



Precision Meets Perfection,
Economical Solutions.



2024

THICK TURRET T90 SERIES

Visit us: www.ketecooling.com



“
Precision
Meets
Perfection,
Economical
Solutions.
”

About Us

Innovative Solutions for Fabrication Challenges

Founded in 1998, KETEC Precision Tooling is the **largest manufacturer of Punch Press and Press Brake tooling in China and Asia.**

With over 25 years of unremitting efforts in product innovation and development, as well as manufacturing refinement - In 2010, our Punch Press and Press Brake tools were appointed by the government as the industrial standard in China. As the leader of CNC tooling for the sheet metal fabrication industry. Our products have always been well-known **high-quality, customer-centric, and cost-effective.**

Empowering Metal Fabricators with Top-notch Tooling Solutions

Staying competitive in the manufacturing industry means having better flexibility, quality and efficiency while maintaining a sustainable profit.

That's why many manufacturers choose us. Through our unwavering commitment to quality control, refined manufacturing processes, and consultative customer service, we partner with our customers to minimize costs, boost revenue, and sustain their competitive edge.



Milestones

2004

Obtained Certifications

KETEC®'s trademark was registered as an international trademark and obtained ISO certification - **ISO9000:2000**.



2008

Equipped with High Capacity

Experienced tremendous growth and built our current manufacturing facilities **encompassing a total of 13 acres** in Conghua, Guangzhou, China.



2010

Became National Standard

The National Standardization Committee of China **commissioned KETEC to draft the standard** for "Tooling for CNC Turret Punch Machine." In July of the same year, the Ministry of Industry and IT of China issued and implemented the standard **JB/T10928-2010** for "CNC Turret Punch Press Tooling."



2012

Largest in Asia

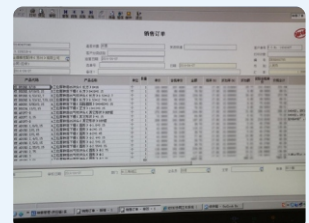
KETEC became the **largest exporter by volume** and manufacturer of CNC sheet metal tooling in Asia with an annual revenue of **\$45 Million USD**.



2020

Customer Centric

Implemented both **ERP and CRM software** company-wide to better serve our customers.



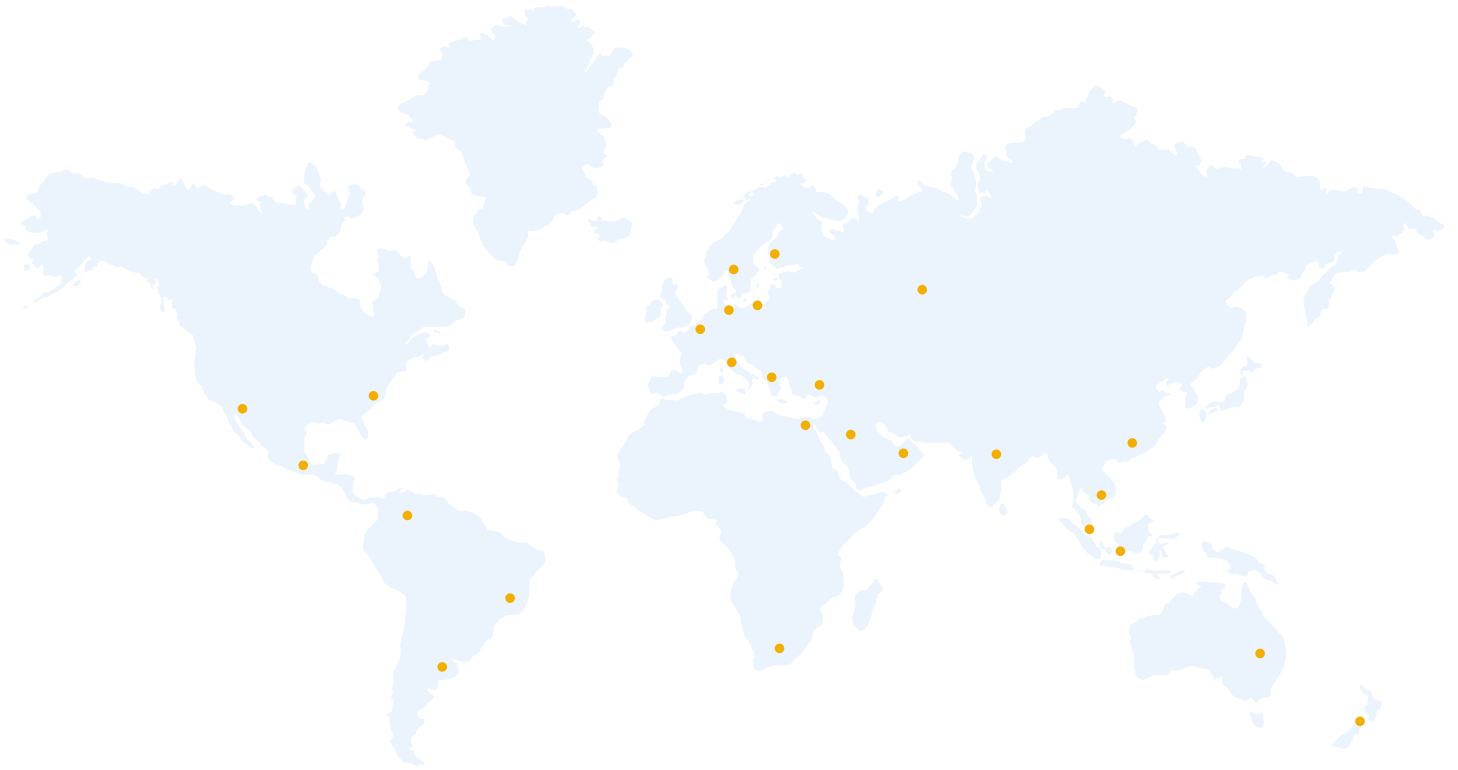
Official OEMS Partners



Customer Highlight



KETEC Agents



Our agents are established in more than 25 countries worldwide

Facilities Gallery

Ordering Workshop



Heat-Treatment Center



Standard Production Line



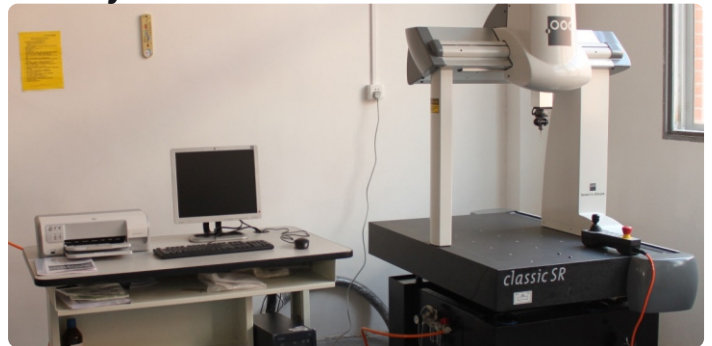
Customized Line



Tooling Test Center



Quality Control Lab



Product Offerings

We specialize in sheet metal fabrication tooling, including **Punch Press, Press Brake, Stamping tools and related machines.**

