



EZ Bar

Kyocera's Easy Adjustment Bar for Small Internal Machining

■ ***Easy Adjustment and High Precision***

The EZ Bar prevents deviation with high-rigidity clamping

■ ***Smooth Coolant Supply***

EZ Bar design provides a smooth supply of coolant

■ ***MEGACOAT PR1225***

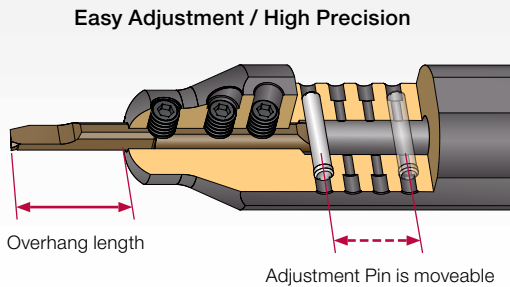
For steel and stainless steel machining with 4 inserts available for boring, grooving, internal face grooving, and threading



Easy Adjustment and High Precision EZ Bar

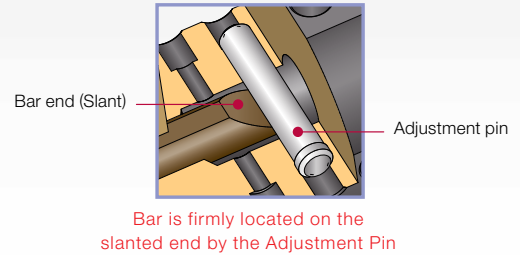
1

Overhang length of bars is adjustable



2

Excellent Clamping Force



Various Application Range with 4 Types of Inserts

Turning, Internal Grooving, Face Grooving and Threading are now available

How to Select Bars ①

HP for high precision and ST for cost reduction (Tolerances are different.)



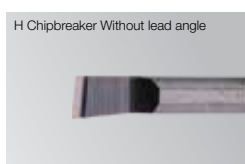
Refer to page 7 for difference of insert shape

	Insert Tolerance	Offset	Longitudinal direction	Cutting edge height	Min. Bore Dia.
<p>Y = Cutting edge height Z = Longitudinal direction f = Offset</p>	HP Precision-oriented	±0.025mm	±0.05mm	+0.05mm/0mm	Same as Shank Dia.
	ST Cost-oriented	±0.06mm	±0.1mm	+0.06mm/0mm	Not same as shank dia.

* See "Dimensions" page for details.

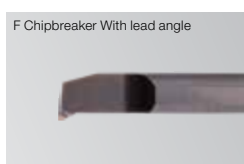
How to Select Bars ②

3 Chipbreakers for various applications



Tough edge (General purpose)

Recommended D.O.C. More than 0.2mm



Sharp cutting (For finishing)

Recommended D.O.C. Less than 0.2mm



No chipbreaker (For Brass and non-ferrous materials)

PCD CBN Inserts Available

MEGACOAT
Long tool life by PR1225



High hardness and oxidation resistance induces longer tool life

• 3 types of corner-R for each chipbreaker

H Chipbreaker: 0.08mm, 0.15mm

F Chipbreaker: 0.05mm, 0.15mm

NB (Without chipbreaker): 0.05mm (PR1225), 0.035mm (PCD/CBN)

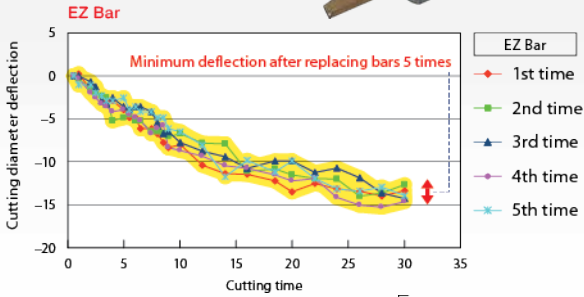
Lineup depends on description

3

Minimized deviation of cutting diameter

EZ Bar

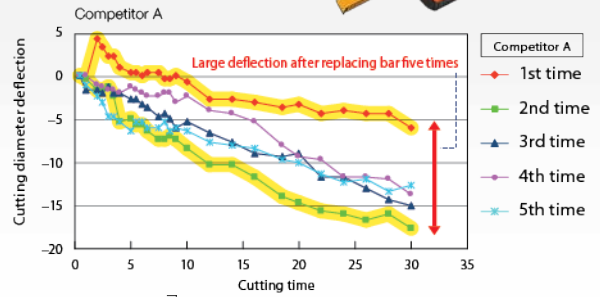
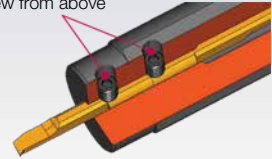
Adjustment pin prevents the bar from rotating during cutting.



Cutting Condition
 $n=5000\text{min}^{-1}$ ($V_c=215\text{ sfm}$)
 $ap=0.004''$ $f=0.0008\text{ ipr}$ (Wet)

Competitor A

Fixed by a screw from above



Workpiece Material:
Carbon Tool Steel

3 Types of Sleeve Lineups

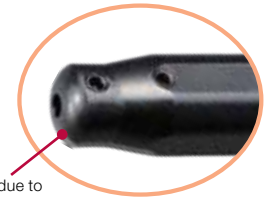
How to Select Sleeves

CT with coolant hole

HP with EZ adjust structure

ST for cost oriented cutting

CT and **HP** can adjust overhang length by **EZ adjust structure**



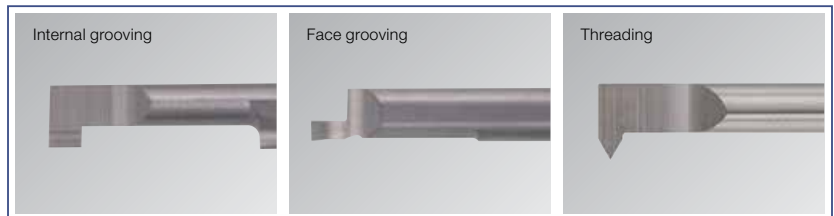
CT

Smooth coolant flow due to special head design



NEW

Now with new grooving and threading inserts



➔ See page 4 for more details

EZ Bar

Easy Selection Guide



1 For Easy Operability and Cost Reduction

Combination

Adjustable Overhang Length HP Sleeve

+

Cost Reduction ST

1 Reduced running cost and high operability with adjustable overhang length

2 ST Bar reduces operating cost and improves operability due to adjustable overhang length of the sleeves

2 For High Precision Cutting

Combination

Adjustable Overhang Length HP Sleeve

+

High Precision HP

1 Stable cutting due to high precision and rigid bar clamping force

2 EZ Bar is designed for high repeatability and stable cutting. The Adjustment Pins prevent the bar from rotating and moving during cut.

Selection Guide Summary

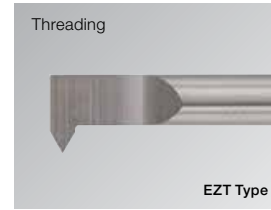
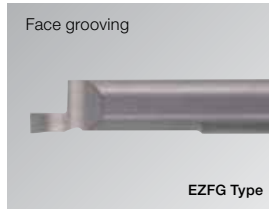
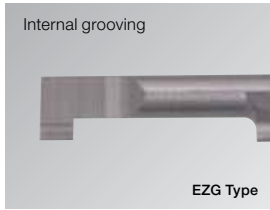
The EZ Bar Advantage

- 1 Select **HP** as your 1st choice
- 2 Select **ST** for cost effective cutting
- 3 Select **HP** for precision cutting
- 4 Long tool life with **MEGACOAT** technology

- Choose **CT** if you need coolant hole -

NEW Internal Grooving Face Grooving and Threading

Inserts Available!



■ EZG for internal grooving

2 types of overhang length (Dimension L2): Standard Type and Short Type (Indicated with "S" at end of description)

■ Standard Type



Chip Evacuation
• 1045 Steel

EZGR04040-200 (2mm)			
IPR Feed	0.0004	0.0008	0.0012

<Cutting Condition> Vc=262 sfm, Groove Depth 0.038" (D.O.C.=0.008"x5 times), W

■ 304 Stainless

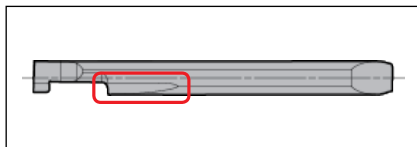
EZGR04040-200 (2mm)		
IPR Feed	0.0004	0.0008

<Cutting Condition> Vc=197 sfm, Groove Depth 0.038" (D.O.C.=0.0008"x5 times), WET

■ Short Type



High Rigidity and Anti-chattering



As shown in the above figure some items of the EZG sleeves are welded on shanks.

■ Bar Identification System

EZ G R 030 030 - 050 S						
EZ symbol of bar	Application	Hand	Min. Bore Dia.	Shank Dia.	Width	Type
	G : Internal Grooving FG : Face Grooving T : Threading B : Boring	R : Right Hand	030: 3mm :	030: 3mm :	050 : 0.5mm 100 : 1.0mm 150 : 1.5mm 200 : 2.0mm	S : Short Type (L2 dimension)

■ EZFG for face grooving

Low Carbon Steel	
Collar • Vc=375sfm • f=0.0004~0.0012ipr • Wet • EZFGR080070-150 • EZH07025.4HP-120	 Face groove depth : 0.06"
PR1225	3,800 pcs/edge
Competitor G	3,000 pcs/edge
EZ Bar extended tool life compared with Competitor G. Stable machining with better wear conditions.	
(User Evaluation)	

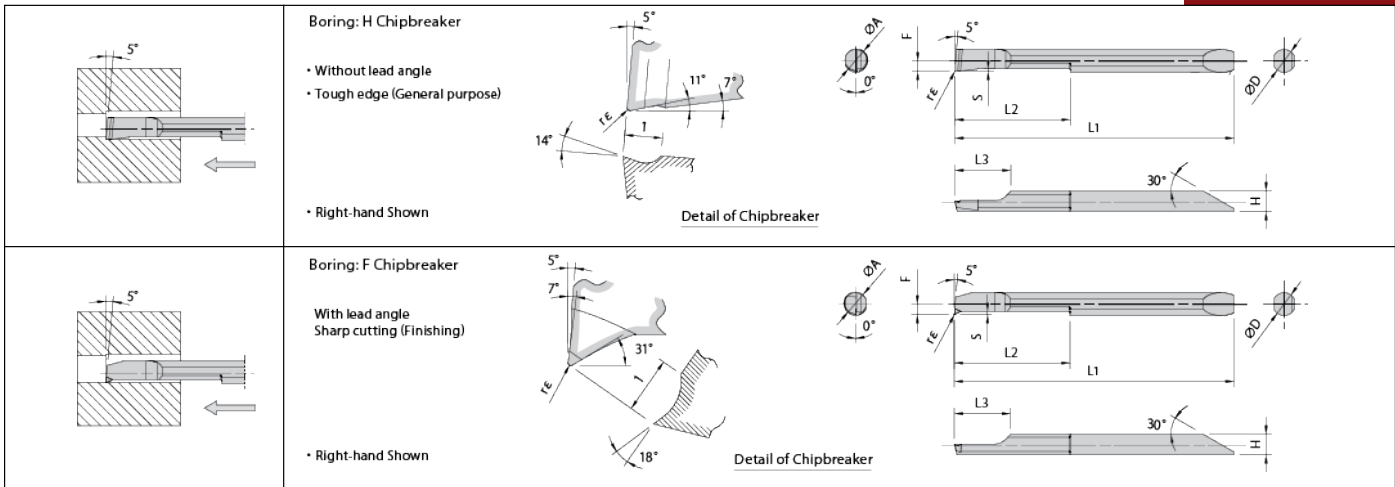
■ EZT for threading

Minimum cutting diameter 3mm,
available for threading of M4 metric screw



EZB-HP

High Precision



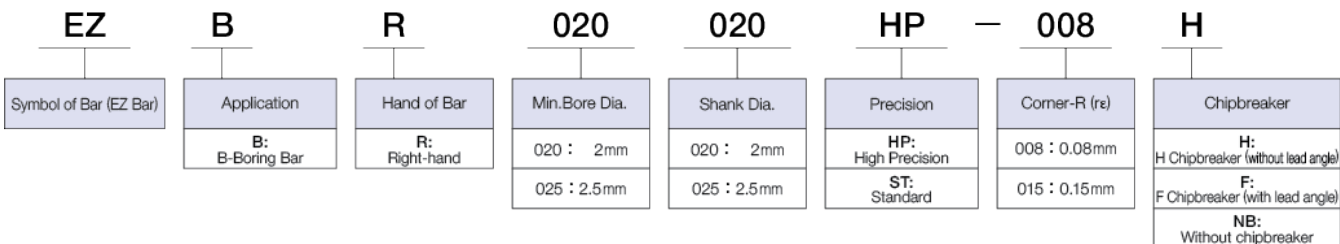
EZ Bar Dimension (metric)

