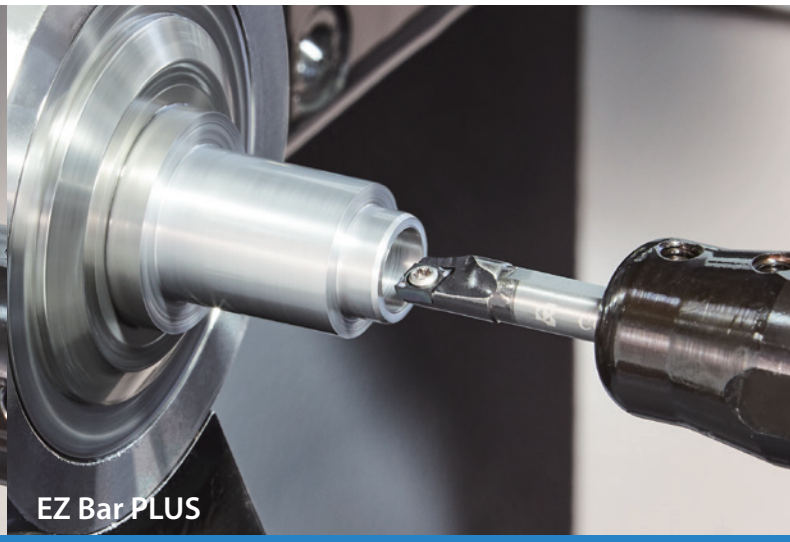
KYOCERA

Small internal machining | EZ Bar

EZ Bar Series



Easy adjustment & high precision for a wide range of machining applications

The EZ Bar prevents deviation with high-rigidity clamping

Unique design provides a smooth supply of coolant

Large tooling lineup for a wide application range

NEW Items for internal turning added to the lineup

Copying	EZBP
45° Chamfering	EZBC

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Small internal machining

EZ Bar Series

Min. bore dia. ø2 – Easy adjustment and high precision
Large tooling lineup for a wide application range

1 Large tooling lineup for a wide application range

Can be used for boring, back boring, internal profiling, internal grooving, face grooving and threading

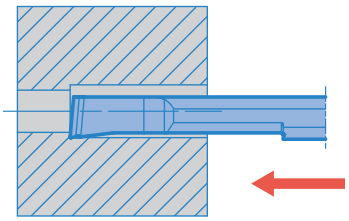
Large lineup of sleeves for various tooling applications

Internal turning

Boring

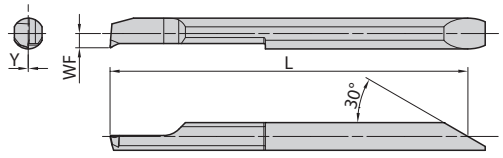
EZB ➡ P5 ~ 8

Select the HP bar for high precision and the ST bar for cost reduction (tolerances are different)



HP (Precision-oriented)

ST (Cost-oriented)

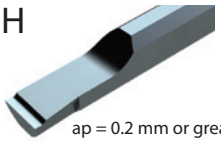


Bar Tolerance	Offset (WF)	Longitudinal direction (L)	Cutting Edge Height (Y)	Min. bore dia.
HP	±0.025 mm	±0.05 mm	+0.05 mm / 0 mm	Same as shank dia.
ST	±0.06 mm	±0.1 mm	+0.06 mm / 0 mm	Different from shank dia.

Chipbreakers

Chipbreakers for various applications

H

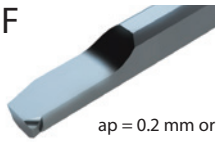


ap = 0.2 mm or greater

1st Recommendation
General purpose
Long type available

➡ P5 ~ 7

F

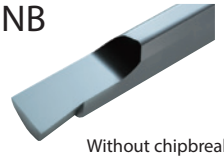


ap = 0.2 mm or less

Finishing
Sharpness oriented

➡ P5 , 7

NB



Without chipbreaker

GW05 Insert grade for aluminum machining available

➡ P8

EZ Bar PLUS

➡ P19 ~ 20

High precision solid bar with convenience of indexable inserts reduce machining costs

Indexable EZ Bar

Minimum bore diameter 5 mm

Internal turning

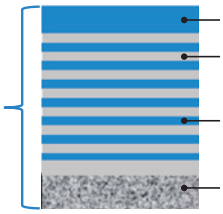
NEW

Newly developed PVD coating PR1725 added to EZB boring bar

AlTiN/AlCrN Nano laminated film with superior wear resistance and adhesion resistance
Excellent surface finish and long tool life

Reduces cracking

Reduces abnormal damages such as chipping because of increased lamination layer with a thinner gap than conventional coatings

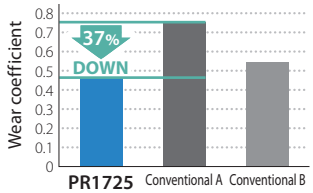


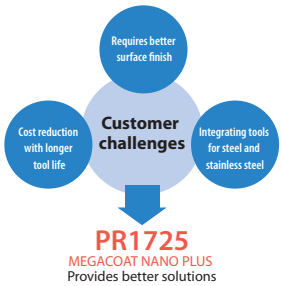
High-lubricity unique surface layer
High aluminum content AlTiN layer
High hardness / Oxidation resistance

Optimized AlCrN layer
Superior adhesion resistance

Tough micro-grain carbide substrate
High stability

Wear coefficient comparison
(Internal evaluation)





Superior wear and chipping resistance

High hardness with nano laminated film layer properties
Internal stress optimization reduces chipping

Excellent surface finish

Special surface layer with great lubricity reduces adhesion

Applicable to various workpiece materials

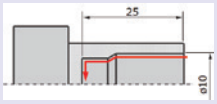
Excellent oxidation resistance. Superior high temperature properties maintains good performance in steel, stainless steel and free-cutting steel

High machining stability

Tough micro-grain carbide substrate provides stable machining

SOLUTION 1 Improved machining efficiency. 2.8 times longer tool life

Automotive parts (C45)



Vc = 50 m/min
ap = 0.2 mm
f = 0.045 mm/rev
Wet
EZBR035035HP-015F PR1725

SOLUTION
EZ Bar PR1725 18,000 pcs/edge

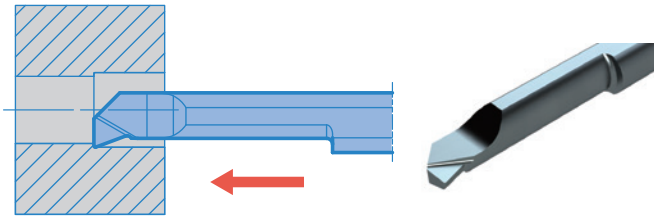
x2.8 Tool life

Conventional
Conventional C 6,300 pcs/edge

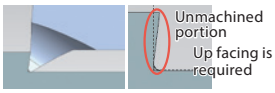
The EZ bar (PR1725) showed **2.8 times** longer tool life than the conventional C

(User evaluation)

90° lead angle EZBF ➡ P9

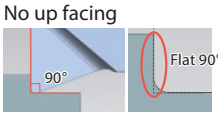


Creates a finished surface against the bore face



General boring

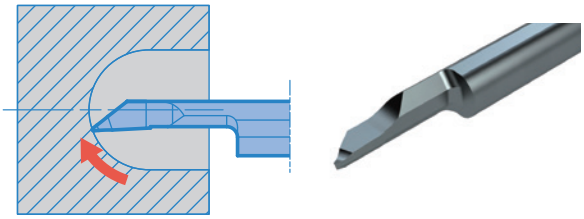
No up facing



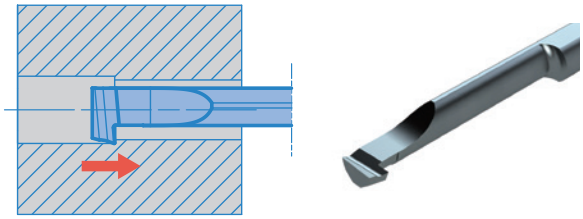
90° Lead angle boring

Max. D.O.C. : 1.0 mm (ø 3.0)