Punch Press Tooling

- Thick Turret Tooling
- Thin Turret Tooling
- TRUMPF® Style Tooling
- Salvagnini®
- Muratec-Wiedemann®



Stamping Tools

- Automotive
- Thick Plate
- Copper Plate



Press Brake Tooling

- Euro-Amada® Style
- Wila®-Trumpf® Style



Machines

- Tool Grinding Machine
- 2D Inspection Machine



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Thick Turret T90 Series

Thick Turret T90 Series

Ketec's 90 series is one of our best-selling product lines, due to its reliability and popularity. Our T90 series can be equipped with ABS, Standard and other industry common features. Categories come in station A ($\frac{1}{2}$ "), B ($1\frac{1}{4}$ ") C (2"), D ($3\frac{1}{2}$ "), E ($4\frac{1}{2}$ "), and offer full interchangeability with other mainstream tooling manufacturers.

PRODUCT OVERVIEW

Ketec's T90 series is one of Ketec's best-selling product lines, prized for its easy of use, reliability, and its popularity.

Our T90 series can be equipped with ABS, Standard and other industry common features.

All categories are available in stations A, B, C, D, E, offering other mainstream tooling manufactures.

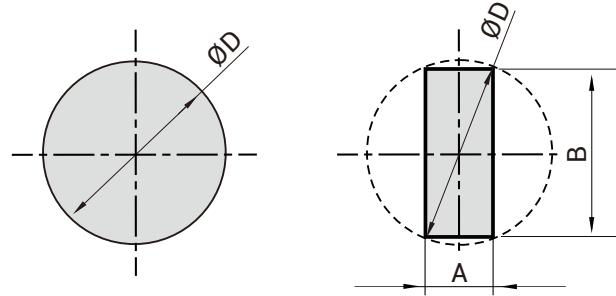
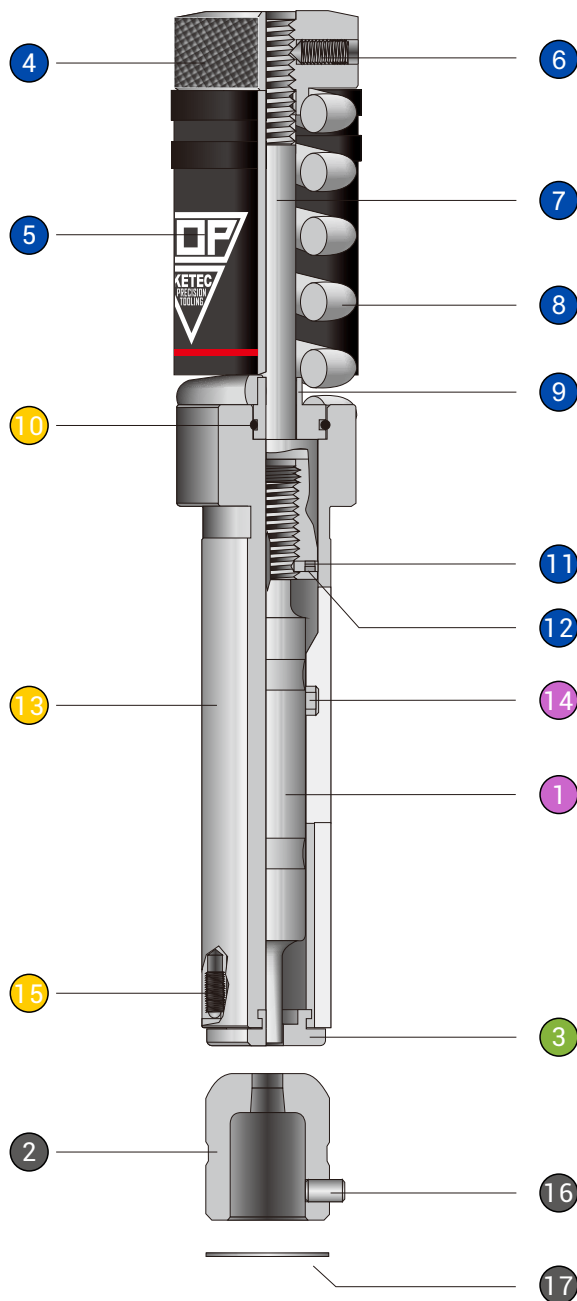
- Tool-free punch length adjustment is achieved by rotating the punch body clockwise or counterclockwise and locked in place by retaining ring and index pin.
- Max grinding life for A & B station is about 6.3mm [0.248"].
- Max grinding life for C, D, E station is about 8mm [0.315"].
- Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments.
- Guides on A & B stations are treated with Nitriding process to enhance compressive, wear, and corrosion resistance.
- TiCN coating available upon request for additional protection.
- Rooftop shear available upon request for C, D, E stations.
- Standard shape guide comes in 2 standard slot angles of 0°, 90°, or 0°, 135° for A & B stations.
- Standard shape guide comes in 3 standard slot angles of 0°, 90°, 225° for C, D, E stations.
- Interchangeable with other mainstream tooling manufacturers.





T90 A STATION VIEW DRAWING

The positive direction of guide, punch and die is the anti-clockwise direction by overlook at the work position.