Description	Min. Bore Dia.	Dimension (mm)								Grade		Applicable Sleeve
		ØA	ØD	H	L1	L2	L3	F	S	re	MEGACOAT	
											PR1225	
EZBR 020020HP-008H	2	2	1.8	32	8	4.9	0.85	0.25	0.08 ±0.015	●	EZH020...	
025025HP-008H	2.5	2.5	2.3	35	10.5	4.9	1.1	0.25	0.08 ±0.015	●	EZH025...	
025025HP-015H									0.15 ±0.02	●		
030030HP-008H	3	3	2.7	38.9	13	6.9	1.35	0.3	0.08 ±0.015	●	EZH030...	
030030HP-015H									0.15 ±0.02	●		
035035HP-008H	3.5	3.5	3.2	41.9	15	6.9	1.6	0.4	0.08 ±0.015	●	EZH035...	
035035HP-015H									0.15 ±0.02	●		
040040HP-008H	4	4	3.6	48.8	20	9.8	1.85	0.4	0.08 ±0.015	●	EZH040...	
040040HP-015H									0.15 ±0.02	●		
050050HP-008H	5	5	4.6	58.1	25	9.8	2.35	0.5	0.08 ±0.015	●	EZH050...	
050050HP-015H									0.15 ±0.02	●		
060060HP-008H	6	6	5.6	66.1	30	11.8	2.85	0.6	0.08 ±0.015	●	EZH060...	
060060HP-015H									0.15 ±0.02	●		
EZBR 020020HP-005F	2	2	1.8	32	8	4.9	0.85	0.25	0.05 ±0.01	●	EZH020...	
025025HP-005F	2.5	2.5	2.3	35	10.5	4.9	1.1	0.3	0.05 ±0.01	●	EZH025...	
025025HP-015F									0.15 ±0.02	●		
030030HP-005F	3	3	2.7	38.9	13	6.9	1.35	0.4	0.05 ±0.01	●	EZH030...	
030030HP-015F									0.15 ±0.02	●		
035035HP-005F	3.5	3.5	3.2	41.9	15	6.9	1.6	0.5	0.05 ±0.01	●	EZH035...	
035035HP-015F									0.15 ±0.02	●		
040040HP-005F	4	4	3.6	48.8	20	9.8	1.85	0.5	0.05 ±0.01	●	EZH040...	
040040HP-015F									0.15 ±0.02	●		
050050HP-005F	5	5	4.6	58.1	25	9.8	2.35	0.7	0.05 ±0.01	●	EZH050...	
050050HP-015F									0.15 ±0.02	●		
060060HP-005F	6	6	5.6	66.1	30	11.8	2.85	0.9	0.05 ±0.01	●	EZH060...	
060060HP-015F									0.15 ±0.02	●		

Tolerance: Offset ± 0.025 mm (of the reference pin), overall length ± 0.05 mm, edge height $+0.05/0$ mm

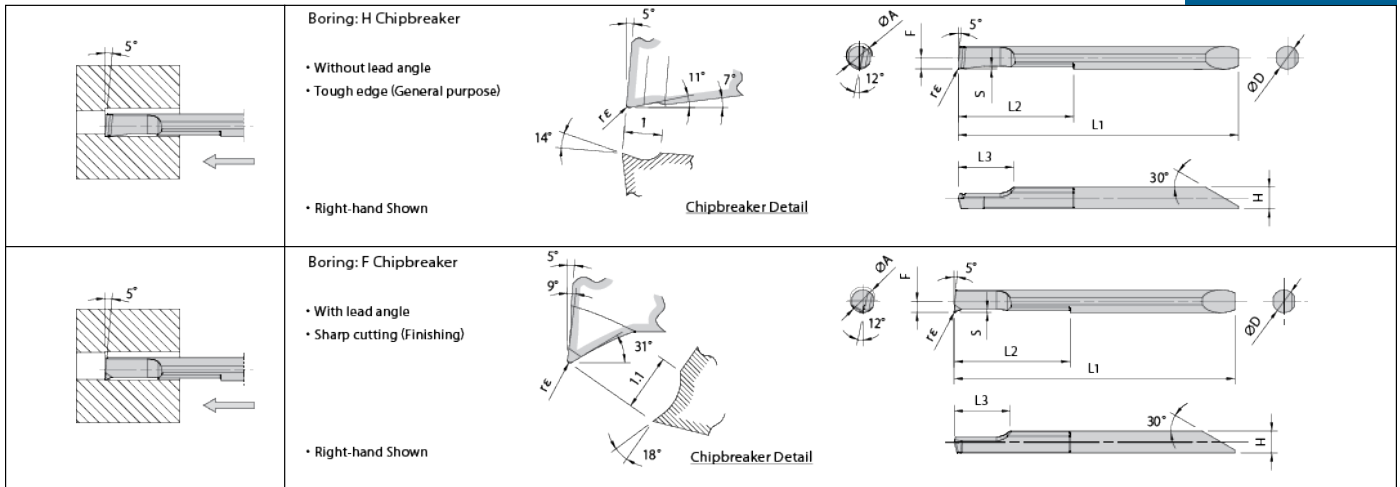
● : Stock Standard ○ : World Express

EZ Bar Identification System



Cost Reduction

EZB-ST



EZ Bar Dimension (metric)

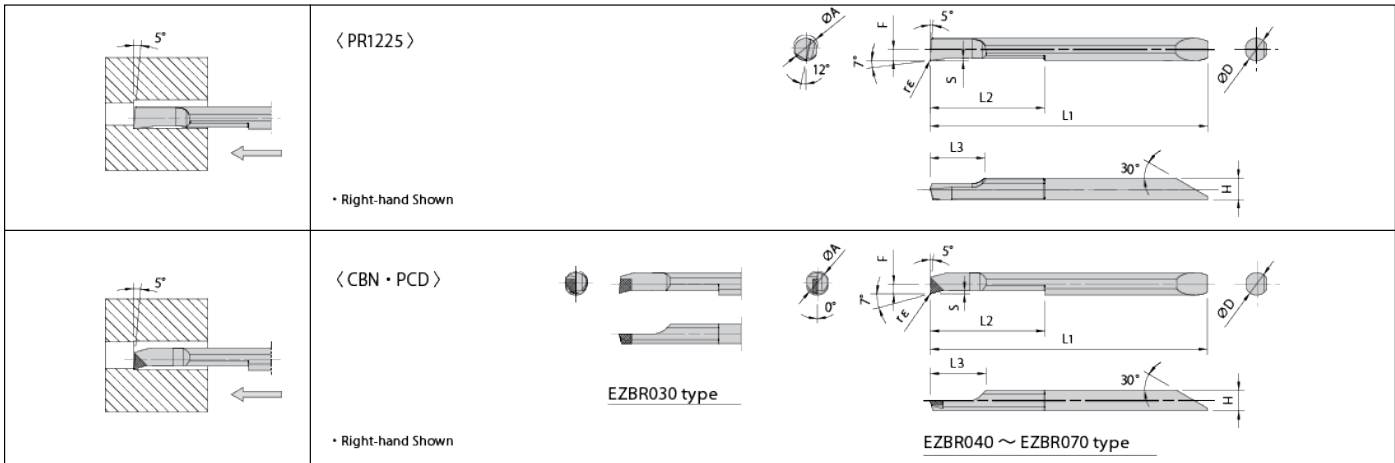
Description	Min. Bore Dia.	Dimension (mm)								Grade		Applicable Sleeve
		ØA	ØD	H	L1	L2	L3	F	S	rε	MEGACOAT	
											PR1225	
EZBR 020017ST-008H	2	1.7	1.5	27.3	7	4.7	0.79	0.19	0.08 ±0.015	●	EZH017...	
025020ST-008H	2.5	2	1.82	32	8	4.8	0.94	0.16	0.08 ±0.015	●	EZH020...	
025020ST-015H									0.15 ±0.02	●		
030025ST-008H	3	2.5	2.3	35	10.5	4.8	1.19	0.15	0.08 ±0.015	●	EZH025...	
030025ST-015H									0.15 ±0.02	●		
035030ST-008H	3.5	3	2.8	39	13	6.8	1.44	0.18	0.08 ±0.015	●	EZH030...	
035030ST-015H									0.15 ±0.02	●		
040035ST-008H	4	3.5	3.3	42	15	6.7	1.69	0.24	0.08 ±0.015	●	EZH035...	
040035ST-015H									0.15 ±0.02	●		
045040ST-008H	4.5	4	3.8	49	20	9.7	1.94	0.27	0.08 ±0.015	●	EZH040...	
045040ST-015H									0.15 ±0.02	●		
055050ST-008H	5.5	5	4.8	58.2	25	9.7	2.44	0.33	0.08 ±0.015	●	EZH050...	
055050ST-015H									0.15 ±0.02	●		
065060ST-008H	6.5	6	5.8	66.2	30	11.8	2.94	0.38	0.08 ±0.015	●	EZH060...	
065060ST-015H									0.15 ±0.02	●		
075070ST-008H	7.5	7	6.8	74.2	35	11.7	3.44	0.44	0.08 ±0.015	●	EZH070...	
075070ST-015H									0.15 ±0.02	●		
EZBR 020017ST-005F	2	1.7	1.5	27.3	7	4.7	0.79	0.2	0.05 ±0.01	●	EZH017...	
025020ST-005F	2.5	2	1.82	32	8	4.8	0.94	0.16	0.05 ±0.01	●	EZH020...	
025020ST-015F									0.15 ±0.02	●		
030025ST-005F	3	2.5	2.3	35	10.5	4.8	1.19	0.2	0.05 ±0.01	●	EZH025...	
030025ST-015F									0.15 ±0.02	●		
035030ST-005F	3.5	3	2.8	39	13	6.8	1.44	0.26	0.05 ±0.01	●	EZH030...	
035030ST-015F									0.15 ±0.02	●		
040035ST-005F	4	3.5	3.3	42	15	6.7	1.69	0.33	0.05 ±0.01	●	EZH035...	
040035ST-015F									0.15 ±0.02	●		
045040ST-005F	4.5	4	3.8	49	20	9.7	1.94	0.31	0.05 ±0.01	●	EZH040...	
045040ST-015F									0.15 ±0.02	●		
055050ST-005F	5.5	5	4.8	58.2	25	9.7	2.44	0.45	0.05 ±0.01	●	EZH050...	
055050ST-015F									0.15 ±0.02	●		
065060ST-005F	6.5	6	5.8	66.2	30	11.7	2.94	0.59	0.05 ±0.01	●	EZH060...	
065060ST-015F									0.15 ±0.02	●		
075070ST-005F	7.5	7	6.8	74.2	35	11.7	3.44	0.65	0.05 ±0.01	●	EZH070...	
075070ST-015F									0.15 ±0.02	●		

Tolerance: Offset ±0.06mm (of the reference pin), overall length ±0.1mm, edge height +0.06/0mm