Internal facing • Internal profiling EZVB ➡ P10

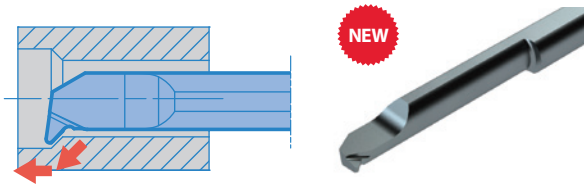


Back boring EZBT ➡ P10



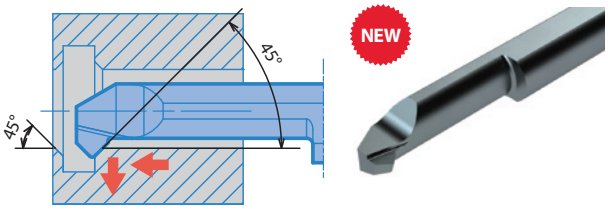
Copying EZBP ➡ P11

NEW



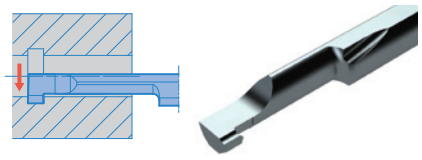
45° Chamfering EZBC ➡ P12

NEW



Internal grooving and threading

Internal grooving EZG ➡ P15

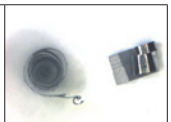


Two different overhang lengths (LU) are available

Short type with higher rigidity and chattering resistance

Chip evacuation (Internal evaluation)

C45

EZG EZGR040040-200 (Groove width 2mm)			
f (mm/rev)	0.01	0.02	0.03

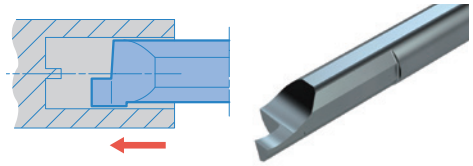
Cutting conditions : Vc = 80 m/min, Groove depth 1.0 mm (ap = 0.2 x 5 times), Wet

X5CrNi18-10

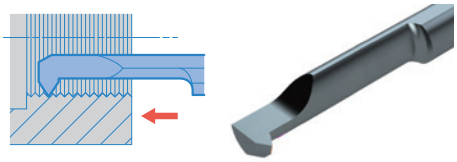
EZG EZGR040040-200 (Groove Width 2mm)		
f (mm/rev)	0.01	0.02

Cutting conditions : Vc = 60 m/min, Groove depth 1.0 mm (ap = 0.2 x 5 times), Wet

Face grooving EZFG ➡ P16



Internal threading EZT ➡ P17 ~ 18



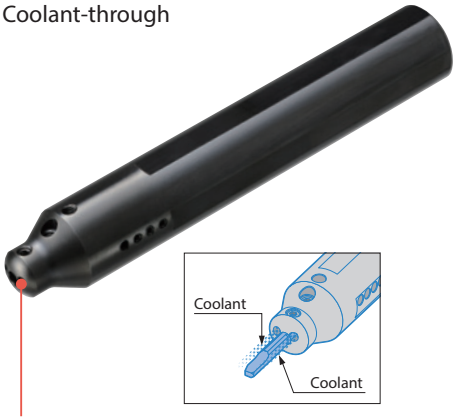
Minimum bore diameter 3 mm
Available for threading M4 metric screw threads

Sleeves

How to select sleeves

Select between three types of sleeves

EZH-CT
With EZ adjust structure
Coolant-through



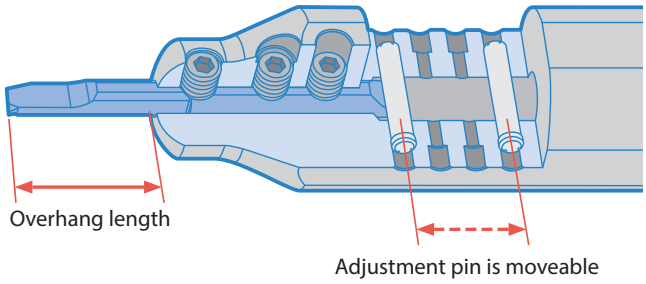
Smooth coolant flow due to special head design

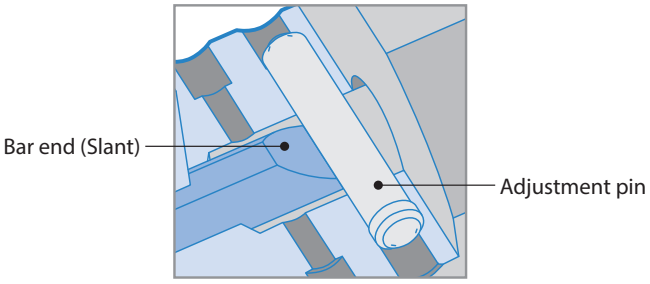
EZH-HP
With EZ adjust structure

EZH-ST
Without EZ adjust structure
For cost oriented machining

2 Adjustable overhang length (EZ adjust structure)

For CT sleeves with coolant holes and HP sleeves with positioning function, the overhang length can be set by moving adjustment pins

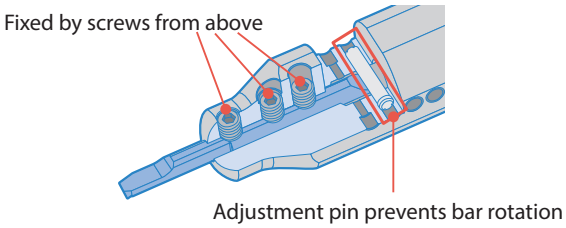




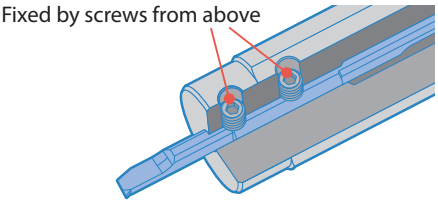
3 Minimized deviation of cutting diameter

The adjustment pin prevents the bar from rotating during machining

EZ Bar

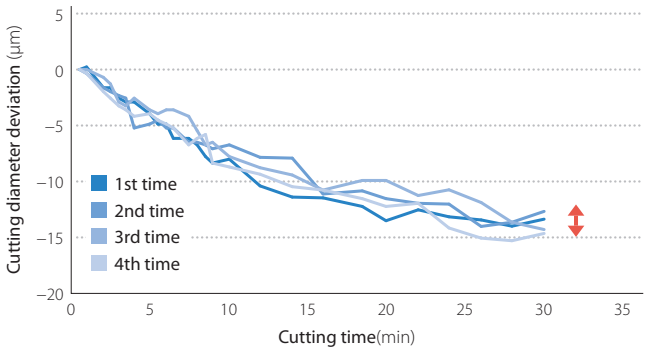


Competitor

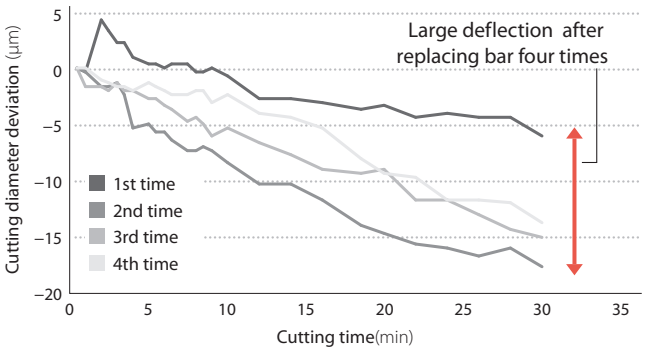


Cutting diameter deviation comparison (internal evaluation)