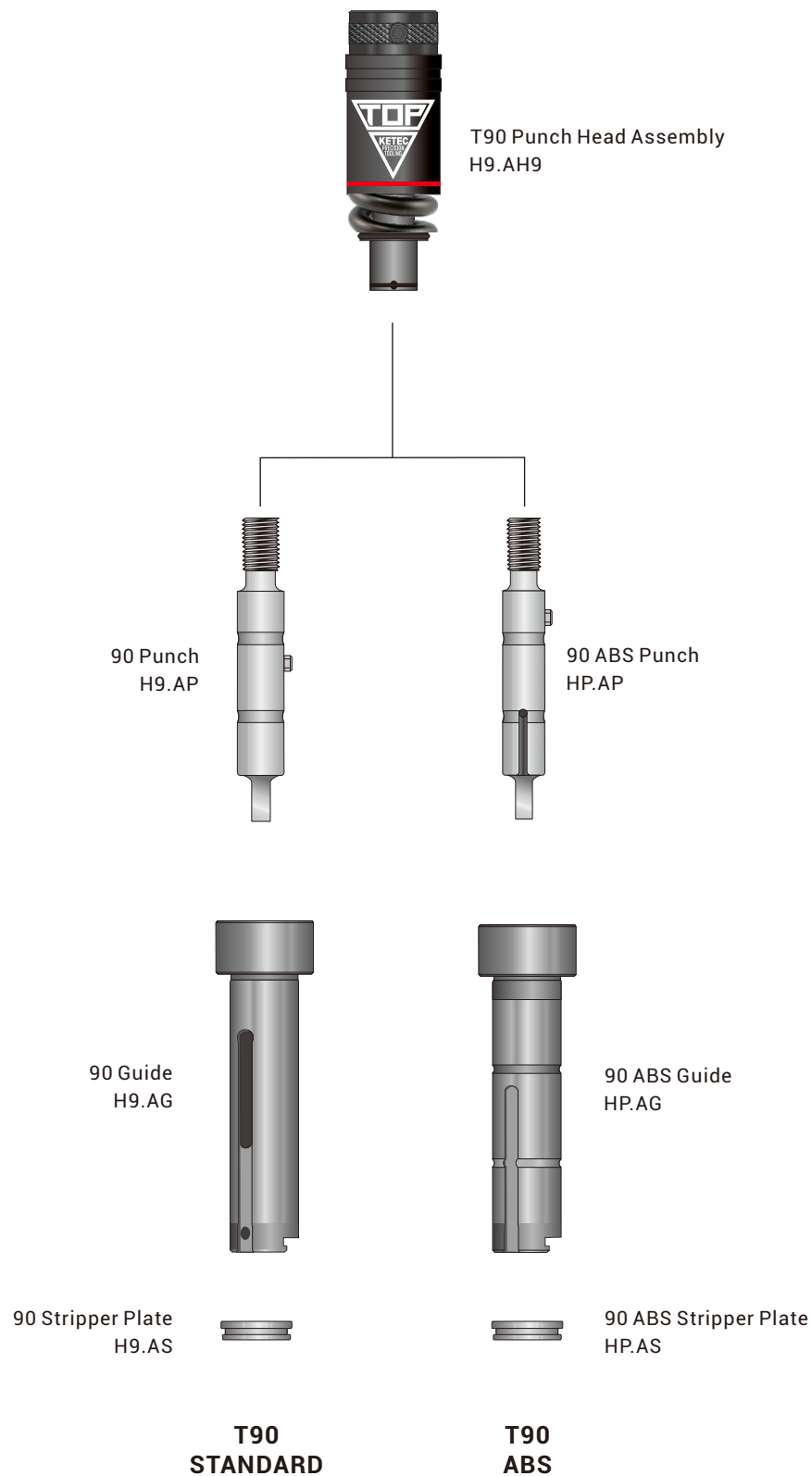


5	Canister	P.YJG
6	Screw	P.M6*6E
10	O-Ring	P.Q-21,2
11	Steel Ball	P.TH-H9A
13	Guide	
14	Dowel Pin	HT.T-3A
15	Plastic Plunger	P.ZTJ-A
16	Dowel Pin	HT.AD9
17	Die Shim	

Standard
Shapes



A STATION STRUCTURE



PUNCH ASSEMBLIES

T90 STANDARD



T90 ABS



T90 SERIES A STATION PUNCH ASSEMBLIES

T90	Geometry	Guide Slot	Slot Angle	TiCN	TiCN + KPM
H9.AA1RO.	Round	1	0°	H9.AA1TRO.	H9.AA1MRO.
H9.AA2**.	Standard	2	0°, 90°	H9.AA2T**.	H9.AA2M**.
H9.AA3SQ.	Square	2	0°, 135°	H9.AA3TSQ.	H9.AA3MSQ.
H9.AA2**.	Customised	3	0°, 45°, 90°	H9.AA2T**.	H9.AA2M**.
	Customised	4	0°, 90°, 180°, 270°		
T90ABS	Geometry	Guide Slot	Slot Angle	TiCN	TiCN + KPM
HP.AA1RO.	Round	1	0°	HP.AA1TRO.	HP.AA1MRO.
HP.AA2**.	Standard	2	0°, 90°	HP.AA2T**.	HP.AA2M**.
HP.AA3SQ.	Square	2	0°, 135°	HP.AA3TSQ.	HP.AA3MSQ.
HP.AA2**.	Customised	3	0°, 45°, 90°	HP.AA2T**.	HP.AA2M**.
	Customised	4	0°, 90°, 180°, 270°		

PUNCHES

90 STANDARD



90 ABS



90 SERIES A STATION PUNCHES

90	Geometry	Pin Position	TiCN	TiCN + KPM
H9.AP1RO.	Round	No pin 	H9.AP1TRO.	H9.AP1MRO.
H9.AP2RE.	Rectangle	Standard 	H9.AP2TRE.	H9.AP2MRE.
H9.AP2SQ.	Square	Standard 	H9.AP2TSQ.	H9.AP2MSQ.
H9.AP2**.	Customised	Customized 	H9.AP2T**.	H9.AP2M**.
90ABS	Geometry	Pin Position	TiCN	TiCN + KPM
HP.AP1RO.	Round	No pin 	HP.AP1TRO.	HP.AP1MRO.
HP.AP2RE.	Standard	Standard 	HP.AP2T**.	HP.AP2M**.
HP.AP2SQ.	Square	Standard 	HP.AP3TSQ.	HP.AP3MSQ.
HP.AP2**.	Customised	Customized 	HP.AP2T**.	HP.AP2M**.

GUIDES

T90 SERIES A STATION GUIDES		
T90	Guide Slot	Slot Angle
H9.AG1	1	0°
H9.AG2	2	0°, 90°
H9.AG3	2	0°, 135°
H9.AG**.	3	0°, 45°, 90°
	4	0°, 90°, 180°, 270°
T90ABS	Guide Slot	Slot Angle
HP.AG1	1	0°
HP.AG2	2	0°, 90°
HP.AG3	2	0°, 135°
HP.AG**.	3	0°, 45°, 90°
	4	0°, 90°, 180°, 270°



90 STANDARD GUIDE



90 ABS GUIDE

STRIPPER PLATES

T90 SERIES A STATION STRIPPER PLATES	
T90	Geometry
H9.AS1RO.	Round
H9.AS1RE.	Rectangle
H9.AS1SQ.	Square
H9.AS1OB.	Oblong
H9.AS1HX.	Hexagon
H9.AS1SD.	Single D
H9.AS1DD.	Double D
H9.AS1QD.	Quad D
H9.AS1QR.	Quad R
T90ABS	Geometry
HP.AS1RO.	Round
HP.AS1RE.	Rectangle
HP.AS1SQ.	Square
HP.AS1OB.	Oblong
HP.AS1HX.	Hexagon
HP.AS1SD.	Single D
HP.AS1DD.	Double D
HP.AS1QD.	Quad D
HP.AS1QR.	Quad R