● : Stock Standard ○ : World Express

Bars are sold in 1 piece boxes

■ EZB-NB



• EZ Bar Dimensions

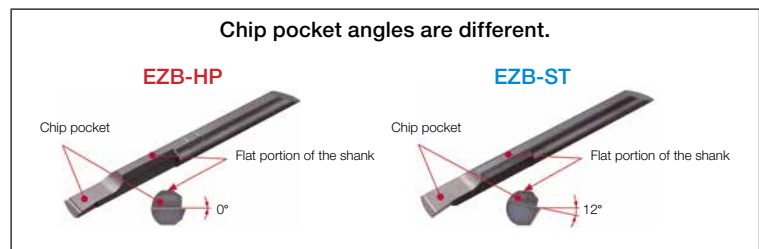
Description	Min. Bore Dia.	Dimension (mm)									Grade			Applicable Sleeve	
		ØA	ØD	H	L1	L2	L3	F	S	re	MEGACOAT	MEGACOAT CBN	Diamond		
											PR1225	KBN05M	KPD001		
EZBR 020017-005NB	2	1.7	1.5	27.3	7	4.7	0.79	0.2	±0.015	0.05	○			EZH017...	
025020-005NB	2.5	2	1.82	32	8	4.8	0.94	0.16			○			EZH020...	
030025-005NB	3	2.5	2.3	35	10.5	4.8	1.19	0.16			○			EZH025...	
035030-005NB	3.5	3	2.8	39	13	6.8	1.44	0.19			○			EZH030...	
040035-005NB	4	3.5	3.3	42	15	6.7	1.69	0.25			○			EZH035...	
045040-005NB	4.5	4	3.8	49	20	9.7	1.94	0.28			○			EZH040...	
055050-005NB	5.5	5	4.8	58.2	25	9.7	2.44	0.33			○			EZH050...	
065060-005NB	6.5	6	5.8	66.2	30	11.7	2.94	0.39			○			EZH060...	
075070-005NB	7.5	7	6.8	74.2	35	11.7	3.44	0.45	○			EZH070...			
EZBR 030030-003NB	3	3	2.6	38.8	13	6.8	1.25	0.3	±0.015	0.035		○		EZH030...	
040040-003NB	4	4	3.6	48.8	20	9.8	1.75					○		EZH040...	
050050-003NB	5	5	4.6	58.1	25	9.8	2.25					○		EZH050...	
060060-003NB	6	6	5.6	66.1	30	11.8	2.75					○		EZH060...	
070070-003NB	7	7	6.6	74.1	35	11.8	3.25					○		EZH070...	
EZBR 040040-003NB	4	4	3.6	48.8	20	9.8	1.75	±0.015	0.035			○		EZH040...	
050050-003NB	5	5	4.6	58.1	25	9.8	2.25						○		EZH050...
060060-003NB	6	6	5.6	66.1	30	11.8	2.75						○		EZH060...
070070-003NB	7	7	6.6	74.1	35	11.8	3.25						○		EZH070...

■ Edge Preparation

Grade	Edge Preparation	Remarks
PR1225	Sharp Edge	-
KBN05M	0.08mm×15° Chamfered Cutting Edge	T00815
KPD001	Sharp Edge	-

■ How to Distinguish Bars

● : Stock Standard ○ : World Express



■ EZ Bar Compatibility

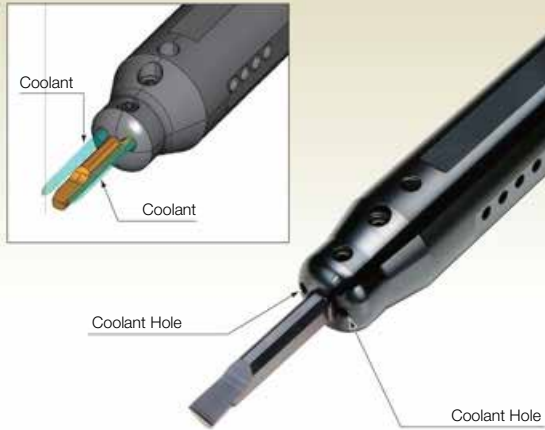
EZ Bar is compatible with conventional Tip Bar

Sleeve \ Bar	EZB...HP	EZB...ST	HPB...(Conventional)
EZH...HP	○	○	※1 ※2 ○ (Compatible)
EZH...ST	○	○	※1 ○ (Compatible)
PSH...(Conventional)	※1 ○ (Compatible)	※1 ○ (Compatible)	○

※1 Some diameter types of conventional Tip-Bar are incompatible

※2 Use them without Adjustment Pins. Overhang length of bar is not adjustable.

Bars are sold in 1 piece boxes



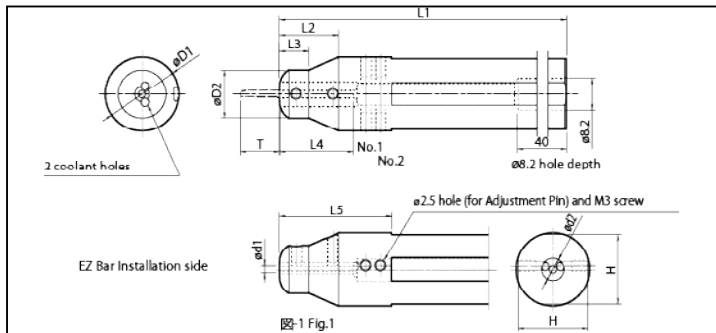
EZH-CT (High precision with coolant hole)

Now added in the EZH sleeve Lineup!

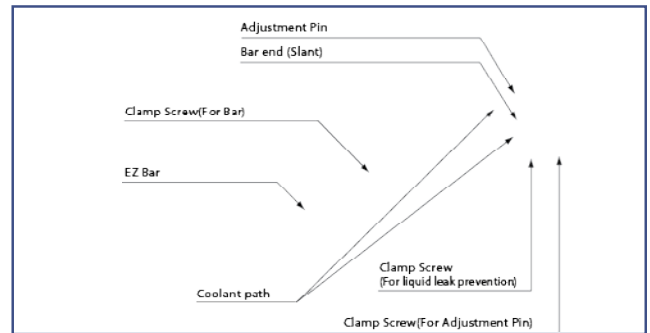
Kyocera's unique EZ adjust structure and internal coolant system improve dimensional accuracy and surface roughness!

EZH-CT Applicable Sleeve

With coolant hole and EZ adjust structure



EZH-CT Internal Structure



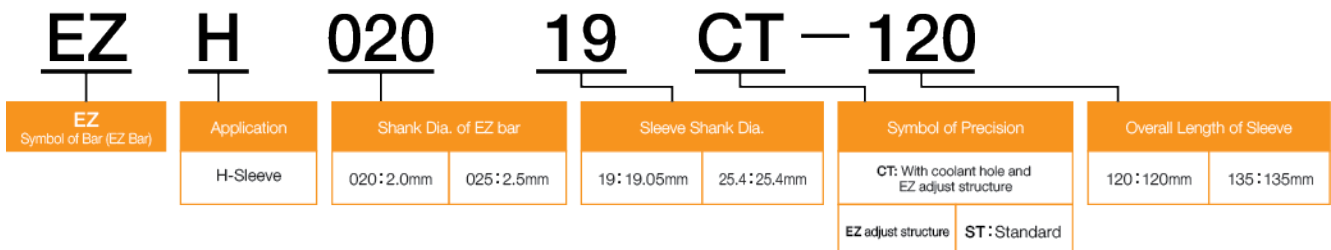
Description	Stock	Dimension (mm)										Overhang Length of Bar				Drawing	Applicable EZ Bar	
		Ød1	ØD1	ØD2	Ød2	H	L1	L2	L3	*L4	L5	Adjustment Pin Setting						
												No1	No2	No3	No4			
EZH 01719CT-120	●	1.7	0.75*	13	6	18	120	16	8	16	30.5	7.5	3.5	-	-	Fig.1	EZBR...017...	
01720CT-120	○		20			19	120											
01722CT-135	○		22			21	135											41.5
01725.0CT-135	○		25			24	135											30.5
01725.4CT-120	●		1.00*			24.4	120											
EZH 02019CT-120	●	2	0.75*	13	6	18	120	16	8	20	30.5	8.5	4.5	-	-	Fig.1	EZBR...020...	
02020CT-120	○		20			19	120											
02022CT-135	○		22			21	135											41.5
02025.0CT-135	○		25			24	135											30.5
02025.4CT-120	●		1.00*			24.4	120											
EZH 02519CT-120	●	2.5	0.75*	13	6	18	120	16	8	20	30.5	11	7	-	-	Fig.1	EZBR...025... EZTR...025...	
02520CT-120	○		20			19	120											
02522CT-135	○		22			21	135											41.5
02525.0CT-135	○		25			24	135											30.5
02525.4CT-120	●		1.00*			24.4	120											

※:L4 shows Ød1 length

● : Stock Standard ○ : World Express

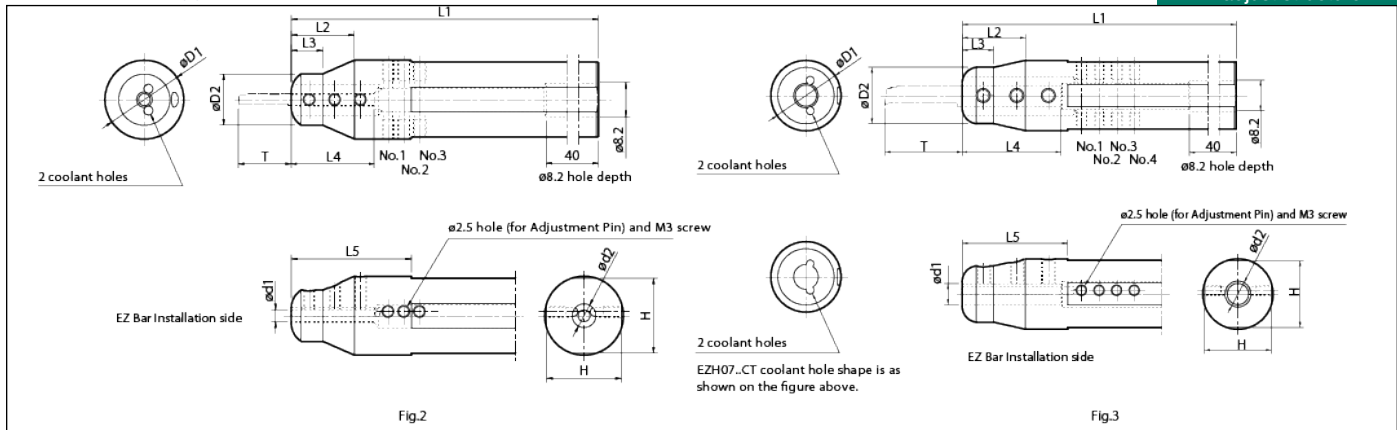
- Choose sleeves (Ød1) to meet with ØD dimension of bar.
- Dimension T shows overhang length of the EZB Bar when attached to sleeve.
- Ø8.2 hole on the sleeve end is prepared hole Rc1/8 threading. Please modify by additional processing if necessary. The body hardness is 42 HRC.

Sleeve Identification System



EZH-CT Applicable Sleeve

With coolant hole and EZ adjust structure



Description	Stock	Dimension (mm)										T (mm) Overhang Length of Bar				Drawing	Applicable EZ Bar
		Ød1	ØD1	ØD2	Ød2	H	L1	L2	L3	*L4	L5	Adjustment Pin Setting					
												No1	No2	No3	No4		
EZH 03019CT-120	●	3	0.75*	13	6	18	120	16	8	21	30.5	13.5	9.5	5.5	-	Fig.2	EZBR...030... EZGR...030... EZTR...030...
03020CT-120	○		20			19	120				41.5						
03022CT-135	○		22			21	135				30.5						
03025.0CT-135	○		25			24	135										
03025.4CT-120	●		1.00*		24.4	120											
EZH 03519CT-120	●	3.5	0.75*	13	6	18	120	16	8	21	31.1	15.5	11.5	7.5	-	Fig.2	EZBR...035... EZTR...035...
03520CT-120	○		20			19	120				41.5						
03522CT-135	○		22			21	135				31.1						
03525.0CT-135	○		25			24	135										
03525.4CT-120	●		1.00*		24.4	120											
EZH 04019CT-120	●	4	0.75*	13	6	18	120	16	8	22	30.5	20.5	16.5	12.5	8.5	Fig.3	EZBR...040... EZGR...040... EZFR...040... EZTR...040...
04020CT-120	○		20			19	120				41.5						
04022CT-135	○		22			21	135				30.5						
04025.0CT-135	○		25			24	135										
04025.4CT-120	●		1.00*		24.4	120											
EZH 05019CT-120	●	5	0.75*	16	6	18	120	18	9		30.0	25.5	20.5	15.5	10.5	Fig.3	EZBR...050... EZGR...050... EZFR...050... EZTR...050...
05020CT-120	○		20			19	120				44.0						
05022CT-135	○		22			21	135				30.0						
05025.0CT-135	○		25			24	135										
05025.4CT-120	●		1.00*		24.4	120											
EZH 06019CT-120	●	6	0.75*	16	7.4	18	120	18	9		30.0	30.5	25.5	20.5	15.5	Fig.3	EZBR...060... EZGR...060... EZTR...060...
06020CT-120	○		20			19	120				41.5						
06022CT-135	○		22			21	135				30.0						
06025.0CT-135	○		25			24	135										
06025.4CT-120	●		1.00*		24.4	120											
EZH 07019CT-120	●	7	0.75*	16	7.4	18	120	18	9		30.0	35.5	30.5	25.5	20.5	Fig.3	EZBR...070... EZGR...070... EZFR...070... EZTR...070...
07020CT-120	○		20			19	120				44.0						
07022CT-135	○		22			21	135				30.0						
07025.0CT-135	○		25			24	135										
07025.4CT-120	●		1.00*		24.4	120											

