N=Neck Refer page 9
M=Material Refer page 8

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

42 CrMo4 : 750-900 N/mm² 52±2HRc

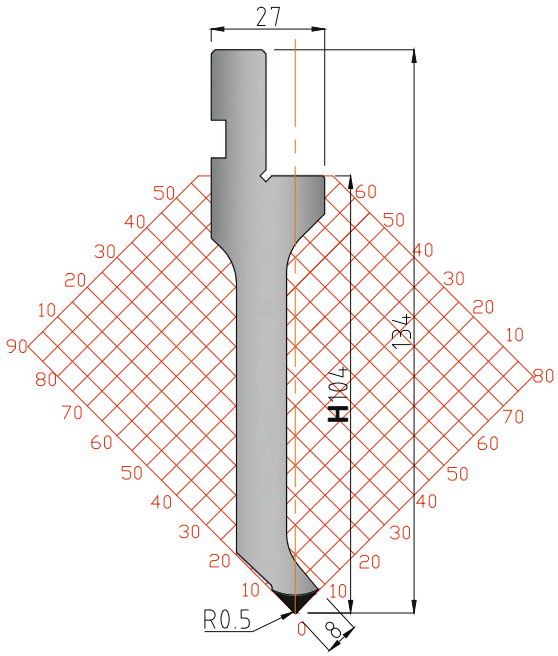
**3 Economy Grade**

C45 :600-710 N/mm² 52±2HRc

MLT Cad/Cam | Toolings | Accessories

# 5.2. SEMI GOOSENECK PUNCHES

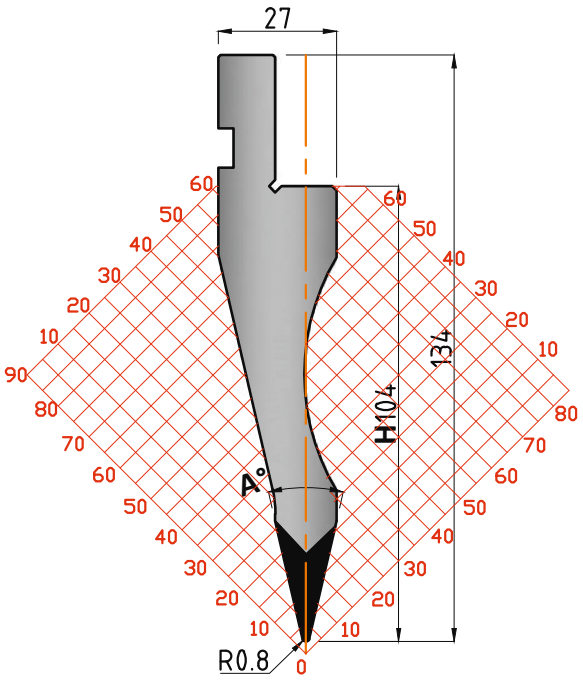





## SGNP05H90R1.5A30N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP05 | 90 | 0.25 to 2.5 | 86° /60° | 60 |
| | 104 | | | 60 |
| | 120 | | | 60 |

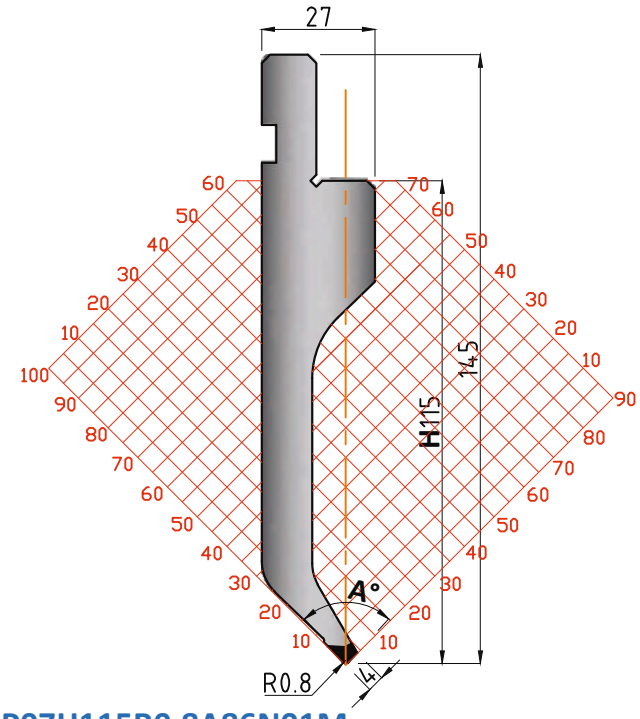
N=Neck Refer page 9
M=Material Refer page 8




## SGNP06H104R0.8A26N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP06 | 90 | 0.25 to 2.5 | 26° /30° /45° | 50 |
| | 104 | | | 50 |
| | 120 | | | 50 |

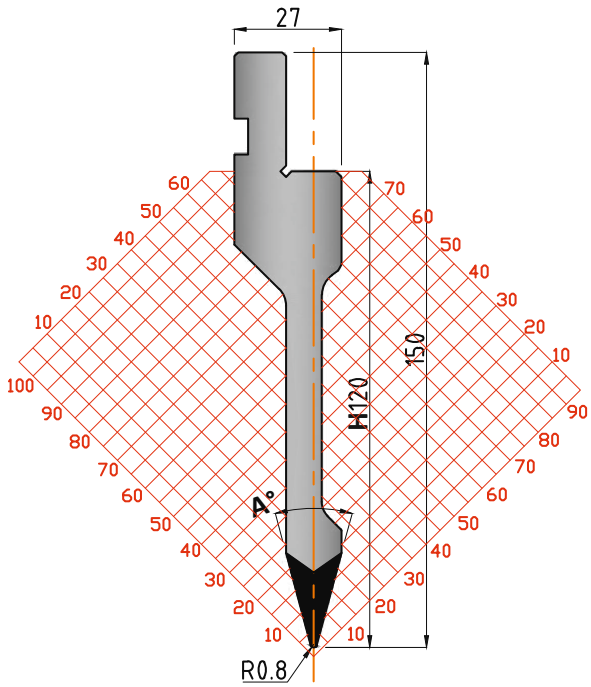
N=Neck Refer page 9
M=Material Refer page 8




## SGNP07H115R0.8A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP07 | 90 | 0.25 to 2.5 | 86° /60° | 40 |
| | 104 | | | 40 |
| | 115 | | | 40 |

N=Neck Refer page 9
M=Material Refer page 8




## SGNP08H120R0.8A30N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP08 | 90 | 0.25 to 2.5 | 26° /30° /45° | 40 |
| | 104 | | | 40 |
| | 120 | | | 40 |

N=Neck Refer page 9
M=Material Refer page 8

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

42 CrMo4 : 750-900 N/mm²
52±2HRc

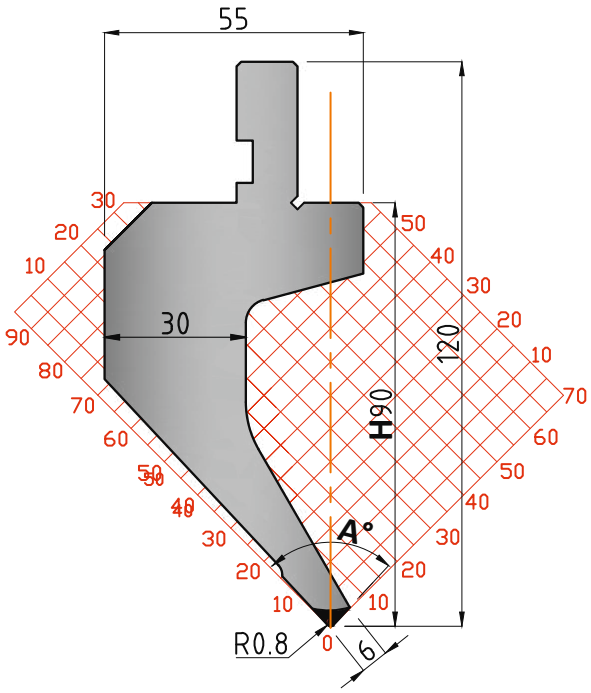
**3 Economy Grade**

C45 :600-710 N/mm²
52±2HRc

Cad/Cam | Toolings | Accessories

# 5.3. GOOSENECK PUNCHES



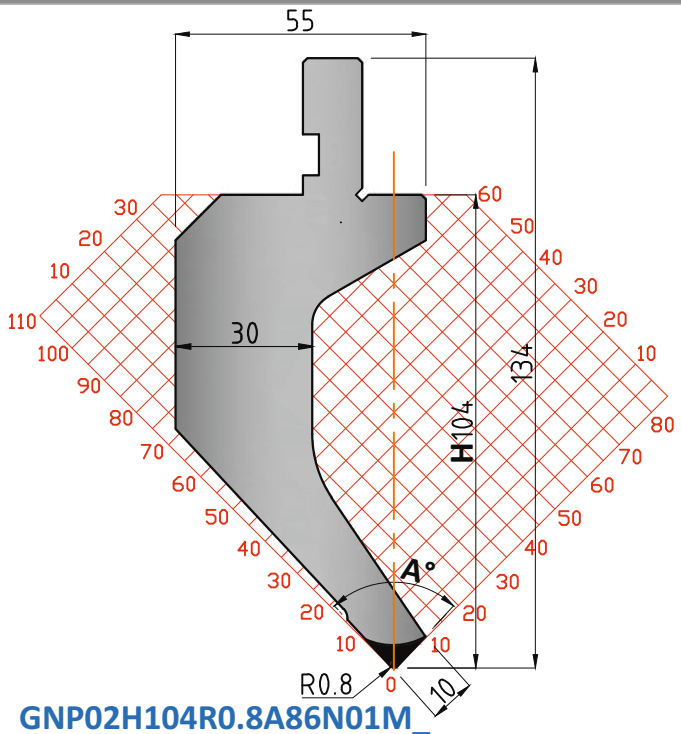



## GNP01H90R0.8A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| GNP01 | 90 | 0.25 to 2.5 | 86° | 50 |
| | 104 | | | 50 |
| | 120 | | | 40 |

N=Neck Refer page 9

M=Material Refer page 8

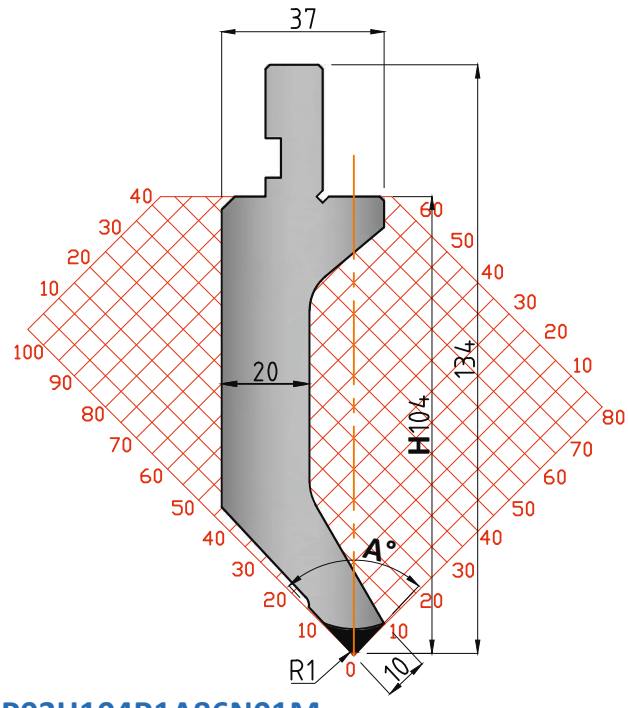



## GNP02H104R0.8A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| GNP02 | 90 | 0.25 to 2.5 | 86° | 60 |
| | 104 | | | 60 |
| | 120 | | | 60 |

N=Neck Refer page 9

M=Material Refer page 8

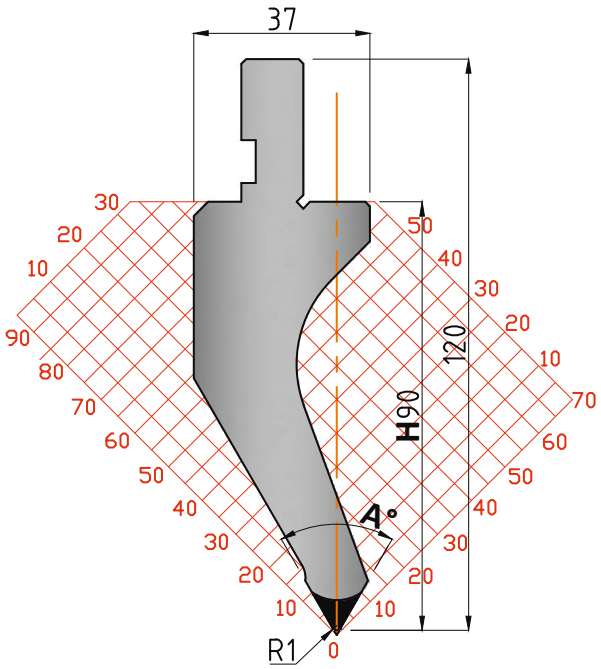



## GNP03H104R1A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| GNP03 | 90 | 0.25 to 2.5 | 86° | 60 |
| | 104 | | | 60 |
| | 120 | | | 60 |

N=Neck Refer page 9

M=Material Refer page 8




## GNP04H90R1A60N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| GNP04 | 90 | 0.25 to 2.5 | 60° | 40 |
| | 104 | | | 40 |

N=Neck Refer page 9

M=Material Refer page 8

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

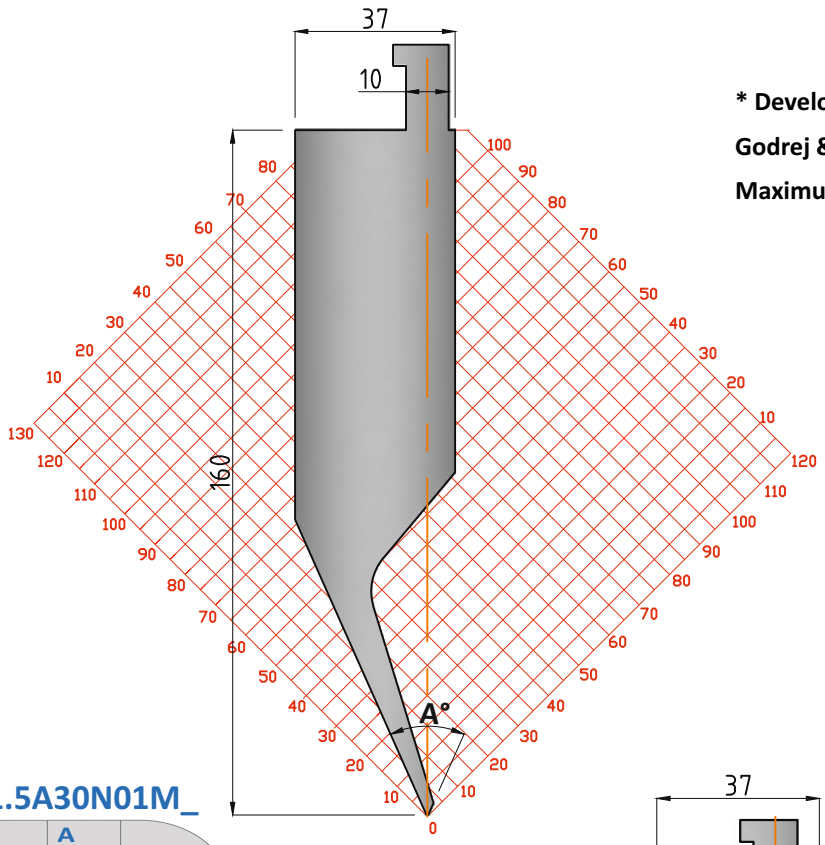
42 CrMo4 : 750-900 N/mm² 52±2HRc

**3 Economy Grade**

C45 :600-710 N/mm² 52±2HRc

MLT Cad/Cam | Toolings | Accessories

Press Brake Punches



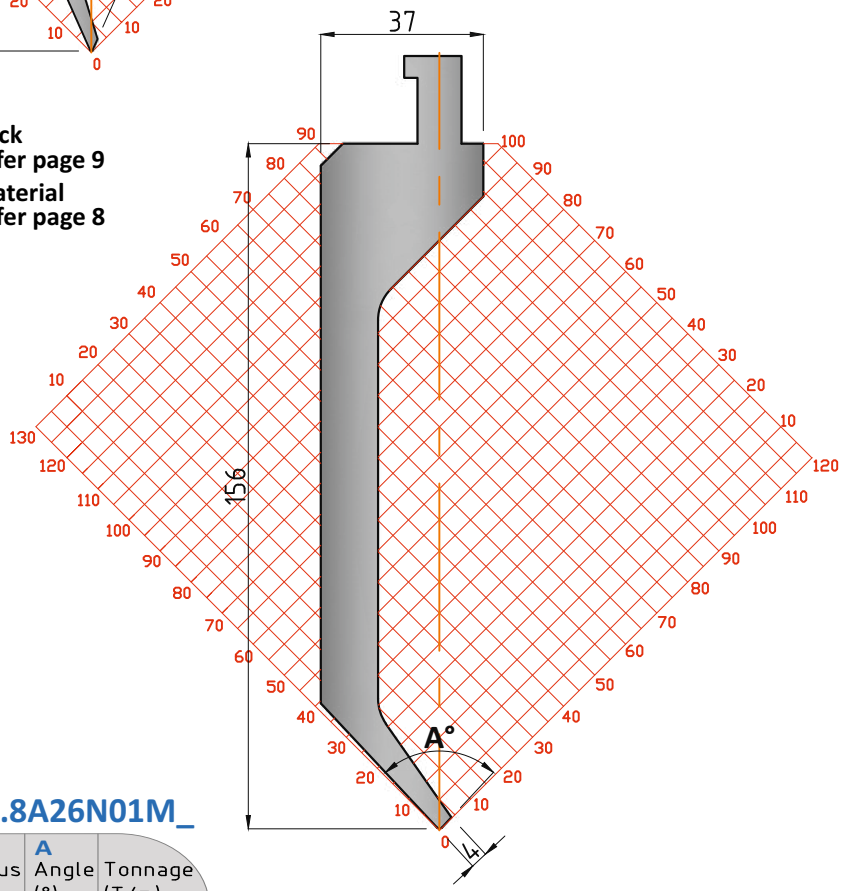

*** Developed for special application of Godrej & boyce interio division to fit Maximum components on single tool.**

## SGNP05H90R1.5A30N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP05 | 90 | 0.25 to 2.5 | 26° | 70 |
| | 104 | | /30° | 60 |
| | | | /45° | |