STRIPPER PLATES

T90 SERIES A STATION PUNCH HEAD ASSEMBLY
T90
H9.AH9



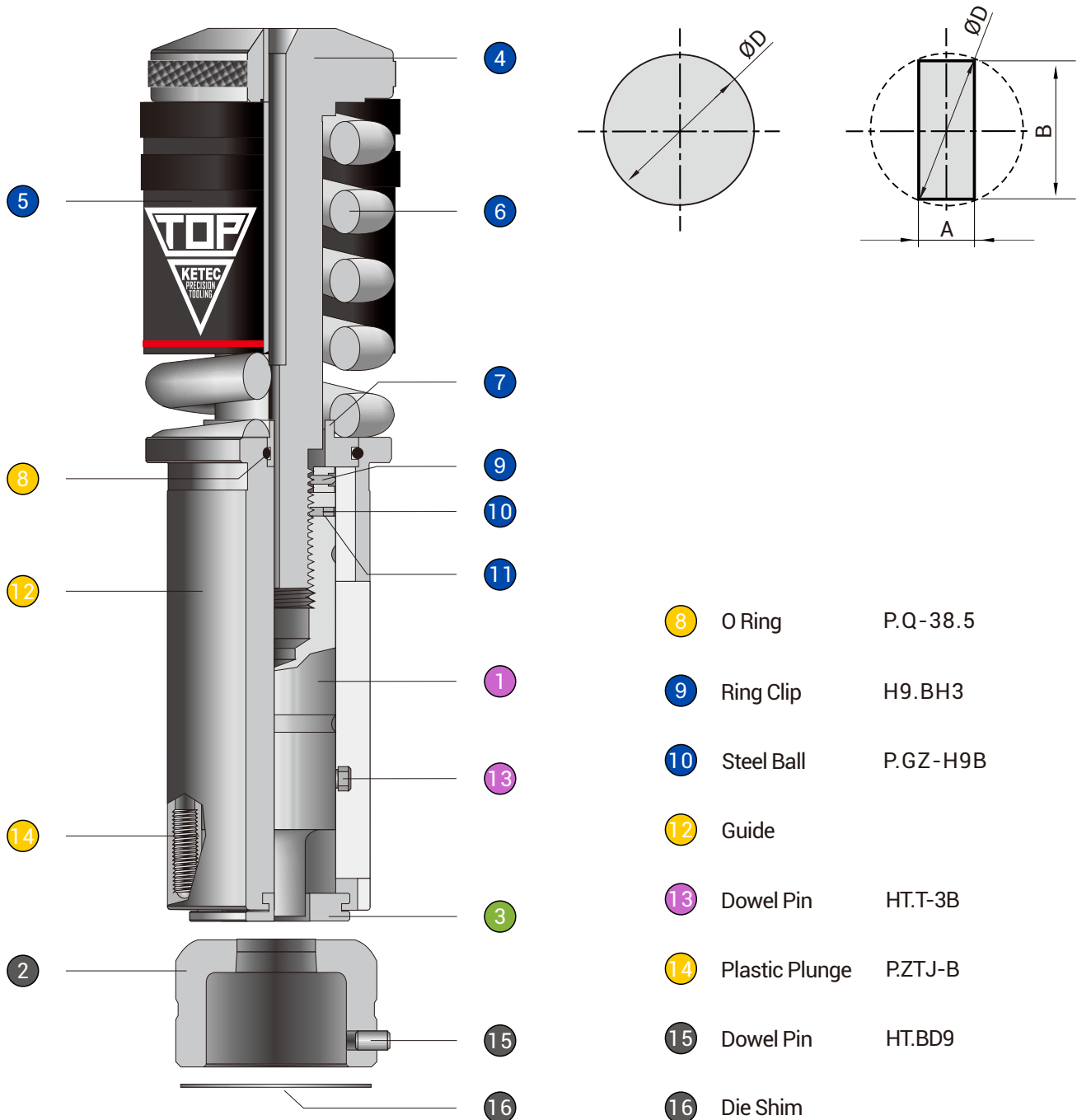
Standard
Shapes





T90 B STATION VIEW DRAWING

The positive direction of guide, punch and die is the anti-clockwise direction by overlook at the work position.