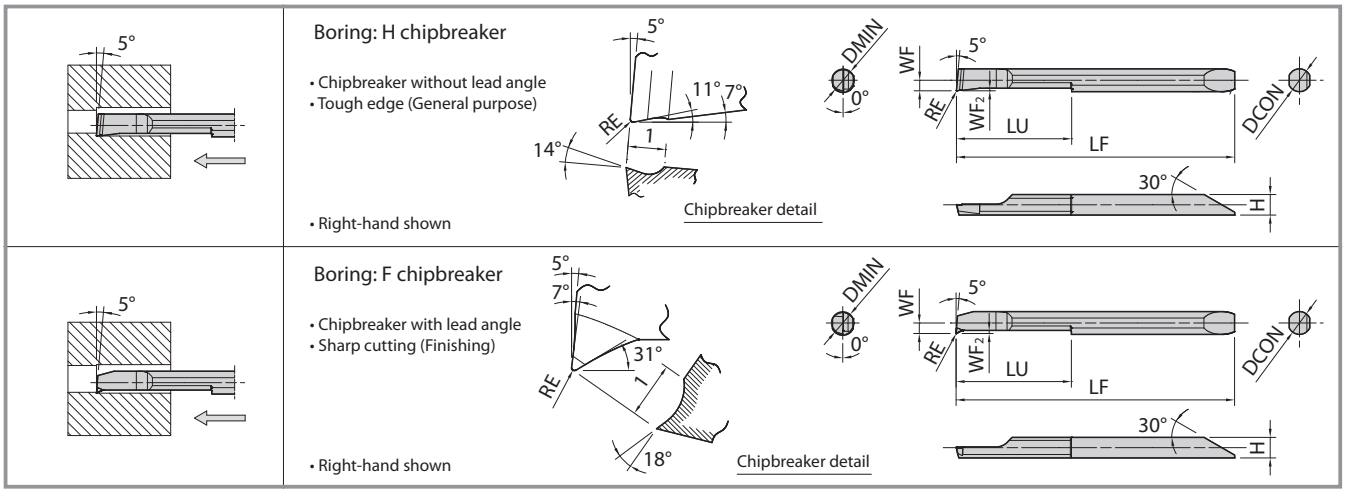
EZ Bar



Competitor A



Cutting conditions : Vc = 66 m/min, ap = 0.1 mm, f = 0.02 mm/rev, wet (oil), workpiece: tool steel (SK4_JIS)



EZ bar dimensions

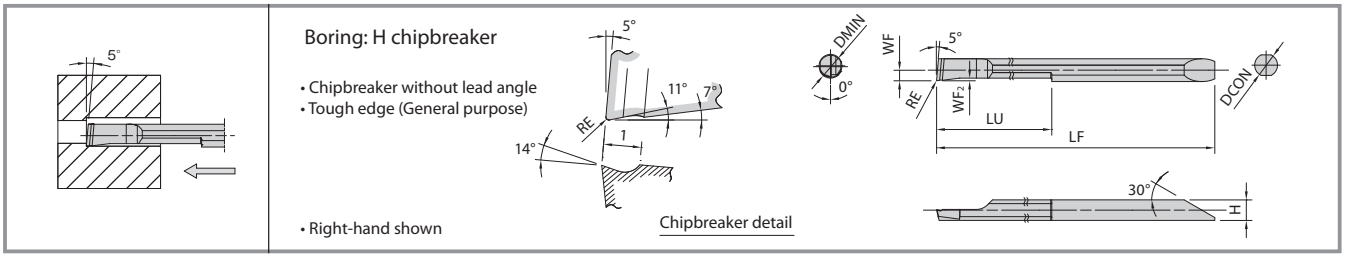
Description		Min. bore dia. (mm)	Dimensions (mm)							Grade						Applicable sleeve
										MEGACOAT NANO PLUS		MEGACOAT		Carbide		
										NEW PR1725		PR1225		GW05		
		DMIN	DCON	H	LF	LU	WF	WF_2	RE	R	L	R	L	R	L	
$EZB^R/_L$	020020HP-008H	2	2	1.8	32	8	0.85	0.25	$0.08^{\pm0.015}$	●		●	●	●		EZH020…
	025025HP-008H	2.5	2.5	2.3	35	10.5	1.1	0.25	$0.08^{\pm0.015}$	●		●	●	●		EZH025…
	025025HP-015H								$0.15^{\pm0.02}$	●		●				
	030030HP-008H	3	3	2.7	38.9	13	1.35	0.3	$0.08^{\pm0.015}$	●		●	●	●		EZH030…
	030030HP-015H								$0.15^{\pm0.02}$	●		●				
	035035HP-008H	3.5	3.5	3.2	41.9	15	1.6	0.4	$0.08^{\pm0.015}$	●		●	●	●		EZH035…
	035035HP-015H								$0.15^{\pm0.02}$	●		●				
	040040HP-008H	4	4	3.6	48.8	20	1.85	0.4	$0.08^{\pm0.015}$	●		●	●	●		EZH040…
	040040HP-015H								$0.15^{\pm0.02}$	●		●				
	045045HP-008H	4.5	4.5	4.1	51.1	22.5	2.1	0.5	$0.08^{\pm0.015}$	●		●	●	●		EZH045…
	045045HP-015H								$0.15^{\pm0.02}$	●		●				
	050050HP-008H	5	5	4.6	58.1	25	2.35	0.5	$0.08^{\pm0.015}$	●		●	●	●		EZH050…
	050050HP-015H								$0.15^{\pm0.02}$	●		●				
	060060HP-008H	6	6	5.6	66.1	30	2.85	0.6	$0.08^{\pm0.015}$	●		●	●	●		EZH060…
	060060HP-015H								$0.15^{\pm0.02}$	●		●				
	070070HP-008H	7	7	6.3	73.8	35	3.3	0.7	$0.08^{\pm0.015}$	●		●	●	●		EZH070…
	070070HP-015H								$0.15^{\pm0.02}$	●		●				
	080080HP-008H	8	8	7.2	84.8	40	3.75	0.8	$0.08^{\pm0.015}$	●		●	●	●		EZH080…
	080080HP-015H								$0.15^{\pm0.02}$	●		●				
EZBR	020020HP-005F	2	2	1.8	32	8	0.85	0.25	$0.05^{\pm0.01}$	●		●				EZH020…
	025025HP-005F	2.5	2.5	2.3	35	10.5	1.1	0.3	$0.05^{\pm0.01}$	●		●				EZH025…
	025025HP-015F								$0.15^{\pm0.02}$	●		●				
	030030HP-005F	3	3	2.7	38.9	13	1.35	0.4	$0.05^{\pm0.01}$	●		●				EZH030…
	030030HP-015F								$0.15^{\pm0.02}$	●		●				
	035035HP-005F	3.5	3.5	3.2	41.9	15	1.6	0.5	$0.05^{\pm0.01}$	●		●				EZH035…
	035035HP-015F								$0.15^{\pm0.02}$	●		●				
	040040HP-005F	4	4	3.6	48.8	20	1.85	0.5	$0.05^{\pm0.01}$	●		●				EZH040…
	040040HP-015F								$0.15^{\pm0.02}$	●		●				
	045045HP-005F	4.5	4.5	4.1	51.1	22.5	2.1	0.7	$0.05^{\pm0.01}$	●		●				EZH045…
	045045HP-015F								$0.15^{\pm0.02}$	●		●				
	050050HP-005F	5	5	4.6	58.1	25	2.35	0.7	$0.05^{\pm0.01}$	●		●				EZH050…
	050050HP-015F								$0.15^{\pm0.02}$	●		●				
	060060HP-005F	6	6	5.6	66.1	30	2.85	0.9	$0.05^{\pm0.01}$	●		●				EZH060…
	060060HP-015F								$0.15^{\pm0.02}$	●		●				
	070070HP-005F	7	7	6.3	73.8	35	3.3	1	$0.05^{\pm0.01}$	●		●				EZH070…
	070070HP-015F								$0.15^{\pm0.02}$	●		●				
	080080HP-005F	8	8	7.2	84.8	40	3.75	1	$0.05^{\pm0.01}$	●		●				EZH080…
	080080HP-015F								$0.15^{\pm0.02}$	●		●				

Tolerance: Offset ±0.025mm, overall length ±0.05mm, edge height +0.05/0mm
*See P1 for details on tolerances.

