

Precision Meets Perfection, Economical Solutions.



2024

85 Series Catalog

"Precision Meets Perfection, Economical Solutions.

11

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[®]



Press Brake Tooling

- Euro-Amada Style
- Wila-Trumpf Style



Stamping Tools

- Automotive
- Thick Plate
- Copper Plate



Machines

- Tool Grinding Machine
- 2D Inspection Machine





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KETEC's

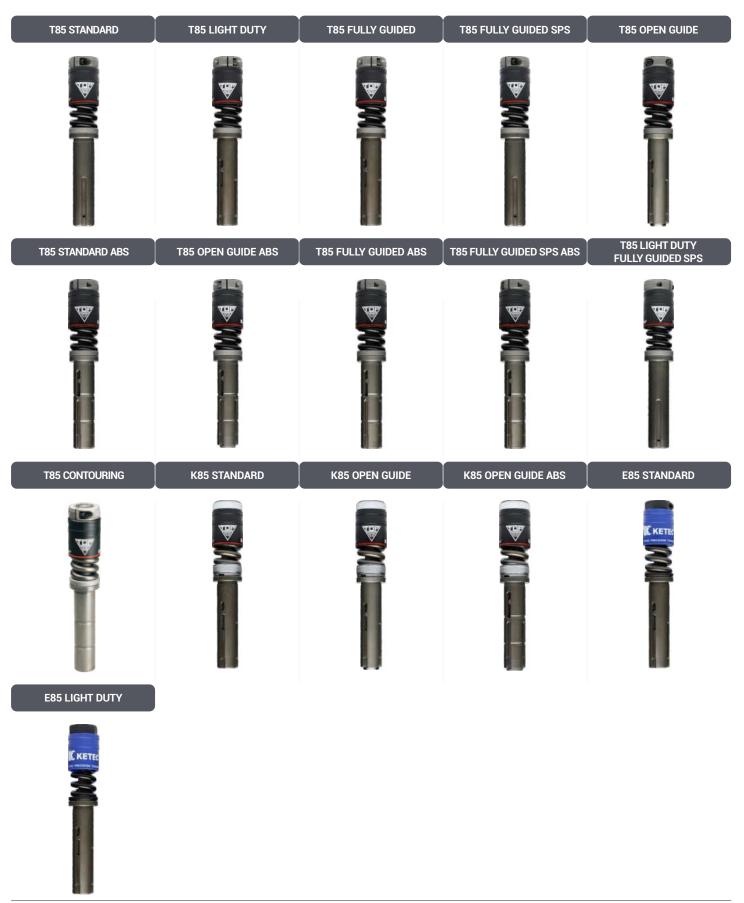
85 Series

About The 85 Series

Ketec's 85 series is one of our best-selling product lines, due to its reliability and popularity. Our 85 series is divided into two categories: Standard Econo 85 and Quick Adjust T85. Both categories come in station A (½"), B (1-1/4") C(2"), $D(3-\frac{1}{2}")$, $E(4-\frac{1}{2}")$, and offer full



A STATION Thick Turret Punch Assembly Index - 85 Series



FEATURED PRODUCTS

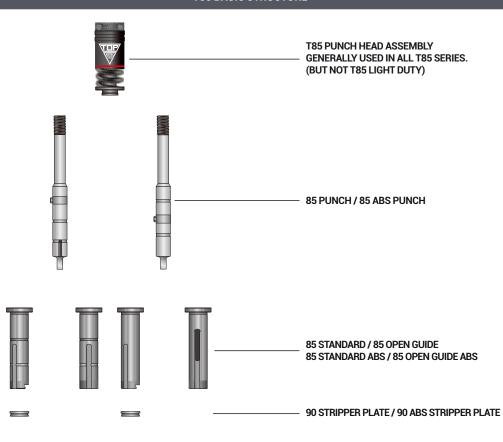






T85 OPEN GUIDE T85 OPEN GUIDE ABS

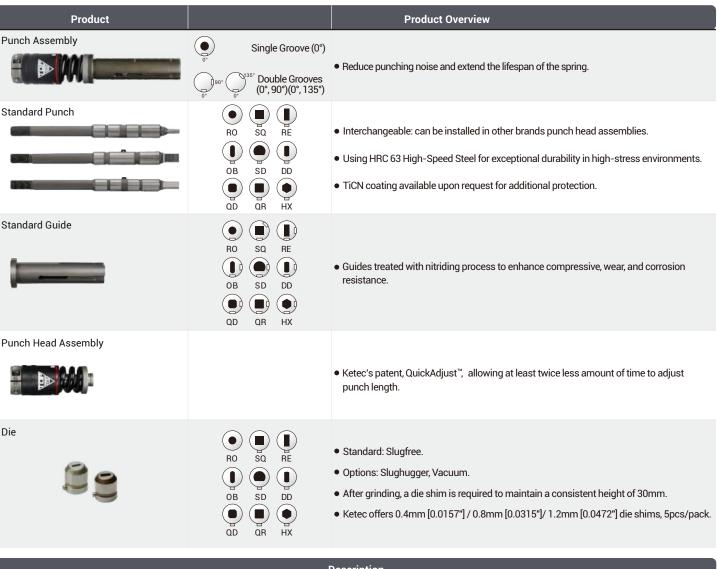
T85 BASIC STRUCTURE

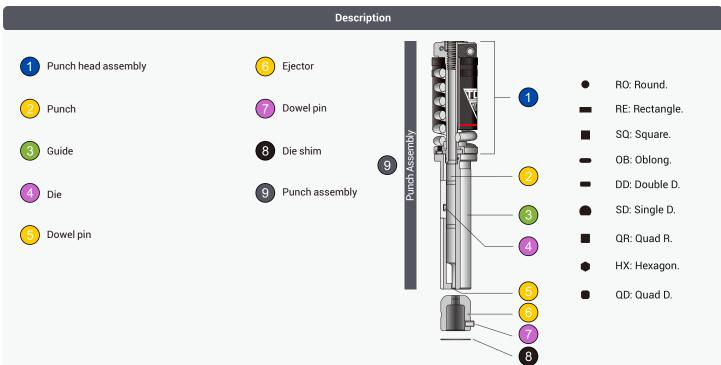


A STATION 10	55 / STANDARD	A Size: ØD ~12.7mm (~½)
Product		Prouduct Overview
Punch Assembly	Single Groove	versatility and durability compared to the E85 series. • Quick adjustable structure and easy handle due to one-piece punch head assembly reduces ves
Standard Punch	RO SQ RE OB SD DD QD QR HX	 Interchangeable: can be installed in other brands punch head assemblies. Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments. TiCN coating available upon request for additional protection.
Standard Guide	RO SQ RE OB SD DD OB SD DD QD QR HX	Guides treated with nitriding process to enhance compressive, wear, and corrosion resistance.
Punch Head Assembly		 Ketec's patent, QuickAdjust™, allowing at least twice less amount of time to adjust punch length.
Die	RO SQ RE OB SD DD QD QR HX	 Standard: Slugfree. Options: Slughugger, Vacuum. After grinding, a die shim is required to maintain a consistent height of 30mm. Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 5pcs/pack.
		Description
1 Punch head assen 2 Punch 3 Guide 4 Die 5 Dowel pin	7 Dowel p 8 Die shir	Poin RO: Round. RE: Rectangle. SQ: Square.

T85 / LIGHT DUTY

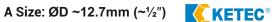






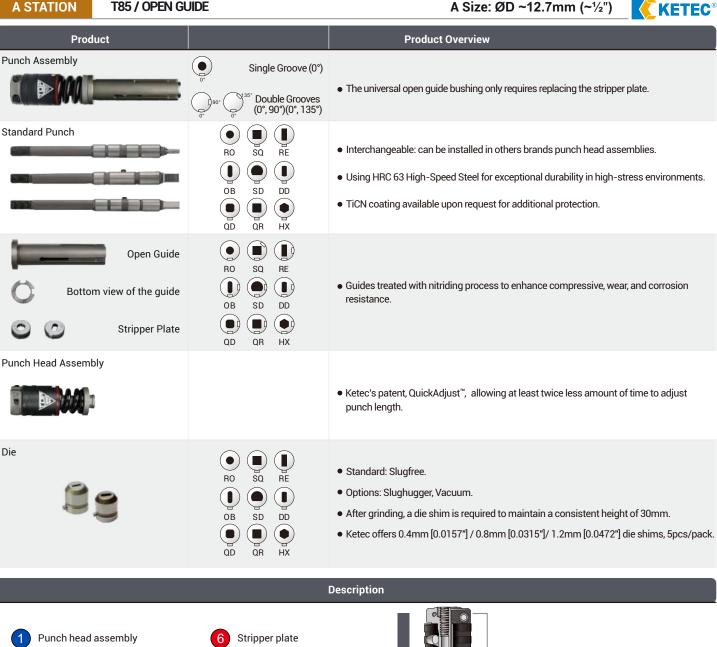
A STATION	T85 / FULLY G	UIDED		A Size: ØD ~	·12.7mm (~½")	KETEC®
Produ	ct		Р	roduct Overview		
Punch Assembly		Single Groove(0	Traditional strippeKetec's Fully Guide	ulting from narrower punch plates often leave larger ga Solution eliminates the rise d thin material applications	ps, exposing blades to vul sk of punch breakage, ben	nerability.
Fully Guided Punch		RO SQ RE OB SD DD OB SD DD OD OR HX	Interchangeable: 0Using HRC 63 Hig	with better rigidity and less can be installed in others bra h-Speed Steel for exception able upon request for addit	ands punch head assemb	
Fully Guided Guide	1	RO SQ RE OB SD DD OB SD DD QD QR HX	extending tool life	punch configurations provi by at least threefold compa h nitriding process to enhal	red to unguided setups.	
Punch Head Assembly	y		 Ketec's patent, Qu punch length. 	ickAdjust™, allowing at leas	st twice less amount of tir	me to adjust
Die	3	RO SQ RE OB SD DD OD QR HX				
			Description			
	1	2	3	4	5	
			9			
1	nick Turret/T85 Fully Guided nch Assembly/A	Thick Turret/85 Fully Guided Punch/A	Thick Turret Die/A	Thick Turret/85 Fully Guided Guide/A	Thick Turret/T85 Punch Head Assembly	<u>//A</u>