Standard
Shapes



RO



RE



SQ



OB



HX



QD



DD

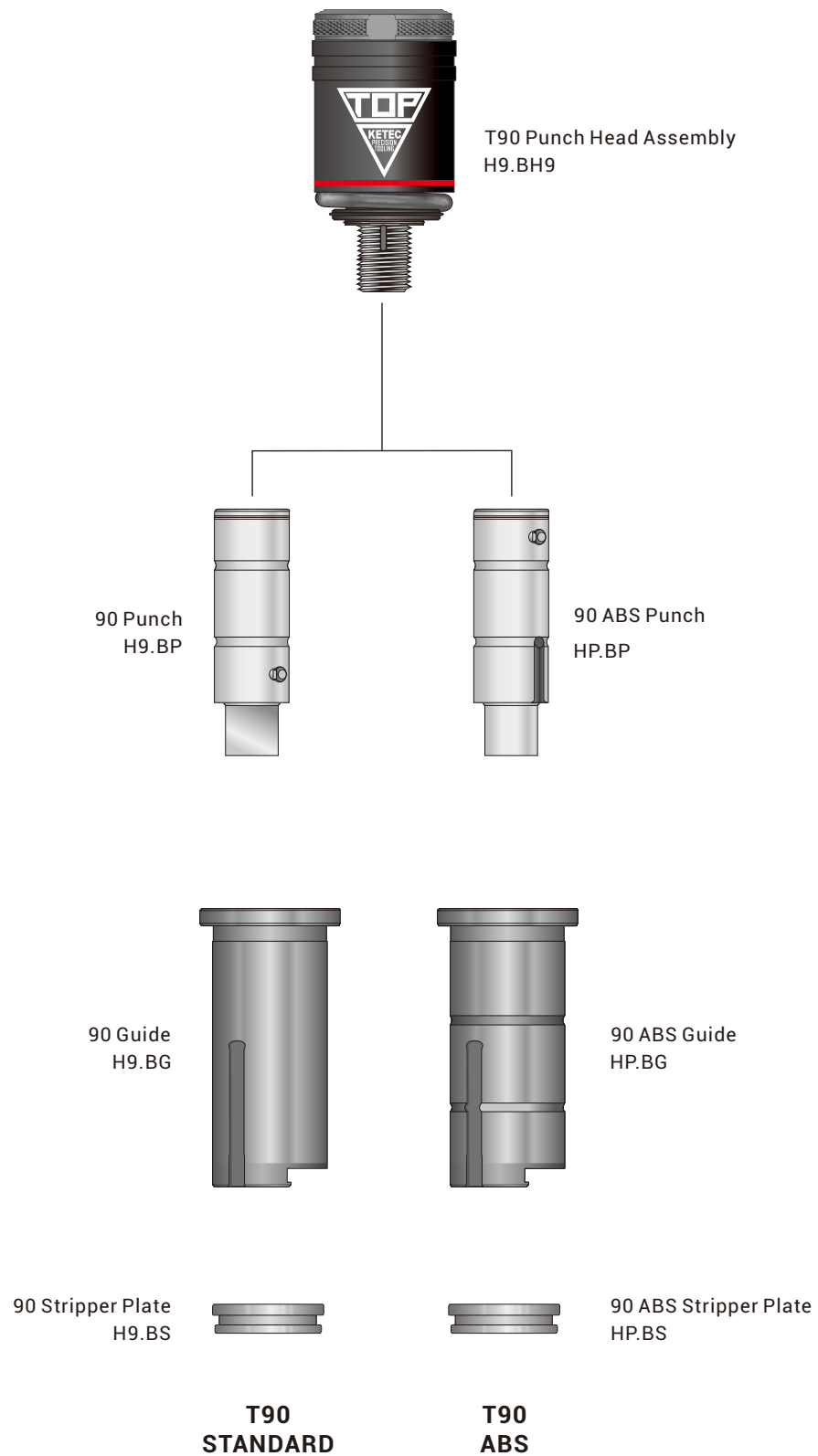


QR



SD

B STATION STRUCTURE





PUNCH ASSEMBLIES

T90 STANDARD



T90 ABS



T90 SERIES B STATION PUNCH ASSEMBLIES

T90	Geometry	Guide Slot	Slot Angle	TiCN	TiCN + KPM
H9.BA1RO.	Round	1	0°	H9.BA1TRO.	H9.BA1MRO.
H9.BA2**.	Standard	2	0°, 90°	H9.BA2T**.	H9.BA2M**.
H9.BA3SQ.	Square	2	0°, 135°	H9.BA3TSQ.	H9.BA3MSQ.
H9.BA2**.	Customised	3	0°, 45°, 90°	H9.BA2T**.	H9.BA2M**.
	Customised	4	0°, 90°, 180°, 270°		
T90ABS	Geometry	Guide Slot	Slot Angle	TiCN	TiCN + KPM
HP.BA1RO.	Round	1	0°	HP.BA1TRO.	HP.BA1MRO.
HP.BA2**.	Standard	2	0°, 90°	HP.BA2T**.	HP.BA2M**.
HP.BA3SQ.	Square	2	0°, 135°	HP.BA3TSQ.	HP.BA3MSQ.
HP.BA2**.	Customised	3	0°, 45°, 90°	HP.BA2T**.	HP.BA2M**.
	Customised	4	0°, 90°, 180°, 270°		

PUNCHES

90 STANDARD



90 ABS



90 SERIES B STATION PUNCHES

90	Geometry	Pin Position	TiCN	TiCN + KPM
H9.BP1RO.	Round	No pin	H9.BP1TRO.	H9.BP1MRO.
H9.BP2RE.	Rectangle	Standard	H9.BP2TRE.	H9.BP2MRE.
H9.BP2SQ.	Square	Standard	H9.BP2TSQ.	H9.BP2MSQ.
H9.BP2**.	Customised	Customized	H9.BP2T**.	H9.BP2M**.
90ABS	Geometry	Pin Position	TiCN	TiCN + KPM
HP.BP1RO.	Round	No pin	HP.BP1TRO.	HP.BP1MRO.
HP.BP2RE.	Standard	Standard	HP.BP2T**.	HP.BP2M**.
HP.BP2SQ.	Square	Standard	HP.BP3TSQ.	HP.BP3MSQ.
HP.BP2**.	Customised	Customized	HP.BP2T**.	HP.BA2M**.

GUIDES

T90 SERIES B STATION GUIDES		
T90	Guide Slot	Slot Angle
H9.BG1	1	0°
H9.BG2	2	0°, 90°
H9.BG3	2	0°, 135°
H9.BG**.	3	0°, 45°, 90°
	4	0°, 90°, 180°, 270°
T90ABS	Guide Slot	Slot Angle
HP.BG1	1	0°
HP.BG2	2	0°, 90°
HP.BG3	2	0°, 135°
HP.BG**.	3	0°, 45°, 90°
	4	0°, 90°, 180°, 270°



90 STANDARD GUIDE



90 ABS GUIDE

STRIPPER PLATES

T90 SERIES B STATION STRIPPER PLATES	
T90	Geometry
H9.BS1RO.	Round
H9.BS1RE.	Rectangle
H9.BS1SQ.	Square
H9.BS1OB.	Oblong
H9.BS1HX.	Hexagon
H9.BS1SD.	Single D
H9.BS1DD.	Double D
H9.BS1QD.	Quad D
H9.BS1QR.	Quad R
T90ABS	Geometry
HP.BS1RO.	Round
HP.BS1RE.	Rectangle
HP.BS1SQ.	Square
HP.BS1OB.	Oblong
HP.BS1HX.	Hexagon
HP.BS1SD.	Single D
HP.BS1DD.	Double D
HP.BS1QD.	Quad D
HP.BS1QR.	Quad R



STRIPPER PLATES

T90 SERIES B STATION PUNCH HEAD ASSEMBLY
T90
H9.BH9



Standard
Shapes



RO



RE



SQ



OB



HX



QD



DD



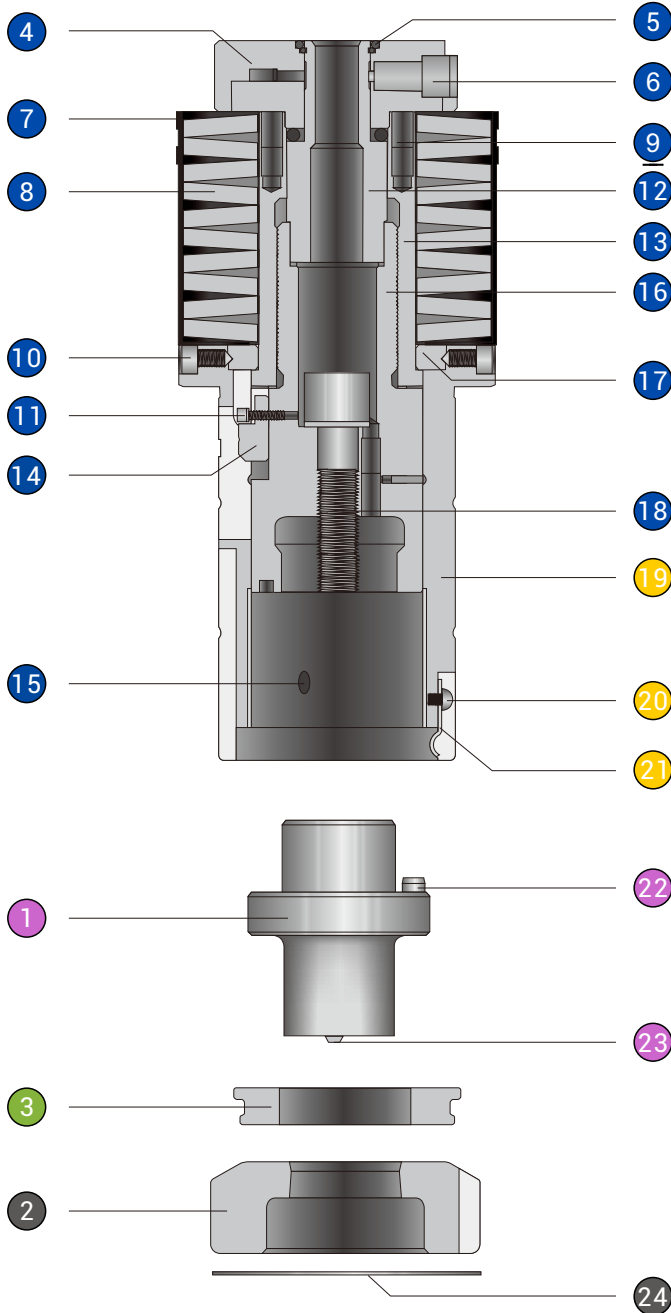
QR



SD

T90 C STATION VIEW DRAWING

The positive direction of guide, punch and die is the anti-clockwise direction by overlook at the work position.