**N=Neck** Refer page 9

**M=Material** Refer page 8




## SGNP06H104R0.8A26N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| SGNP06 | 90 | 0.25 to 2.5 | 26° | 25 |
| | 104 | | /30° | 25 |
| | | | /45° | |

**N=Neck** Refer page 9

**M=Material** Refer page 8

### MATERIAL OPTION :

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

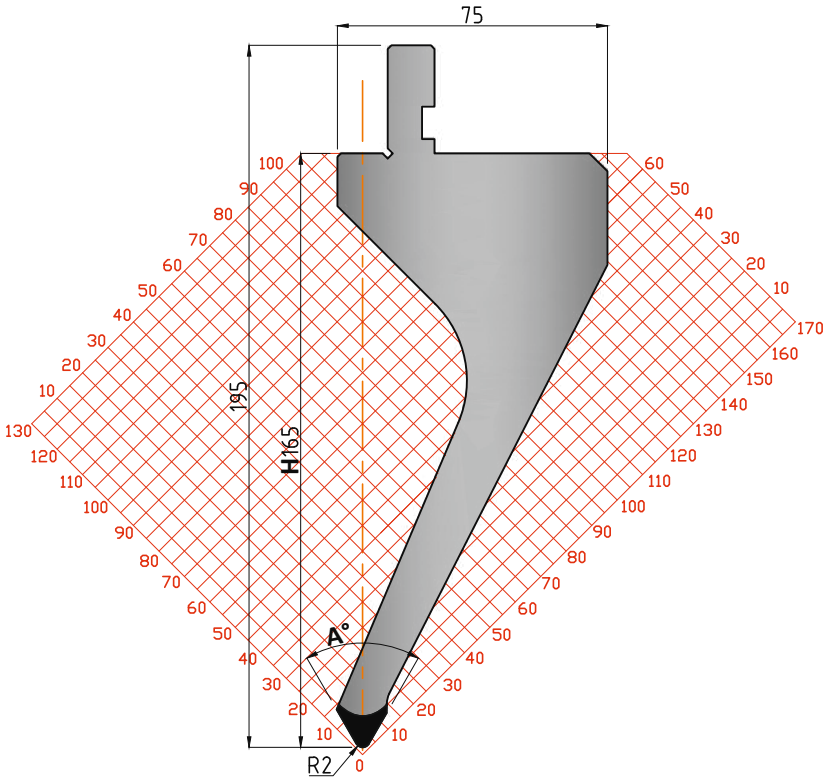
42 CrMo4 : 750-900 N/mm² 52±2HRc

**3 Economy Grade**

C45 :600-710 N/mm² 52±2HRc

MLT Cad/Cam | Toolings | Accessories

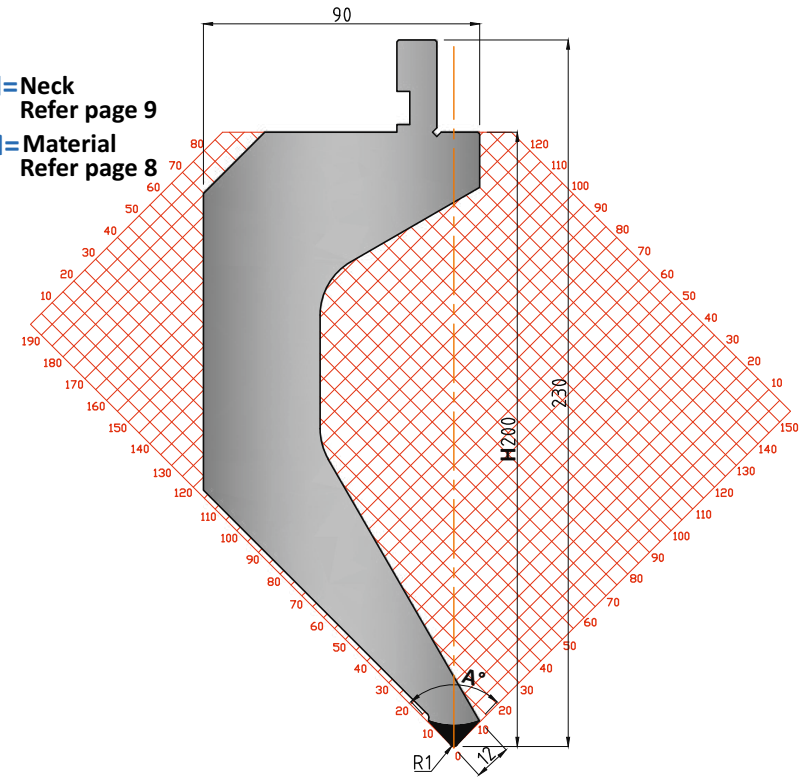
Press Brake Punches




## GNP07H165R2A60N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| GNP07 | 120 | 0.25 to 2.5 | 60° | 35 |
| | 150 | | | 35 |
| | 165 | | | 35 |

N=Neck
Refer page 9
M=Material
Refer page 8




## GNP8H200R1A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| GNP8 | 150 | 0.25 to 2.5 | 86° /60° | 85 |
| | 200 | | | 85 |

N=Neck
Refer page 9
M=Material
Refer page 8

### MATERIAL OPTION :

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

42 CrMo4 : 750-900 N/mm²
52±2HRc

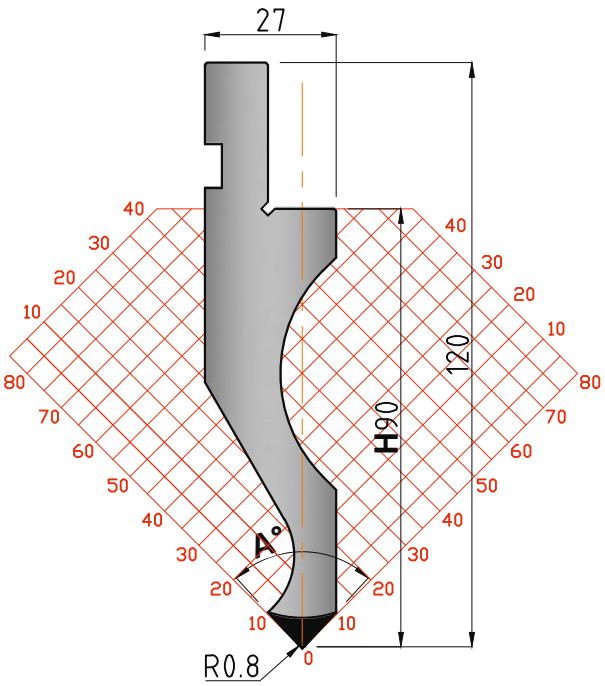
**3 Economy Grade**

C45 :600-710 N/mm²
52±2HRc

MLT Cad/Cam | Toolings | Accessories

# 5.4. PROFILE PUNCHES



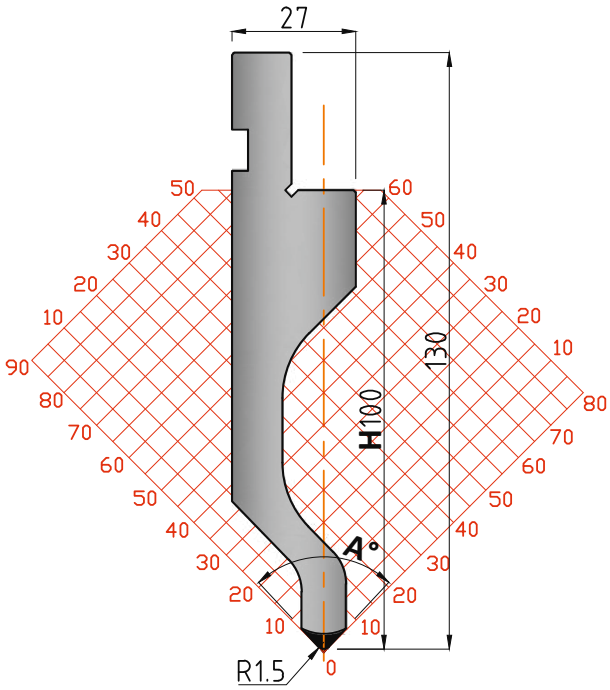



## PP01H90R0.8A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| Pp01 | 90 | 0.25 to 2.5 | 86° /60° | 100 |
| | 104 | | | 100 |

N=Neck Refer page 9

M=Material Refer page 8

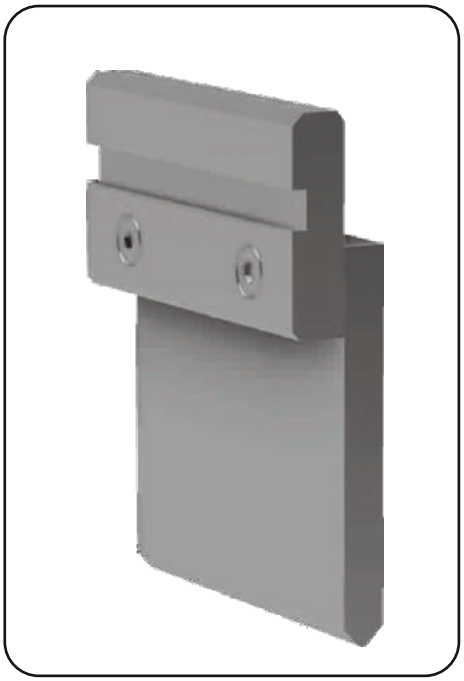



## PP02H100R1.5A86N01M_

| Type | H Height (mm) | R Radius (mm) | A Angle (°) | Tonnage (T/m) |
|---|---|---|---|---|
| PP02 | 90 | 0.25 to 2.5 | 86° /60° | 35 |
| | 100 | | | 35 |

N=Neck Refer page 9

M=Material Refer page 8



**ECONOMY PUNCH**
* Neck Bolted

**WILLA BUTTON**

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

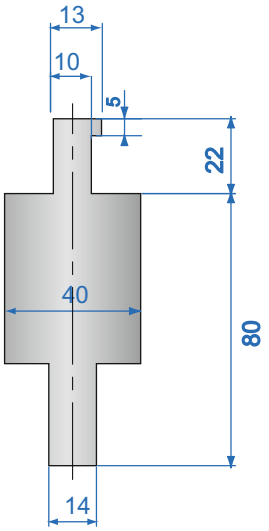
42 CrMo4 : 750-900 N/mm² 52±2HRc

**3 Economy Grade**

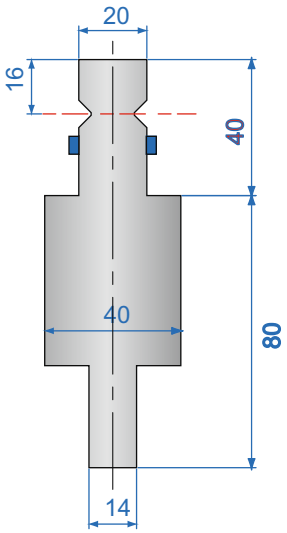
C45 :600-710 N/mm² 52±2HRc

MLT Cad/Cam | Toolings | Accessories

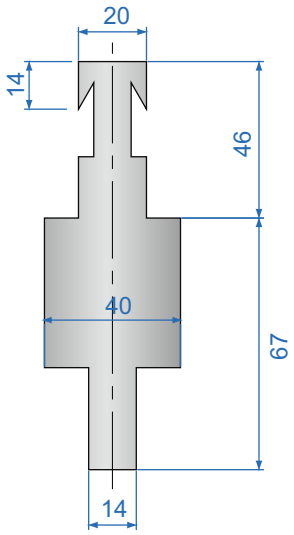
Punch Adaptors




PA1



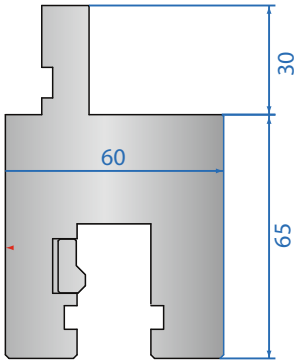

PA2



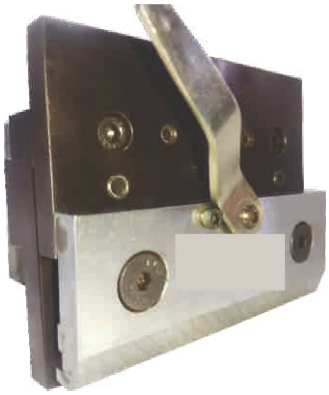

PA3

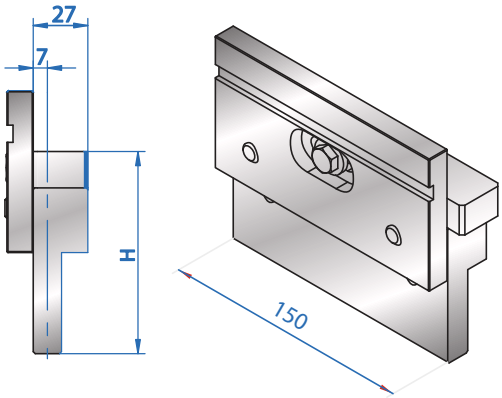
| Model | Height |
|---|---|
| PA4-65 | 65 |
| PA4-100 | 100 |

* Conversion of Amada to Willa type for front tool loading

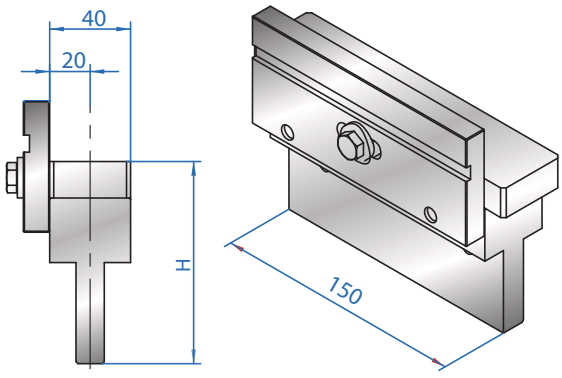



PA4






PA6




PA7

PA 6 & PA 7 are Height extension Adaptor with Taper Key Setting for Leveling of Adaptors

**MATERIAL OPTION :**

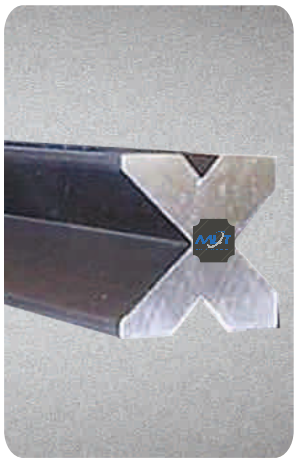
| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

Cad/Cam | Toolings | Accessories

Press brake dies


Single Vee Die Block

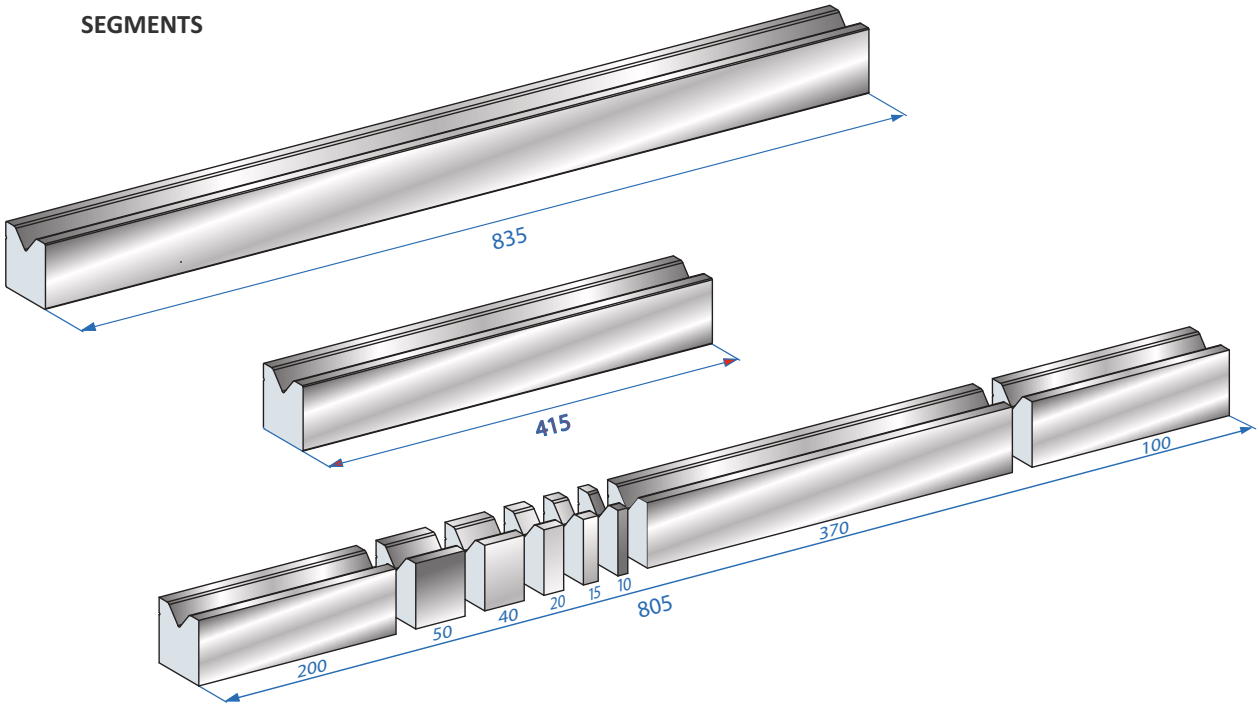

Two Vee Self Centering Die Block


Multi Vee Die Bock


I Type Single Vee Die Block

Dies are manufactured in various types like Single vee die block, 2 vee die blocks, 2 vee self centring type die block and Multi Vee die block.
Standard dies of self centring type and multi vee die are available ex-stock. We also design customised dies as per component requirement.
Modification of vee opening and angle is also possible. Segmented die are also available on request.