T85 / FULLY GUIDED SPS



		01DED 252		Size: ØD ~12.7mm	(~½") KETE
Product			Product Ov	erview	
Punch Assembly	(Only suitable for round shapes. Single Groove (0°)	Ketec's Fully Guided solution e We only recommend thin mate		reakage, bending, and die dama
fully Guided SPS Punch		RO Punch inserts has two shaft sizes: RO Ø3.17 RO Ø6	 Enhance structure with better Punch insert can be replaced i Using HRC 63 High-Speed Ste TiCN coating available upon re 	ndividually, low cost. el for exceptional durability ir	n high-stress environments.
ully Guided Guide		PO RO	 Close-stripper-to-punch confextending tool life by at least t Guides treated with nitriding presistance. 	hreefold compared to ungui	ded setups.
unch Head Assembly			• Ketec's patent, QuickAdjust", punch length.	allowing at least twice less	amount of time to adjust
ie					
		RO	 Standard: Slugfree. Options: Slughugger, Vacuum After grinding, a die shim is re Ketec offers 0.4mm [0.0157"] 	quired to maintain a consist	
		RO	 Options: Slughugger, Vacuum After grinding, a die shim is re	quired to maintain a consist	
	1	RO 2	 Options: Slughugger, Vacuum After grinding, a die shim is re Ketec offers 0.4mm [0.0157"] 	quired to maintain a consist	
		RO 2	 Options: Slughugger, Vacuum After grinding, a die shim is re Ketec offers 0.4mm [0.0157"] 	quired to maintain a consist	[0.0472"] die shims, 5pcs/pac
	Thick Turret/T85 Fully Guided SPS Punch Assembly/A	Thick Turret/85 Full	Options: Slughugger, Vacuum After grinding, a die shim is re Ketec offers 0.4mm [0.0157"] Description 3	quired to maintain a consist	[0.0472"] die shims, 5pcs/pac

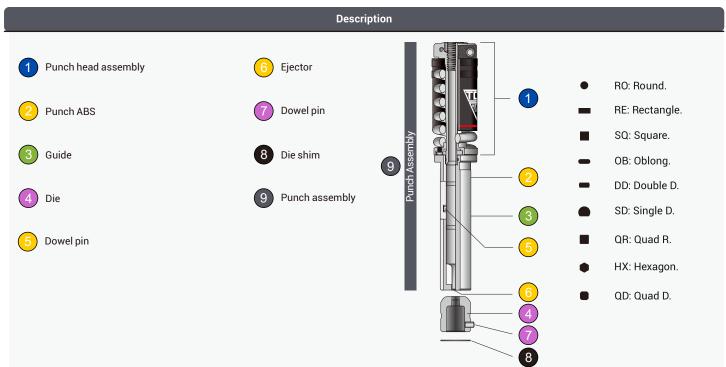
T85 / OPEN GUIDE



RO: Round. Ejector Punch RE: Rectangle. SQ: Square. Guide Dowel pin OB: Oblong. DD: Double D. Die Die shim SD: Single D. Dowel pin Punch assembly QR: Quad R. HX: Hexagon. QD: Quad D. 9

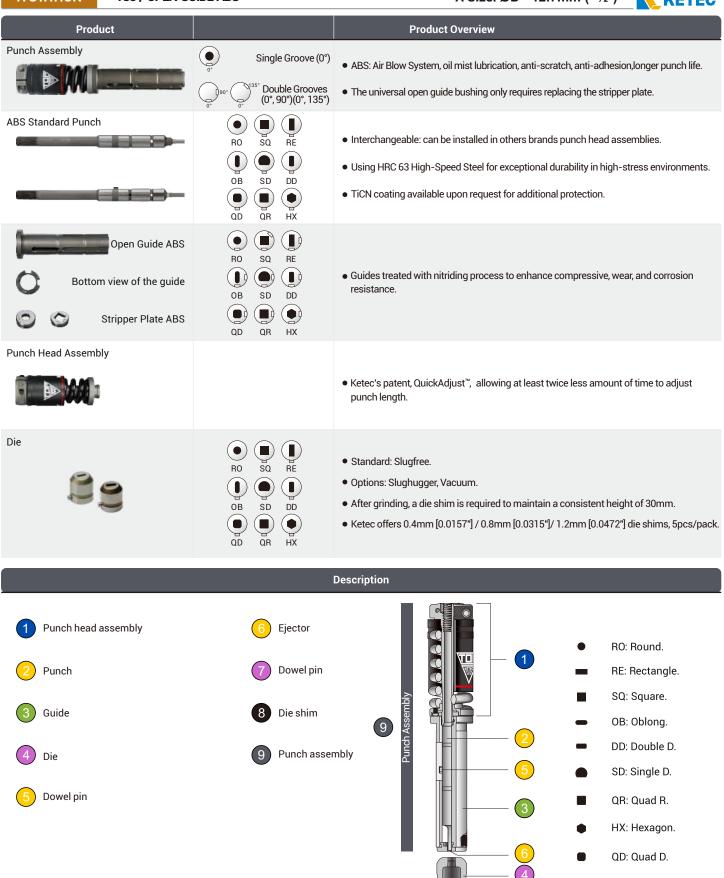
T85 / STANDARD ABS

AUIATION	1007017410		A GIZC: 9D 1Z:711111 (72)
Produ	ıct		Product Overview
Punch Assembly		Single Groove (0°) One of the state of the	ABS: Air Blow System, oil mist lubrication, anti-scratch, anti-adhesion, longer punch life.
Standard Punch ABS		RO SQ RE OB SD DD OD QR HX	 Interchangeable: can be installed in other brands punch head assemblies. Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments. TiCN coating available upon request for additional protection.
Standard Guide ABS		RO SQ RE OB SD DD OD QR HX	Guides treated with nitriding process to enhance compressive, wear, and corrosion resistance.
Punch Head Assembl	у		 Ketec's patent, QuickAdjust[™], allowing at least twice less amount of time to adjust punch length.
Die		RO SQ RE OB SD DD OB SD DD QD QR HX	 Standard: Slugfree. Options: Slughugger, Vacuum. After grinding, a die shim is required to maintain a consistent height of 30mm. Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 5pcs/pack.



T85 / OPEN GUIDE ABS

A Size: ØD ~12.7mm (~½")	KETEC®
Product Overview	



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A Size: ØD ~12.7mm (~1/2")

Product Product Overview Punch Assembly • Ketec's fully guided solution eliminates the risk of punch breakage, bending, and die damage. () () Single Groove (0°) • We only recommend thin material applications. Double Grooves (0°, 90°)(0°, 135°) • ABS: oil mist lubrication, anti-scratch, anti-adhesion, longer punch life. Fully Guided Punch ABS (\blacksquare) sq • Enhance structure with better rigidity and less deformation on punch. RE RO • Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments. OB SD DD • TiCN coating available upon request for additional protection. QR HX Fully Guided Guide ABS RO SQ RE • Guides treated with nitriding process to enhance compressive, wear, and corrosion resistance. SD DD **•**) QR HX **Punch Head Assembly** Ketec's patent, QuickAdjust[™], allowing at least twice less amount of time to adjust punch length. Die • Standard: Slugfree. • Options: Slughugger, Vacuum. • After grinding, a die shim is required to maintain a consistent height of 30mm. SD DD • Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 5pcs/pack. QR



T85 / FULLY GUIDED SPS ABS

		NOISE 22 ISININI (72)
Product		Product Overview
Punch Assembly	Only suitable for round shapes. Single Groove (0°)	 ABS: Air Blow System, oil mist lubrication, anti-scratch, anti-adhesion, longer punch life. The universal open guide bushing only requires replacing the stripper plate.
Fully Guided SPS Punch ABS	Punch inserts has two shaft sizes: RO Ø3.17 RO Ø6	 Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments. TiCN coating available upon request for additional protection.
Fully Guided Guide ABS	● RO	Guides treated with nitriding process to enhance compressive, wear, and corrosion resistance.
Punch Head Assembly		 Ketec's patent, QuickAdjust™, allowing at least twice less amount of time to adjust punch length.
Die	RO	 Standard: Slugfree. Options: Slughugger, Vacuum. After grinding, a die shim is required to maintain a consistent height of 30mm. Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 10pcs/pack.

Comparison of Standard, Fully Guided, Contouring Tooling



Use a 2mm diameter punch and die clearance +0.2mm contouring tool for progressive punching of a 1mm cold-rolled sheet with a 0.5mm pitch.

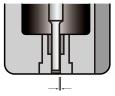
STANDARD



single clearance: 0.15mm



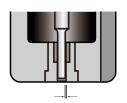
FULLY GUIDED



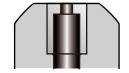
single clearance: 0.025mm



CONTOURING



single clearance: 0.01mm



T85 / LIGHT DUTY FULLY GUIDED SPS

T85 / LIGHT DUTY FULLY GUIDED SPS

A STATION 1037 EIGHT E	DOTT FOLLY GOIDED 3F3	A Size. ØD ~12.7iiiii (~72)
Product		Product Overview
Punch Assembly	Only suitable for round shapes.	Ketec's fully guided solution eliminates the risk of punch breakage, bending, and die damage.
	0.2	We only recommend thin material applications.
	Single Groove (0°)	Reduce punching noise and extend the lifespan of the spring.
Fully Guided SPS Punch	Punch inserts has two shaft sizes: RO Ø3.17 RO Ø6	 Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments. TiCN coating available upon request for additional protection.
Fully Guided Guide		
	RO	Guides treated with nitriding process to enhance compressive, wear, and corrosion resistance.
Punch Head Assembly		Ketec's patent, QuickAdjust™, allowing at least twice less amount of time to adjust punch length.
Die	RO	 Standard: Slugfree. Options: Slughugger, Vacuum. After grinding, a die shim is required to maintain a consistent height of 30mm. Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 10pcs/pac
		Description
1 Punch head assembly	5 Punch Insert	
2 Punch	6 Die	RO: Round. RE: Rectangle.
3 Guide	7 Die shim	SQ: Square. OB: Oblong. DD: Double D.
		OB: Oblong. DD: Double D.
4 Retaining Screw	8 Punch assen	mbly SD: Single D.
		QR: Quad R.
		→ HX: Hexagon.
		QD: Quad D.
		<u> </u>