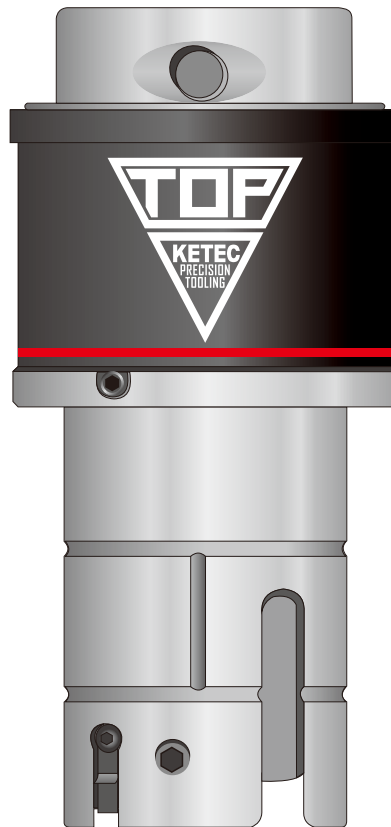
- | | | |
|------------|--------------------|--------------|
| 4 | Punch Head | HK.CH1 |
| 5 | Retaining Ring | P.KH-HKC2 |
| 6 | Adjust Push Button | HK.CH2 |
| 7 | Canister | P.ZST-TOP-C |
| 8 | Disc Spring | PDH-H9C |
| 9 10 11 15 | Screw | |
| 12 | Adjusting Shaft | HK.CH4 |
| 13 | Driver | HK.CH5 |
| 14 | Key | HK.CH7 |
| 16 | Punch Holder | HP.CH6 |
| 17 | Spring Support | H9.CH5 |
| 18 | Screw | PUNC12,7*57A |
| 19 | Guide | HK.CG1 |
| 20 | Screw | H9.CG9 |
| 21 | Stripper Clip | P.JP-H9G |
| 22 | Dowel Pin | H9.CP9 |
| 23 | Ejector | |
| 24 | Die Shim | |

Standard
Shapes

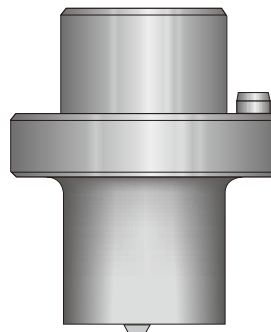


C STATION STRUCTURE

T90 Guide Assembly
HP.CC1.



T90 Punch
HP.CP



T90 Stripper Plate
H9.CS



T90 ABS Stripper Plate
HP.CS



PUNCH ASSEMBLIES



T90 SERIES C STATION PUNCH ASSEMBLIES					
Series	Geometry	Punch Assembly	TiCN	Stripper Plate	Guide Assembly
T90	Round	HJ.CA1RO.	HJ.CA1TRO.	H9.CS1RO.	0°, 90°, 225°
	Standard	HJ.CA1**.	HJ.CA1T**.	H9.CS1**.	
	Customised	HJ.CA1**.	HJ.CA1T**.	H9.CS1**.	
T90 ABS	Round	HP.CA1RO.	HP.CA1TRO.	HP.CS1RO.	
	Standard	HP.CA1**.	HP.CA1T**.	HP.CS1**.	
	Customised	HP.CA1**.	HP.CA1T**.	HP.CS1**.	