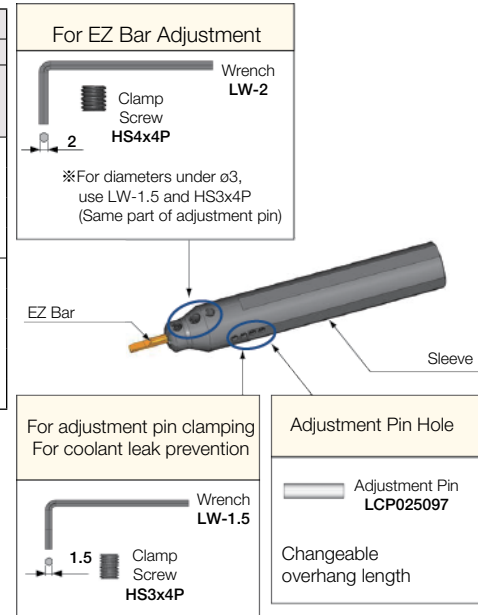
*:L4 shows Ød1 length

● : Stock Standard ○ : World Express

- Ød1 of sleeve should match the shank size of the EZ Bar.
- Dimension T shows overhang length of the EZB Bar when attached to sleeve.
- Ø8.2 hole on the sleeve end is prepared with Rc1/8 threading. Please modify by additional processing if necessary. The sleeve hardness is 42 HRC.

■ Spare Parts Description (for EZH-CT Sleeves)

Description	Spare Parts				
	Clamp Screw	Wrench	Clamp Screw	Wrench	Adjustment Pin
EZH 017...CT- 020...CT- 025...CT- 030...CT- (for adjustment pin, coolant leak prevention and bar)	HS3x4P	LW-1.5 1N • m Tightening Torque	-	-	LCP025097
EZH 035...CT- 040...CT- 050...CT- 060...CT- 070...CT- (for adjustment pin, coolant leak prevention and bar)	HS3x4P	LW-1.5 1N • m Tightening Torque	HS4x4P (for bar)	LW-2 2N • m Tightening Torque	LCP025097



1) If shank dia. is $\phi 2.5\text{mm}$ or less, use 6 clamp screws (HS3x4P), distributed as follows:

- For adjustment pin.....2 pcs
- For coolant leak prevention.....2 pcs
- For bar.....2 pcs

2) If shank dia. is $\phi 3\text{mm}$, use 9 clamp screws (HS3x4P), distributed as follows:

- For adjustment pin.....2 pcs
- For coolant leak prevention.....4 pcs
- For bar.....3 pcs

■ How to set bar in sleeve

● How to use adjustment pin and prevent coolant leakage (Fig.1)

- ① Put the adjustment pin into the hole according to the overhang length and push it into the sleeve using the wrench "LW-1.5".
- ② Tighten the clamp screw for the adjustment pin "HS3x4P" using the wrench "LW-1.5" from both sides of the sleeve.
- ③ Put the additional clamp screws "HS3x4P" into the un-used adjustment pin holes to prevent coolant leakage using the wrench "LW-1.5" and fix them from both sides of the sleeve.

● How to secure the bar (Fig.2)

- ① With the chip pocket upward, set the bar into the sleeve. Secure the slant face of the bar end against the adjustment pin. Make sure that the bar does not rotate. (Fig.3)
- ② Tighten the clamp screw with wrench "LW-2" and secure the bar. (Use "LW-1.5" if shank dia. is 3mm or less.)

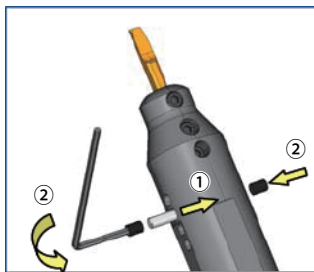


Fig.1 How to use the adjustment pin

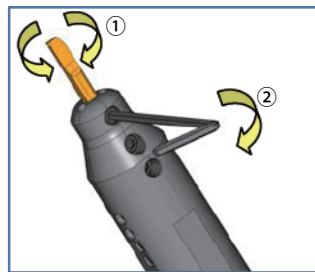


Fig.2 How to secure the bar

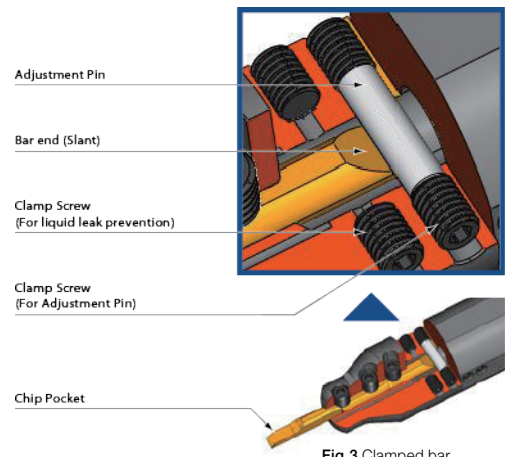
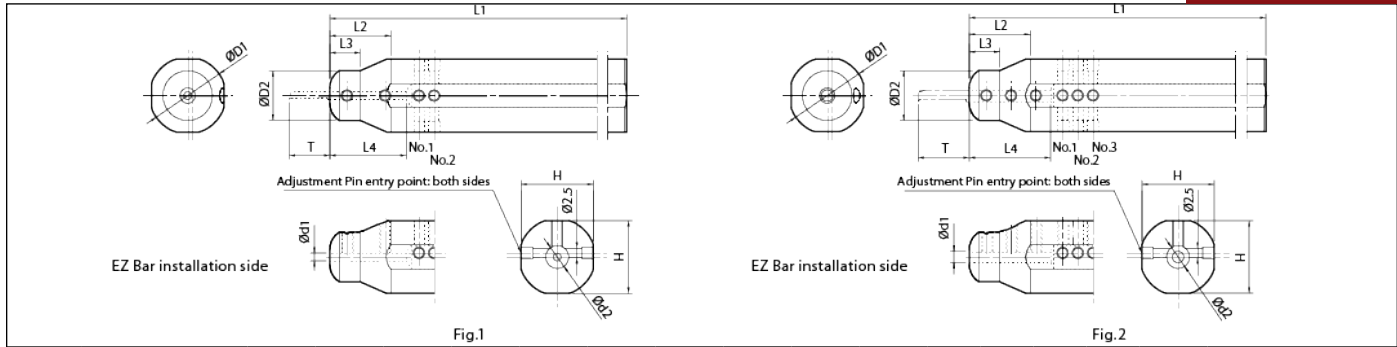


Fig.3 Clamped bar



Description	Stock	Dimension (mm)									T (mm) Overhang Length of Bar				Drawing	Applicable EZ Bar
		Ød1	ØD1	ØD2	Ød2	H	L1	L2	L3	*L4	Adjustment Pin Setting					
											No1	No2	No3	No4		
EZH 01716HP-100	○	1.7	16	13	6	15	100	16	8	16	7.5	3.5	-	-	Fig.1	EZBR...017...
01719HP-120	●		0.75*			18	120									
01720HP-120	○		20			19	120									
01722HP-135	○		22			21	135									
01725.0HP-135	○		25			24	135									
01725.4HP-120	●		1.00*			24.4	120									
EZH 02016HP-100	○	2	16	13	6	15	100	16	8	20	8.5	4.5	-	-	Fig.1	EZBR...020...
02019HP-120	●		0.75*			18	120									
02020HP-120	○		20			19	120									
02022HP-135	○		22			21	135									
02025.0HP-135	○		25			24	135									
02025.4HP-120	●		1.00*			24.4	120									
EZH 02516HP-100	○	2.5	16	13	6	15	100	16	8	20	11	7	-	-	Fig.1	EZBR...025... EZTR...025...
02519HP-120	●		0.75*			18	120									
02520HP-120	○		20			19	120									
02522HP-135	○		22			21	135									
02525.0HP-135	○		25			24	135									
02525.4HP-120	●		1.00*			24.4	120									
EZH 03016HP-100	○	3	16	13	6	15	100	16	8	21	13.5	9.5	5.5	-	Fig.2	EZBR...030... EZGR...030... EZTR...030...
03019HP-120	●		0.75*			18	120									
03020HP-120	○		20			19	120									
03022HP-135	○		22			21	135									
03025.0HP-135	○		25			24	135									
03025.4HP-120	●		1.00*			24.4	120									
EZH 03516HP-100	○	3.5	16	13	6	15	100	16	8	22	15.5	11.5	7.5	-	Fig.2	EZBR...035... EZTR...035...
03519HP-120	●		0.75*			18	120									
03520HP-120	○		20			19	120									
03522HP-135	○		22			21	135									
03525.0HP-135	○		25			24	135									
03525.4HP-120	●		1.00*			24.4	120									

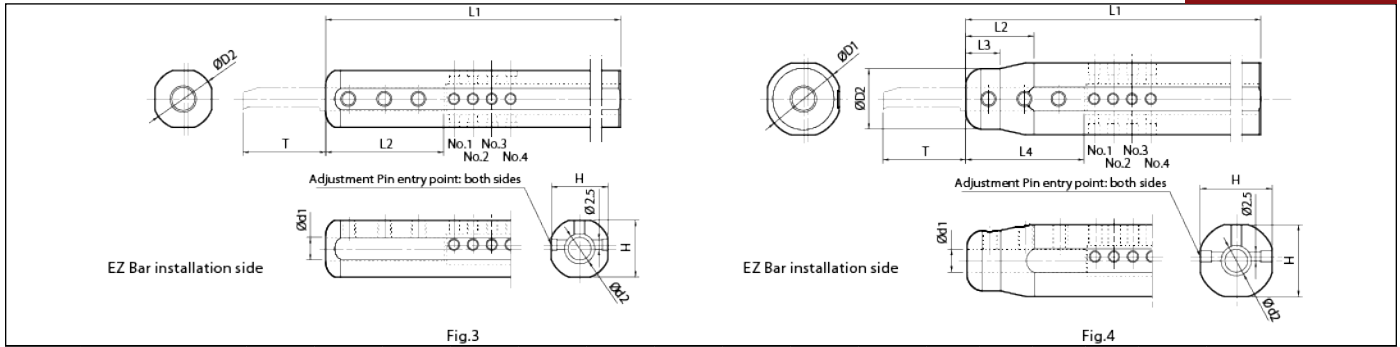
*:L4 shows Ød1 length
 ● : Stock Standard ○ : World Express
 • Choose sleeves (Ød1) to meet with ØD dimension of bar.
 • Dimension T shows overhang length of the EZB Bar when attached to sleeve.

Spare Parts Description (for EZH-HP Sleeves)

Description	Spare Parts					Applicable EZB Bar	
	Clamp Screw	Wrench	Clamp Screw	Wrench	Adjustment Pin		
EZH 017...HP-..	HS3x4P (for adjustment pin and bar)	LW-1.5 1N • m Tightening Torque	-	-	LCP025140	-	EZBR020017...
020...HP-..						EZBR020020HP...	EZBR025020...
025...HP-..						EZBR025025HP...	EZBR030025...
030...HP-..						EZBR030030HP...	EZBR...030...
EZH 035...HP-..	HS3x4P (only for adjustment pin)	LW-1.5 1N • m Tightening Torque	HS4x4P (for bar)	LW-2 2N • m Tightening Torque	LCP025140	EZBR035035HP...	EZBR040035...
040...HP-..						EZBR040040HP...	EZBR...040...
050...HP-..						EZBR050050HP...	EZBR...050...
060...HP-..						EZBR060060HP...	EZBR...060...
070...HP-..						-	EZBR...070...