**SEGMENTS**




**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

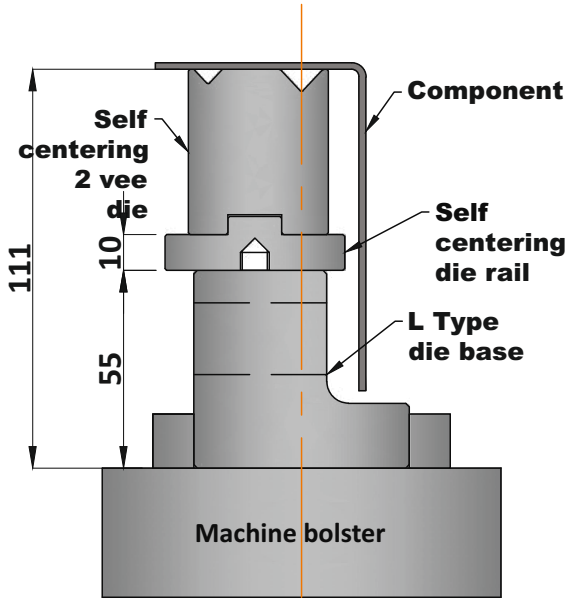
42 CrMo4 : 750-900 N/mm²
52±2HRc

**3 Economy Grade**

C45 :600-710 N/mm²
52±2HRc

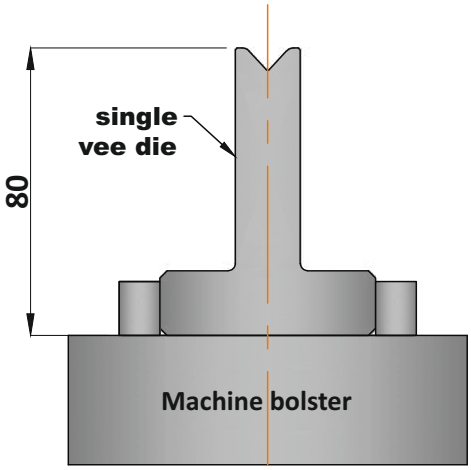
MLT Cad/Cam | Toolings | Accessories

## Die clamping style 1:

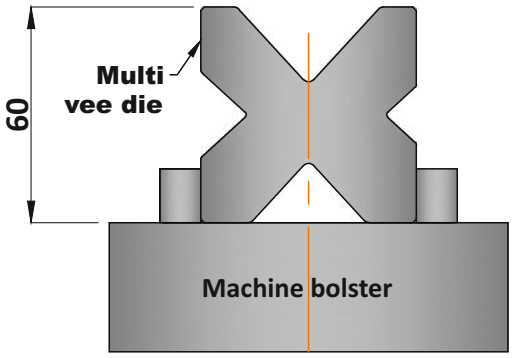



**2Vee die**

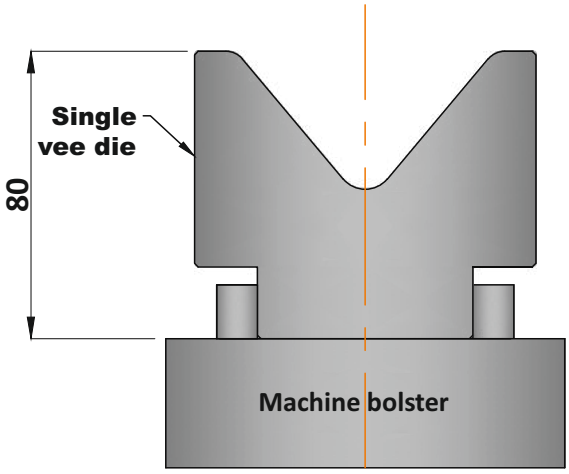
*L type Die base is suitable if there is a down bend in component as shown.




**Single Vee die**




**Multi Vee die**




**Single Vee die**

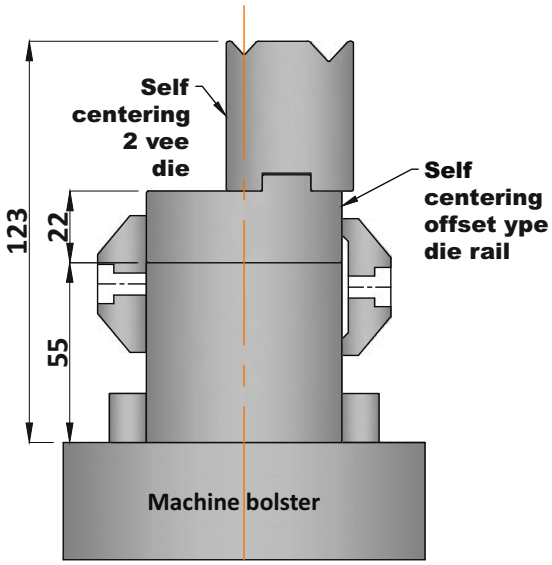
**MATERIAL OPTION :**

| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

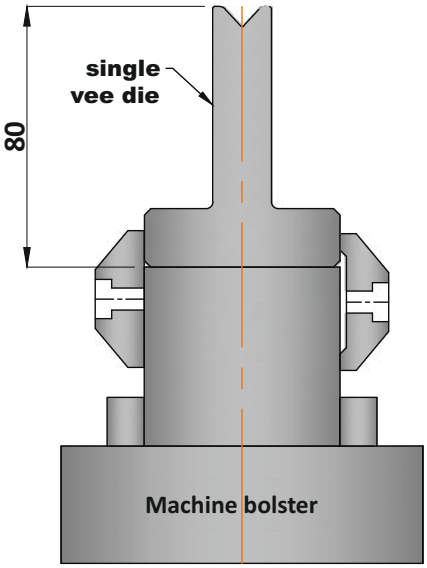


Cad/Cam | Toolings | Accessories

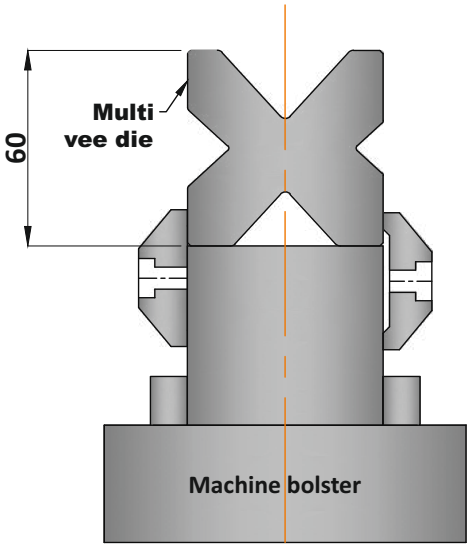
## Die clamping style 2:



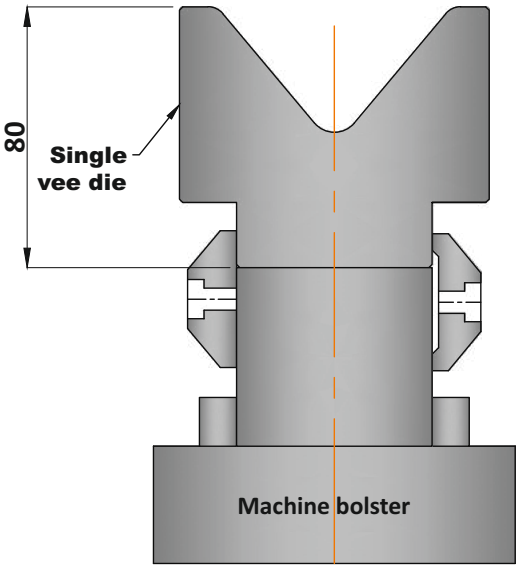

2Vee die




Single Vee die




Multi Vee die




Single Vee die

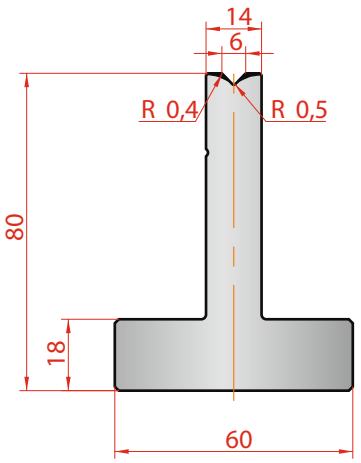
**MATERIAL OPTION :**

| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

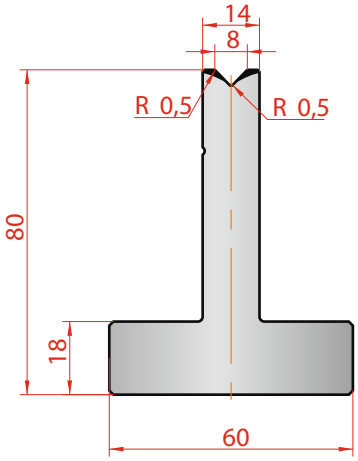
Cad/Cam | Toolings | Accessories

# 6.1. SINGLE VEE DIE BLOCKS

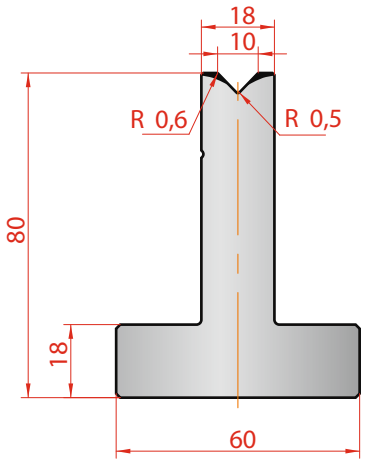




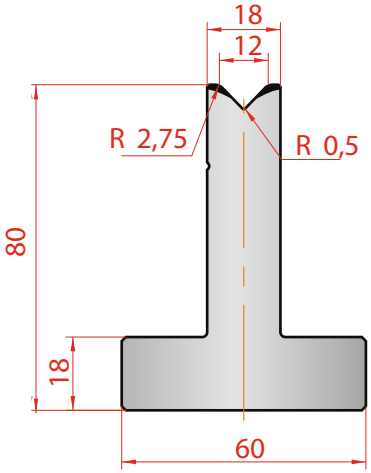

**SVD01H80V6A86**
MAX T/m=100



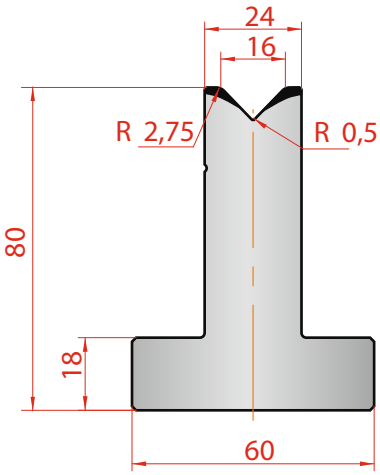

**SVD02H80V8A86**
MAX T/m=100



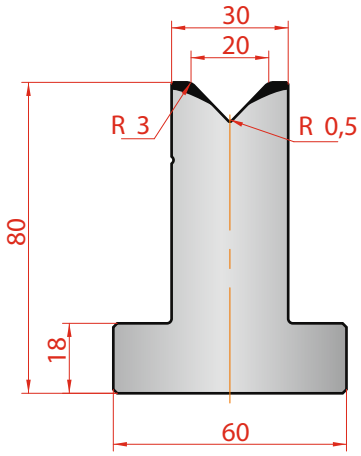

**SVD03H80V10A86**
MAX T/m=100



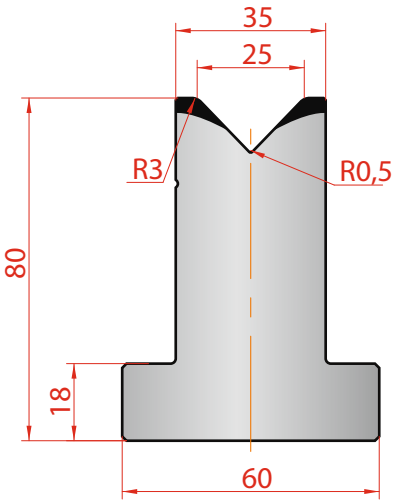

**SVD04H80V12A86**
MAX T/m=100



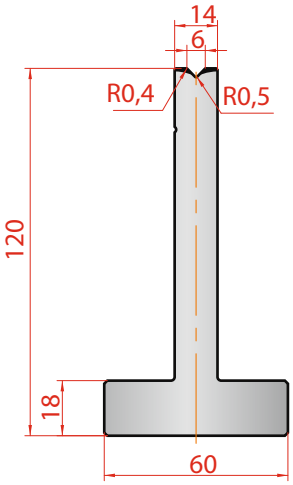

**SVD05H80V16A86**
MAX T/m=100



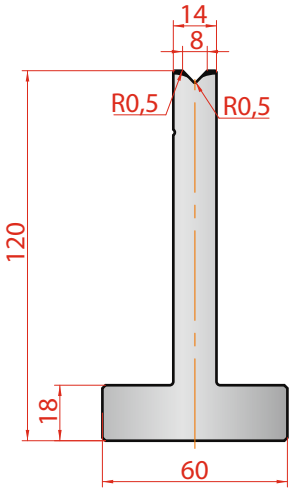

**SVD06H80V20A86**
MAX T/m=100




**SVD07H80V25A86**
MAX T/m=100




**SVD08H120V6A86**
MAX T/m=100




**SVD09H120V8A86**
MAX T/m=100

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

42 CrMo4 : 750-900 N/mm²
52±2HRc

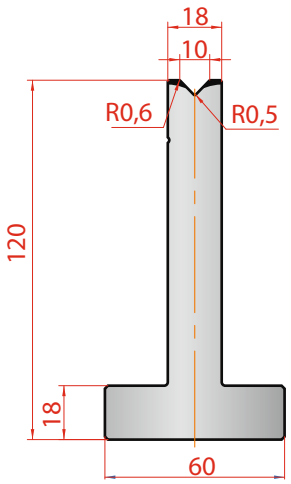
**3 Economy Grade**

C45 :600-710 N/mm²
52±2HRc

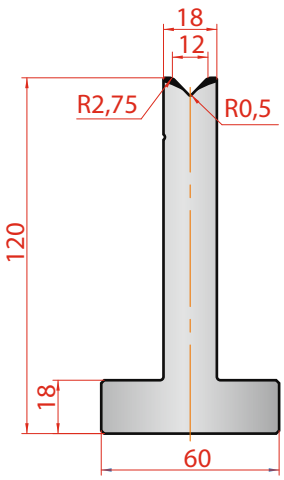
MLT Cad/Cam | Toolings | Accessories

# 6.1. SINGLE VEE DIE BLOCKS

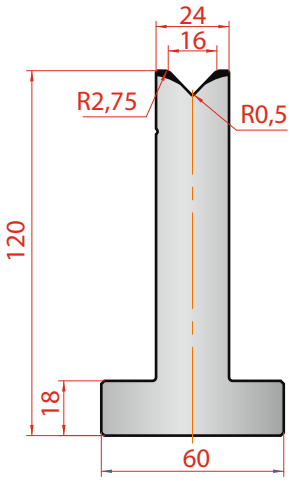




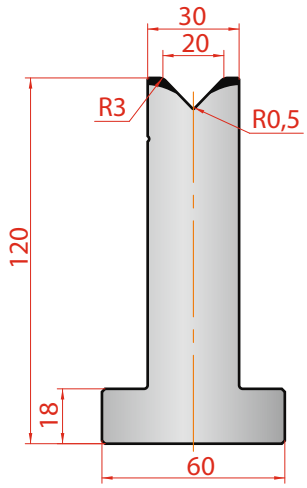

**SVD10H120V10A86**
MAX T/m=100



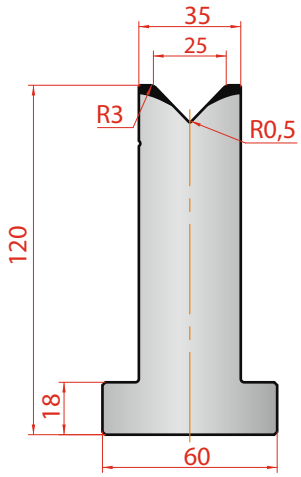

**SVD11H120V12A86**
MAX T/m=100



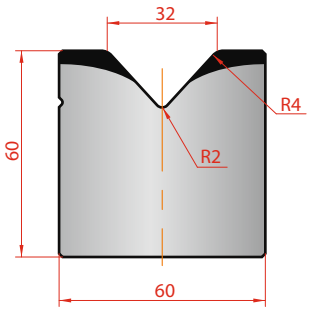

**SVD12H120V16A86**
MAX T/m=100



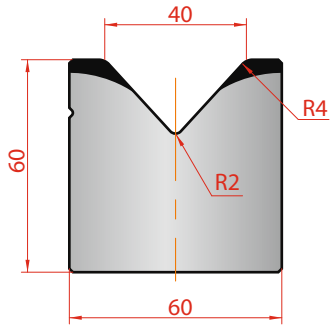

**SVD13H120V20A86**
MAX T/m=100



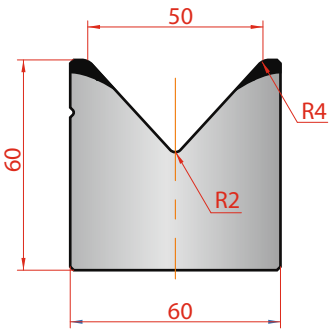

**SVD14H120V25A86**
MAX T/m=100



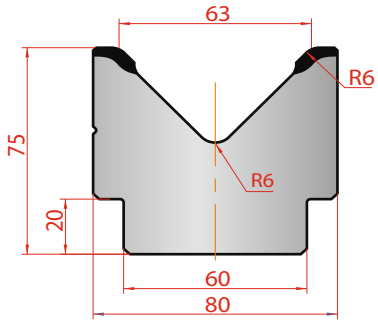

**SVD15H60V32A86**
MAX T/m=100




**SVD16H60V40A86**
MAX T/m=100




**SVD17H60V50A86**
MAX T/m=80




**SVD18H75V63A86**
MAX T/m=100

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

42 CrMo4 : 750-900 N/mm²
52±2HRc

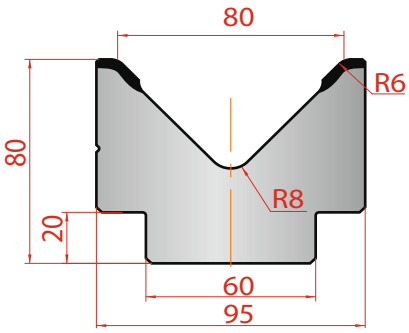
**3 Economy Grade**

C45 :600-710 N/mm²
52±2HRc

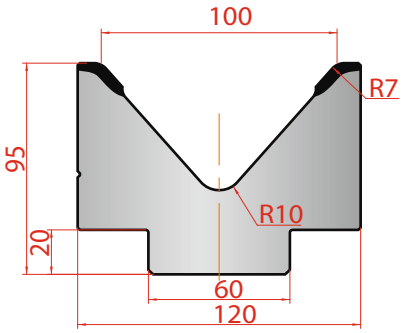
MLT Cad/Cam | Toolings | Accessories

# 6.1. SINGLE VEE DIE BLOCKS

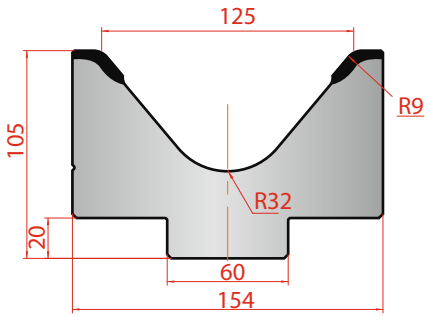
Press brake dies




**SVD19H80V80A86**
MAX T/m=100

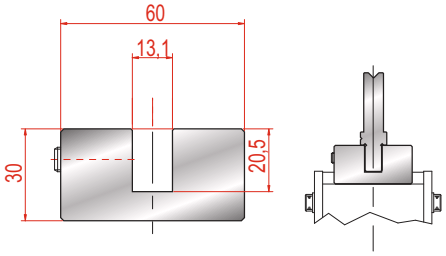



**SVD20H95V100A86**
MAX T/m=120

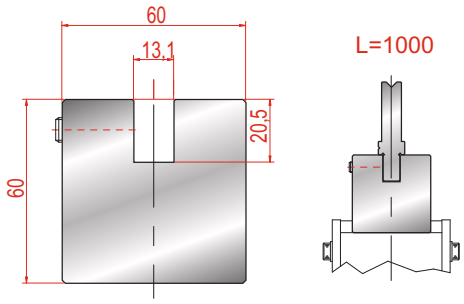



**SVD21H105V125A86**
MAX T/m=120

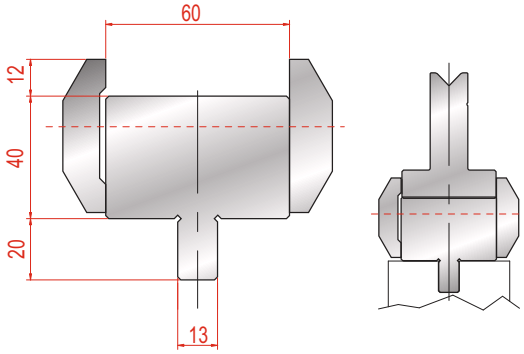
## Punch Adaptor




DH1H30W60
AMADA - BYSTRONIC / TRUMPF

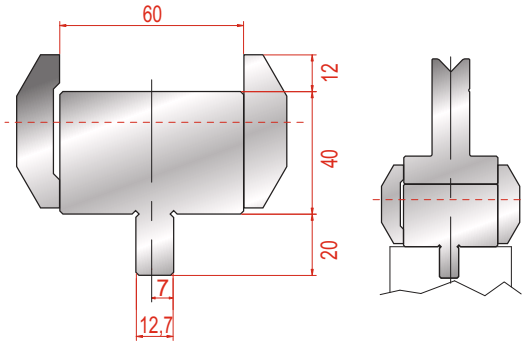



DH2H60W60
AMADA - BYSTRONIC / TRUMPF



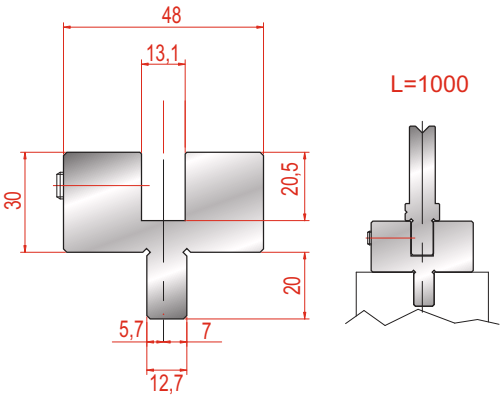

DH3H40W60

L = 835 mm
L = 415 mm
BYSTRONIC / TRUMPF - AMADA




DH4H40W60

L = 835 mm
L = 415 mm
LVD - AMADA




DH5H30W48
LVD - BYSTRONIC / TRUMPF

**LENGTH SEGMENT :**
**A - 415**
**B - 500**
**C - 835**
**D - 1000**

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**
CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

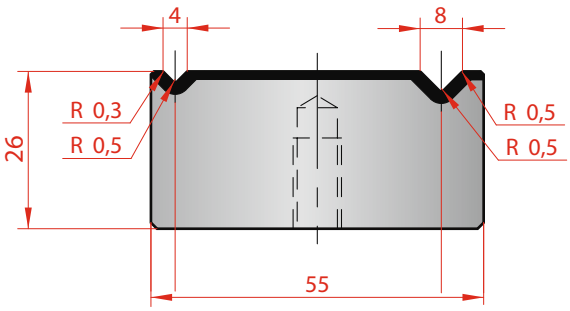
**2 Standard**
42 CrMo4 : 750-900 N/mm²
52±2HRc

**3 Economy Grade**
C45 :600-710 N/mm²
52±2HRc

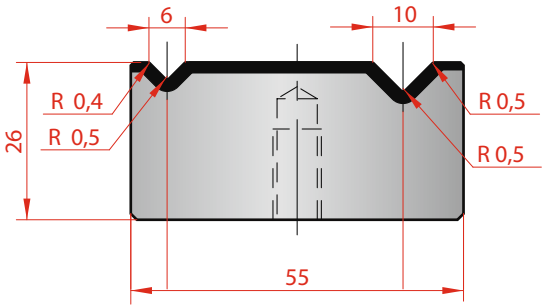
MLT Cad/Cam | Toolings | Accessories

# 6.2. TWO VEE DIE BLOCKS

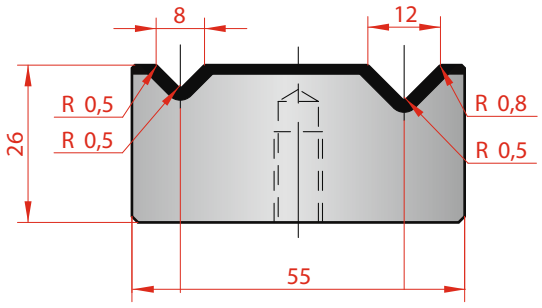




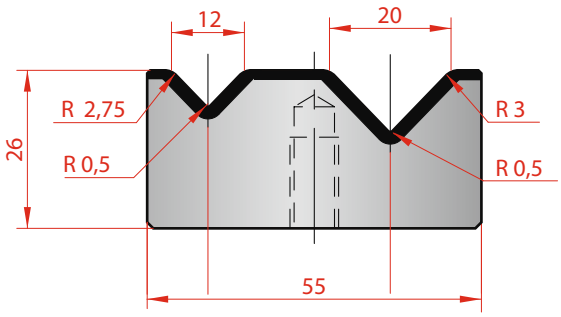

**2VD01H26V4-8A86**
MAX T/m=100



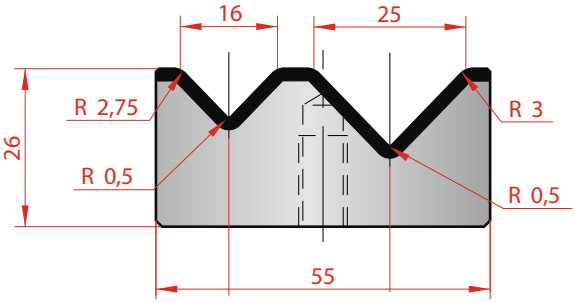

**2VD02H26V6-10A86**
MAX T/m=100



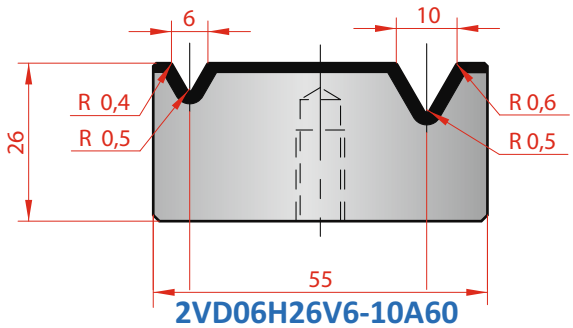

**2VD03H26V8-12A86**
MAX T/m=100



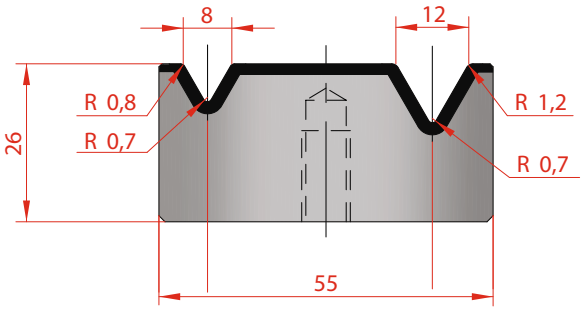

**2VD04H26V12-20A86**
MAX T/m=100



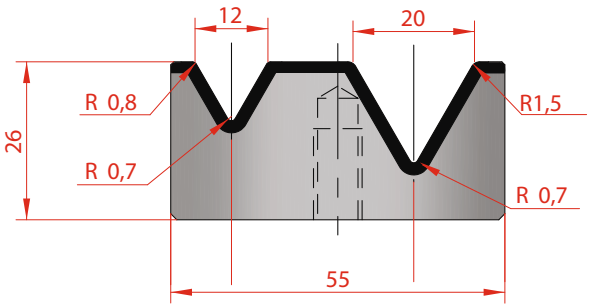

**2VD05H26V16-25A86**
MAX T/m=100




**2VD06H26V6-10A60**
MAX T/m=60




**2VD07H26V8-12A60**
MAX T/m=60

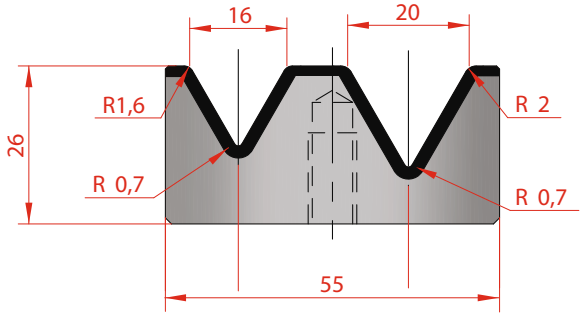



**2VD08H26V12-20A60**
MAX T/m=60

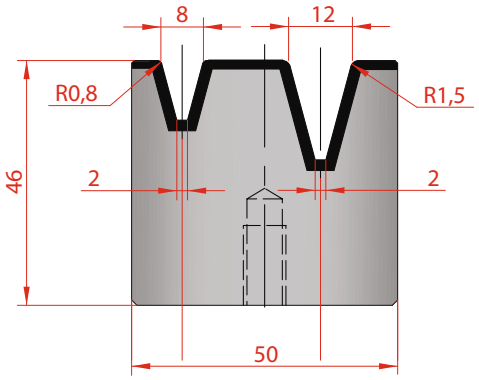
**MATERIAL OPTION :**

| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| ⌵ M 52±2HRc | 42 CrMo4 : 750-900 N/mm² ⌵ M 52±2HRc | C45 :600-710 N/mm² ⌵M 52±2HRc |

MLT Cad/Cam | Toolings | Accessories

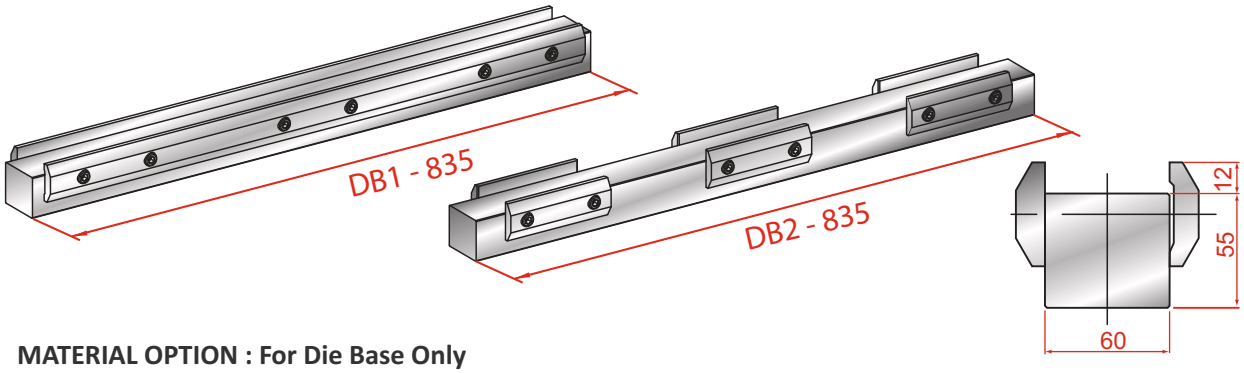



**2VD09H26V16-20A60**
MAX T/m=60




**2VD10H26V8-12A30**
MAX T/m=40

**Die Base for Single Vee Die Block**

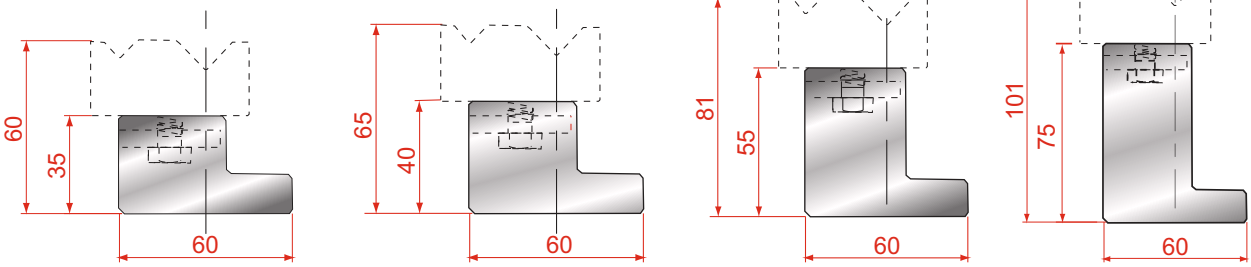



**MATERIAL OPTION : For Die Base Only**

| | |
|---|---|
| CrMnMo 850-1100 N/mm² Base 30±2 HRc | C45:600-710 N/mm² |

**Length Available 835, 415, 1000, 500 mm**

**L Type Die Base For 2 Vee Die Block & Self Centering Die Block when used with Rail (Die Block Supplied with Standard Bolt Spring & Washer)**