PUNCHES

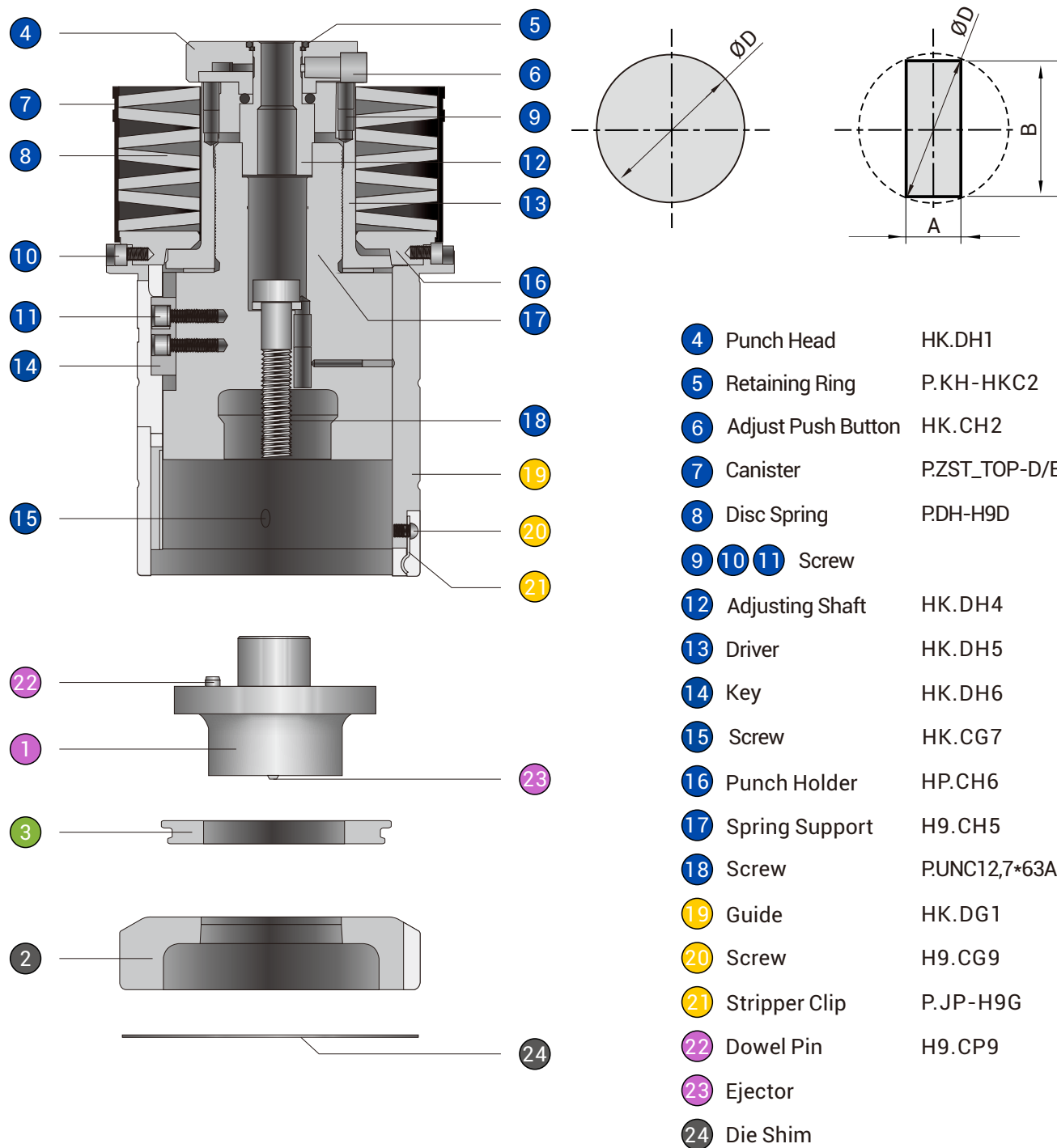


90 SERIES B STATION PUNCHES				
Series	Geometry	Pin Position	Punch	TiCN
T90 / T90 ABS	Round	Standard 	H9.CP1RO.	H9.CP1TRO.
	Standard	Standard 	H9.CP1**.	H9.CP1T**.
	Customized	Customized 	H9.CP1**.	H9.CP1T**.

Standard Shapes RO RE SQ OB HX QD DD QR SD

T90 D STATION VIEW DRAWING

The positive direction of guide, punch and die is the anti-clockwise direction by overlook at the work position.

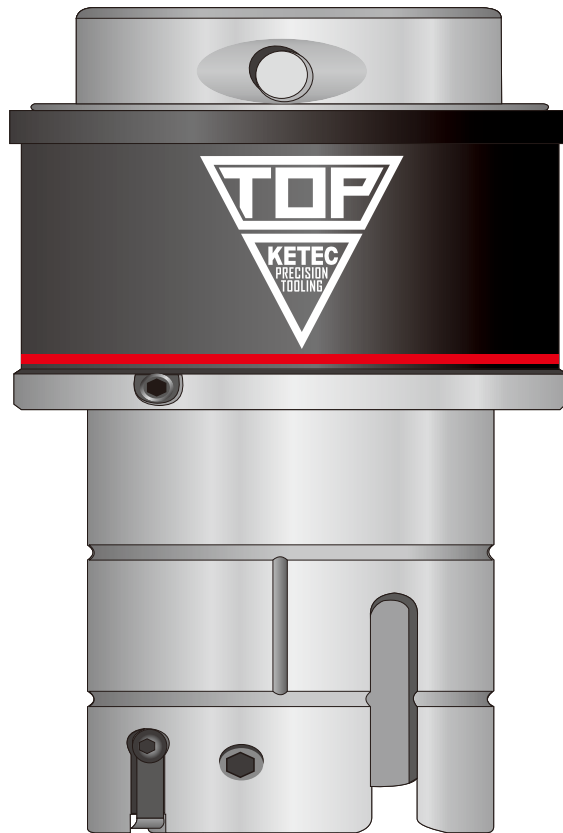


Standard
Shapes

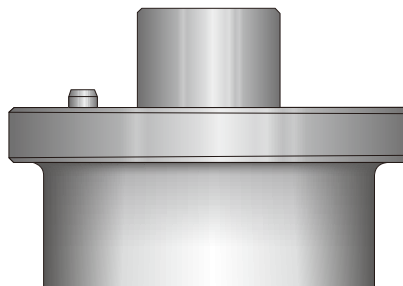


D STATION STRUCTURE

T90 Guide Assembly
HP.DC1.



T90 Punch
HP.DP



T90 Stripper Plate
H9.DS



T90 ABS Stripper Plate
HP.DS



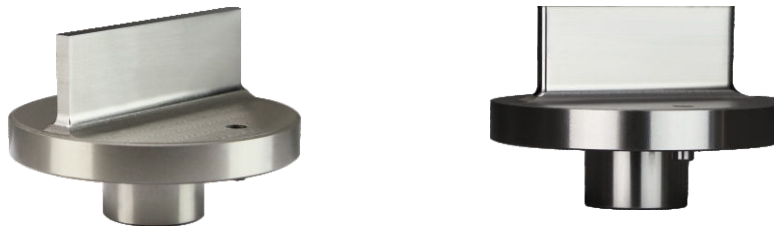
PUNCH ASSEMBLIES



T90 SERIES C STATION PUNCH ASSEMBLIES

Series	Geometry	Punch Assembly	TiCN	Stripper Plate	Guide Assembly
T90	Round	HJ.DA1RO.	HJ.DA1TRO.	H9.DS1RO.	0°, 90°, 225°
	Standard	HJ.DA1**.	HJ.DA1T**.	H9.DS1**.	
	Customised	HJ.DA1**.	HJ.DA1T**.	H9.DS1**.	
T90 ABS	Round	HP.DA1RO.	HP.DA1TRO.	HP.DS1RO.	
	Standard	HP.DA1**.	HP.DA1T**.	HP.DS1**.	
	Customised	HP.DA1**.	HP.DA1T**.	HP.DS1**.	

PUNCHES



90 SERIES B STATION PUNCHES

Series	Geometry	Pin Position	Punch	TiCN
T90 / T90 ABS	Round	Standard	H9.DP1RO.	H9.DP1TRO.
	Standard	Standard	H9.DP1**.	H9.DP1T**.
	Customized	Customized	H9.DP1**.	H9.DP1T**.

Standard
Shapes



RO



RE



SQ



OB



HX



QD



DD



QR



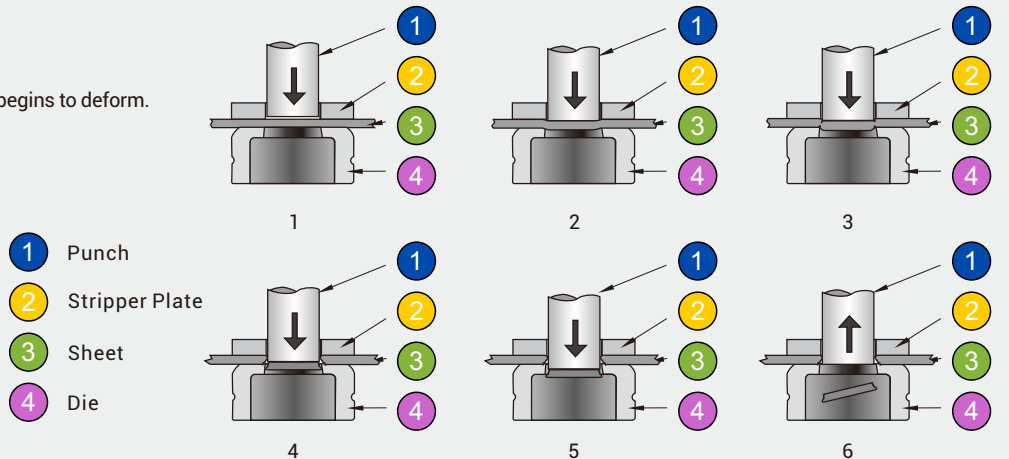
SD



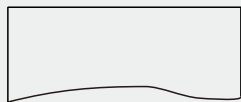


PUNCHING PROCESS

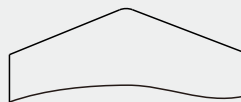
1. The stripper plate presses the sheet tightly.
2. The punch contacts the sheet, and the sheet begins to deform.
3. The punch and die begin to shear the sheet.
4. The sheet begins to tear.
5. The punch reaches the bottom.
6. The punch retracts, and the slug falls freely.