T85 / CONTOURING SPS

Size: ØD ~12.7mm (~1/2")	KETEC®
····	

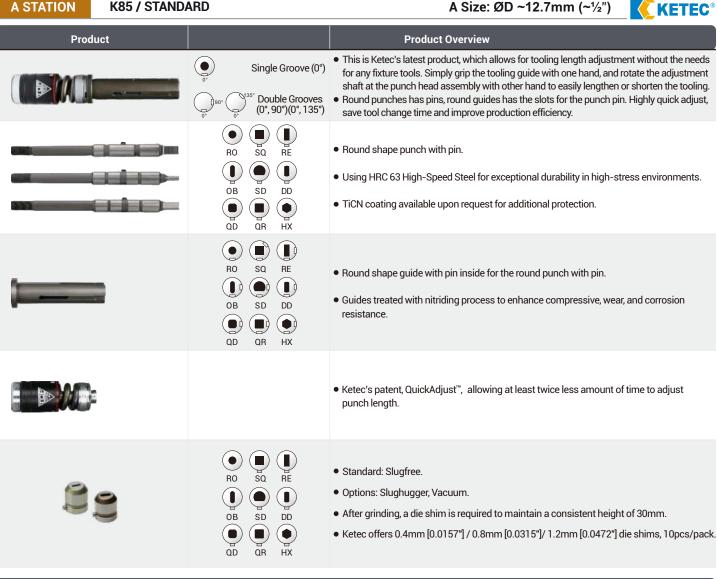


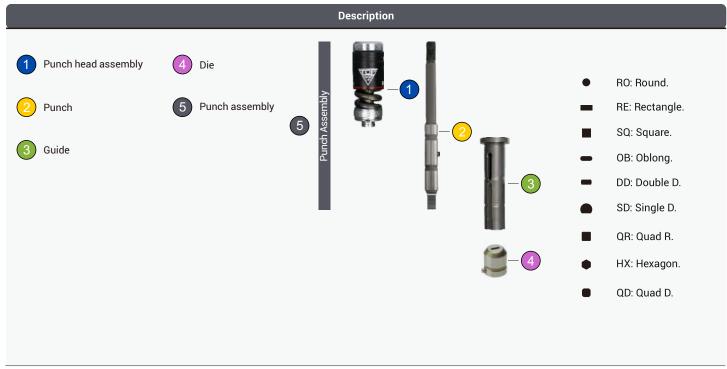
QR: Quad R.

HX: Hexagon.

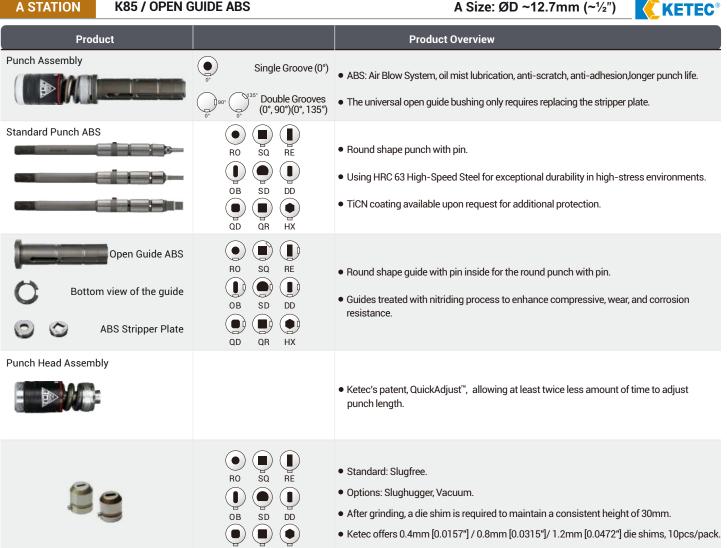
QD: Quad D.

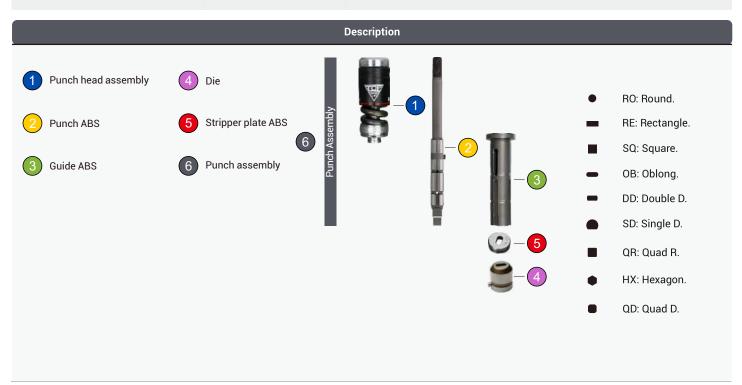
K85 / STANDARD





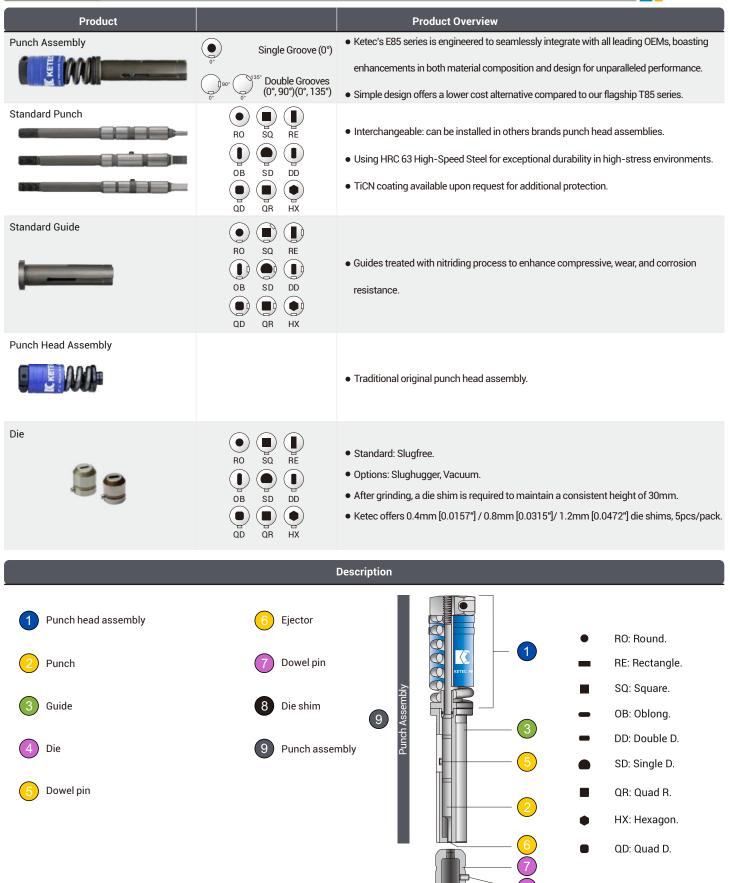




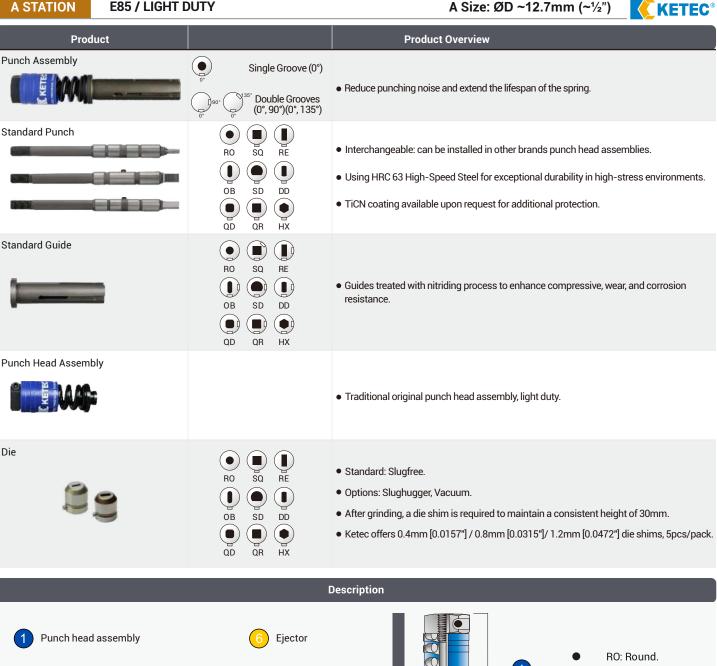


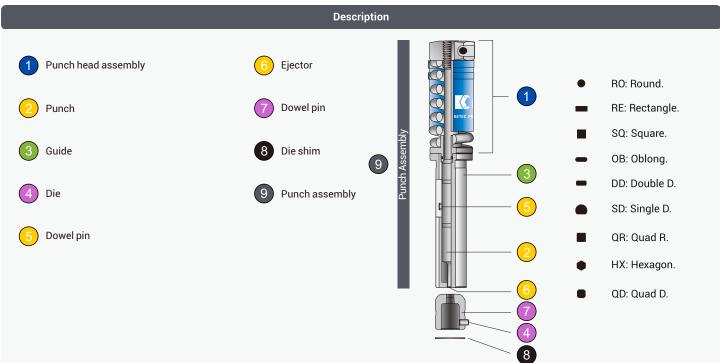
A Size: ØD ~12.7mm (~1/2")