**MATERIAL SPECIFICATION :**

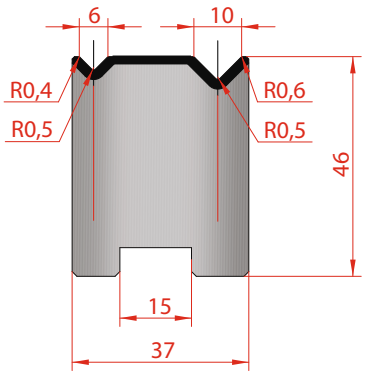
| | |
|---|---|
| CrMnMo 850-1100 N/mm² Base 30±2 HRc | C45 :- 600-710 N/mm² |

**MATERIAL OPTION :**

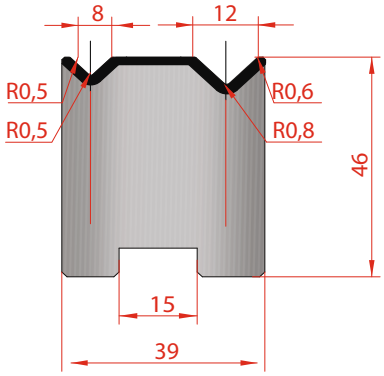
| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

Cad/Cam | Toolings | Accessories

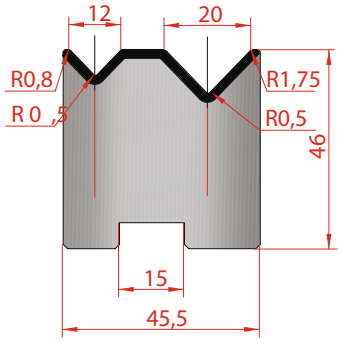
Press brake dies



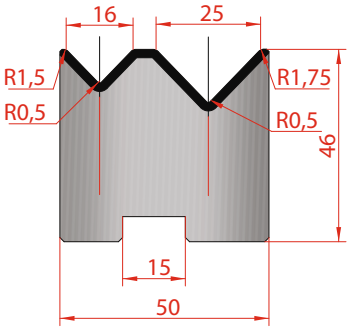

**SC2VD1H46V6-10A86**
MAX T/m=80



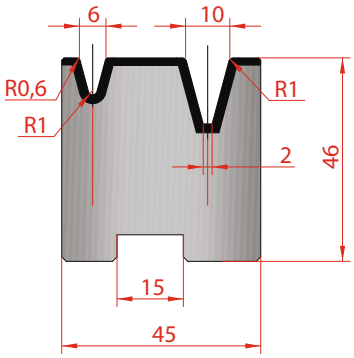

**SC2VD2H46V8-12A86**
MAX T/m=80



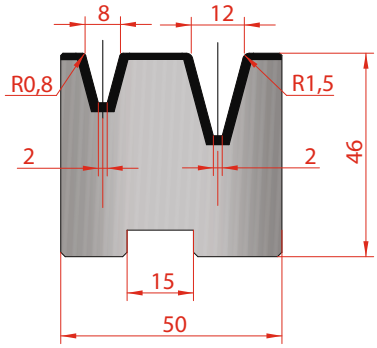

**SC2VD3H46V12-20A86**
MAX T/m=80




**SC2VD4H46V16-25A86**
MAX T/m=80

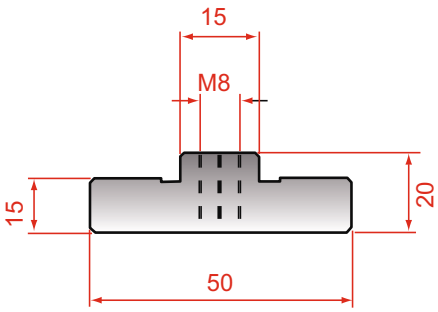



**SC2VD5H46V6-10A30**
MAX T/m=40



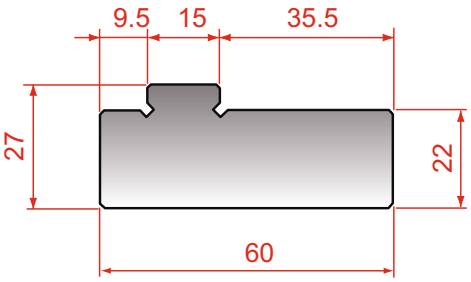

**SC2VD6H46V8-12A30**
MAX T/m=80

**Rail For 2 Vee Self Centering Die Block (Add on for L Type Die base)**

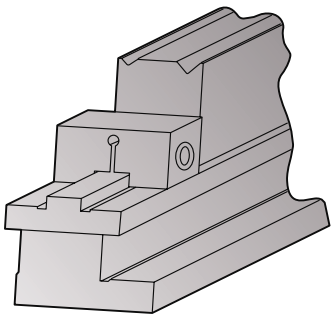


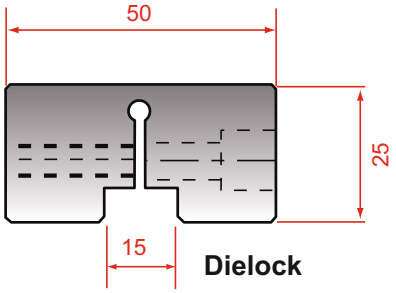

SCR - 835, 415

**Offset type self centering Die Rail (Add on for Die Base)**




**OTSCR - 835**






**Dielock**

**MATERIAL SPECIFICATION :**

| | |
|---|---|
| CrMnMo 850-1100 N/mm² Base 30±2 HRc | C45 :- 600-710 N/mm² |

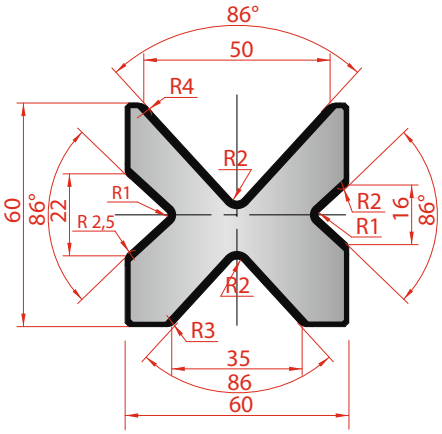
**MATERIAL OPTION :**

| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

MLT Cad/Cam | Toolings | Accessories

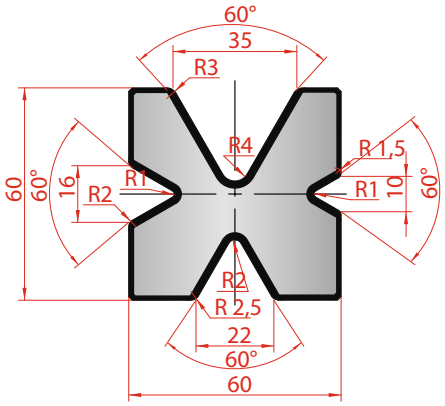
# 6.4. MULTI VEE DIE BLOCKS





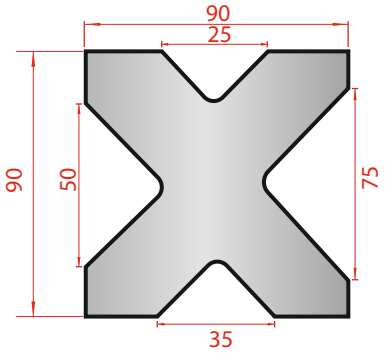

**MVD1H60V16-22-35-50A86**

MAX T/m=80

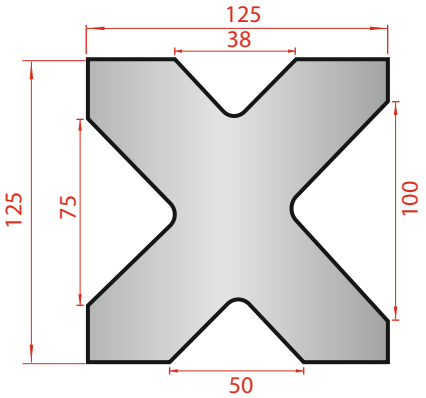



**MVD2H60V10-16-22-35A60**

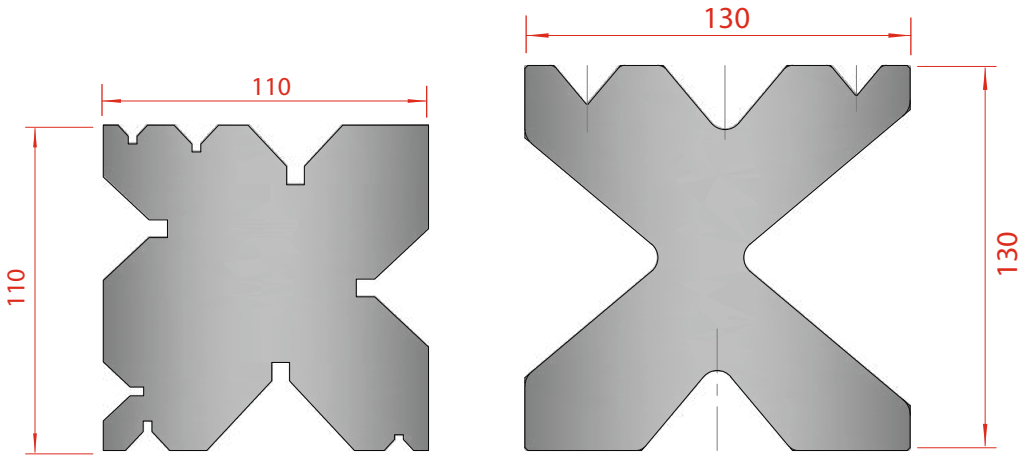
MAX T/m=60




**MVD1H60V16-22-35-50A86**




**MVD2H60V10-16-22-35A60**




***Custom**

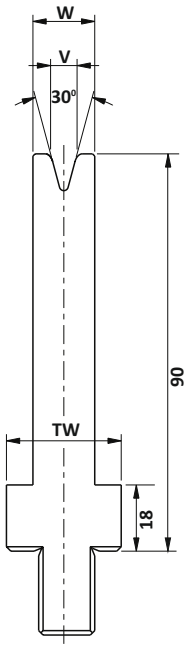
**MATERIAL OPTION :**

| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

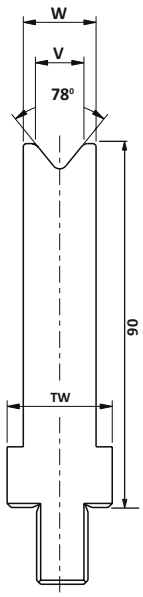
Cad/Cam | Toolings | Accessories

# 6.5. I - TYPE SINGLE VEE DIE BLOCKS

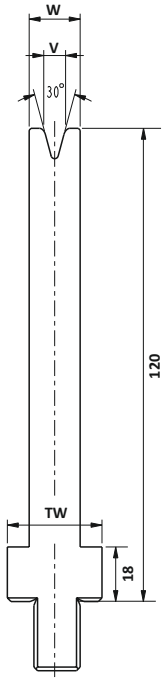




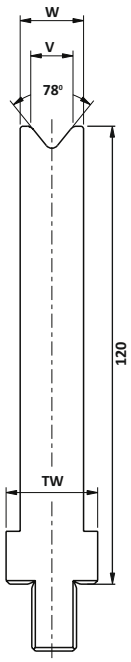

| A30deg \| H90 | | | | |
|---|---|---|---|---|
| Model No. | V-Opening | Max tonnage t/m | W | TW |
| IVD6x30-90 | 6mm | 24 | 14 | 26 |
| IVD8x30-90 | 8mm | 26 | 16 | 26 |
| IVD10x30-90 | 10mm | 35 | 22 | 26 |
| IVD12x30-90 | 12mm | 40 | 26 | 26 |
| IVD16x30-90 | 16mm | 50 | 32 | 32 |
| IVD20x30-90 | 20mm | 60 | 40 | 40 |
| IVD24x30-90 | 24mm | 60 | 45 | 45 |
| IVD32x30-90 | 32mm | 60 | 50 | 50 |
| IVD40x30-90 | 40mm | 75 | 75 | 75 |
| IVD48x30-90 | 48mm | 75 | 90 | 90 |




| A78deg \| H90 | | | | |
|---|---|---|---|---|
| Model No. | V-Opening | Max tonnage t/m | W | TW |
| IVD6x86-90 | 6mm | 30 | 10 | 26 |
| IVD8x86-90 | 8mm | 30 | 14 | 26 |
| IVD10x86-90 | 10mm | 40 | 16 | 26 |
| IVD12x86-90 | 12mm | 40 | 20 | 26 |
| IVD16x86-90 | 16mm | 50 | 32 | 32 |
| IVD20x86-90 | 20mm | 60 | 40 | 40 |
| IVD24x86-90 | 24mm | 60 | 45 | 46 |
| IVD32x86-90 | 32mm | 60 | 50 | 50 |
| IVD40x86-90 | 40mm | 80 | 75 | 75 |
| IVD48x86-90 | 48mm | 80 | 95 | 95 |
| IVD48x86-90 | 60mm | 100 | 100 | 100 |
| IVD48x86-90 | 80mm | 100 | 140 | 140 |




| A30deg \| H120 | | | | |
|---|---|---|---|---|
| Model No. | V-Opening | Max tonnage t/m | W | TW |
| IVD6x30-120 | 6mm | 24 | 14 | 26 |
| IVD8x30-120 | 8mm | 26 | 16 | 26 |
| IVD10x30-120 | 10mm | 35 | 22 | 26 |
| IVD12x30-120 | 12mm | 40 | 26 | 26 |
| IVD16x30-120 | 16mm | 50 | 32 | 32 |
| IVD20x30-120 | 20mm | 60 | 40 | 40 |
| IVD24x30-120 | 24mm | 60 | 45 | 45 |
| IVD32x30-120 | 32mm | 60 | 50 | 50 |
| IVD40x30-120 | 40mm | 75 | 75 | 75 |
| IVD48x30-120 | 48mm | 75 | 90 | 90 |




| A78deg \| H120 | | | | |
|---|---|---|---|---|
| Model No. | V-Opening | Max tonnage t/m | W | TW |
| IVD6x86-120 | 6mm | 30 | 10 | 26 |
| IVD8x86-120 | 8mm | 30 | 14 | 26 |
| IVD10x86-120 | 10mm | 40 | 16 | 26 |
| IVD12x86-120 | 12mm | 40 | 20 | 26 |
| IVD16x86-120 | 16mm | 50 | 32 | 32 |
| IVD20x86-120 | 20mm | 60 | 40 | 40 |
| IVD24x86-120 | 24mm | 60 | 45 | 46 |
| IVD32x86-120 | 32mm | 60 | 50 | 50 |
| IVD40x86-120 | 40mm | 80 | 75 | 75 |
| IVD48x86-120 | 48mm | 80 | 95 | 95 |
| IVD48x86-120 | 60mm | 100 | 100 | 100 |
| IVD48x86-90 | 80mm | 100 | 140 | 140 |

I Type single Vee Die Block
Available for **Amada / Trumpf / Bystronic / LVD**

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

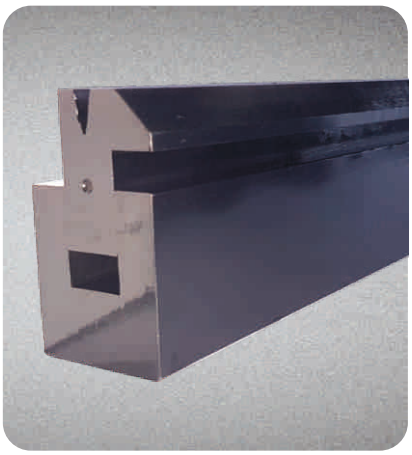
42 CrMo4 : 750-900 N/mm²
52±2HRc

**3 Economy Grade**

C45 :600-710 N/mm²
52±2HRc

MLT Cad/Cam | Toolings | Accessories

Press brake tool

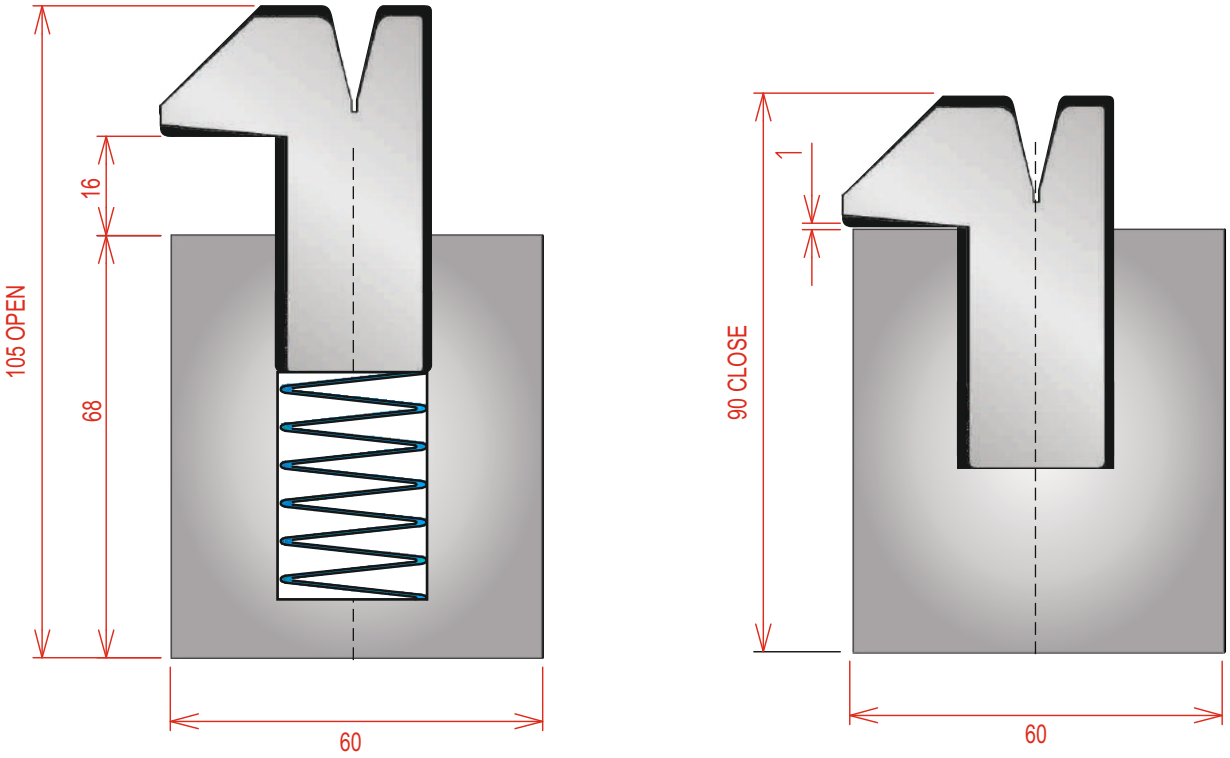


**INTRODUCTION :**

Spring loaded Hemming dies for operation on 0.5mm to 2.5mm thickness sheet. Available ex stock. Spring used in same are of Japanese make. Hemming dies are manufactured only with High tensile tool steel and are hardened and ground. Spring loaded hemming die can be provided with lock to use the same die as normal vee die.