EZH-HP Applicable Sleeve

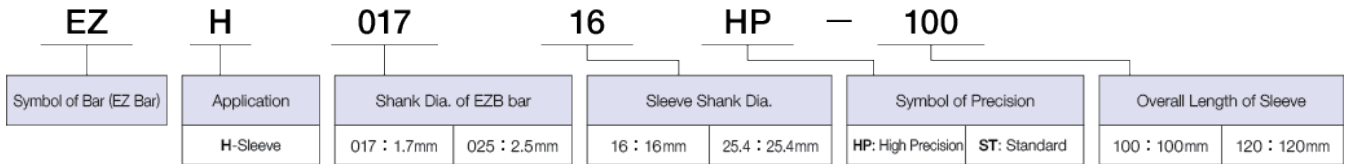
Adjustable



Description	Stock	Dimension (mm)										T (mm) Overhang Length of Bar Adjustment Pin Setting				Drawing	Applicable EZ Bar
		Ød1	ØD1	ØD2	Ød2	H	L1	L2	L3	*L4	No1	No2	No3	No4			
EZH 04016HP-100	○	4	16	13	6	15	100	16	8	24	20.5	16.5	12.5	8.5	Fig.4	EZBR...040... EZGR...040... EZFG...040... EZTR...040...	
04019HP-120	●		0.75"			18	120										
04020HP-120	○		20			19	120										
04022HP-135	○		22			21	135										
04025.0HP-135	○		25			24	135										
04025.4HP-120	●		1.00"			24.4	120										
EZH 05016HP-100	○	5	16	16	6	15	100	-	4	29	25.5	20.5	15.5	10.5	Fig.3 Fig.4	EZBR...050... EZGR...050... EZFG...050... EZTR...050...	
05019HP-120	●		0.75"			18	120										
05020HP-120	○		20			19	120										
05022HP-135	○		22			21	135										
05025.0HP-135	○		25			24	135										
05025.4HP-120	●		1.00"			24.4	120										
EZH 06016HP-100	○	6	16	16	8	15	100	-	4	31	30.5	25.5	20.5	15.5	Fig.3 Fig.4	EZBR...060... EZGR...060... EZTR...060...	
06019HP-120	●		0.75"			18	120										
06020HP-120	○		20			19	120										
06022HP-135	○		22			21	135										
06025.0HP-135	○		25			24	135										
06025.4HP-120	●		1.00"			24.4	120										
EZH 07016HP-100	○	7	16	16	8	15	100	-	4	33	35.5	30.5	25.5	20.5	Fig.3 Fig.4	EZBR...070... EZGR...070... EZFG...070... EZTR...070...	
07019HP-120	●		0.75"			18	120										
07020HP-120	○		20			19	120										
07022HP-135	○		22			21	135										
07025.0HP-135	○		25			24	135										
07025.4HP-120	●		1.00"			24.4	120										

*:L4 shows Ød1 length
 • Choose sleeves (Ød1) to meet with ØD dimension of bar.
 • Dimension T shows overhang length of the EZB Bar when attached to sleeve.
 ● : Stock Standard ○ : World Express

Sleeve Identification System



How to attach bar to sleeve

● How to use adjustment pin (Fig.1)

- Put the adjustment pin into the hole.
- Push it into the sleeve, using the wrench "LW-1.5."
- Tighten the clamp screw "HS3x4p" with wrench "LW-1.5" to fix the adjustment screw.



Fig. 1: How to use adjustment pin

● How to secure bar (Fig.2)

- With the chip pocket upward, set the bar in sleeve. Press the slant of the end of the bar against the adjustment pin. Make sure that the bar does not rotate. (Fig.3)
- Tighten the clamp screw with wrench "LW-2" and secure the bar. (Use "LW-1.5" if shank dia. is 3mm or less.)



Fig. 2: How to secure bar

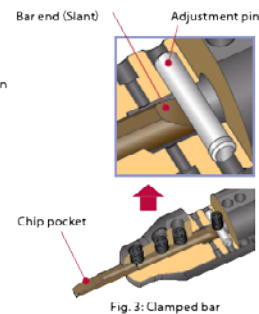


Fig. 3: Clamped bar

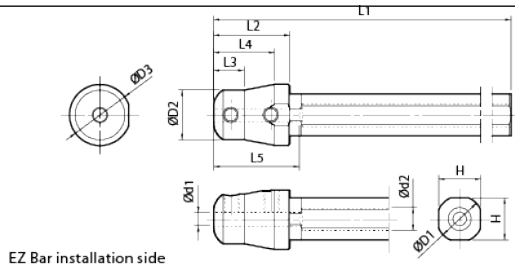


Fig.1

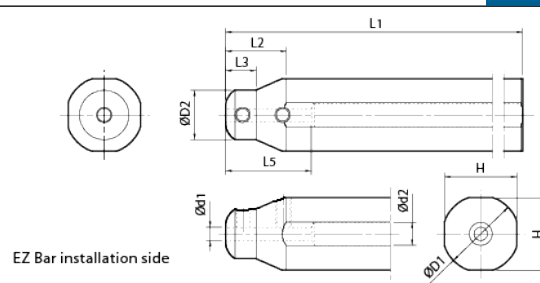


Fig.2

Description	Stock	Dimension (mm)											Drawing	Applicable EZ Bar	
		Ød1	ØD1	ØD2	ØD3	Ød2	H	L1	L2	L3	L4	*L5			
EZH 01712ST-80	○	1.7	12	13	-	6	11	80	16	8	-	16	16	Fig.1	EZBR...017...
01716ST-100	○		16				15	100							
01719ST-120	○		0.75"				18	120							
01720ST-120	○		20				19	120							
01722ST-135	○		22				21	135							
01725.0ST-135	○		25				24	135							
01725.4ST-120	○		1.00"				24.4	120							
EZH 02012ST-80	○	2	12	13	-	6	11	80	16	8	-	16	20	Fig.1	EZBR...020...
02016ST-100	○		16				15	100							
02019ST-120	○		0.75"				18	120							
02020ST-120	○		20				19	120							
02022ST-135	○		22				21	135							
02025.0ST-135	○		25				24	135							
02025.4ST-120	○		1.00"				24.4	120							
EZH 02512ST-80	○	2.5	12	13	-	6	11	80	16	8	-	16	20	Fig.1	EZBR...025... EZTR...025...
02516ST-100	○		16				15	100							
02519ST-120	○		0.75"				18	120							
02520ST-120	○		20				19	120							
02522ST-135	○		22				21	135							
02525.0ST-135	○		25				24	135							
02525.4ST-120	○		1.00"				24.4	120							
EZH 03012ST-80	○	3	12	13	-	6	11	80	16	8	-	16	21	Fig.1	EZBR...030... EZGR...030... EZTR...030...
03016ST-100	○		16				15	100							
03019ST-120	○		0.75"				18	120							
03020ST-120	○		20				19	120							
03022ST-135	○		22				21	135							
03025.0ST-135	○		25				24	135							
03025.4ST-120	○		1.00"				24.4	120							
EZH 03512ST-80	○	3.5	12	13	-	6	11	80	16	8	-	16	22	Fig.1	EZBR...035... EZTR...035...
03516ST-100	○		16				15	100							
03519ST-120	○		0.75"				18	120							
03520ST-120	○		20				19	120							
03522ST-135	○		22				21	135							
03525.0ST-135	○		25				24	135							
03525.4ST-120	○		1.00"				24.4	120							
EZH 04012ST-80	○	4	12	13	-	6	11	80	16	8	-	16	24	Fig.1	EZBR...040... EZGR...040... EZFGR...040... EZTR...040...
04016ST-100	○		16				15	100							
04019ST-120	○		0.75"				18	120							
04020ST-120	○		20				19	120							
04022ST-135	○		22				21	135							
04025.0ST-135	○		25				24	135							
04025.4ST-120	○		1.00"				24.4	120							

*:L5 shows Ød1 length

• Choose sleeves (Ød1) to meet with ØD dimension of bar.

• Adjustment pin cannot be installed in EZH-ST sleeves. To adjust overhang of EZB insert, please use EZH-CT or EZH-HP sleeves.

● : Stock Standard ○ : World Express

EZH-ST Applicable Sleeve

NOT Adjustable

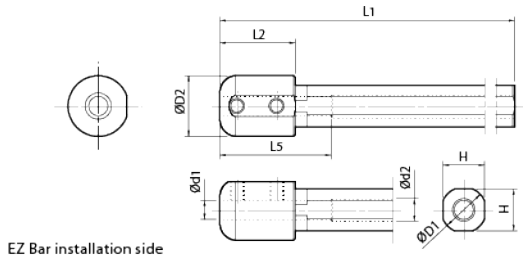


Fig.3

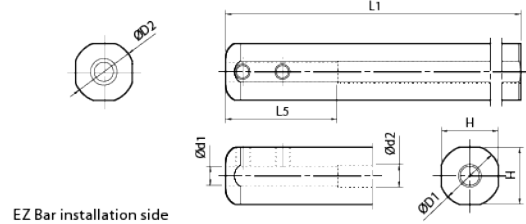


Fig.4

Description	Stock	Dimension (mm)											Drawing	Applicable EZ Bar			
		Ød1	ØD1	ØD2	ØD3	Ød2	H	L1	L2	L3	L4	*L5					
EZH 05012ST-80	○	5	12	16	-	6	11	80	20	-	-	-	29	Fig.3	EZBR...050... EZGR...050... EZFR...050... EZTR...050...		
05016ST-100	○		16				15	100	-					Fig.4			
05019ST-120	○		0.75"				18	120	18					9		-	-
05020ST-120	○		20				19	120									
05022ST-135	○		22				21	135	18					9		Fig.2	
05025.0ST-135	○		25				24	135	-					-		-	
05025.4ST-120	○		1.00"				24.4	120									
EZH 06012ST-80	○	6	12	16	-	8	11	80	20	-	-	-	31	Fig.3	EZBR...060... EZGR...060... EZTR...060...		
06016ST-100	○		16				15	100	-					Fig.4			
06019ST-120	○		0.75"				18	120	18					9		-	-
06020ST-120	○		20				19	120									
06022ST-135	○		22				21	135	18					9		Fig.2	
06025.0ST-135	○		25				24	135	-					-		-	
06025.4ST-120	○		1.00"				24.4	120									
EZH 07012ST-80	○	7	12	16	-	8	11	80	20	-	-	-	33	Fig.3	EZBR...070... EZGR...070... EZFR...070... EZTR...070...		
07016ST-100	○		16				15	100	-					Fig.4			
07019ST-120	○		0.75"				18	120	18					9		-	-
07020ST-120	○		20				19	120									
07022ST-135	○		22				21	135	18					9		Fig.2	
07025.0ST-135	○		25				24	135	-					-		-	
07025.4ST-120	○		1.00"				24.4	120									



※:L5 shows Ød1 length

● : Stock Standard ○ : World Express

• Choose sleeves (Ød1) to meet with ØD dimension of bar.

• Adjustment pin cannot be installed in EZH-ST sleeves. To adjust overhang of EZB insert, please use EZH-CT or EZH-HP sleeves.