PUNCH SHEAR



Horizontal Shear



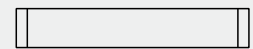
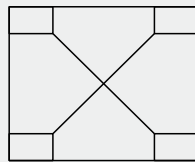
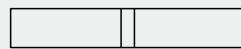
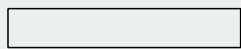
Rooftop Shear



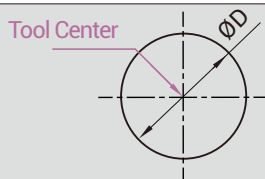
Quad Concave Shear



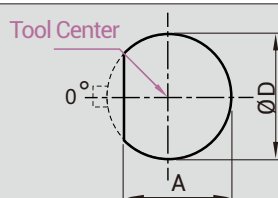
Double Concave Shear



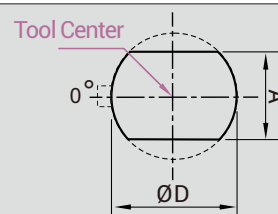
STANDARD SHAPE DIMENSION



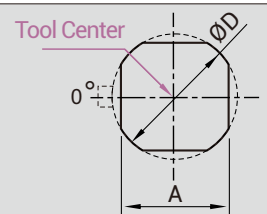
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Size: $\varnothing D$



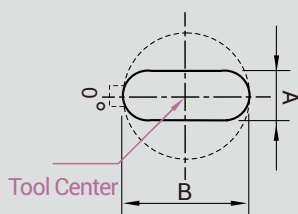
Code: SD
Size: $\varnothing D \times A$



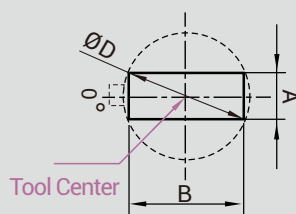
Code: DD
Size: $\varnothing D \times A$



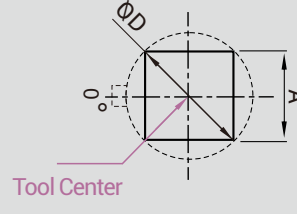
Code: QD
Size: $\varnothing D \times A$



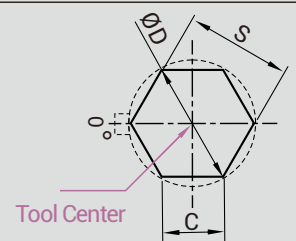
Code: OB
Size: $\varnothing A \times B$



Code: RE
Size: $A \times B$



Code: SQ
Size: $A \times A$



Code: HX
Size: S



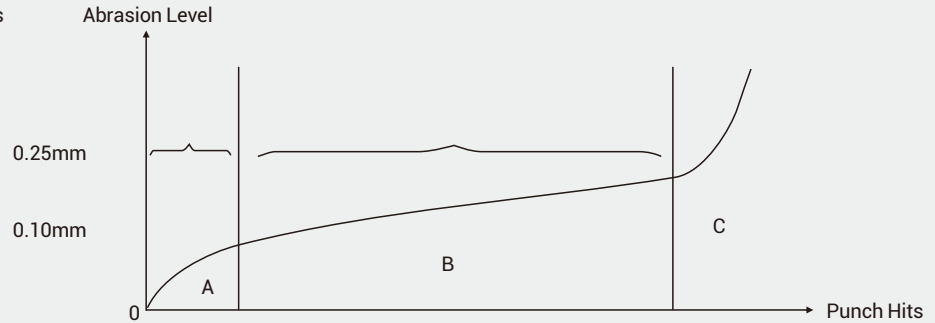
ABRASION LEVEL & PUNCH HITS

The relationship of Abrasion Level & Punch Hits

A: Initial abrasion stage

B: Normal abrasion stage

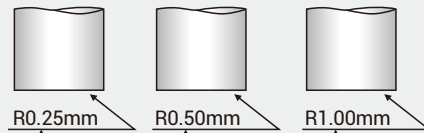
C: Abnormal abrasion stage



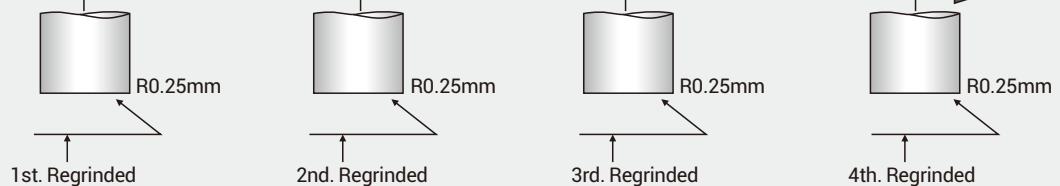
TOOLING REGRINDING INSTRUCTION

Following the correct instruction to regrind the punch, the tooling life will be extended to double.

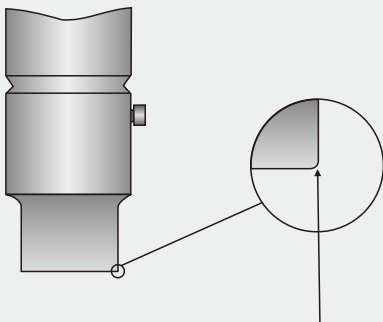
Without regrinding



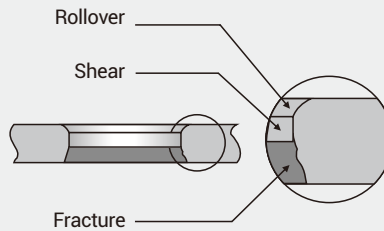
Correct regrinding



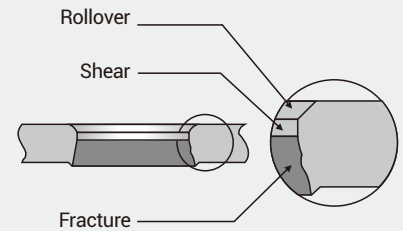
TIMING FOR REGRINDING



Corner radius less than 0.25mm, tooling needs regrinding.



An ideal punched hole



A flawed punched hole



Precision Meets Perfection, Economical Solutions.

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