Bars are sold in 1 piece boxes
● : Available

EZB-HP (Boring, long type)

High precision | Extended reach (...HP...-LT)



EZ bar dimensions

Description		Min. bore dia. (mm)	Dimensions (mm)											Grade MEGACOAT	Applicable sleeve
		DMIN	DCON	H	LF	LU	*Overhang length No.1	No.2	No.3	No.4	WF	WF_2	RE	PR1225	
EZBR	020020HP-008H-LT	2	2	1.8	36	12	12.5	8.5	-	-	0.85	0.25	$0.08^{\pm 0.015}$	●	EZH020…
	025025HP-008H-LT	2.5	2.5	2.3	39.5	15	15.5	11.5	-	-	1.1			●	EZH025…
	030030HP-008H-LT	3	3	2.7	47.9	18	22.5	18.5	14.5	-	1.35	0.3		●	EZH030…
	035035HP-008H-LT	3.5	3.5	3.2	51.9	21	25.5	21.5	17.5	-	1.6	0.4		●	EZH035…
	040040HP-008H-LT	4	4	3.6	60.8	28	32.5	28.5	24.5	20.5	1.85			●	EZH040…
	050050HP-008H-LT	5	5	4.6	73.1	35	40.5	35.5	30.5	25.5	2.35	0.5		●	EZH050…
	060060HP-008H-LT	6	6	5.6	83.1	42	47.5	42.5	37.5	32.5	2.85	0.6		●	EZH060…

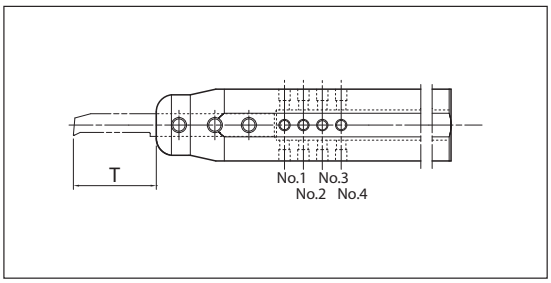
Tolerance: Offset ±0.025mm, overall length ±0.05mm, edge height +0.05/0mm
*See P1 for details on tolerances. * In case of overhang length mentioned in italics, modified insert is required

Bars are sold in 1 piece boxes
●: Available

Extended reach (…HP…-LT) bar overhang length T (mm)

Description		Adjustment pin setting No.1	No.2	No.3	No.4
EZBR	020020HP-008H-LT	12.5	8.5	-	-
	025025HP-008H-LT	15.5	11.5	-	-
	030030HP-008H-LT	22.5	18.5	14.5	-
	035035HP-008H-LT	25.5	21.5	17.5	-
	040040HP-008H-LT	32.5	28.5	24.5	20.5
	050050HP-008H-LT	40.5	35.5	30.5	25.5
	060060HP-008H-LT	47.5	42.5	37.5	32.5

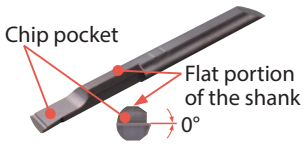
* In case of overhang length mentioned in italics, modified insert is required



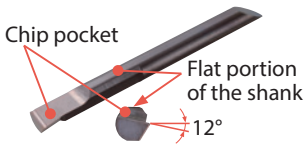
How to distinguish bars

Chip pocket angles are different

HP (EZB-HP)



ST (EZB-ST)



EZ bar compatibility

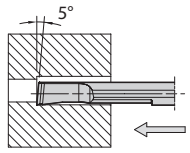
EZ bar compatible with conventional tip bars

Sleeve \ Bar	EZB ••• HP	EZB ••• ST	HPB ••• (EOL)
EZB ••• HP	✓	✓	*1 *2 ✓ (Compatible)
EZB ••• ST	✓	✓	*1 ✓ (Compatible)
PSH ••• (EOL)	*1 ✓ (Compatible)	*1 ✓ (Compatible)	✓

*1: Some diameters of conventional tip bars are incompatible
*2: Use conventional tip bars without adjustment pins. The overhang length of bar is not adjustable

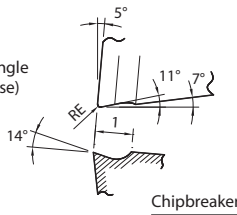
EZ bar identification system

EZ	B	R	020	020	HP	-	008	H
Bar symbol (EZ Bar)	Application	Bar hand	Min. bore dia.	Shank dia.	Precision		Corner-R(RE)	Chipbreaker
	B: Boring bar	R: Right-hand	020: 2 mm	020: 2 mm	HP: High precision		008: 0.08 mm	H Chipbreaker (Without lead angle)
		L: Left-hand	025: 2.5 mm	025: 2.5 mm	ST: Standard		015: 0.15 mm	H-LT: Chipbreaker (Extended reach)
								F Chipbreaker (With lead angle)
								NB: Without chipbreaker

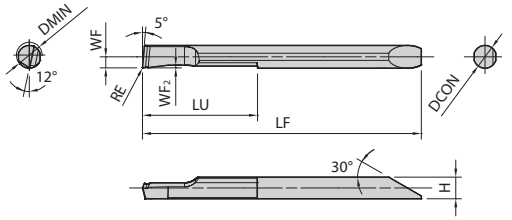


Boring: H chipbreaker

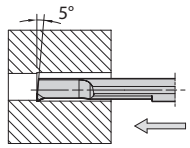
- Chipbreaker without lead angle
- Tough edge (General purpose)



Chipbreaker detail

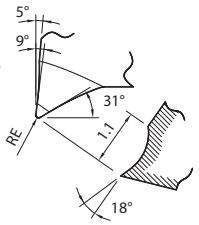


- Right-hand shown

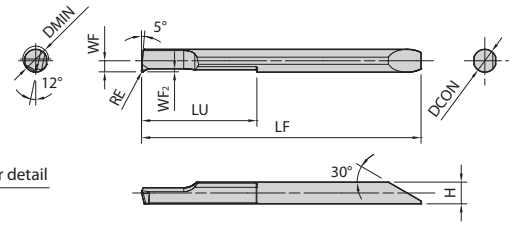


Boring: F chipbreaker

- Chipbreaker with lead angle
- Sharp cutting (Finishing)