E85 / STANDARD



E85 / LIGHT DUTY





B STATION Thick Turret Punch Assembly Index - 85 Series



FEATURED PRODUCTS





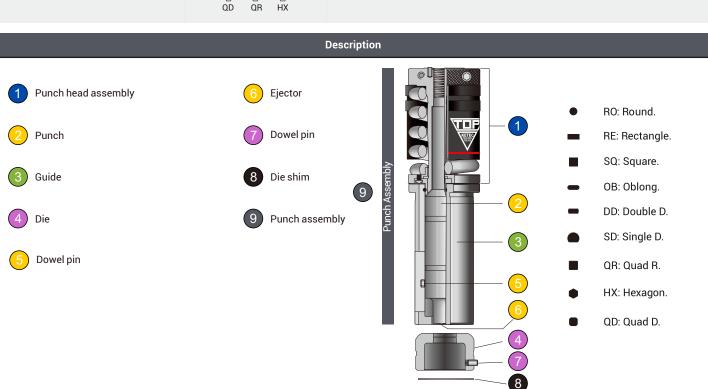


T85 OPEN GUIDE T85 OPEN GUIDE ABS

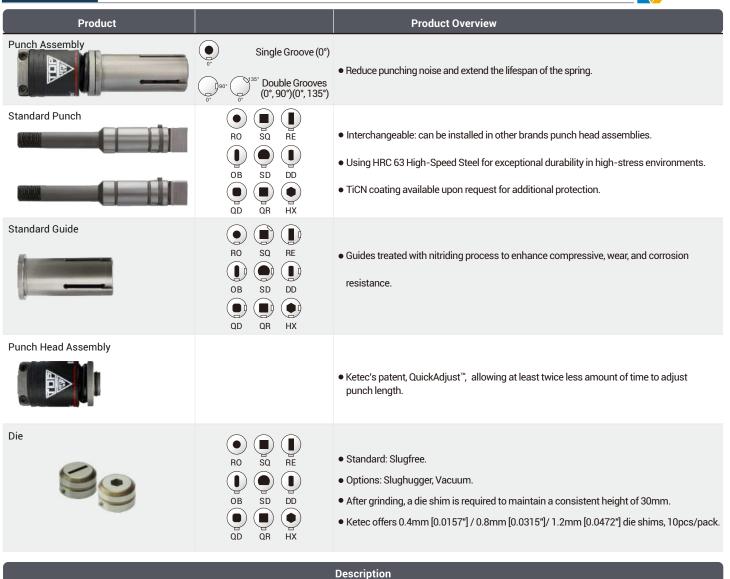
T85 BASIC STRUCTURE

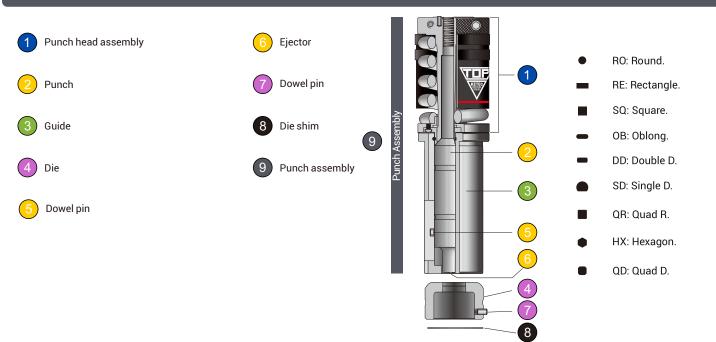


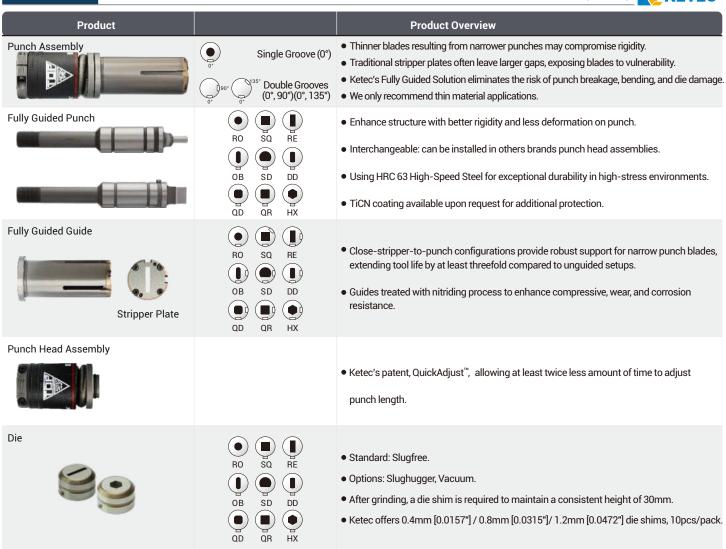




T85 / LIGHT DUTY

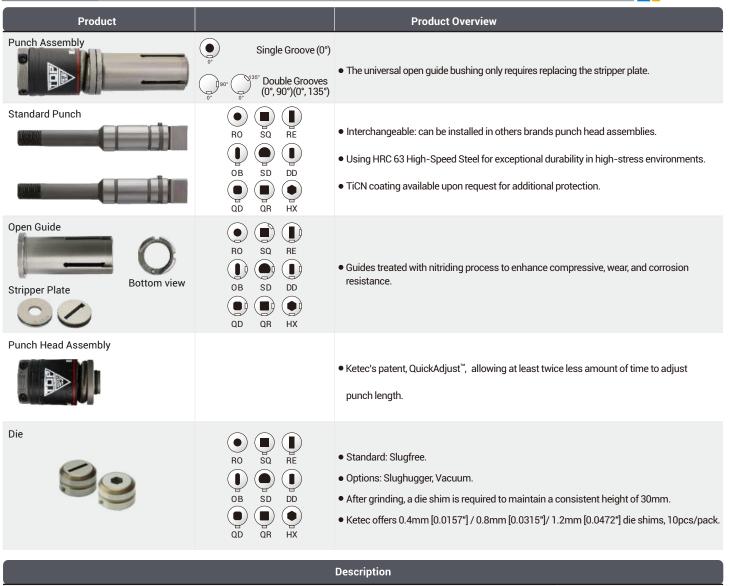


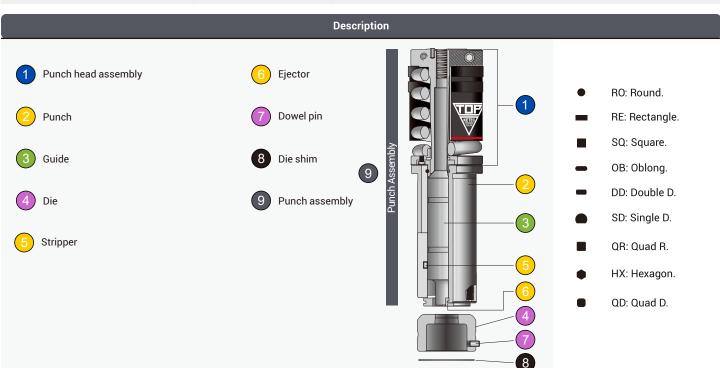


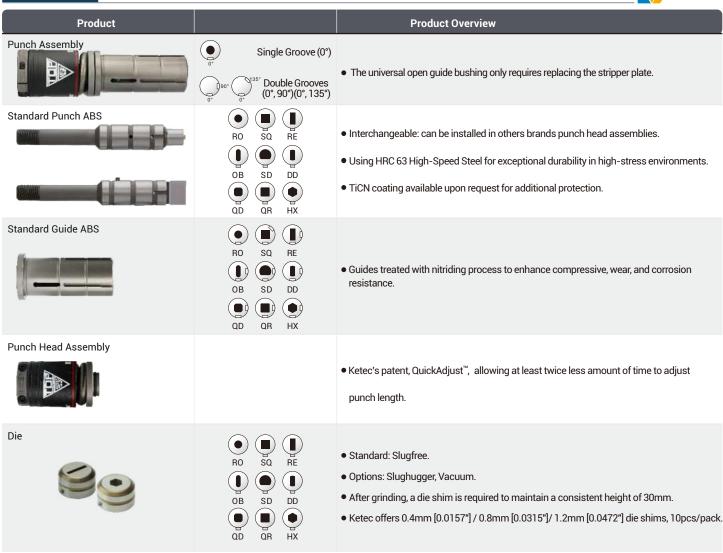




T85 / OPEN GUIDE







Description Punch head assembly Ejector RO: Round. ABS hole Punch RE: Rectangle. SQ: Square. Guide Dowel pin OB: Oblong. DD: Double D. Die shim Die SD: Single D. Dowel pin Punch assembly QR: Quad R. HX: Hexagon. QD: Quad D. 9

T85 / FULLY GUIDE ABS



DOTATION	100 / 1 OLLI	GOIDED ADO	A Size. 9D *S1.711111 (* 1 - 74)
Produ	et		Product Overview
Punch Assembly		Single Groove (0°) Single Grooves (0°, 90°)(0°, 135°)	 Ketec's fully guided solution eliminates the risk of punch breakage, bending, and die damage. We only recommend thin material applications. ABS: oil mist lubrication, anti-scratch, anti-adhesion, longer punch life.
Fully Guide Punch AB		RO SQ RE OB SD DD OB SD DD QD QR HX	 Enhance structure with better rigidity and less deformation on punch. Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments. TiCN coating available upon request for additional protection.
Fully Guided Guide AB	Stripper Plate ABS	RO SQ RE OB SD DD OB SD DD QD QR HX	Guides treated with nitriding process to enhance compressive, wear, and corrosion resistance.
Punch Head Assembly	у		 Ketec's patent, QuickAdjust[™], allowing at least twice less amount of time to adjust punch length.
Die	3	RO SQ RE OB SD DD OB QD QR HX	 Standard: Slugfree. Options: Slughugger, Vacuum. After grinding, a die shim is required to maintain a consistent height of 30mm. Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 10pcs/pack.
			Description



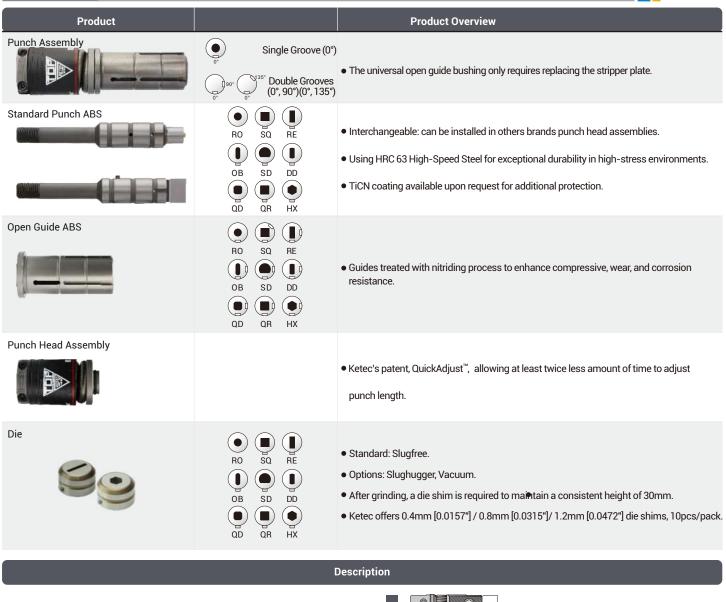








- RO: Round.
- RE: Rectangle.
- SQ: Square.
- OB: Oblong.
- DD: Double D.
- SD: Single D.
- QR: Quad R.
- HX: Hexagon.
- QD: Quad D.