Spare Parts Description (for EZH-ST Sleeves)

Description	Spare Parts		Applicable EZB Bar		
	Screw	Wrench	EZB-HP	EZB-ST	EZB-NB
					
EZH 017...ST-..	HS3x4P	LW-1.5 1N • m Tightening Torque	-	EZBR020017ST...	EZBR020017...NB
020...ST-..			EZBR020020HP...	EZBR025020ST...	EZBR025020...NB
025...ST-..			EZBR025025HP...	EZBR030025ST...	EZBR030025...NB
030...ST-..			EZBR030030HP...	EZBR035030ST...	EZBR030030...NB EZBR035030...NB
EZH 035...ST-..	HS4x4P	LW-2 2N • m Tightening Torque	EZBR035035HP...	EZBR040035ST...	EZBR040035...NB
040...ST-..			EZBR040040HP...	EZBR045040ST...	EZBR040040...NB EZBR045040...NB
050...ST-..			EZBR050050HP...	EZBR055050ST...	EZBR050050...NB EZBR055050...NB
060...ST-..			EZBR060060HP...	EZBR065060ST...	EZBR060060...NB EZBR065060...NB
070...ST-..			-	EZBR075070ST...	EZBR070070...NB EZBR075070...NB

■ Applicable Sleeve

Sleeve Description				Applicable EZB Bar		Applicable Machine Manufacturer
EZH-CT (With coolant hole and EZ adjust structure)	EZH-HP (Adjustable)	EZH-ST	Sleeve Shank Dia. ØD1(mm)	Description	Shank Dia. Ød1(mm)	
		EZH 01712ST-80 02012ST-80 02512ST-80 03012ST-80 03512ST-80 04012ST-80 05012ST-80 06012ST-80 07012ST-80	12	EZBR...0017ST/NB EZBR...020HP/ST/NB EZBR...025HP/ST/NB EZBR...030HP/ST/NB EZBR...035HP/ST/NB EZBR...040HP/ST/NB EZBR...050HP/ST/NB EZBR...060HP/ST/NB EZBR...070ST/NB	1.7 2 2.5 3 3.5 4 5 6 7	General machines
	EZH 01716HP-100 02016HP-100 02516HP-100 03016HP-100 03516HP-100 04016HP-100 05016HP-100 06016HP-100 07016HP-100	EZH 01716ST-100 02016ST-100 02516ST-100 03016ST-100 03516ST-100 04016ST-100 05016ST-100 06016ST-100 07016ST-100	16	EZBR...017ST/NB EZBR...020HP/ST/NB EZBR...025HP/ST/NB EZBR...030HP/ST/NB EZBR...035HP/ST/NB EZBR...040HP/ST/NB EZBR...050HP/ST/NB EZBR...060HP/ST/NB EZBR...070ST/NB	1.7 2 2.5 3 3.5 4 5 6 7	General machines
EZH 01719CT-120 02019CT-120 02519CT-120 03019CT-120 03519CT-120 04019CT-120 05019CT-120 06019CT-120 07019CT-120	EZH 01719HP-120 02019HP-120 02519HP-120 03019HP-120 03519HP-120 04019HP-120 05019HP-120 06019HP-120 07019HP-120	EZH 01719ST-120 02019ST-120 02519ST-120 03019ST-120 03519ST-120 04019ST-120 05019ST-120 06019ST-120 07019ST-120	19.05 (0.75")	EZBR...017ST/NB EZBR...020HP/ST/NB EZBR...025HP/ST/NB EZBR...030HP/ST/NB EZBR...035HP/ST/NB EZBR...040HP/ST/NB EZBR...050HP/ST/NB EZBR...060HP/ST/NB EZBR...070ST/NB	1.7 2 2.5 3 3.5 4 5 6 7	CITIZEN MACHINERY MIYANO CO., LTD.
EZH 01720CT-120 02020CT-120 02520CT-120 03020CT-120 03520CT-120 04020CT-120 05020CT-120 06020CT-120 07020CT-120	EZH 01720HP-120 02020HP-120 02520HP-120 03020HP-120 03520HP-120 04020HP-120 05020HP-120 06020HP-120 07020HP-120	EZH 01720ST-120 02020ST-120 02520ST-120 03020ST-120 03520ST-120 04020ST-120 05020ST-120 06020ST-120 07020ST-120	20	EZBR...017ST/NB EZBR...020HP/ST/NB EZBR...025HP/ST/NB EZBR...030HP/ST/NB EZBR...035HP/ST/NB EZBR...040HP/ST/NB EZBR...050HP/ST/NB EZBR...060HP/ST/NB EZBR...070ST/NB	1.7 2 2.5 3 3.5 4 5 6 7	AMADA MACHINE TOOLS CO.,LTD. EGURO.LTD TSUGAMI CORPORATION CITIZEN MACHINERY MIYANO CO., LTD. General machines
EZH 01722CT-135 02022CT-135 02522CT-135 03022CT-135 03522CT-135 04022CT-135 05022CT-135 06022CT-135 07022CT-135	EZH 01722HP-135 02022HP-135 02522HP-135 03022HP-135 03522HP-135 04022HP-135 05022HP-135 06022HP-135 07022HP-135	EZH 01722ST-135 02022ST-135 02522ST-135 03022ST-135 03522ST-135 04022ST-135 05022ST-135 06022ST-135 07022ST-135	22	EZBR...017ST/NB EZBR...020HP/ST/NB EZBR...025HP/ST/NB EZBR...030HP/ST/NB EZBR...035HP/ST/NB EZBR...040HP/ST/NB EZBR...050HP/ST/NB EZBR...060HP/ST/NB EZBR...070ST/NB	1.7 2 2.5 3 3.5 4 5 6 7	STAR MICRONICS CO., LTD. Nomura VTC Automatic Lathe Co., Ltd. TSUGAMI CORPORATION
EZH 01725.0CT-135 02025.0CT-135 02525.0CT-135 03025.0CT-135 03525.0CT-135 04025.0CT-135 05025.0CT-135 06025.0CT-135 07025.0CT-135	EZH 01725.0HP-135 02025.0HP-135 02525.0HP-135 03025.0HP-135 03525.0HP-135 04025.0HP-135 05025.0HP-135 06025.0HP-135 07025.0HP-135	EZH 01725.0ST-135 02025.0ST-135 02525.0ST-135 03025.0ST-135 03525.0ST-135 04025.0ST-135 05025.0ST-135 06025.0ST-135 07025.0ST-135	25	EZBR...017ST/NB EZBR...020HP/ST/NB EZBR...025HP/ST/NB EZBR...030HP/ST/NB EZBR...035HP/ST/NB EZBR...040HP/ST/NB EZBR...050HP/ST/NB EZBR...060HP/ST/NB EZBR...070ST/NB	1.7 2 2.5 3 3.5 4 5 6 7	AMADA MACHINE TOOLS CO.,LTD. EGURO.LTD TSUGAMI CORPORATION CITIZEN MACHINERY MIYANO CO., LTD. General machines
EZH 01725.4CT-120 02025.4CT-120 02525.4CT-120 03025.4CT-120 03525.4CT-120 04025.4CT-120 05025.4CT-120 06025.4CT-120 07025.4CT-120	EZH 01725.4HP-120 02025.4HP-120 02525.4HP-120 03025.4HP-120 03525.4HP-120 04025.4HP-120 05025.4HP-120 06025.4HP-120 07025.4HP-120	EZH 01725.4ST-120 02025.4ST-120 02525.4ST-120 03025.4ST-120 03525.4ST-120 04025.4ST-120 05025.4ST-120 06025.4ST-120 07025.4ST-120	25.4 (1.00")	EZBR...017ST/NB EZBR...020HP/ST/NB EZBR...025HP/ST/NB EZBR...030HP/ST/NB EZBR...035HP/ST/NB EZBR...040HP/ST/NB EZBR...050HP/ST/NB EZBR...060HP/ST/NB EZBR...070ST/NB	1.7 2 2.5 3 3.5 4 5 6 7	CITIZEN MACHINERY MIYANO CO., LTD.

- Choose sleeves (Ød1) to meet with ØD dimension of bar.
- Adjustment pin cannot be installed in EZH-ST sleeves. To adjust overhang of EZB insert, please use EZH-CT or EZH-HP sleeves.

■ Recommended Cutting Conditions

• F Chipbreaker (EZBR...HP-...F, EZBR...ST-...F)

Workpiece Material	Insert Grade (Vc:sfm)	EZB020/025		EZB030/035		EZB040/045		EZB050/055/ 060/065/075		Remarks
	MEGACOAT	Depth of Cut: ap(in), Feed: f(ipr)								
	PR1225	ap	f	ap	f	ap	f	ap	f	
Carbon steel / Alloy steel	100~325	~0.0118	~0.0012	~0.0157	~0.0016	~0.0177	~0.0028	~0.0197	~0.0039	Wet
Stainless Steel	100~250	~0.0079	~0.0008	~0.0118	~0.0012	~0.0138	~0.0020	~0.0157	~0.0028	

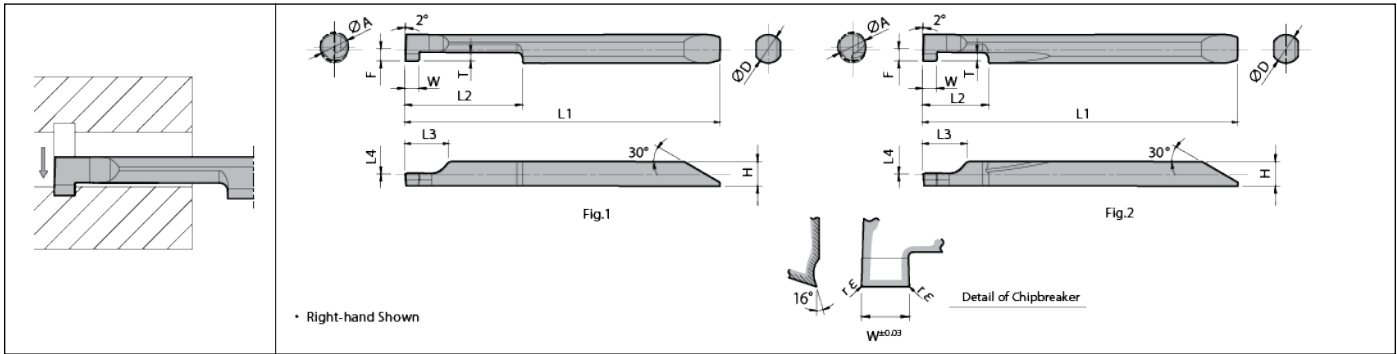
• F Chipbreaker (EZBR...HP-...F, EZBR...ST-...F)

Workpiece Material	Insert Grade (Vc:sfm)	EZB020/025		EZB030/035		EZB040/045		EZB050/055/ 060/065/075		Remarks
	MEGACOAT	Depth of Cut: ap(in), Feed: f(ipr)								
	PR1225	ap	f	ap	f	ap	f	ap	f	
Carbon steel / Alloy steel	100~325	~0.0079	~0.0012	~0.0079	~0.0020	~0.0118	~0.0028	~0.0118	~0.0028	Wet
Stainless Steel	100~250	~0.0079	~0.0008	~0.0079	~0.0012	~0.0098	~0.0020	~0.0098	~0.0020	

• NB Chipbreaker (EZBR...-...NB)

Workpiece Material	Insert Grade (Vc:sfm)	EZB020/025		EZB030/035		EZB040/045		EZB055/065/075		Remarks
	MEGACOAT	Depth of Cut: ap(in), Feed: f(ipr)								
	PR1225	ap	f	ap	f	ap	f	ap	f	
Carbon steel / Alloy steel	100~325	~0.0118	~0.0012	~0.0157	~0.0016	~0.0177	~0.0028	~0.0197	~0.0039	Wet
Stainless Steel	100~250	~0.0079	~0.0008	~0.0118	~0.0012	~0.0138	~0.0020	~0.0157	~0.0028	
Non-ferrous Material	200~325	~0.0118	~0.0020	~0.0157	~0.0024	~0.0177	~0.0028	~0.0197	~0.0039	

Workpiece Material	Insert Grade (Vc:sfm)		EZB030		EZB040/045		EZB050/060/070		Remarks		
	MEGACOAT	Diamond	Depth of Cut: ap(in), Feed: f(ipr)								
	KBN05M	KPD001	ap	f	ap	f	ap	f			
Non-ferrous Material	-	~975	-	-	~0.0177	~0.0039	~0.0197	~0.0059	Wet		
Hard Materials (including heat-treated steel)	~325	-	~0.0028	~0.0012	~0.0039	~0.0020	~0.0059	~0.0028			