Chipbreaker detail



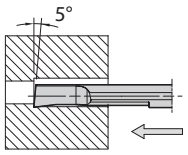
- Right-hand shown

EZ Bar dimensions

Description		Min. bore dia. (mm)	Dimensions (mm)							Grade		Applicable sleeve
										MEGACOAT NANO PLUS	MEGACOAT	
		DMIN	DCON	H	LF	LU	WF	WF_2	RE	NEW PR1725	PR1225	
EZBR	020017ST-008H	2	1.7	1.5	27.3	7	0.79	0.19	$0.08^{\pm0.015}$	●	●	EZH017…
	025020ST-008H	2.5	2	1.82	32	8	0.94	0.16	$0.08^{\pm0.015}$	●	●	EZH020…
	025020ST-015H								$0.15^{\pm0.02}$	●	●	
	030025ST-008H	3	2.5	2.3	35	10.5	1.19	0.15	$0.08^{\pm0.015}$	●	●	EZH025…
	030025ST-015H								$0.15^{\pm0.02}$	●	●	
	035030ST-008H	3.5	3	2.8	39	13	1.44	0.18	$0.08^{\pm0.015}$	●	●	EZH030…
	035030ST-015H								$0.15^{\pm0.02}$	●	●	
	040035ST-008H	4	3.5	3.3	42	15	1.69	0.24	$0.08^{\pm0.015}$	●	●	EZH035…
	040035ST-015H								$0.15^{\pm0.02}$	●	●	
	045040ST-008H	4.5	4	3.8	49	20	1.94	0.27	$0.08^{\pm0.015}$	●	●	EZH040…
	045040ST-015H								$0.15^{\pm0.02}$	●	●	
	055050ST-008H	5.5	5	4.8	58.2	25	2.44	0.33	$0.08^{\pm0.015}$	●	●	EZH050…
	055050ST-015H								$0.15^{\pm0.02}$	●	●	
	065060ST-008H	6.5	6	5.8	66.2	30	2.94	0.38	$0.08^{\pm0.015}$	●	●	EZH060…
	065060ST-015H								$0.15^{\pm0.02}$	●	●	
	075070ST-008H	7.5	7	6.8	74.2	35	3.44	0.44	$0.08^{\pm0.015}$	●	●	EZH070…
	075070ST-015H								$0.15^{\pm0.02}$	●	●	
EZBR	020017ST-005F	2	1.7	1.5	27.3	7	0.79	0.2	$0.05^{\pm0.01}$	●	●	EZH017…
	025020ST-005F	2.5	2	1.82	32	8	0.94	0.16	$0.05^{\pm0.01}$	●	●	EZH020…
	025020ST-015F								$0.15^{\pm0.02}$	●	●	
	030025ST-005F	3	2.5	2.3	35	10.5	1.19	0.2	$0.05^{\pm0.01}$	●	●	EZH025…
	030025ST-015F								$0.15^{\pm0.02}$	●	●	
	035030ST-005F	3.5	3	2.8	39	13	1.44	0.26	$0.05^{\pm0.01}$	●	●	EZH030…
	035030ST-015F								$0.15^{\pm0.02}$	●	●	
	040035ST-005F	4	3.5	3.3	42	15	1.69	0.33	$0.05^{\pm0.01}$	●	●	EZH035…
	040035ST-015F								$0.15^{\pm0.02}$	●	●	
	045040ST-005F	4.5	4	3.8	49	20	1.94	0.31	$0.05^{\pm0.01}$	●	●	EZH040…
	045040ST-015F								$0.15^{\pm0.02}$	●	●	
	055050ST-005F	5.5	5	4.8	58.2	25	2.44	0.45	$0.05^{\pm0.01}$	●	●	EZH050…
	055050ST-015F								$0.15^{\pm0.02}$	●	●	
	065060ST-005F	6.5	6	5.8	66.2	30	2.94	0.59	$0.05^{\pm0.01}$	●	●	EZH060…
	065060ST-015F								$0.15^{\pm0.02}$	●	●	
	075070ST-005F	7.5	7	6.8	74.2	35	3.44	0.65	$0.05^{\pm0.01}$	●	●	EZH070…
	075070ST-015F								$0.15^{\pm0.02}$	●	●	

Tolerance: Offset ±0.06mm, overall length ±0.1mm, edge height +0.06/0mm
*See P1 for details on tolerances.

Bars are sold in 1 piece boxes
● : Available



PR1225•GW05

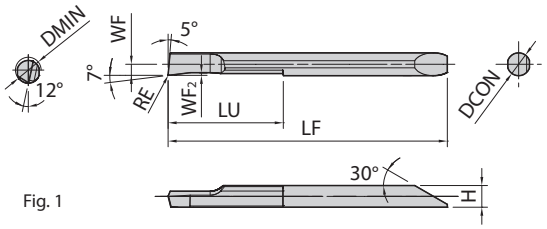
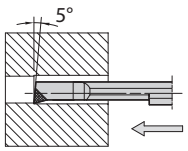


Fig. 1

• Right-hand shown



KBN05M•KPD001

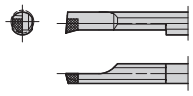


Fig.2 EZBR030 Type

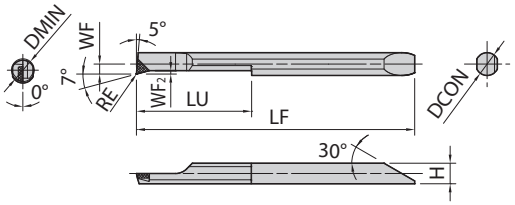


Fig. 3 EZBR040-EZBR070 type

• Right-hand shown

EZ Bar dimensions

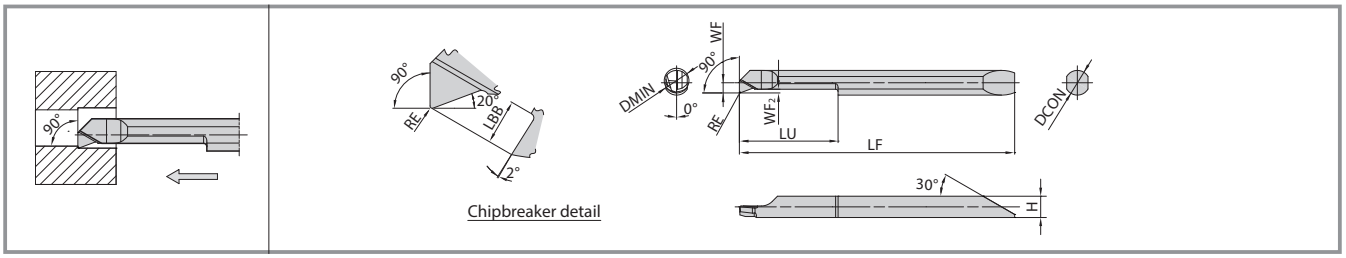
Description		Min. bore dia. (mm)	Dimensions (mm)							Drawing	Grade				Applicable sleeve
											MEGA COAT	Carbide	MEGA COAT CBN	PCD	
		DMIN	DCON	H	LF	LU	WF	WF_2	RE		PR1225	GW05	KBN05M	KPD001	
EZBR	020017-005NB	2	1.7	1.5	27.3	7	0.79	0.2	$0.05^{\pm 0.015}$	Fig.1	●	●			EZH017…
	025020-005NB	2.5	2	1.82	32	8	0.94	0.16			●	●			EZH020…
	030025-005NB	3	2.5	2.3	35	10.5	1.19	0.16			●	●			EZH025…
	035030-005NB	3.5	3	2.8	39	13	1.44	0.19			●	●			EZH030…
	040035-005NB	4	3.5	3.3	42	15	1.69	0.25			●	●			EZH035…
	045040-005NB	4.5	4	3.8	49	20	1.94	0.28			●	●			EZH040…
	055050-005NB	5.5	5	4.8	58.2	25	2.44	0.33			●	●			EZH050…
	065060-005NB	6.5	6	5.8	66.2	30	2.94	0.39			●	●			EZH060…
	075070-005NB	7.5	7	6.8	74.2	35	3.44	0.45			●	●			EZH070…
EZBR	030030-003NB	3	3	2.6	38.8	13	1.25	0.3	$0.035^{\pm 0.015}$	Fig.2			●		EZH030…
	040040-003NB	4	4	3.6	48.8	20	1.75	0.5		Fig.3			●		EZH040…
	050050-003NB	5	5	4.6	58.1	25	2.25						●		EZH050…
	060060-003NB	6	6	5.6	66.1	30	2.75						●		EZH060…
	070070-003NB	7	7	6.6	74.1	35	3.25						●		EZH070…
EZBR	040040-003NB	4	4	3.6	48.8	20	1.75	0.5	$0.035^{\pm 0.015}$					●	EZH040…
	050050-003NB	5	5	4.6	58.1	25	2.25							●	EZH050…
	060060-003NB	6	6	5.6	66.1	30	2.75							●	EZH060…
	070070-003NB	7	7	6.6	74.1	35	3.25							●	EZH070…