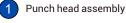
Ejector Punch head assembly RO: Round. Dowel pin Punch RE: Rectangle. SQ: Square. Guide Dowel pin OB: Oblong. DD: Double D. Die Die shim SD: Single D. Stripper Punch assembly QR: Quad R. HX: Hexagon. QD: Quad D.

9



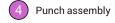
Punch head assembly Punch Guide Punch assembly Punch assembly RO: Round. RE: Rectangle. SQ: Square. OB: Oblong. DD: Double D. SD: Single D. QR: Quad R. HX: Hexagon. QD: Quad D.

B STATION R85 / OF	EN GUIDE	A Size: ØD ~31.7mm (~1-¼) KETEC*
Product		Product Overview
Punch Assembly	Single Groove (0°) 0° Single Groove (0°) 0° 0° 0° 0° 0°, 90°)(0°, 135°)	The universal open guide bushing only requires replacing the stripper plate.
Standard Punch	RO SQ RE OB SD DD QD QR HX	 Round shape punch with pin. Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments. TiCN coating available upon request for additional protection.
Open Guide	RO SQ RE OB SD DD OB SD DD QD QR HX	 Round shape guide with pin inside for the round punch with pin. Guides treated with nitriding process to enhance compressive, wear, and corrosion resistance.
Punch Head Assembly		■ Ketec's patent, Highly QuickAdjust™.
Die	RO SQ RE OB SD DD OB SD DD QD QR HX	 Standard: Slugfree. Options: Slughugger, Vacuum. After grinding, a die shim is required to maintain a consistent height of 30mm. Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 10pcs/pack.
		Description
1 Punch head assembly		







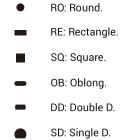


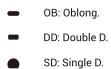












QR: Quad R.

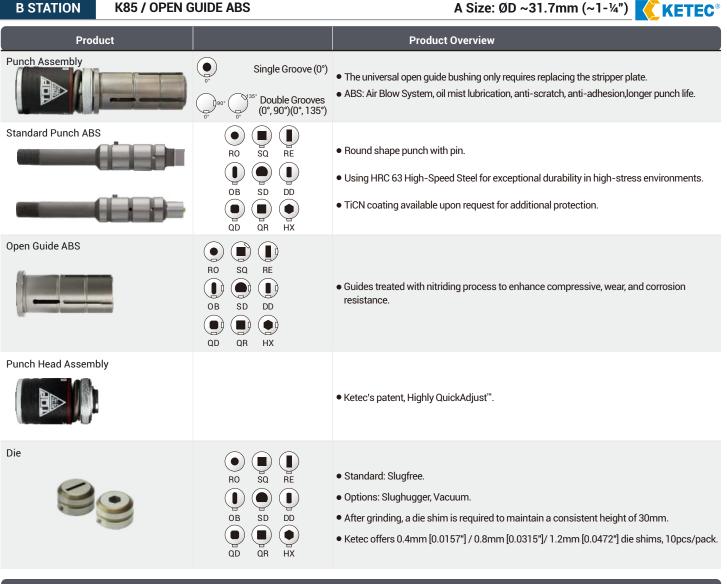
HX: Hexagon.

QD: Quad D.

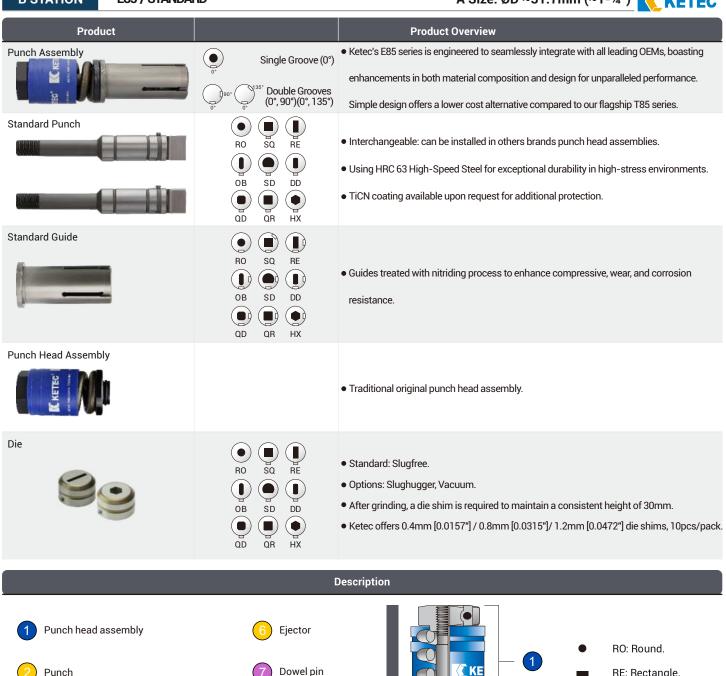


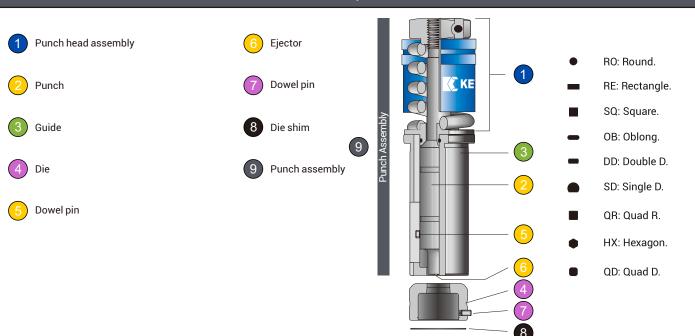


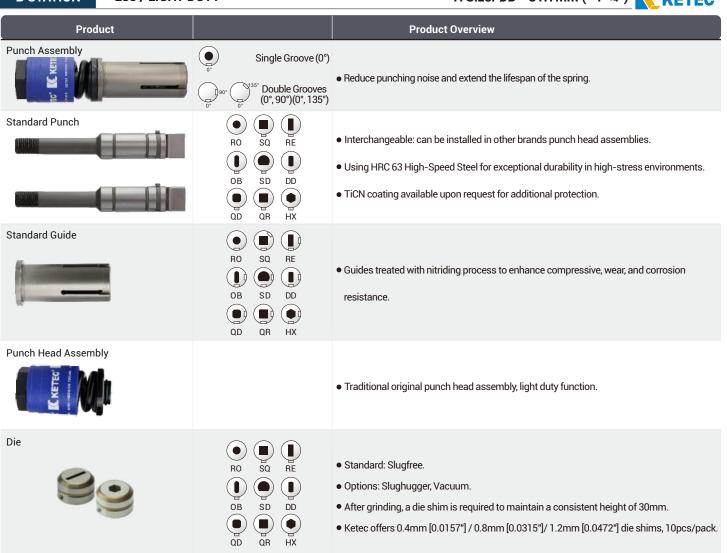


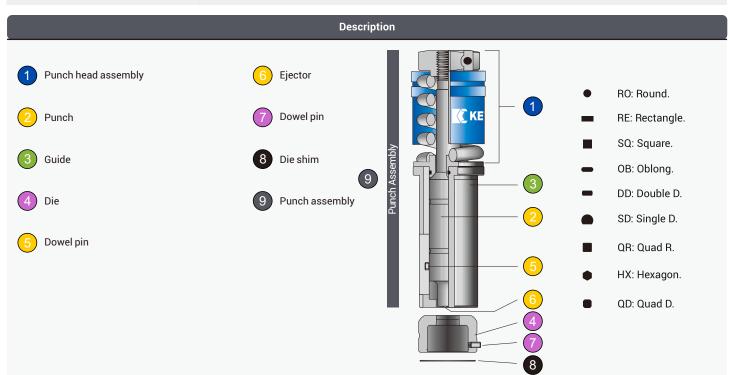


Description Punch head assembly RO: Round. Punch RE: Rectangle. Guide SQ: Square. OB: Oblong. Punch assembly DD: Double D. SD: Single D. QR: Quad R. HX: Hexagon. QD: Quad D.











C STATION
Thick Turret Punch Assembly Index - 85 Series T85 **T85 LIGHT DUTY T85 FULLY GUIDED** T85 ABS E85 PUNCH ASSEMBLIES PUNCH HEAD ASSEMBLIES GUIDES **GUIDE ASSEMBLIES** KETEC"