• EZ Bar Dimensions

Description	Min. Bore Dia.	Dimension (mm)										Drawing	MEGACOAT	Applicable Sleeves				
		ØA	W ^{±0.03}	r _ε	ØD	H	L1	L2	L3	L4	F				T			
EZGR 040040-050 040040-100 040040-150 040040-200 050050-100 050050-150 050050-200 060060-100 060060-150 060060-200 070070-100 070070-150 070070-200 080070-100 080070-150 080070-200	4	0.5	±0.013 0.05	4	3.45	44.7	12	6.2	0	1.7	1	Fig.2	PR1225	EZH040..				
		1.0											●					
		1.5											●					
		2.0											●					
	5	1.0		5	4.3	52.8	20	6.7		2.15	1.5		Fig.1	●	EZH050..			
	1.5	●																
	2.0	●																
	1.0	●																
	6	1.0		6	5.15	60.7	7.6	3.05		2	Fig.1			●	EZH060..			
	1.5	●																
2.0	●																	
1.0	●																	
7	1.5	7	6.2	63.7	25	7.6	3.05	2	Fig.1	●		EZH070..						
2.0	●																	
1.0	●																	
1.5	●																	
8	1.5	8	6.2	63.7	25	7.6	3.45	2		Fig.1		●	EZH070..					
2.0	●																	
1.0	●																	
1.5	●																	
EZGR 030030-050S 030030-100S 040040-050S 040040-100S 040040-150S 040040-200S 050050-100S 050050-150S 050050-200S 060060-100S 060060-150S 060060-200S 070070-100S 070070-150S 070070-200S 080070-100S 080070-150S 080070-200S	3	0.5	±0.013 0.05	3	2.5	38.7	5	4.8			0	1.25	0.8	Fig.2	●	EZH030..		
		1.0													●			
	4	0.5		4	3.45	44.7	8	6.2	6.2			6.2	1.7		1	Fig.2	●	EZH040..
		1.0															●	
		1.5															●	
		2.0															●	
	5	1.0		5	4.3	52.8	10	6.7	6.7	2.15		1.5	Fig.2		●		EZH050..	
	1.5	●																
	2.0	●																
	1.0	●																
	6	1.0		6	5.15	60.7	10	6.7	6.7	2.65		2			Fig.2		●	EZH060..
	1.5	●																
	2.0	●																
	1.0	●																
7	1.5	7	6.2	63.7	10	6.7	6.7	3.05	2	Fig.2	●	EZH070..						
2.0	●																	
1.0	●																	
1.5	●																	
8	1.5	8	6.2	63.7	10	6.7	6.7	3.45	2		Fig.2	●		EZH070..				
2.0	●																	
1.0	●																	
1.5	●																	

Dimension T: Available grooving depth
"S" in description denotes stub length

● : Stock Standard ○ : World Express

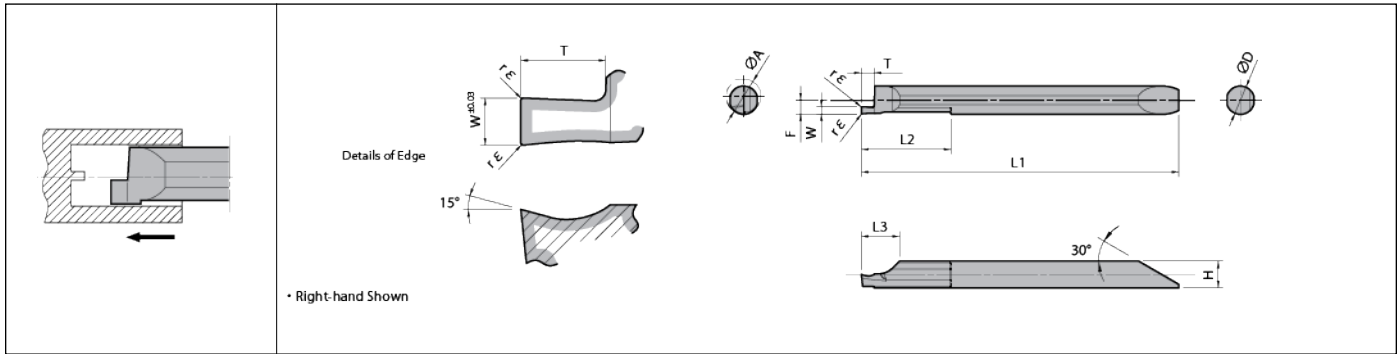
Bars are sold in 1 piece boxes

◆ Recommended Cutting Conditions

Workpiece Material	Insert Grade (Vc: sfm)	EZGR030030-S	EZGR040040 EZGR050050 EZGR040040-S EZGR050050-S	EZGR060060 EZGR070070 EZGR080070 EZGR060060-S EZGR070070-S EZGR080070-S	Notes
	MEGACOAT				
	PR1225				
Carbon Steel / Alloy Steel (SxxC • SCM)	★ 100~325	~0.0008	~0.0012	~0.0020	Wet
Stainless Steel (SUS304)	★ 100~250	~0.0004	~0.0008	~0.0012	

★ : First Recommendation

EZFG Face Grooving



EZ Bar Dimensions

Description	Min. Bore Dia.	Dimension (mm)										MEGACOAT	Applicable Sleeves
		W ^{±0.03} *	r _ε	ØD	H	L1	L2	L3	F	T	PR1225		
EZFGR 050040-100	5	1.0	0.05	4	3.8	45.0	12	5.4	1.9	1.5	○	EZH040..	
		1.5								2.0			
EZFGR 060050-100	6	1.0	0.05	5	4.8	53.2	25	6.9	2.4	1.5	○	EZH050..	
		1.5								2.5			
		2.0								3.0			
EZFGR 080070-100	8	1.0	0.05	7	6.8	64.2	25	7.9	3.4	2.0	○	EZH070..	
		1.5								2.5			
		2.0								○			
		3.0								○			

Dimension T: Available grooving depth

● : Stock Standard ○ : World Express

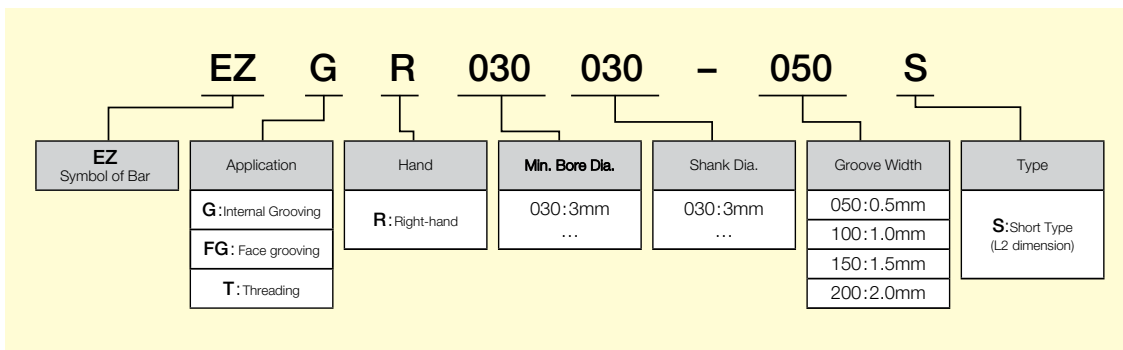
Bars are sold in 1 piece boxes

Recommended Cutting Condition

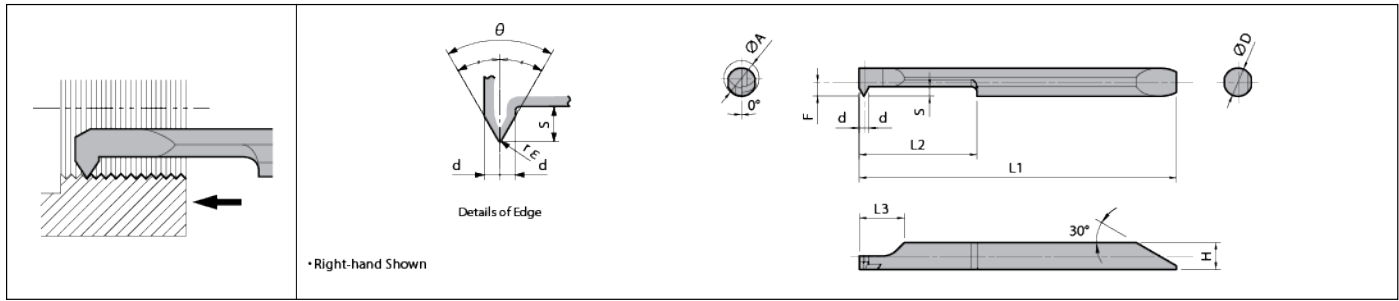
Workpiece Material	Insert Grade (Vc:sfm)	EZFG050040-100 EZFG060050-100 EZFG080070-100	EZFG050040-150 EZFG060050-150 EZFG080070-150	EZFG060050-200 EZFG080070-200	EZFG080070-300	Notes
	MEGACOAT					
	PR1225					
Carbon Steel / Alloy Steel (SxxC • SCM)	★ 100~325	~0.0008	~0.0012	~0.0016	~0.0020	Wet
Stainless Steel (SUS304)	★ 100~250	~0.0004	~0.0008	~0.0008	~0.0012	

★ : First Recommendation

Sleeve Identification System (Internal Grooving, Face Grooving, Threading)



EZT Threading



• Right-hand Shown

• EZ Bar Dimensions

Description	Min. Bore Dia.	Dimension (mm)										MEGACOAT	Applicable Screw							
		ØA	ØD	H	L1	L2	L3	F	S	d	rε		θ	Metric		Unified		American National Pipe		
														Applicable Thread	Pitch (mm)	Applicable Thread	Pitch (tpi)	Applicable Thread	Pitch (tpi)	
EZTR 030025-60-002	3.0	2.5	2.3	35.0	6.5	5.4	1.19	1.0	0.5	0.02 ^{+0.01}	60°	●	M4 M3.5 or more	P0.5-P0.8	No.8-32UNC No.8-36UNF or more	36-32	-	-		
035030-60-002	3.5	3.0	2.8	39.0	9.0	5.9	1.44	1.2	0.6			●	M4.5 M4.5 or more	P0.5-P1.0	No.10-24UNC No.8-36UNF or more	36-24	-	-		
040035-60-004	4.0	3.5	3.3	42.0	11.0	5.9	1.69	1.2	0.6			0.04 ^{+0.01}	60°	●	M5 M5 or more	P0.75-P1.25	No.12-24UNC No.12-28UNF or more	28-20	-	-
050040-60-004	5.0	4.0	3.8	45.0	16.0	6.4	1.94	1.3	0.65					●	M7 M6 or more	P0.75-P1.5	1/4-20UNC 1/4-28UNF or more	28-18	-	-
060050-60-004	6.0	5.0	4.8	53.2	20.0	7.4	2.44	1.6	0.8					●	M8 M7 or more	P0.75-P1.5	5/16-18UNC 5/16-24UNF or more	24-16	1/4NPT 3/8NPT	18
070060-60-004	7.0	6.0	5.8	61.2	25.0	8.4	2.94	2.0	1.0					●	M9 M8 or more	P0.75-P1.75	3/8-16UNC 3/8-24UNF or more	24-16	1/4NPT	18,14
												Whitworth		Parallel pipe / Tapered pipe						
EZTR 060050-55-008	6.0	5.0	4.8	53.2	20.0	7.4	2.44	1.6	0.8	0.08 ^{-0.01}	55°	●	W10 tpi 24 or more	24-20	G1/16 R1/16 or more	28	-	-		
080070-55-008	8.0	7.0	6.8	64.2	20.5	8.9	3.44	2.0	1.0			●	W11 tpi 20 or more	20-18	G1/8 R1/8 or more	28,19	-	-		

• For American National Pipe (NPT), use EZTR...-60-004. See page 20.
For applicable sleeve see page 22.