Bars are sold in 1 piece boxes
●: Available

Edge preparation

Grade	Edge preparation	Notes
PR1225 • GW05	Sharp edge	–
KBN05M	T00815	0.08 mm × 15° chamfered cutting edge
KPD001	Sharp edge	–

EZBF (90° Lead angle)



EZ Bar dimensions

Description		Min. bore dia. (mm)	Dimensions (mm)								Grade		Applicable sleeve
											MEGACOAT PR1225		
		DMIN	DCON	H	LF	LU	WF	WF_2	LBB	RE	R	L	
EZBFR	030030-008	3	3	2.5	37.7	12	1.2	0.45	1.5	$0.08^{\pm 0.015}$	●		EZH030…
	040040-008	4	4	3.45	44.6	16	1.65	0.55	2.0	$0.08^{\pm 0.015}$	●		EZH040…
	050050-015	5	5	4.3	52.7	20	2.15	0.7	2.4	$0.15^{\pm 0.02}$	●		EZH050…
	060060-015	6	6	5.15	59.6	24	2.55	0.85	2.8	$0.15^{\pm 0.02}$	●		EZH060…

Tolerance: Offset ±0.05mm, overall length ±0.05mm, edge height +0.05/0mm
*See P1 for details on tolerances.

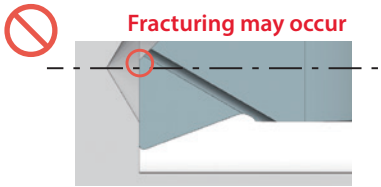
Bars are sold in 1 piece boxes
● : Available

Precautions

✓ Recommended ⊘ Not Recommended

1. Machining in blind hole is not recommended

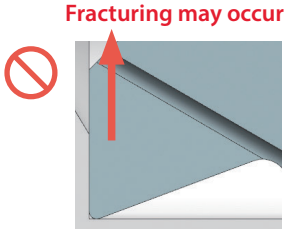
2. If front cutting edge exceeds beyond workpiece center line, fracturing may occur



Min boring diameter of ø 4 : 1.9 mm front cutting edge length

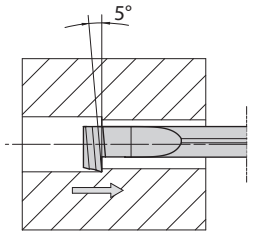
Off-center boring

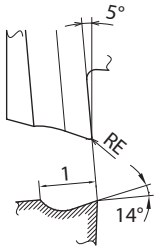
3. Up facing is not recommended



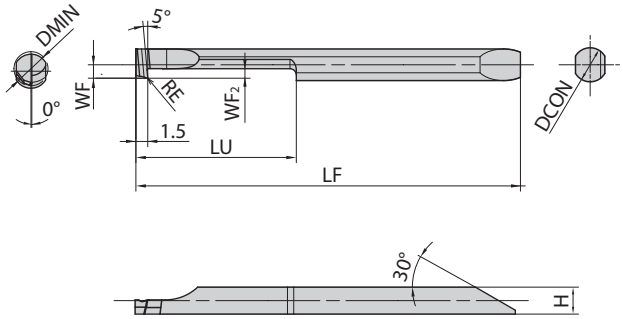
EZBT (Back boring)

Back boring





Chipbreaker detail



• Right-hand shown

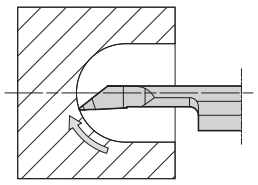
EZ Bar dimensions

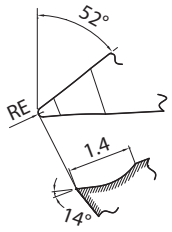
Description		Min. bore dia. (mm)	Dimensions (mm)							Grade		Applicable sleeve
										MEGACOAT	Carbide	
		DMIN	DCON	H	LF	LU	WF	WF_2	RE	PR1225	GW05	
EZBTR	040040-005	4	4	3.45	48.7	20	1.7	1.2	$0.05^{+0}_{-0.02}$	●	●	EZH040…
	050050-005	5	5	4.3	58.7	25	2.15	1.5		●	●	EZH050…

Bars are sold in 1 piece boxes
●: Available

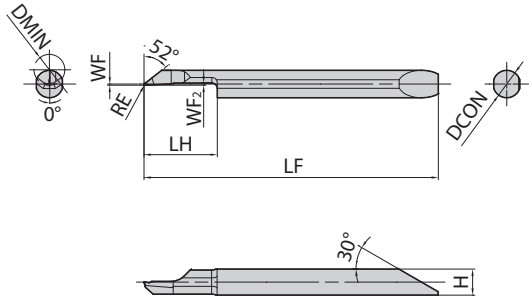
EZVB (Boring • Internal facing • Internal profiling)

Internal profiling





Chipbreaker detail



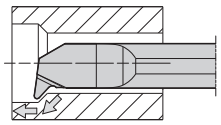
• Right-hand shown

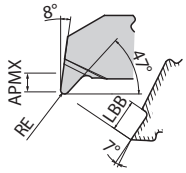
EZ Bar dimensions

Description		Min. bore dia. (mm)	Dimensions (mm)							Grade	Applicable sleeve
										MEGACOAT	
		DMIN	DCON	H	LF	LH	WF	WF_2	RE	PR1225	
EZVBR	035030-010	3.5	3	2.8	38	8	0.17	0.22	$0.1^{\pm 0.015}$	●	EZH030…
	045040-010	4.5	4	3.8	43	10		0.26		●	EZH040…
	055050-010	5.5	5	4.8	50.2	12		0.29		●	EZH050…
	065060-010	6.5	6	5.8	55.2	14		0.32		●	EZH060…

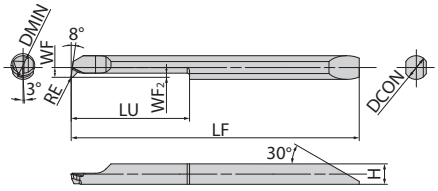
Bars are sold in 1 piece boxes
●: Available

NEW EZBP (Copying)





Chipbreaker Detail



• Right-hand shown

EZ Bar Dimensions

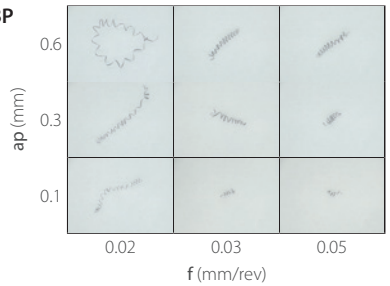
Description		Min. bore dia. (mm)	Dimensions (mm)									Grade	Applicable sleeve
												MEGACOAT	
		DMIN	DCON	H	LF	LU	WF	WF_2	LBB	RE	APMX	PR1225	
EZBPR	020020-005-08	2	2	1.65	31.8	8	0.55	0.35	1.0	$0.05^{\pm0.01}$	0.3	●	EZH020…
	020020-005-10				33.8	10						●	
	020020-005-12				35.8	12						●	
	030030-005-12	3	3	2.5	37.7	12	1.05	0.45	1.2	$0.05^{\pm0.01}$	0.4	●	EZH030…
	030030-005-15				40.7	15						●	
	040040-015	4	4	3.45	48.7	20	1.65	0.65	1.5	$0.15^{\pm0.02}$	0.6	●	EZH040…
	050050-015	5	5	4.3	57.8	25	2	1.1	2.2	$0.15^{\pm0.02}$	0.8	●	EZH050…
	060060-015	6	6	5.15	65.7	30	2.45	1.35	2.5	$0.15^{\pm0.02}$	1	●	EZH060…