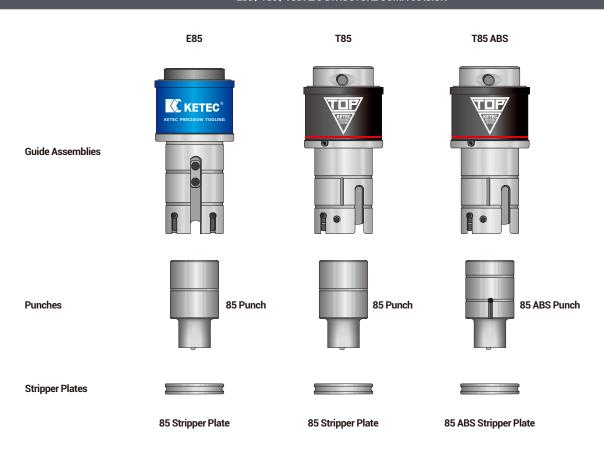


FEATURED PRODUCTS

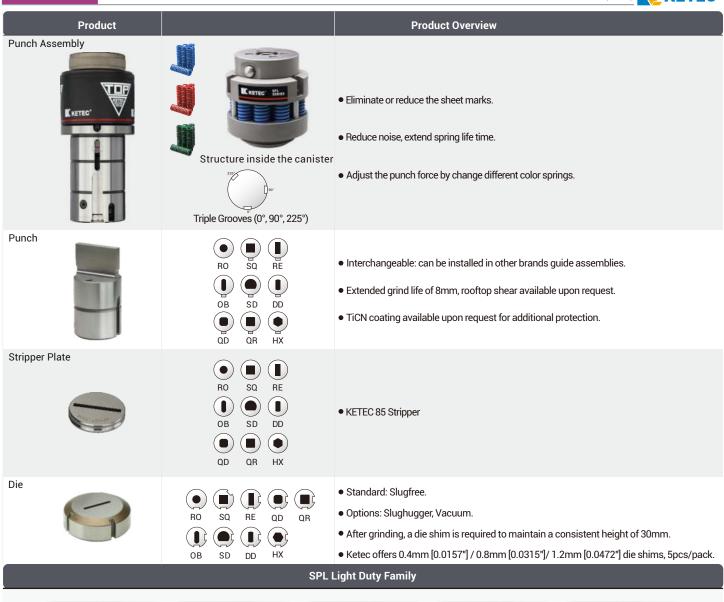


T85 & T85 ABS

E85 / T85 / T85 ABS STRUCTURE COMPARASION

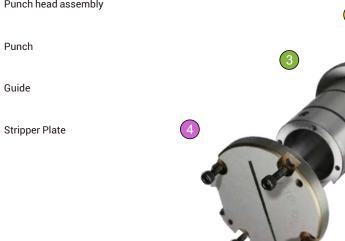


C STATION 185		A Size: ØD ~50.8mm (~2") KETE(
Product		Product Overview
Punch Assembly	Triple Grooves (0°, 90°, 225°)	 Ketec's T85 series stands out as one of our top-selling products, offering enhanced versatiliand durability compared to the E85 series. To adjust length, press down on the quick-adjust button, rotate the punch head clockwise or counterclockwise to adjust punch length.
Punch	RO SQ RE OB SD DD OB QD QR HX	 Interchangeable: can be installed in other brands guide assemblies. Extended grind life of 8mm, rooftop shear available upon request. TiCN coating available upon request for additional protection.
stripper Plate	RO SQ RE OB SD DD QD QR HX	• KETEC 85 Stripper
oie	RO SQ RE QD QR OB SD DD HX	 Standard: Slugfree. Options: Slughugger, Vacuum. After grinding, a die shim is required to maintain a consistent height of 30mm. Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 5pcs/pack Description
		Description
 Punch head assembly Punch Guide 	6 Stripper s 7 Stripper p 8 Die shim	SO: Square
_	•	99 SAC
4 Die	9 Punch as	sembly
5 Ejector		SD: Single D. QR: Quad R.

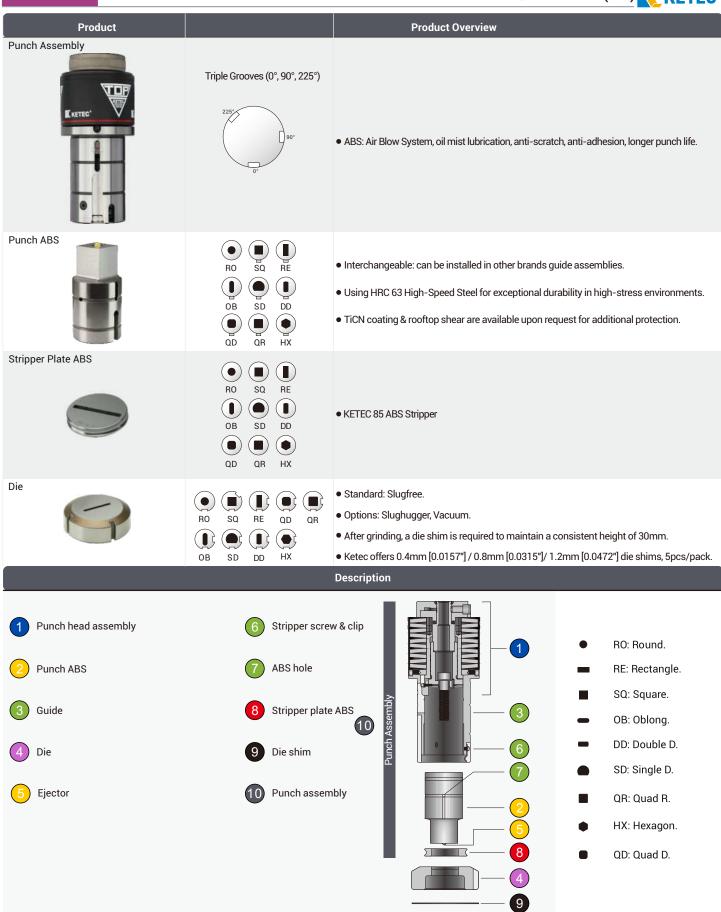


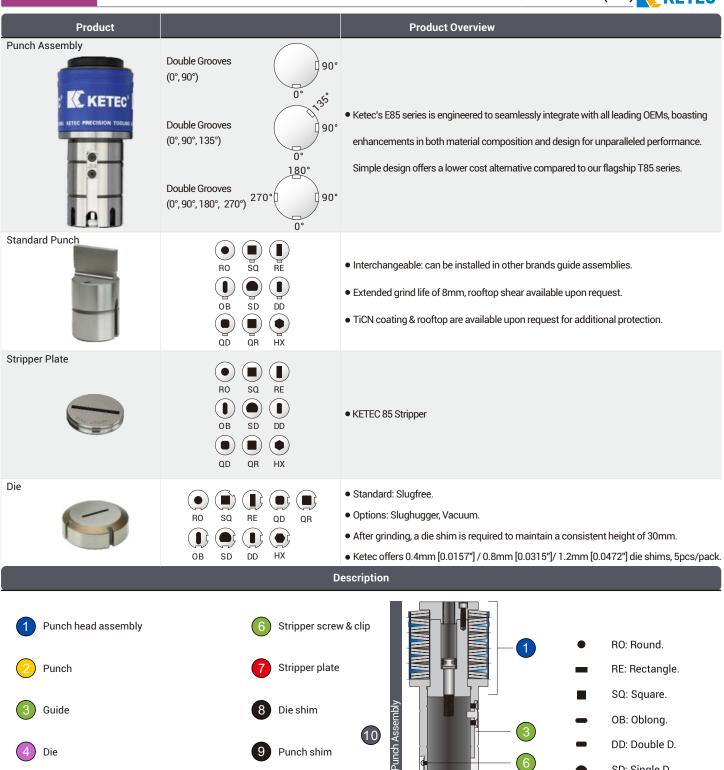


C STATION	T85 FULLY (GUIDED	A Size: ØD ~50.8mm (~2") KETEC®
Produ	uct		Product Overview
Punch Assembly	CHILA	Double Grooves (0°, 90°)	 Thinner blades resulting from narrower punches may compromise rigidity. Traditional stripper plates often leave larger gaps, exposing blades to vulnerability. Ketec's Fully Guided Solution eliminates the risk of punch breakage, bending, and die damage. We only recommend thin material applications.
Punch		RO SQ RE OB SD DD OB QD QR HX	 Enhance structure with better rigidity and less deformation on punch. Interchangeable: can be installed in others brands guide assemblies. Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments. TiCN coating & rooftop shear are available upon request for additional protection.
Stripper Plate		RO SQ RE QD QR OB SD DD HX	Close-stripper-to-punch configurations provide robust support for narrow punch blades, extending tool life by at least threefold compared to unguided setups.
Die	7	RO SQ RE QD QR OB SD DD HX	 Standard: Slugfree. Options: Slughugger, Vacuum. After grinding, a die shim is required to maintain a consistent height of 30mm. Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 5pcs/pack.
			Description
1 Punch head a 2 Punch	assembly		RO: Round. RE: Rectangle. SQ: Square.



- OB: Oblong.
- DD: Double D.
- SD: Single D.
- QR: Quad R.
- HX: Hexagon.
- QD: Quad D.





Punch shim

Punch assembly

DD: Double D.

SD: Single D.

QR: Quad R.

HX: Hexagon.

QD: Quad D.

Die

Ejector

C STATION	185 OPTIONAL	LPARIS	A Size: ØD ~50.8mm (~2") KETEC®
Prod	luct		Product Overview
Slitting Punch (Type	19)	T85 + Slitting Punch T85 Light Duty + Slitting Punch T85 Fully Guided + Slitting Punch E85 + Slitting Punch	 Based on the 85 punch holder, interchangeable punch sizes are availabl It is suitable for various rectangular or oblong cutting tools.
Clusters (Punch, Die	e, Stripper Plate)	T85 Cluster T85 ABS Cluster T85 Fully Guided Cluster E85 Cluster	 Cluster is one of the commonly and widely used methods in sheet metal processing. The 85 series is equipped with a cluster slitting punch for customers to choose. Customers only need to provide the sheet metal drawing, thickness, machine model information.
Blank Die		• Mostly use in forming tools, such	h as lots of form down centerpoint, form down stamping logo / letter
Roller Ball Die		• The function of the roller ball die	is for scratch-resistant sheets.
Brush Die		• The function of the roller ball die	is for scratch-resistant sheets.
90 Guide		● Use for T85 / T85ABS / T85 LIGH	IT DUTY.
85 Guide		• Only for E85.	
Fully Guided		• Only for Fully Guided.	