◆ ap & Number of Passes (Metric)

Pitch (mm)	Total ap (mm)	No. of Passes	1 Pass	2 Pass	3 Pass	4 Pass	5 Pass	6 Pass	7 Pass	8 Pass	9 Pass	10 Pass	11 Pass	12 Pass	13 Pass	14 Pass	15 Pass	16 Pass	17 Pass	18 Pass	19 Pass	20 Pass
0.5	0.3	9	0.05	0.05	0.04	0.04	0.03	0.03	0.02	0.02	0.02											
0.7	0.42	10	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.02										
0.75	0.45	10	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03										
0.8	0.48	11	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03									
1.00	0.61	12	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03								
1.25	0.77	14	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.04	0.04	0.03							
1.50	0.93	17	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.03				
1.75	1.1	20	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03

◆ ap & Number of Passes (Whitworth)

TPI	Total ap (mm)	No. of Passes	1 Pass	2 Pass	3 Pass	4 Pass	5 Pass	6 Pass	7 Pass	8 Pass	9 Pass	10 Pass	11 Pass	12 Pass	13 Pass	14 Pass	15 Pass	16 Pass	17 Pass
24	0.65	13	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03				
20	0.81	15	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03		
18	0.91	17	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.03

◆ ap & Number of Passes (Unified)

TPI	Total ap (mm)	No. of Passes	1 Pass	2 Pass	3 Pass	4 Pass	5 Pass	6 Pass	7 Pass	8 Pass	9 Pass	10 Pass	11 Pass	12 Pass	13 Pass	14 Pass	15 Pass	16 Pass	17 Pass	18 Pass
36	0.44	8	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.02	0.02								
32	0.5	10	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.03							
28	0.55	12	0.07	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03						
24	0.65	12	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.04	0.03						
20	0.78	14	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.04	0.04	0.03					
18	0.88	17	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.03			
16	0.99	18	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	

● : Stock Standard ○ : World Express

Bars are sold in 1 piece boxes

◆ **ap & Number of Passes** (Parallel Pipe / Tapered Pipe)

TPI	Total ap (mm)	No. of Passes	1 Pass	2 Pass	3 Pass	4 Pass	5 Pass	6 Pass	7 Pass	8 Pass	9 Pass	10 Pass	11 Pass	12 Pass	13 Pass	14 Pass	15 Pass	16 Pass	17 Pass	18 Pass
28	0.61	12	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03						
19	0.95	18	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03

◆ **ap & Number of Passes** (American National Pipe)

TPI	Total ap (mm)	No. of Passes	1 Pass	2 Pass	3 Pass	4 Pass	5 Pass	6 Pass	7 Pass	8 Pass	9 Pass	10 Pass	11 Pass	12 Pass	13 Pass	14 Pass	15 Pass	16 Pass	17 Pass	18 Pass	19 Pass
18	1.23	16	0.18	0.14	0.12	0.12	0.10	0.09	0.08	0.08	0.07	0.06	0.05	0.04	0.03	0.03	0.02	0.02			
14	1.56	19	0.18	0.16	0.14	0.14	0.12	0.10	0.09	0.09	0.08	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.02

◆ **Recommended Cutting Condition**

Workpiece Material	Recommended Insert Grade (cutting speed sfm)	
	MEGACOAT	
(S45C • SCM435) Carbon Steel / Alloy Steel	PR1225 ★ 100-325	
(SUS304) Stainless Steel	★ 100-250	
Non-ferrous Metals (Aluminum / Brass)	-	

Note

1. The standard cutting speed is Vc=100-175sfm. The table feed may not follow the expected conditions when machining small diameter workpieces at high speeds.
2. Coolant is recommended.

★ : First Recommendation

■ **Application of Parallel Pipe and Tapered Pipe Thread**

● **G (PF), Rp (PS)**

Applicable Thread		TPI	Internal Threading (G, Rp)		Same Root's Radius
Inch	Symbol (Previous Symbol)		Insert	Bore Dia.	
-	G 1/16 (-)	28	EZTR 060050-55-008	6.56	0.12
1/8	G 1/8 (PF 1/8)			8.57	
1/2	G 1/4 (PF 1/4)	19	EZTR 080070-55-008	11.45	0.18
3/8	G 3/8 (PF 3/8)			14.95	

● **R, Rc (PT) (BSPT)**

Applicable Thread		TPI	Internal Threading (Rc)		Same Root's Radius
Inch	Symbol (Previous Symbol)		Insert	Bore Dia.	
-	R 1/16, Rc 1/16 (-)	28	EZTR 060050-55-008	-	0.12
1/8	R 1/8, Rc 1/8 (PT 1/8)			080070-55-008	
1/2	R 1/4, Rc 1/4 (PT 1/4)	19	EZTR 080070-55-008	-	0.18
3/8	R 3/8, Rc 3/8 (PT 3/8)			-	

When using "EZT type" for Parallel Pipe / Tapered Pipe threading, the thread's corners become sharp edged due to its partial profile, and the shape will not be the same as the standard shape for Parallel Pipe / Tapered Pipe.

■ **Application for NPT**

Applicable Thread	TPI	Internal Threading		
		Toolholder	Insert	
			Partial Profile	Full Profile
1/16 NPT 1/8 NPT	27	No Tools Available		
1/4 NPT 3/8 NPT	18	EZH Sleeve	EZTR060050-60-004 EZTR070060-60-004	-
1/2 NPT 3/4 NPT	14	EZH Sleeve	EZTR070060-60-004	-
1/2 NPT 3/4 NPT	14	SINR1616S-16 SINR2016S-16	-	16IR14NPT

● **Application of NPTF Thread**

NPTF is the thread for sealing pipes without using any sealing material.

Thread symbol is similar to NPT but the Tolerance is different from that of NPT and the above Inserts are not available to NPTF.

■ Applicable Sleeves for Machine Manufacturers

Sleeve Description				Applicable EZG, EZFG, EZT Bar				Applicable Machine Manufacturer
EZH-CT (With coolant hole and EZ adjust structure)	EZH-HP (Adjustable)	EZH-ST	Sleeve Shank Dia.	EZG	EZFG	EZT	Shank Dia.	
			ØD1(mm)				Ød1(mm)	
		EZH 01712ST-80	12				1.7	General machines
		02012ST-80					2	
		02512ST-80					2.5	
		03012ST-80					3	
		03512ST-80					3.5	
		04012ST-80					4	
		05012ST-80					5	
		06012ST-80					6	
		07012ST-80					7	
	EZH 01716HP-100	EZH 01716ST-100	16				1.7	General machines
	02016HP-100	02016ST-100					2	
	02516HP-100	02516ST-100					2.5	
	03016HP-100	03016ST-100					3	
	03516HP-100	03516ST-100					3.5	
	04016HP-100	04016ST-100					4	
	05016HP-100	05016ST-100					5	
	06016HP-100	06016ST-100					6	
	07016HP-100	07016ST-100					7	
EZH 01719CT-120	EZH 01719HP-120	EZH 01719ST-120	0.75"				1.7	CITIZEN MACHINERY MIYANO CO., LTD.
02019CT-120	02019HP-120	02019ST-120					2	
02519CT-120	02519HP-120	02519ST-120					2.5	
03019CT-120	03019HP-120	03019ST-120					3	
03519CT-120	03519HP-120	03519ST-120					3.5	
04019CT-120	04019HP-120	04019ST-120					4	
05019CT-120	05019HP-120	05019ST-120					5	
06019CT-120	06019HP-120	06019ST-120					6	
07019CT-120	07019HP-120	07019ST-120					7	
EZH 01720CT-120	EZH 01720HP-120	EZH 01720ST-120	20				1.7	AMADA MACHINE TOOLS CO.,LTD. EGURO.LTD TSUGAMI CORPORATION CITIZEN MACHINERY MIYANO CO., LTD. General machines
02020CT-120	02020HP-120	02020ST-120					2	
02520CT-120	02520HP-120	02520ST-120					2.5	
03020CT-120	03020HP-120	03020ST-120					3	
03520CT-120	03520HP-120	03520ST-120					3.5	
04020CT-120	04020HP-120	04020ST-120					4	
05020CT-120	05020HP-120	05020ST-120					5	
06020CT-120	06020HP-120	06020ST-120					6	
07020CT-120	07020HP-120	07020ST-120					7	
EZH 01722CT-135	EZH 01722HP-135	EZH 01722ST-135	22				1.7	STAR MICRONICS CO., LTD. Nomura VTC Automatic Lathe Co., Ltd. TSUGAMI CORPORATION
02022CT-135	02022HP-135	02022ST-135					2	
02522CT-135	02522HP-135	02522ST-135					2.5	
03022CT-135	03022HP-135	03022ST-135					3	
03522CT-135	03522HP-135	03522ST-135					3.5	
04022CT-135	04022HP-135	04022ST-135					4	
05022CT-135	05022HP-135	05022ST-135					5	
06022CT-135	06022HP-135	06022ST-135					6	
07022CT-135	07022HP-135	07022ST-135					7	
EZH 01725.0CT-135	EZH 01725.0HP-135	EZH 01725.0ST-135	25				1.7	AMADA MACHINE TOOLS CO.,LTD. EGURO.LTD TSUGAMI CORPORATION CITIZEN MACHINERY MIYANO CO., LTD. General machines
02025.0CT-135	02025.0HP-135	02025.0ST-135					2	
02525.0CT-135	02525.0HP-135	02525.0ST-135					2.5	
03025.0CT-135	03025.0HP-135	03025.0ST-135					3	
03525.0CT-135	03525.0HP-135	03525.0ST-135					3.5	
04025.0CT-135	04025.0HP-135	04025.0ST-135					4	
05025.0CT-135	05025.0HP-135	05025.0ST-135					5	
06025.0CT-135	06025.0HP-135	06025.0ST-135					6	
07025.0CT-135	07025.0HP-135	07025.0ST-135					7	
EZH 01725.4CT-120	EZH 01725.4HP-120	EZH 01725.4ST-120	25.4				1.7	CITIZEN MACHINERY MIYANO CO., LTD.
02025.4CT-120	02025.4HP-120	02025.4ST-120					2	
02525.4CT-120	02525.4HP-120	02525.4ST-120					2.5	
03025.4CT-120	03025.4HP-120	03025.4ST-120					3	
03525.4CT-120	03525.4HP-120	03525.4ST-120					3.5	
04025.4CT-120	04025.4HP-120	04025.4ST-120					4	
05025.4CT-120	05025.4HP-120	05025.4ST-120					5	
06025.4CT-120	06025.4HP-120	06025.4ST-120					6	
07025.4CT-120	07025.4HP-120	07025.4ST-120					7	

• Choose sleeves (Ød1) to meet with ØD dimension of bar.

• Adjustment pin cannot be installed in EZH-ST sleeves. To adjust overhang of EZB insert, please use EZH-CT or EZH-HP sleeves.

Case Studies

304SS	
Valve Part • Vc=250sfm • ap=0.004" • f=0.0012ipr • Wet • EZBR030030HP-015F (PR1225) • EZH03025.0HP-135	
PR1225	3,000 pcs/edge
Competitor F	2,000 pcs/edge
Compared to Competitor F, EZ Bar showed 1.5 times longer tool life with superior stability and accuracy of cutting edge position.	
(User Evaluation)	

316SS	
Connector • Vc=150-200sfm • ap=0.004" • f=0.0012ipr • Wet • EZBR045040ST-008H (PR1225) • EZH04025.0HP-135	
PR1225	2,000 pcs/edge
Competitor G	500 pcs/edge
Compared to Competitor G, EZ Bar showed 4 times longer tool life. Adjustable overhang length of sleeves (EZH-HP) drastically improved operability.	
(User Evaluation)	

1045	
Sleeve (Automotive Part) • Vc=150sfm • ap=0.002" • f=0.0024ipr • Wet • EZBR045040ST-008H (PR1225) • EZH04016HP-100	
PR1225	2,000 pcs/edge
Competitor H	1,000 pcs/edge
Compared to Competitor H, EZ Bar doubled tool life. The excellent operability of the sleeve reduced the cycle time and improved productivity.	
(User Evaluation)	

12L14	
Collar • Vc=275sfm • ap=0.002"-0.004" • f=0.001ipr • Wet • EZBR040040HP-008H (PR1225) • EZH04019HP-120	
PR1225	10,000 pcs/edge (Stable Machining)
Competitor I	10,000 pcs/edge (Unstable)
Compared to Competitor I, EZ Bar achieved stable machining of 10,000 pcs/edge, minimizing deflection of the diameter. Number of defects is reduced drastically.	
(User Evaluation)	

4135	
Sleeve • Vc=100sfm • ap=0.002" (2 passes) • f=0.0012ipr • Wet • EZBR045040ST-008H (PR1225) • EZH04019HP-100	
PR1225	300 pcs/edge (Further Machining Possible)
Competitor J	150 pcs/edge
PR1225 has double the tool life of that of Competitor J with good chip control.	
(User Evaluation)	

303SS	
Pipe • Vc=125sfm • ap=0.009" • f=0.0012ipr • Wet • EZBR030030HP-015H (PR1225) • EZH03016HP-100	
PR1225	1,500 pcs/edge (No Defective Products)
Competitor K	1,500 pcs/edge (Unstable)
Conventional K was unstable in tool life and dimension. EZ Bar provided stable machining.	
(User Evaluation)	



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