Hemming dies are also available for conventional machines in single length or as Die set with Pillar Guide & Gas Springs.

## FLATTENING HEMMING TOOLS




SPHD 1

**Max T/M**=100

**Sheet Metal Thickness** from 0.5 to 2.5 mm

| Model No. | V | T | Minimum Flange Length | α |
|---|---|---|---|---|
| SPHD8 | 8 | Max. 1.5 | 9 | 30° |
| SPHD12 | 12 | 1.5 to 2.5 | 12 | 26° |

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

42 CrMo4 : 750-900 N/mm² 52±2HRc

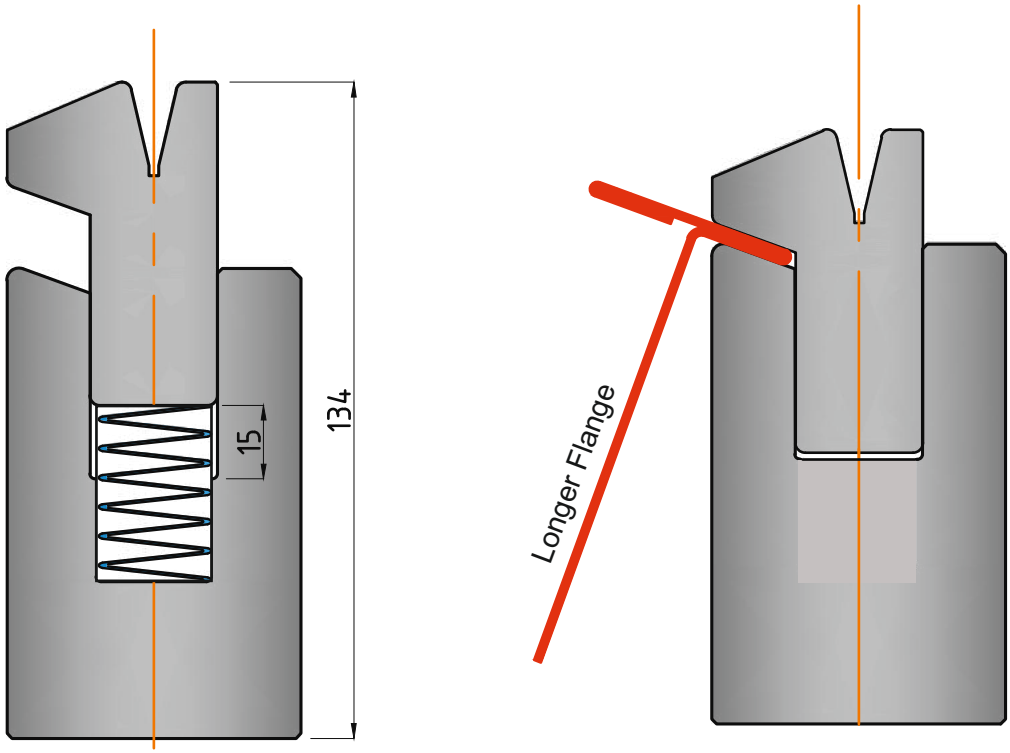
**3 Economy Grade**

C45 :600-710 N/mm² 52±2HRc

MLT Cad/Cam | Toolings | Accessories

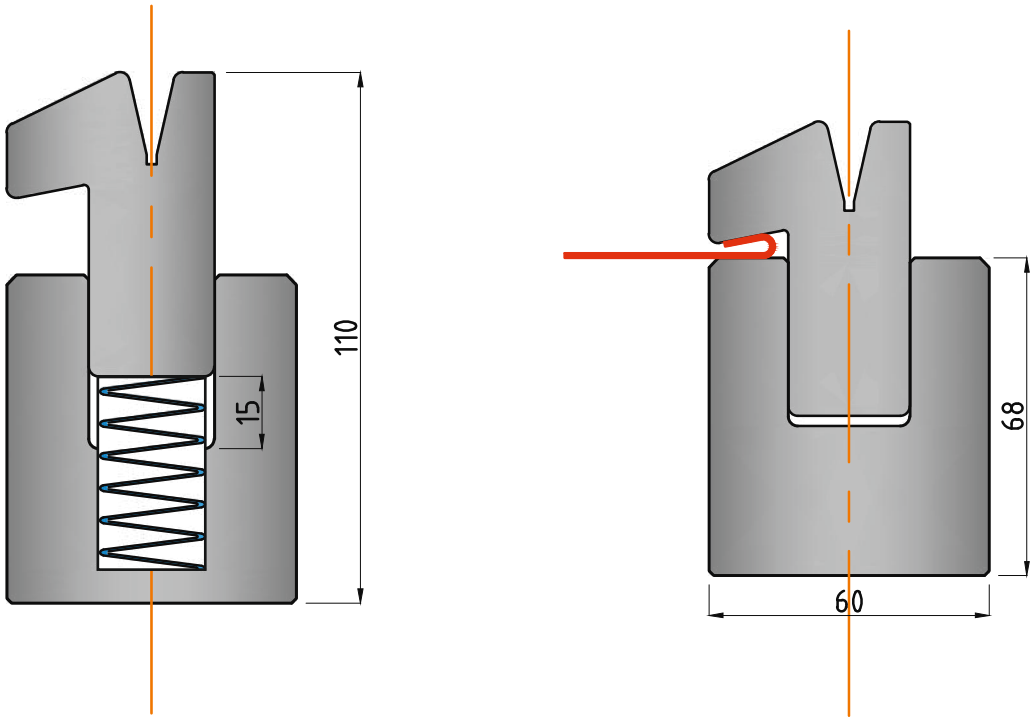
# 6.6. SPRING LOADED HEMMING TOOL






SPHD 2 – Inclined Hemming

* For Longer Flange Length to avoid interference with machine bolster




SPHD 3 – Tear Drop Hemming

**MATERIAL OPTION :**

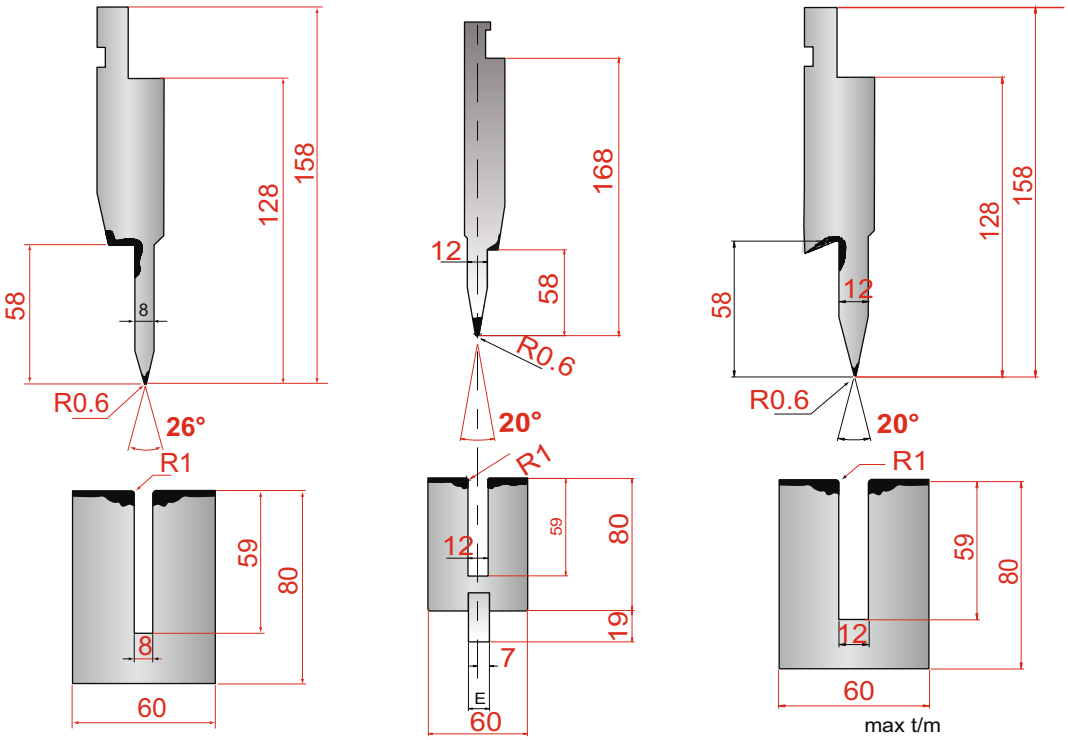
| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

Cad/Cam | Toolings | Accessories

# 6.7. HEMMING TOOL

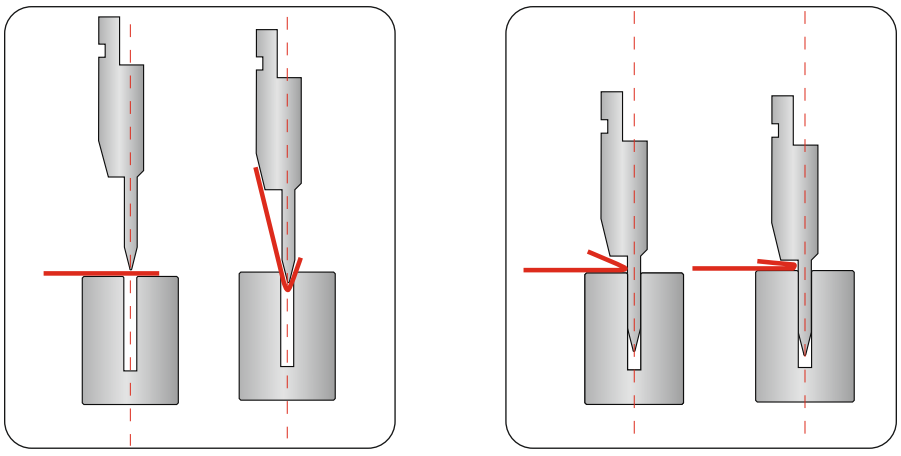
Press brake tool

HP 1 | HP 2 | HP 3




HD 1 | HD 2 | HD 3

HYDRAULIC PRESS NC & CNC



STROKE 1 | STROKE 2

## PNEUMATIC HEMMING TOOLS

| Model No. | V | A | $H_{Open\ height}$ | $Max\ T/M$ |
|---|---|---|---|---|
| PNHD.8.26 | 8 | 26 | 110 | 80 |
| PNHD.12.30 | 12 | 30 | 110 | 100 |

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

42 CrMo4 : 750-900 N/mm² 52±2HRc

**3 Economy Grade**

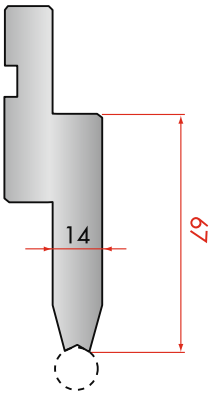
C45 :600-710 N/mm² 52±2HRc

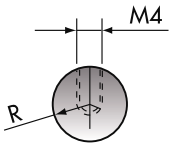
MLT Cad/Cam | Toolings | Accessories

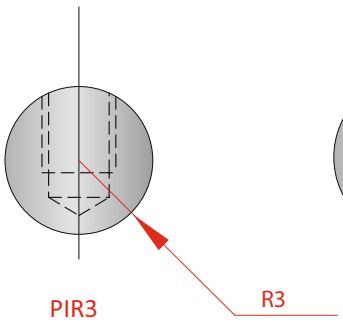
Press brake tool

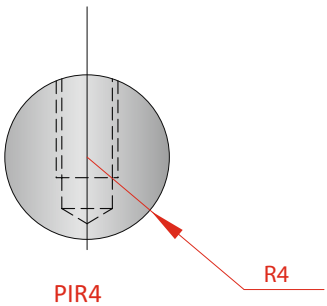
For versatility and to form different and accurate radius components, radius inserts are used.
Punch adaptor with changeable radius inserts are easily changeable and have high accuracies on radius.
Inserts are available of different types like radius forming, radius with 60 degree or 30 degree and flattening inserts.
All above are manufactured in length as required by customer.
Standard lengths are 835 and 415.

| PIR | R mm |
|---|---|
| 3 | 3 |
| 3,5 | 3,5 |
| 4 | 4 |
| 4,5 | 4,5 |
| 5 | 5 |
| 5,5 | 5,5 |
| 6 | 6 |
| 6,5 | 6,5 |