Bars are sold in 1 piece boxes
● : Available

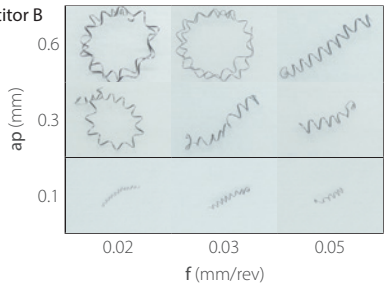
Chip control comparison (Internal evaluation)

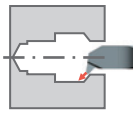
Copying

EZBP



Competitor B



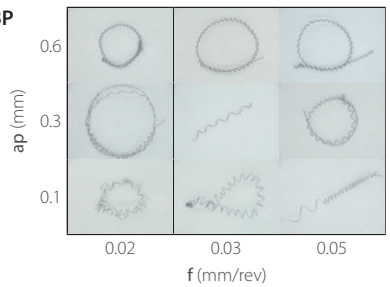


Cutting conditions : Vc = 80 m/min, Wet
Workpiece: C45 (ø14)
EZBPR040040-015 PR1225

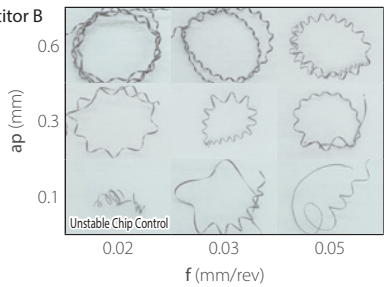
EZBP showed better chip breaking in a wide range of machining applications compared to competitor B

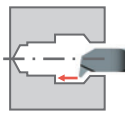
Boring

EZBP



Competitor B



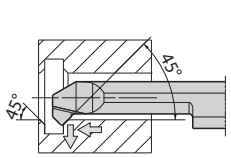


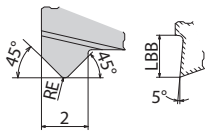
Cutting conditions : Vc = 80 m/min, Wet
Workpiece: C45 (ø14)
EZBPR040040-015 PR1225

EZBP showed better chip control than competitor B

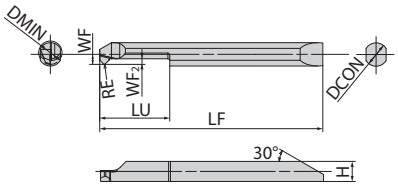
Recommended cutting conditions

Workpiece	Insert grade (Vc : m/min)	EZBPR020020-005-08/10/12		EZBPR030030-005-12/15		EZBPR040040-015		EZBPR050050-015		EZBPR060060-015		Notes
	MEGACOAT	ap (mm), f (mm/rev)										
	PR1225	ap	f	ap	f	ap	f	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 100	~ 0.3	~ 0.05	~ 0.4	~ 0.05	~ 0.6	~ 0.05	~ 0.8	~ 0.05	~ 1.0	~ 0.05	Wet
Stainless steel	30 ~ 80	~ 0.3	~ 0.05	~ 0.4	~ 0.05	~ 0.6	~ 0.05	~ 0.8	~ 0.05	~ 1.0	~ 0.05	





Chipbreaker Detail



• Right-hand shown

EZ Bar Dimensions

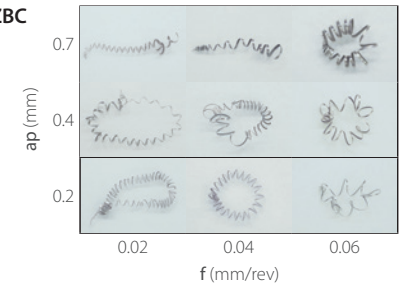
Description		Min. bore dia. (mm)	Dimensions (mm)							Grade	Applicable sleeve
										MEGACOAT	
		DMIN	DCON	H	LF	LU	WF	WF_2	LBB	RE	PR1225	
EZBCR	050050-020-15	5	5	4.3	47.8	15	2.15	1.2	1.8	$0.2^{\pm 0.02}$	●	EZH050…
	050050-020-20				52.8	20					●	
	060060-020-18	6	6	5.15	53.7	18	2.65	1.9	2.5		●	EZH060…
	060060-020-24				59.7	24					●	
	070070-020-21	7	7	6.2	59.7	21	3	2.5	3.1		●	EZH070…
	070070-020-42				80.7	28					●	

Bars are sold in 1 piece boxes
●: Available

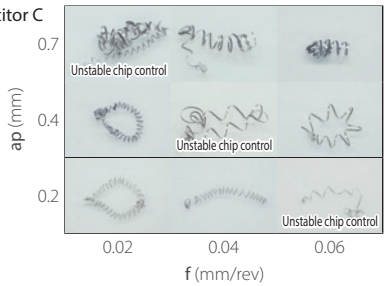
Chip control comparison (Internal evaluation)

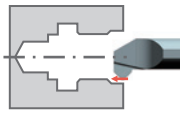
Boring

EZBC



Competitor C



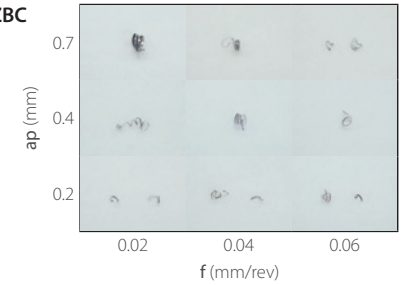


Cutting conditions : Vc = 80 m/min, Wet
Workpiece: X5CrNi18-10 (ø14)
EZBCR050050-020-15 PR1225

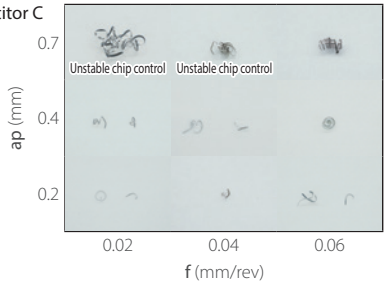
EZBC reduced chip clogging and showed stable chip control

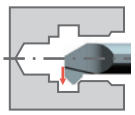
Chamfering

EZBC



Competitor C





Cutting conditions : Vc = 80 m/min, Wet
Workpiece: X5CrNi18-10 (ø14)
EZBCR050050-020-15 PR1225

EZBC showed improved chip evacuation and better chip control at large D.O.C. compared to competitor C

Recommended cutting conditions

Workpiece	Insert Grade (Vc : m/min)	EZBC050050-020-15/20		EZBC060060-020-18/24		EZBC070070-020-21/42		Notes
	MEGACOAT	ap (mm), f (mm/rev)						
	PR1225	ap	f	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 100	~ 0.7	~ 0.06	~ 0.7	~ 0.06	~ 0.7	~ 0.06	Wet
Stainless steel	30 ~ 80	~ 0.7	~ 0.06	~ 0.7	~ 0.06	~ 0.7	~ 0.06	

Recommended cutting conditions

H Chipbreaker EZB-HP • H Type EZB-ST • H Type

Workpiece	Insert grade (Vc : m/min)			EZB020/025 Type		EZB030/035 Type		Notes
	MEGACOAT NANO PLUS	MEGACOAT	Carbide	ap (mm), f (mm/rev)				
	PR1725	PR1225	GW05	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 120	30 ~ 100	–	~ 0.3	~ 0.03	~ 0.4	~ 0.04	Wet
Stainless steel	30 ~ 100	30 ~ 80	–	~ 0.2	~ 0.02	~ 0.3	~ 0.03	
Non-ferrous metals	–	–	~ 100	~ 0.3	~ 0.05	~ 0.4	~ 0.06	