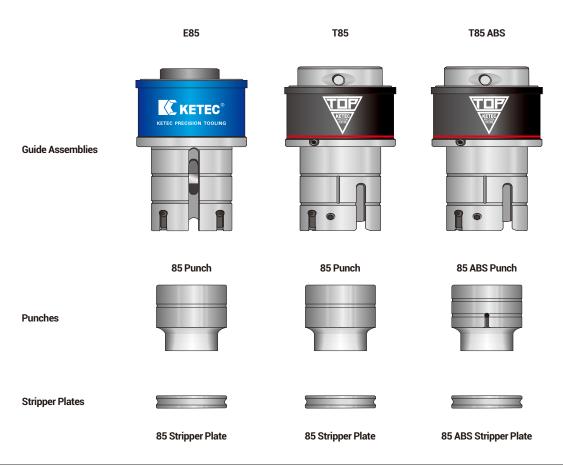


FEATURED PRODUCTS



T85 & T85 ABS

E85 / T85 / T85 ABS STRUCTURE COMPARASION



785



8



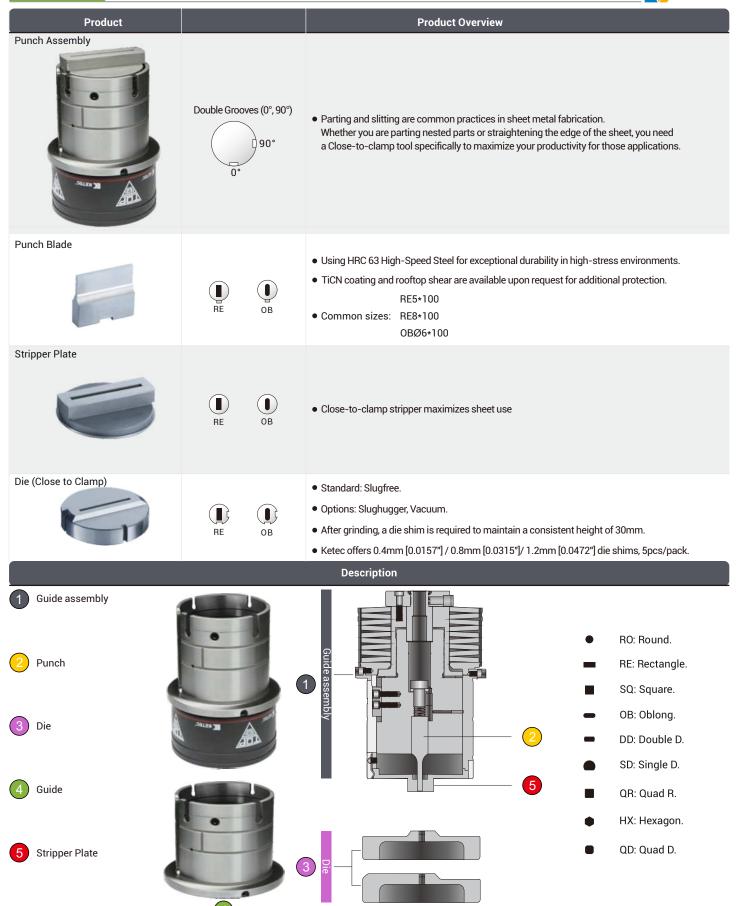
D STATION	T85 FULLY GUIDE	D	A Size: ØD ~88.9mm (~3-1/2") KETEC®
Produ	ıct		Product Overview
Punch Assembly		ouble Grooves (0°, 90°)	 Thinner blades resulting from narrower punches may compromise rigidity. Traditional stripper plates often leave larger gaps, exposing blades to vulnerability. Ketec's Fully Guided Solution eliminates the risk of punch breakage, bending, and die damage. We only recommend thin material applications.
Fully Guided Punch		RO SQ RE OB SD DD OB SD DD QD QR HX	 Enhance structure with better rigidity and less deformation on punch. Interchangeable: can be installed in others brands guide assemblies. Using HRC 63 High-Speed Steel for exceptional durability in high-stress environments. TiCN coating & rooftop shear are available upon request for additional protection.
Stripper Plate	RO OB	SQ RE QD QR SD DD HX	 Close-stripper-to-punch configurations provide robust support for narrow punch blades, extending tool life by at least threefold compared to unguided setups.
Die	RO OB	SQ RE QD QR SD DD HX	 Standard: Slugfree. Options: Slughugger, Vacuum. After grinding, a die shim is required to maintain a consistent height of 30mm. Ketec offers 0.4mm [0.0157"] / 0.8mm [0.0315"]/ 1.2mm [0.0472"] die shims, 5pcs/pack.
			Description
Punch head a	assembly		RO: Round. RE: Rectangle. SQ: Square.
3 Guide			OB: Oblong. DD: Double D.
4 Stripper Plate	2	4	SD: Single D.
			QR: Quad R.

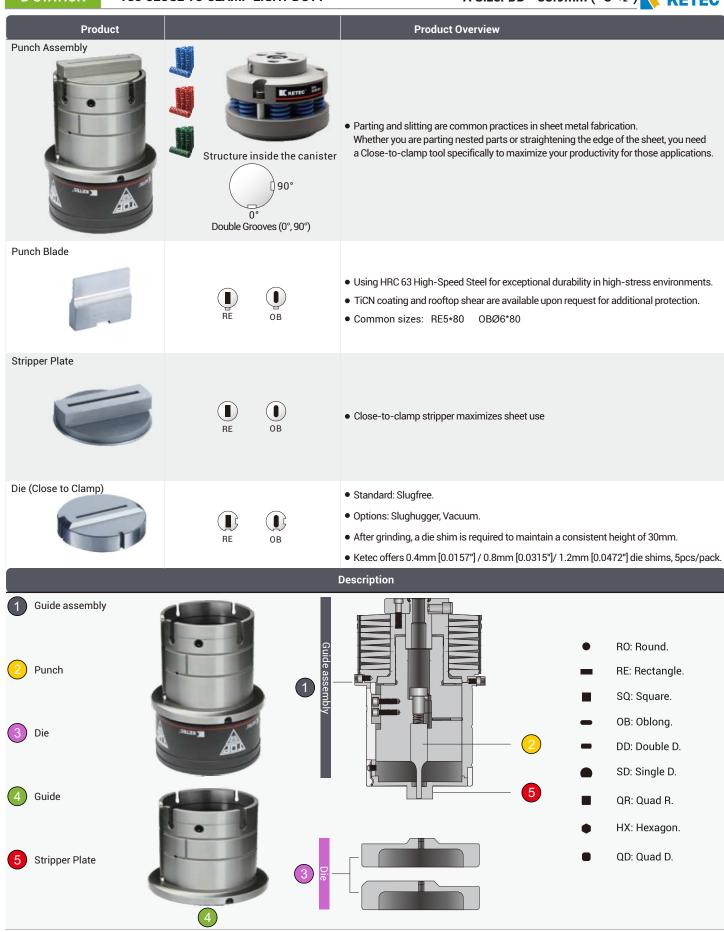
HX: Hexagon.

QD: Quad D.

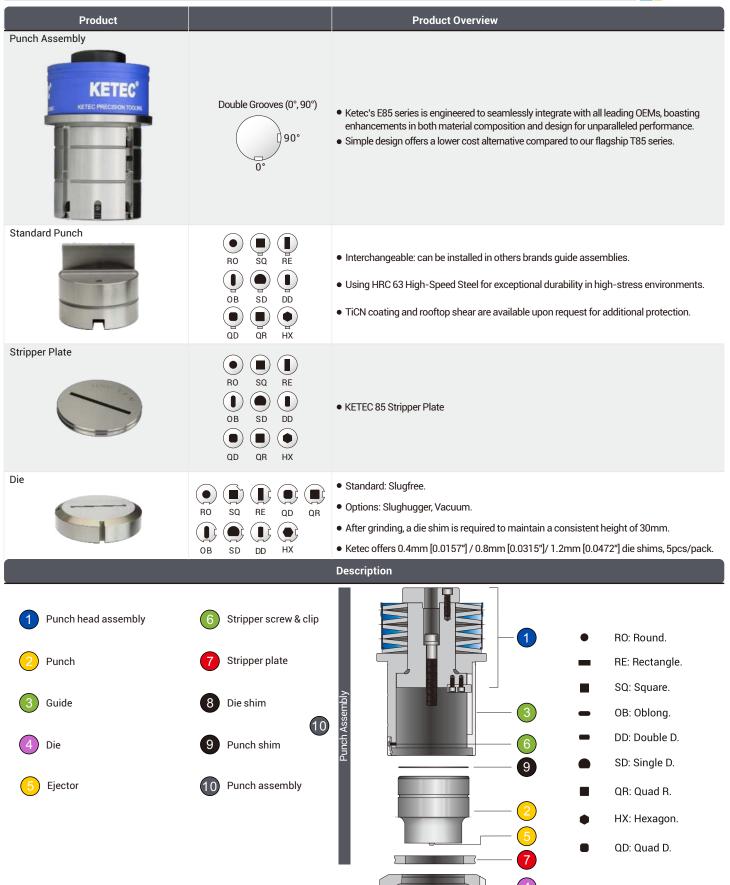


T85 / CLOSE TO CLAMP





E85



8

Roller Ball Die

Brush Die

Product		Product Overview
Slitting Punch (Type 16)	T85 + Slitting Punch T85 Light Duty + Slitting Punch T85 Fully Guided + Slitting Punch E85 + Slitting Punch	 Based on the 85 punch holder, interchangeable punch sizes are available It is suitable for various rectangular or oblong cutting tools.
Clusters (Punch, Die, Stripper Plate)	T85 Cluster T85 ABS Cluster T85 Fully Guided Cluster E85 Cluster	 Cluster is one of the commonly and widely used methods in sheet metal processing. The 85 series is equipped with a cluster slitting punch for customers to choose. Customers only need to provide the sheet metal drawing, thickness, machine model information.
Blank Die • Most	ly use in forming tools, such as	lots of form down centerpoint, form down stamping logo / letter

- The function of the roller ball die is for scratch-resistant sheets.
- The function of the roller ball die is for scratch-resistant sheets.



T85 / T85 ABS, ● Use for T85 LIGHT DUT



Close to Clamp

• Use for T85 CLOSE TO CLAMP.

185 CLOSE TO CLAMP LIGHT DUTY.





• Only use for E85.



• Only use for Fully Guided.