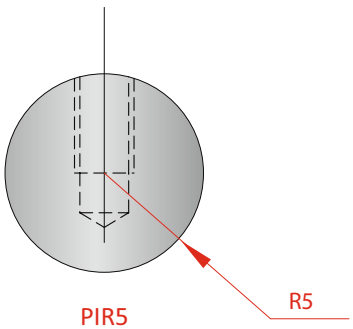


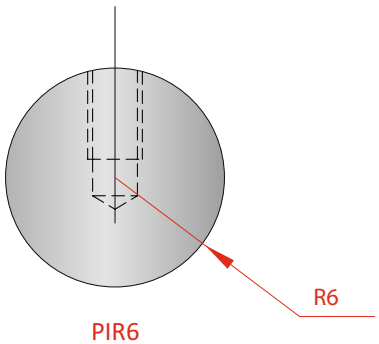



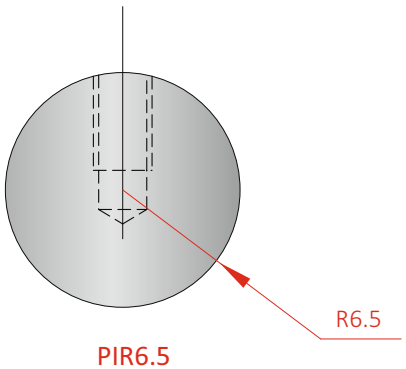




**PH 1**
**For R3 To R 6.5**




**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

42 CrMo4 : 750-900 N/mm² 52±2HRc

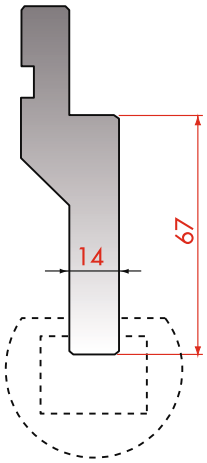
**3 Economy Grade**

C45 :600-710 N/mm² 52±2HRc

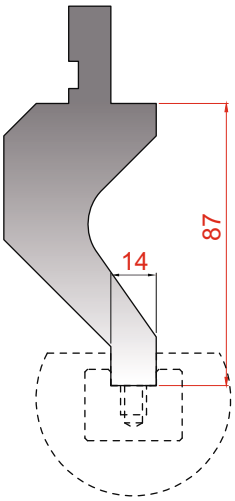
MLT Cad/Cam | Toolings | Accessories

Press brake tool

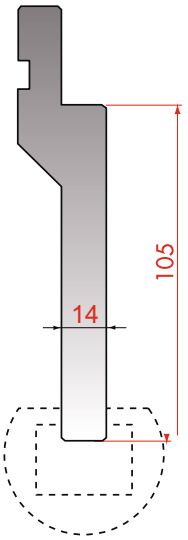
PH 2

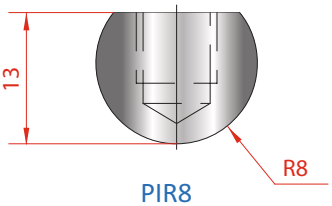



PH 3

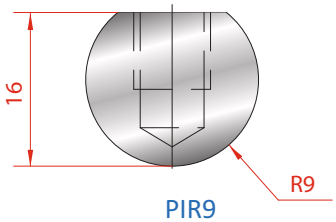



PH 4

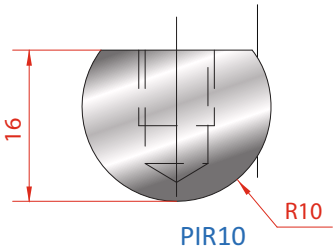


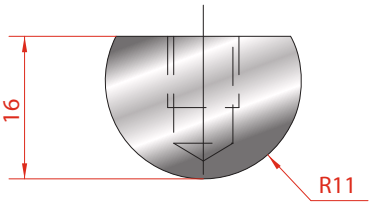

PIR8



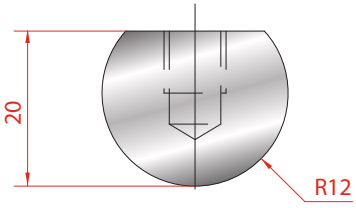

PIR9



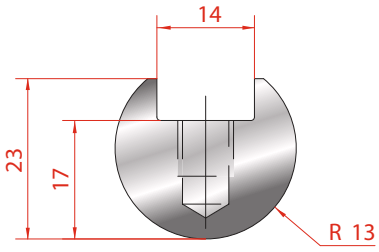

PIR10



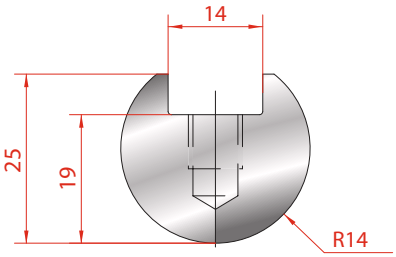

PIR11



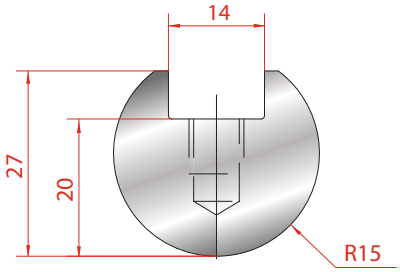

PIR12



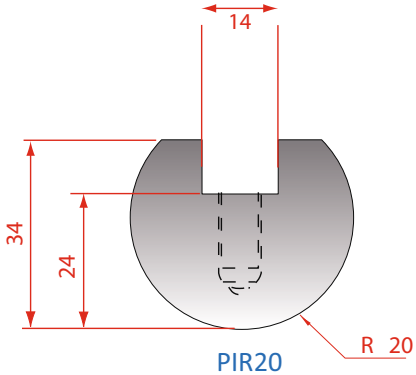

PIR13




PIR14




PIR15




PIR20

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

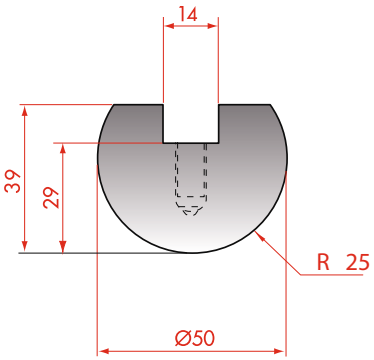
42 CrMo4 : 750-900 N/mm²
52±2HRc

**3 Economy Grade**

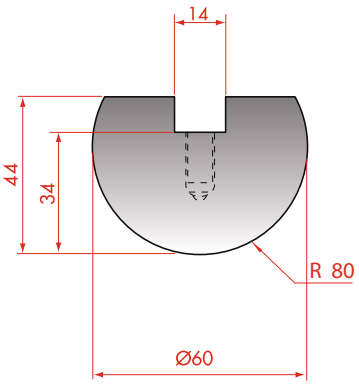
C45 :600-710 N/mm²
52±2HRc

MLT Cad/Cam | Toolings | Accessories

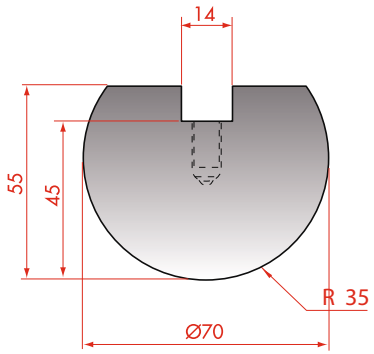
Press brake tool



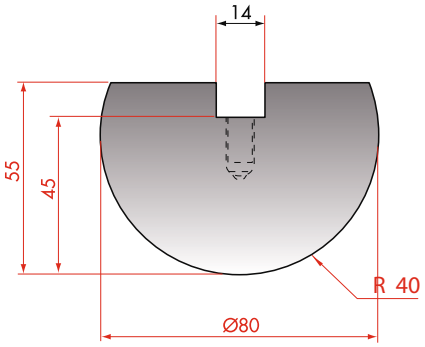

PIR 25



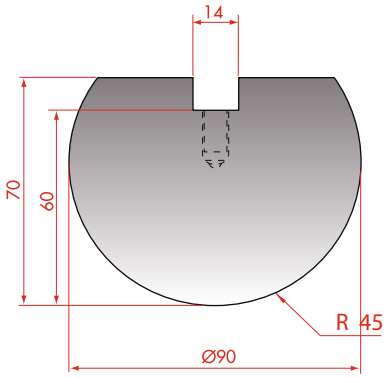

PIR 30



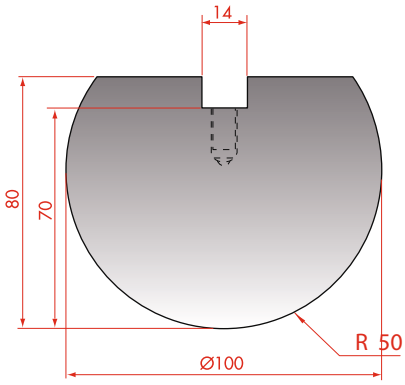

PIR 35




PIR 40

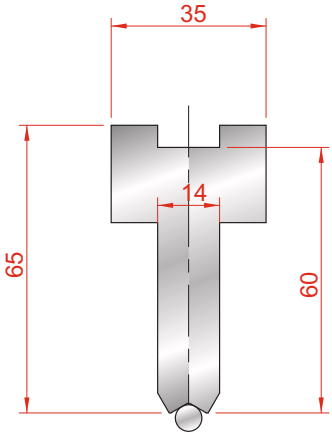



PIR 45

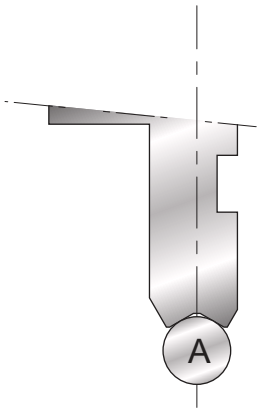



PIR 50

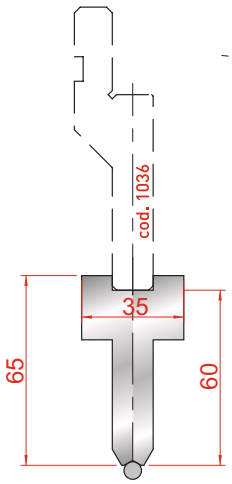
## Punch Holder Adopter for

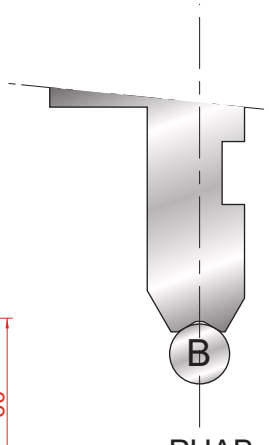



PHAA




For R 3 to 4.5




PHAB
For R 5 to 6.5

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

42 CrMo4 : 750-900 N/mm² 52±2HRc

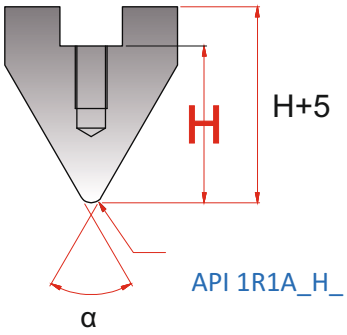
**3 Economy Grade**

C45 :600-710 N/mm² 52±2HRc

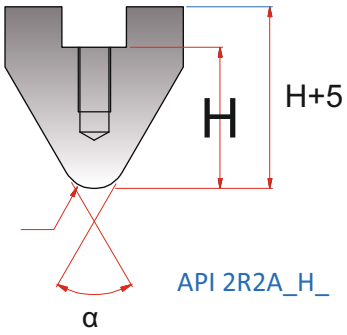
MLT Cad/Cam | Toolings | Accessories

Press brake tool

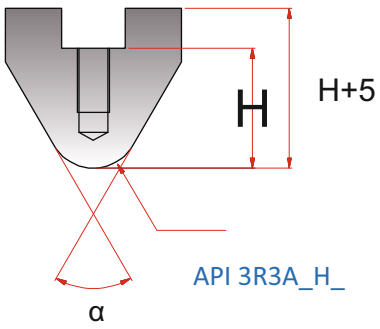
Customised



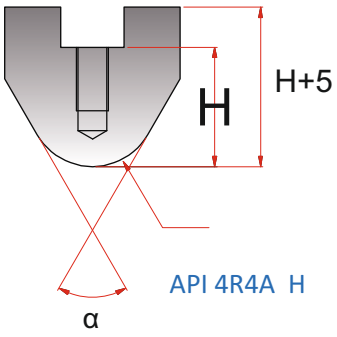
API 1R1A_H_



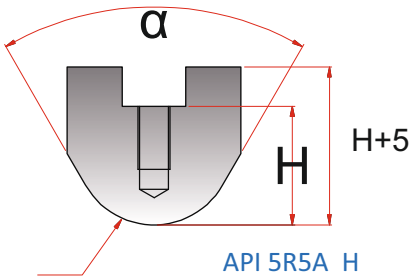
API 2R2A_H_



API 3R3A_H_



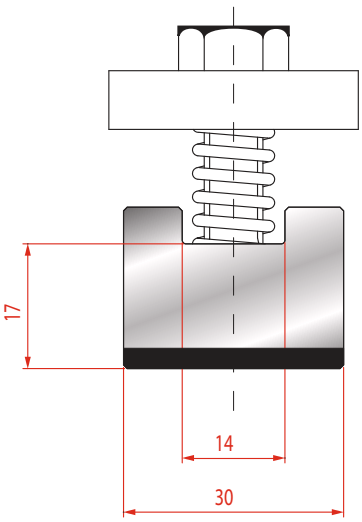
API 4R4A H



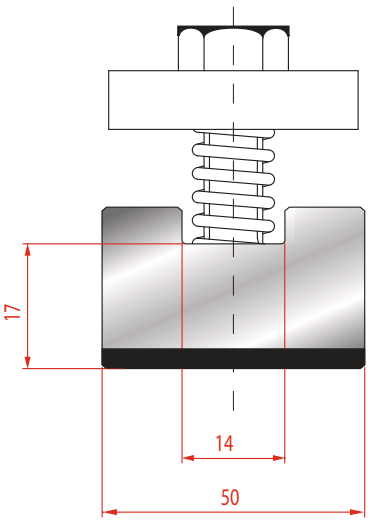
API 5R5A H

## PUNCH INSERT HOLDERS

### FLATTENING INSERT AND ACCESSORIES



PIF 30



PIF 50

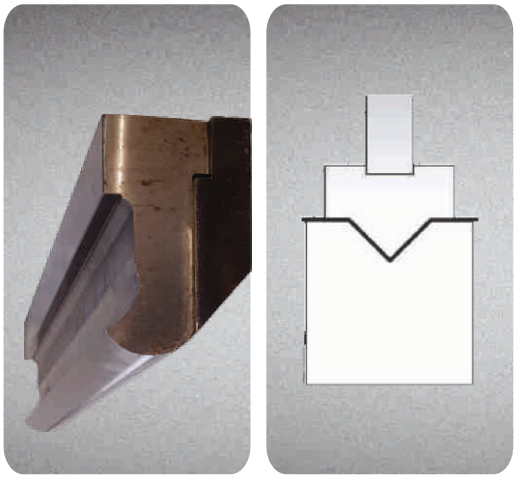
**MATERIAL OPTION :**

| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

Cad/Cam | Toolings | Accessories

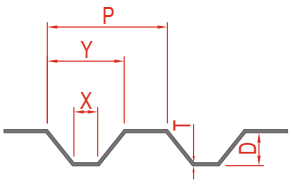
Press brake tool

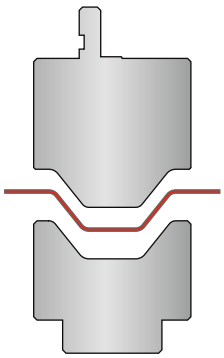
## FORMING TOOLS



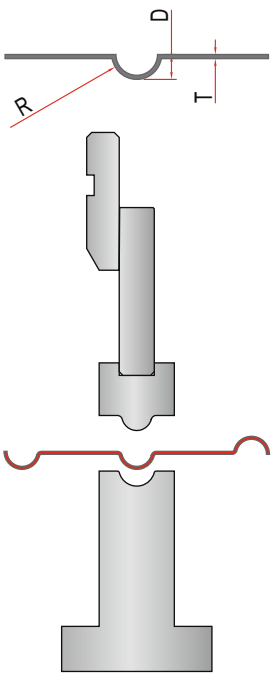
Custom made Forming tools are manufactured as per client component drawings. Varity of forming tools are made to facilitate multiple bends in single stroke to save no. of strokes and increase production quantity in less time.

Forming tools are designed considering additional spring back of sheet metal as per its grade.

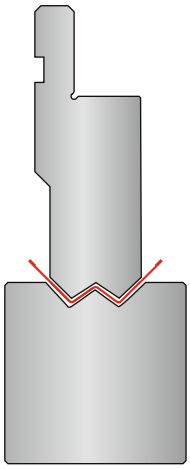


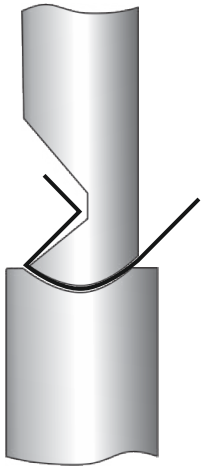
CORRUGATION




BIDDING



W FORMING



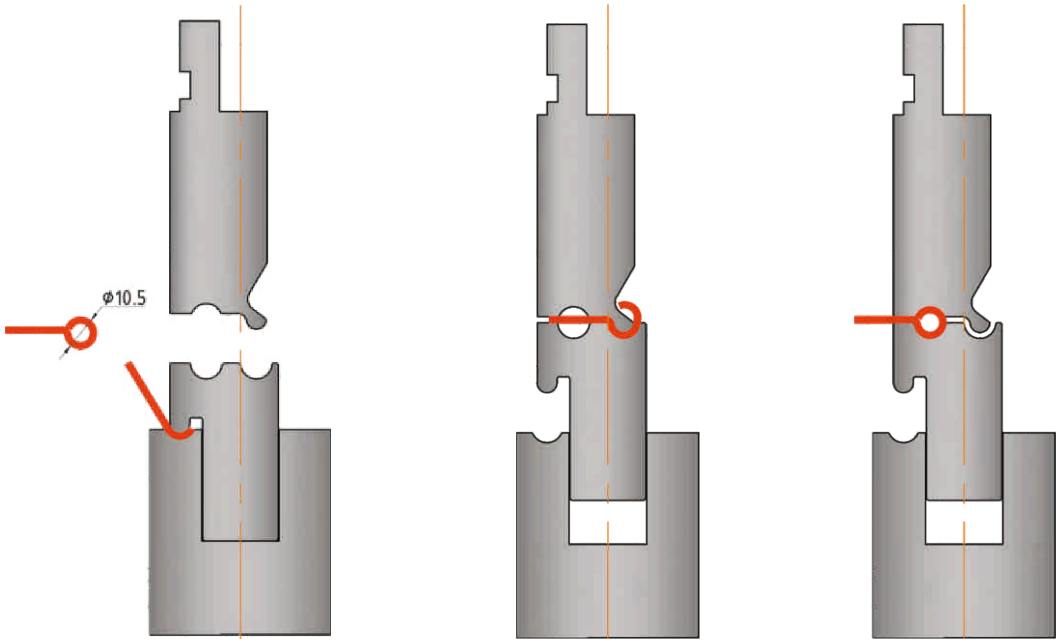
RADIUS FORMING

**MATERIAL OPTION :**

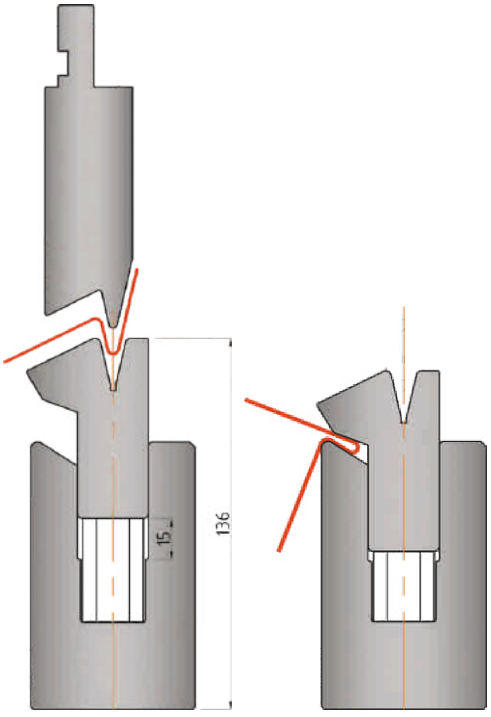
| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

Cad/Cam | Toolings | Accessories

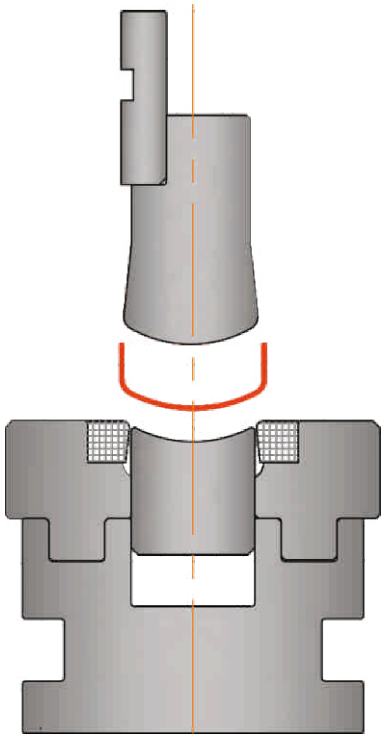
Press brake tool




HINGE OR CURLING TOOL




TEAR DROP HEMMING
WITH PROFILE TOOL



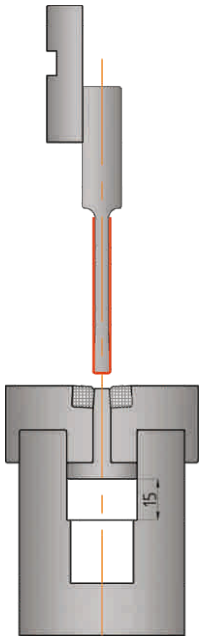
CHANNEL FORMING
WITH ROUND CORNERS

**MATERIAL OPTION :**

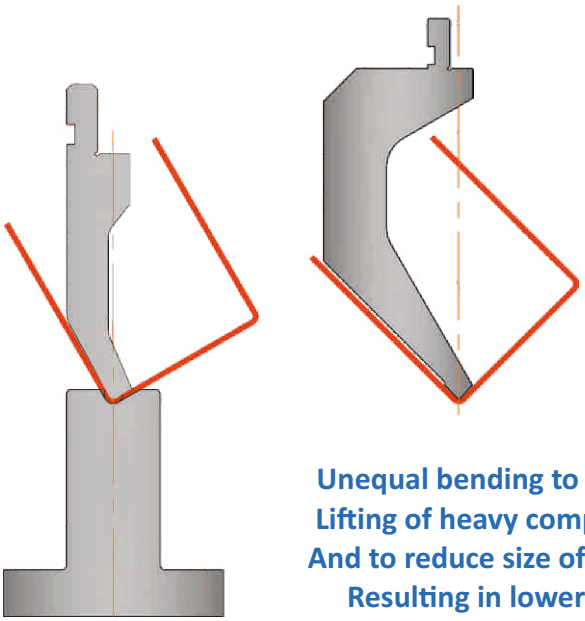
| 1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life | 2 Standard | 3 Economy Grade |
|---|---|---|
| CrMnMo 850-1100 N/mm² Quenched & Tempered 30±2 HRc \| 52±2HRc | 42 CrMo4 : 750-900 N/mm² 52±2HRc | C45 :600-710 N/mm² 52±2HRc |

Cad/Cam | Toolings | Accessories

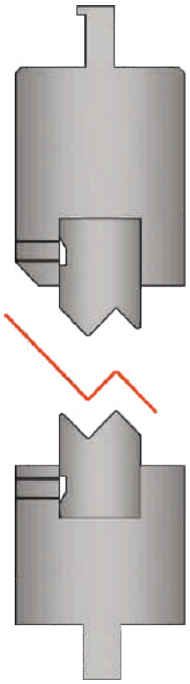
Press brake tool



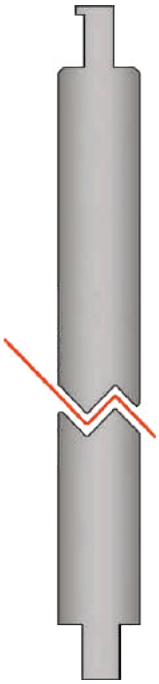

CHANNEL FORMING TOOL



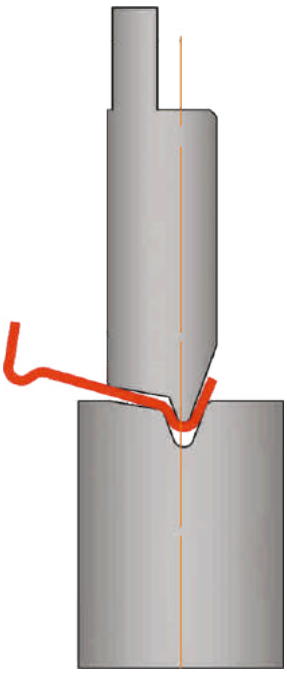
Unequal bending to reduce
Lifting of heavy component
And to reduce size of tooling
Resulting in lower cost



INSERT TYPE JOGGLE TOOL



FIXED JOGGLE TOOL



PROFILE FORMING TOOL

**MATERIAL OPTION :**

**1 Toughened for Optimum Performance for 1.3 times max Load & 1.5 times tool life**

CrMnMo 850-1100 N/mm²
Quenched & Tempered 30±2 HRc | 52±2HRc

**2 Standard**

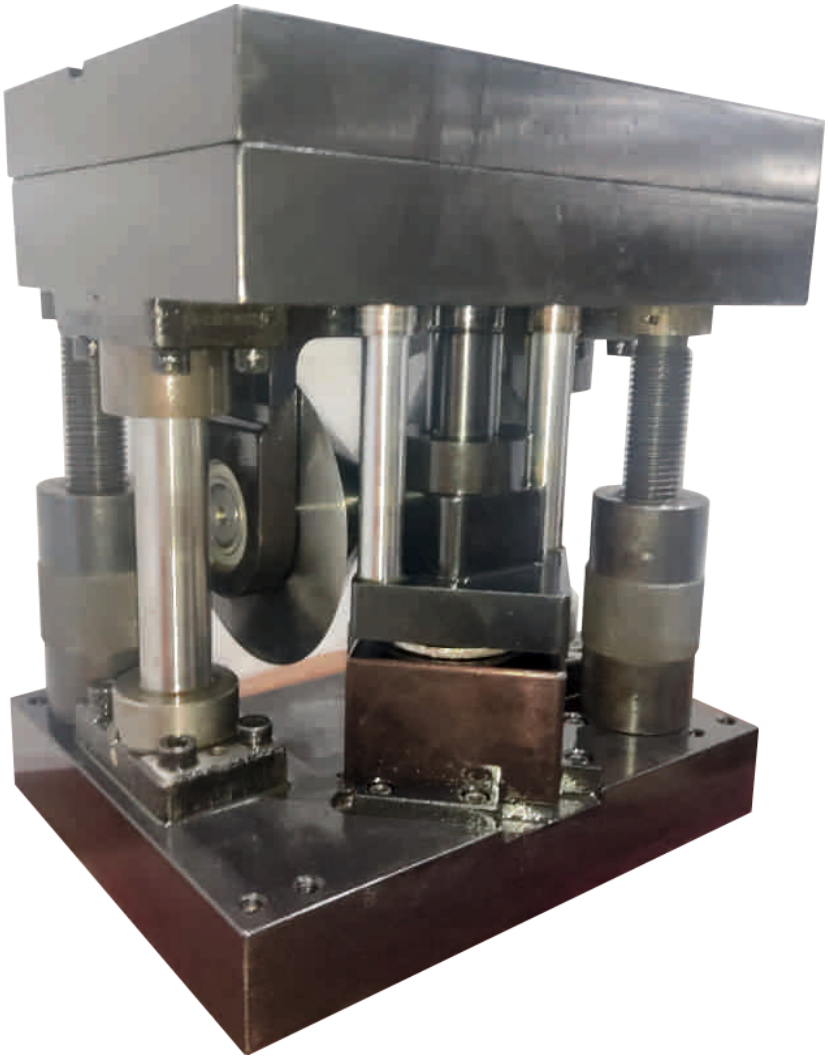
42 CrMo4 : 750-900 N/mm²
52±2HRc

**3 Economy Grade**

C45 :600-710 N/mm²
52±2HRc

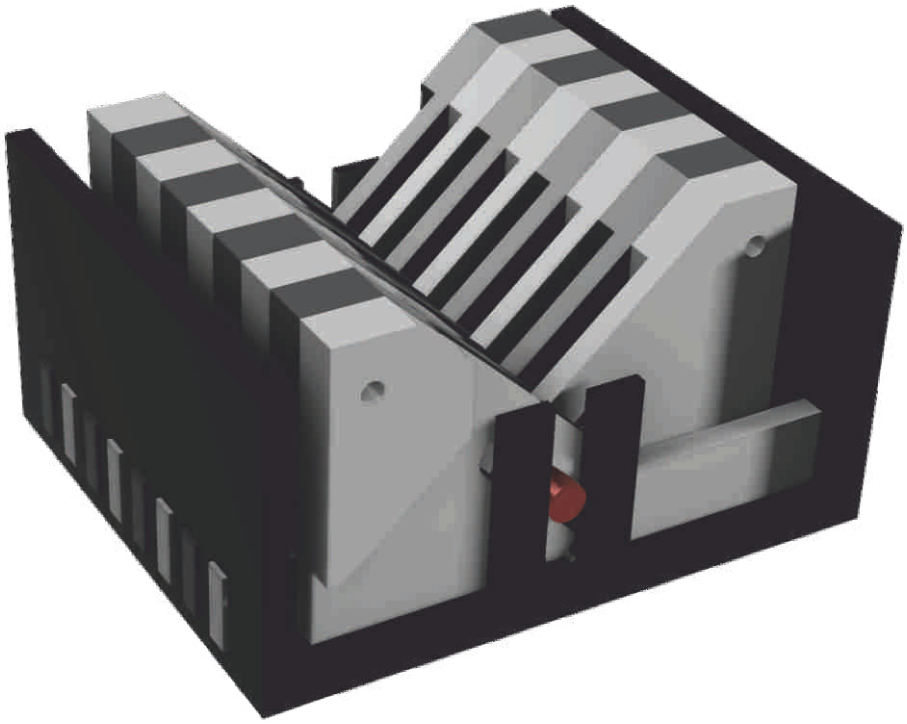
MLT Cad/Cam | Toolings | Accessories

## CORNER FORMING TOOL

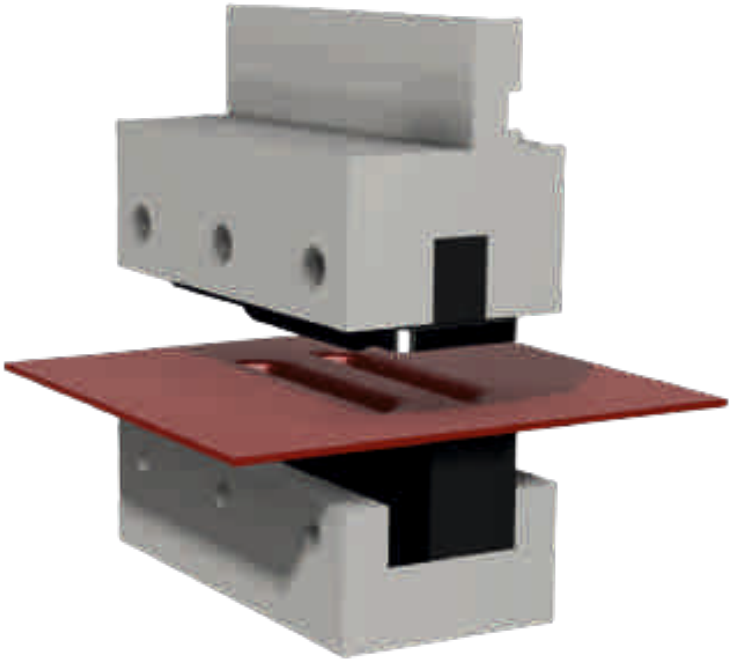


## CHANNEL FORMING TOOL WITH PU INSERT

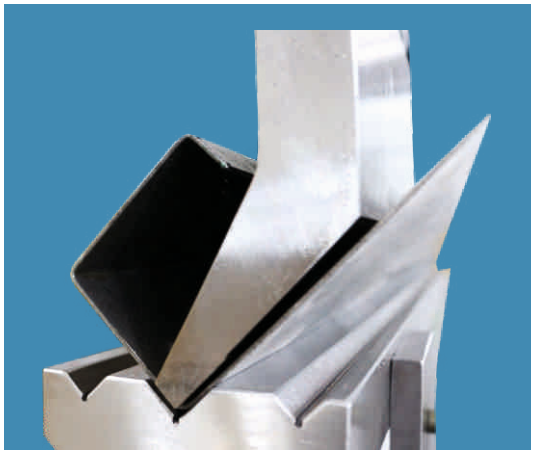
## ADJUSTABLE VEE DIE

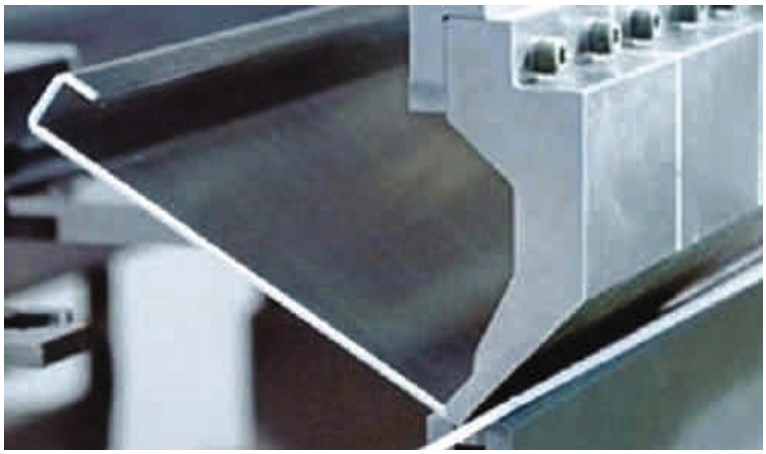


## LOUVER TOOL



## HEAVY DUTY PRESS BRAKE TOOL



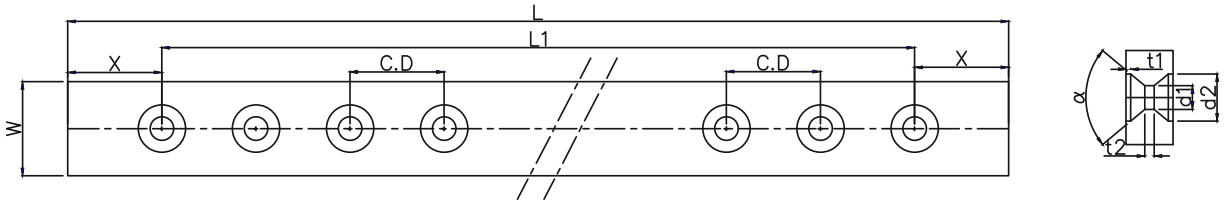


Gooseneck punch of 600 height and 400 width was specially manufactured for bending JCB components of 16mm and 12mm high tensile steel. Components of JCB excavators like arms and booms.
Segmented tooling of total length of 5.5 meter and 6 meter was supplied . Heavy duty common die block for variable thickness of 12mm and 16mm was manufactured using replaceable inserts in length 2500 and 300mm to total upto 5500mm used in tandem.

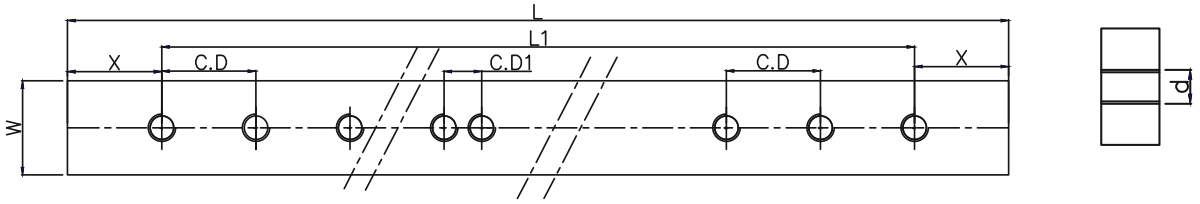
## TRANSRAIL LIGHTNING TOOL


Heavy duty straight punch manufacture for Transrail Lighting. Height of tool 500mm thickness as low as 12mm and total length of 12meters for bending octagonal of light poles. Tool used in single setting on two 6 meters press brakes in tandem. Tooling with replaceable wear resistant pads too increase life of tool against rubbing action due to side removal of huge component.

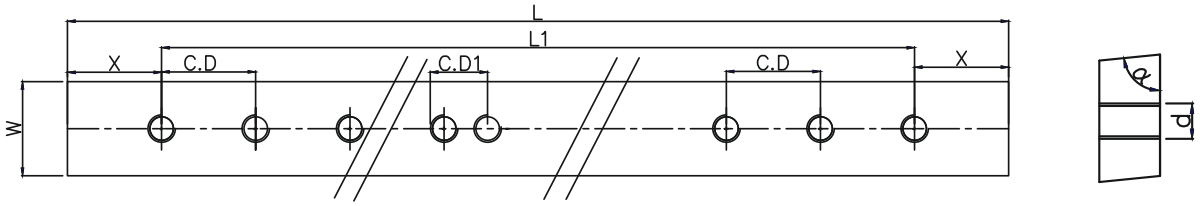
## SHEAR BLADES




90⁰ with Counter Sunk Holes




90⁰with Tap Holes




Angular with Tap Holes

Range of Shearing Blades
Cold shear, Hot Shear, Heavy duty Shear Blades are manufactured

We use Bohler Group Raw material for manufacturing of Shear Blades.
For Blades less than 1400mm length Vacuum hardening is done to assures higher hardness and uniformity of hardness.

# ML TECHNOLOGIES

Reg. Office. #10, D Wing, Avni Landmark,
Ekdant Nagar Ambad Nashik
Maharashtra - INDIA

**Mobile: +91 7030725680**

E-mail : saipawar@mltechnologies.co.inin

**www.mltechnologies.co.in**

Cad/Cam | Toolings | Accessories

ML TECHNOLOGIES

DESIGNERS AND MFG. OF POWER PRESS AND PRESS BREAK TOOLS