FEATURED PRODUCTS



T85 & T85 ABS

T85 STANDARD FAMILY





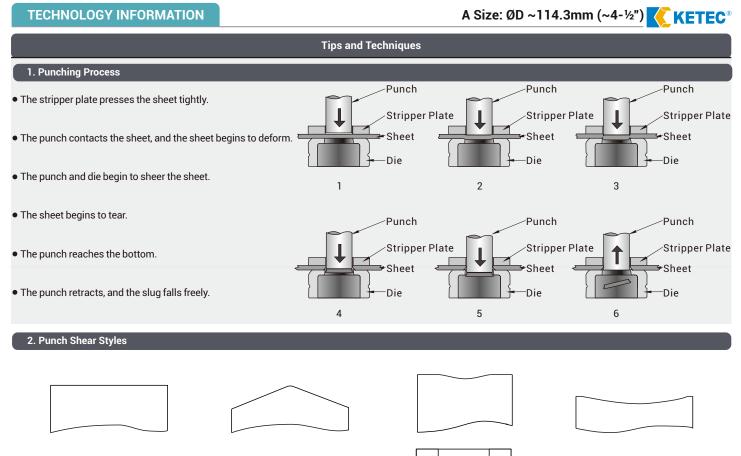


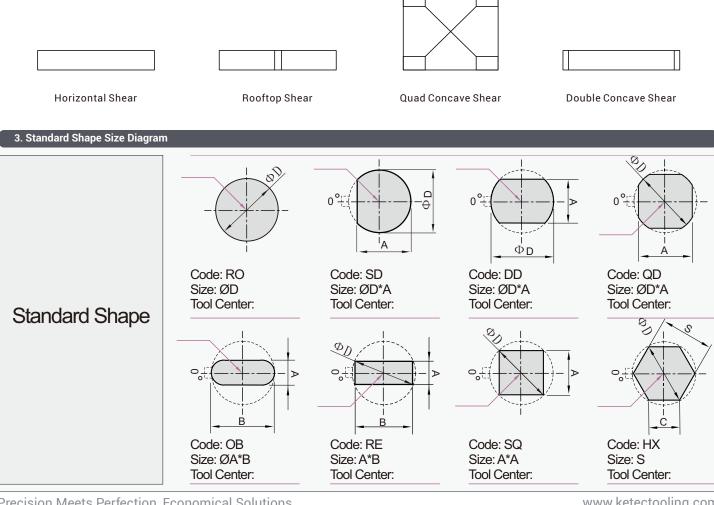
E STATION	STATION T85 FULLY GUIDED			A Size: ØD ~114.3mm (~4-½") KETEC ®			
Punch Assembly	Product		Pro	oduct Overview			
August Au		Double Grooves (0°, 90°)	Traditional stripper Ketec's Fully Guidect	liting from narrower punches r plates often leave larger gaps, I Solution eliminates the risk o d thin material applications.	exposing blades to vul	nerability.	
Punch		RO SQ RE OB SD DD OB SD DD QD QR HX	Interchangeable: caUsing HRC 63 High	with better rigidity and less de an be installed in others branc -Speed Steel for exceptional of ftop shear are available upon	ls guide assemblies. durability in high-stres		
Stripper Plate		RO SQ RE QD QF OB SD DD HX	 Close-stripper-to-p 	ounch configurations provide ly at least threefold compared		row punch blades,	
Die		RO SQ RE QD QF OB SD DD HX	After grinding, a die				
			Description				
	1	2	3	4	5	6	
	Lev Krenc V	K AFFEC					
	Thick Turret/T85 Fully Guided unch Assembly/E	Thick Turret/T85 Punch Head Assembly/E	Thick Turret / 85 Fully Guided Guide	Thick Turret/85 Fully Guided Punch/E	Thick Turret/85 Fully Guided Stripper Plate/E	Thick Turret Die/E	
Size	General use	General use	General use	RE5*110	RE5*110	RE5*110+0.15	



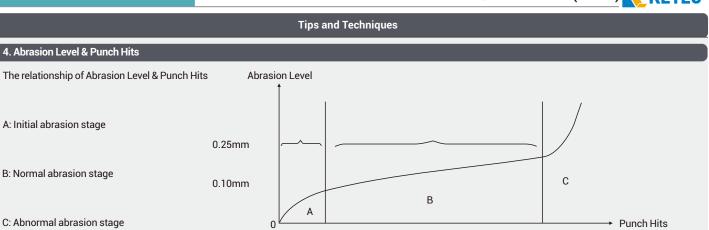






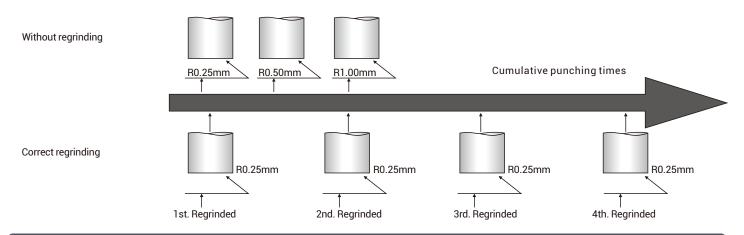


Precision Meets Perfection, Economical Solutions.

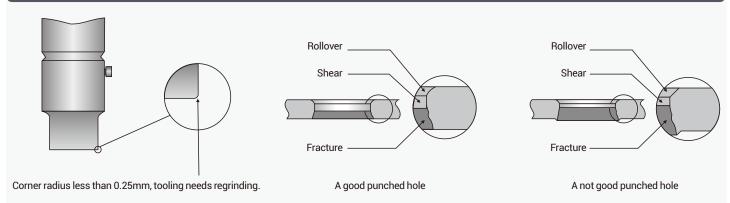


5. Tooling Regrinding Instruction

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



6. Timing for Regrinding



7. Precautions of Regrinding

Precautions:

There are various methods for sharpening tooling blades. A specialized blade sharpening machine can be used, or it can be done on a surface grinder. When sharpening tooling blades, the following factors need to be considered:

- Choose an appropriate grinding wheel, it is recommended to use a loose, coarse-grained, soft grinding wheel, such as WA46KV.
- The grinding amount for each pass should not exceed 0.015mm. Excessive grinding can cause surface overheating, resulting in softening of the tooling or the formation of cracks.
- Sufficient cooling must be provided, and the grinding wheel should be kept sharp.
- The punch and lower die should be kept stable and fixed, using specialized fixtures and tooling.
- After sharpening, the edge should be treated with oil to avoid excessive sharpness. Clean thoroughly, demagnetize, apply oil, and adjust the tooling height.

A Size: ØD ~114.3mm (~4-½") **KETEC**®

Tips and Techniques

8. Adjustment after Regrinding

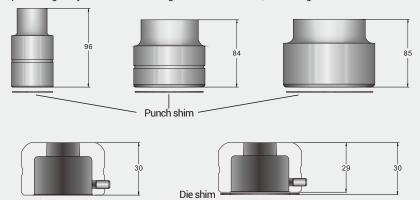
Punch Adjustment

The new punch heights for C, D, and E stations are as shown in the diagram.

In older quide assemblies like E85 series, after each sharpening of the punch, it is necessary to add shims to adjust the punch height.

The adjustment method is as follows: the thickness of the shims plus the punch height should equal the values shown in the diagram below.

In newer guide assembly like T85 or T90, punch height adjustment is made using threaded mechanism, eliminating the need for shims.



Die Adjustment

9. Calculation of Punching Force

Punching force (KN) = Shape Perimeter (L) X Thickness (T) X 0.345 X Material Factor X Shear Fator

e.g. SQ40*40, T=3.0mm, SPCC, Flat shear

Punching force = (40X4)C3.0C0.345X1.2X1.0=198.72 (KN). [19.9 tons]

40 40

If the thickness of the sheet metal pate is greater than or equal to 3mm, the punching force needs to be calculated to determine:

- 1. whether the required punching force exceeds the machine's rated nominal force.
- 2. whether the required punching force exceeds the pressure-bearing capacity of the punch's weakest part.

The punching force can be reduced by altering the punch edge structure, changing the station, or using heavy duty tooling to avoid damage to the tool or the machine.

10. Recommended Value of Die Clearance

Sheet material:

Different materials have varying hardness and ductility, which affects the required clearance. Softer materials generally require smaller clearances, while harder materials need larger clearance.

Sheet thickness:

As the thickness of the sheet increases, the required die clearance should also increase to accommodate proper cutting or forming without causing damage to the tooling or material.

Die clearance:

The clearance between the punch and die should be appropriately set based on the sheet material and thickness to ensure clean cuts, prevent excessive wear, and avoid issues like burrs or deformation.

In general, as the sheet thickness increases, the clearance should also increase proportionally to maintain the quality of the process.

Thickness Material (T)	0.8	1.0	0.8	0.8	2.5	3.0	3.2	3.5	4.0	4.5	5.0	5.5	6.0
Aluminum	0.12	0.15	0.2	0.3	0.35	0.45	0.48	0.53	0.6	0.68	0.75	0.83	0.9
SPCC, Mild Steel	0.15	0.2	0.3	0.4	0.5	0.6	0.65	0.7	0.8	0.9	1	1.1	1.2
Stainless Steel	0.15	0.2	0.35	0.45	0.5	0.6	0.65	0.7	0.8				

A Size: ØD ~114.3mm (~4-1/2") KETEC®

Tips and Techniques

11. Selection of Die Type

The four different die styles as offered by KETEC are illustrated in below:







Negative taper



Slughugger



Stairs

Positive taper

This is the best style of die for punching holes of less than 0.236" [6mm] diameter in mild steel and stainless steel, or less than 0.472" [12mm] diameter in aluminum. Use of this style of die can result in slug pulling.

Negative taper

Although the taper is only 0.0005" [0.01mm], this is enough to help squeeze and hold the slug as its pushed down into the die land, thus helping to prevent slug pulling. Negative taper is not recommended for punching aluminum or plastic because of slug packing.

Slughugger

This is the only guaranteed method of stopping slug pulling and is especially recommended for use with modern punch presses due to the high punching speed.

12. Thick Turret Alignment Tools & Adapters



Thick Turret Alignment Tools

Item	Code				
Full Set	J.DW-HA1	J.DW-HB1	J.DW-HC1	J.DW-HD1	
Punch	J.DW-HA2	J.DW-HB2	J.DW-HC2	J.DW-HD2	
Die	J.DW-HA3	J.DW-HB3	J.DW-HC3	J.DW-HD3	
Handle	J.DW-HA4	J.DW-HB4	J.DW-HB4	J.DW-HB4	

Thick Turret Adapters

STATION	PUNCH CODE	DIE CODE
B to A	J.H-BA1	J.H-BA3
C to A	J.H-CA1	J.H-CA3
C to B	J.H-CB1	J.H-CB3
D to A	J.H-DA1	J.H-DA3
D to B	J.H-DB1	J.H-DB3
D to C	J.H-DC1	J.H-DC3

Please provide KETEC your machine models.



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