Workpiece	Insert grade (Vc : m/min)			EZB040/045 Type		EZB050/055/060/ 065/070/075/080 Type		Notes
	MEGACOAT NANO PLUS	MEGACOAT	Carbide	ap (mm), f (mm/rev)				
	PR1725	PR1225	GW05	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 120	30 ~ 100	–	~ 0.45	~ 0.07	~ 0.5	~ 0.1	Wet
Stainless steel	30 ~ 100	30 ~ 80	–	~ 0.35	~ 0.05	~ 0.4	~ 0.07	
Non-ferrous metals	–	–	~ 100	~ 0.45	~ 0.1	~ 0.5	~ 0.15	

H Chipbreaker (Long Type)

Workpiece	Insert grade (Vc : m/min)	EZB020/025/030/035 Type		EZB040/050/060 Type		Notes
	MEGACOAT	ap (mm), f (mm/rev)				
	PR1225	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 60	~ 0.3	~ 0.05	~ 0.4	~ 0.1	Wet
Stainless steel	20 ~ 40	~ 0.25	~ 0.05	~ 0.3	~ 0.07	

F Chipbreaker EZB-HP • F Type EZB-ST • F Type

Workpiece	Insert grade (Vc : m/min)		EZB020/025 Type		EZB030/035 Type		EZB040/045 Type		EZB050/055/060/ 065/070/075/080 Type		Notes
	MEGACOAT NANO PLUS	MEGACOAT	ap (mm), f (mm/rev)								
	PR1725	PR1225	ap	f	ap	f	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 120	30 ~ 100	~ 0.2	~ 0.03	~ 0.2	~ 0.05	~ 0.3	~ 0.07	~ 0.3	~ 0.07	Wet
Stainless steel	30 ~ 100	30 ~ 80		~ 0.02		~ 0.03	~ 0.25	~ 0.05	~ 0.25	~ 0.05	

NB Chipbreaker (without chipbreaker)

Workpiece	Insert grade (Vc : m/min)		EZB020/025 Type		EZB030/035 Type		EZB040/045 Type		EZB055/ 065/075 Type		Notes
	MEGACOAT	Carbide	ap (mm), f (mm/rev)								
	PR1225	GW05	ap	f	ap	f	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 100	–	~ 0.3	~ 0.03	~ 0.4	~ 0.04	~ 0.45	~ 0.07	~ 0.5	~ 0.1	Wet
Stainless steel	30 ~ 80	–	~ 0.2	~ 0.02	~ 0.3	~ 0.03	~ 0.35	~ 0.05	~ 0.4	~ 0.07	
Non-ferrous metals	–	~ 100	~ 0.3	~ 0.05	~ 0.4	~ 0.06	~ 0.45	~ 0.07	~ 0.5	~ 0.1	

Workpiece	Insert grade(Vc : m/min)		EZB030 Type		EZB040/045 Type		EZB050/060/070 Type		Notes
	MEGACOAT CBN	PCD	ap (mm), f (mm/rev)						
	KBN05M	KPD001	ap	f	ap	f	ap	f	
Non-ferrous metals	–	~ 300	–	–	~ 0.45	~ 0.1	~ 0.5	~ 0.15	Wet
Hard materials	~ 100	–	~ 0.07	~ 0.03	~ 0.10	~ 0.05	~ 0.15	~ 0.07	

Recommended cutting conditions

EZBF (90° Lead angle)

Workpiece	Insert grade (Vc : m/min)	EZBFR030030-008		EZBFR040040-008		EZBFR050050/ 060060-015		Notes
	MEGACOAT	ap (mm), f (mm/rev)						
	PR1225	ap	f	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 100	~ 0.2	~ 0.05	~ 0.3	~ 0.05	~ 0.5	~ 0.05	Wet
Stainless steel	30 ~ 80	~ 0.2	~ 0.05	~ 0.3	~ 0.05	~ 0.5	~ 0.05	

EZBT (Back boring)

Workpiece	Insert grade (Vc : m/min)		EZBTR040 Type		EZBTR050 Type		Notes
	MEGACOAT	Carbide	ap (mm), f (mm/rev)				
	PR1225	GW05	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 100	–	~ 0.45	~ 0.07	~ 0.5	~ 0.1	Wet
Stainless steel	30 ~ 80	–		~ 0.05		~ 0.07	
Non-ferrous metals	–	30 ~ 100		~ 0.1		~ 0.15	

EZVB (Boring • Internal facing • Internal profiling)

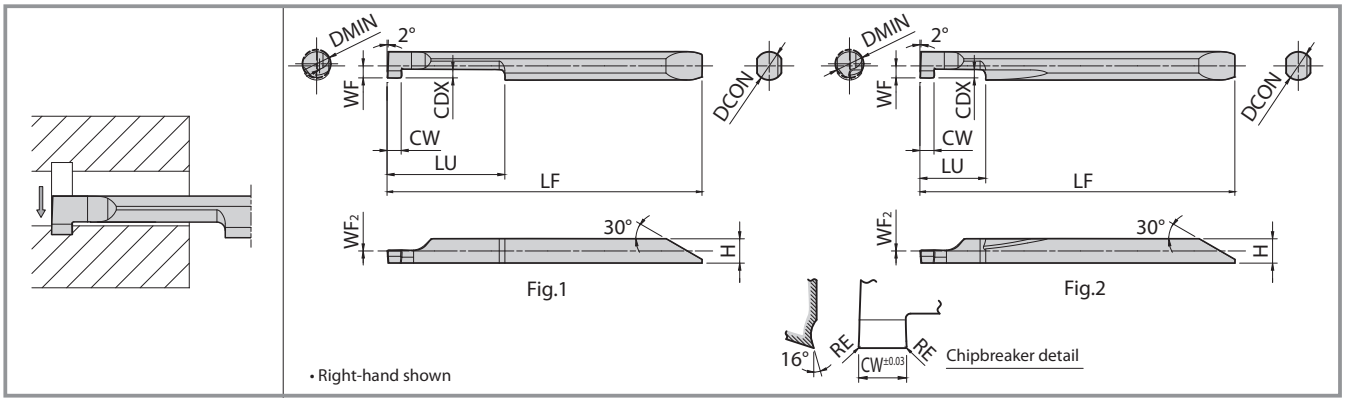
Workpiece	Insert grade (Vc : m/min)	EZVB035 Type		EZVB045 Type		EZVB055/065 Type		Notes
	MEGACOAT	ap (mm), f (mm/rev)						
	PR1225	ap	f	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 100	~ 0.05	~ 0.04	~ 0.07	~ 0.07	~ 0.1	~ 0.07	Wet
Stainless steel	30 ~ 80	~ 0.03	~ 0.03	~ 0.05	~ 0.05	~ 0.07	~ 0.05	

EZBP (Copying)

Workpiece	Insert grade (Vc : m/min)	EZBPR020020-005-08/10/12		EZBPR030030-005-12/15		EZBPR040040-015		EZBPR050050-015		EZBPR060060-015		Notes
	MEGACOAT	ap (mm), f (mm/rev)										
	PR1225	ap	f	ap	f	ap	f	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 100	~ 0.3	~ 0.05	~ 0.4	~ 0.05	~ 0.6	~ 0.05	~ 0.8	~ 0.05	~ 1.0	~ 0.05	Wet
Stainless steel	30 ~ 80	~ 0.3	~ 0.05	~ 0.4	~ 0.05	~ 0.6	~ 0.05	~ 0.8	~ 0.05	~ 1.0	~ 0.05	

EZBC (45° Chamfering)

Workpiece	Insert grade (Vc : m/min)	EZBC050050-020-15/20		EZBC060060-020-18/24		EZBC070070-020-21/42		Notes
	MEGACOAT	ap (mm), f (mm/rev)						
	PR1225	ap	f	ap	f	ap	f	
Carbon steel • Alloy steel	30 ~ 100	~ 0.7	~ 0.06	~ 0.7	~ 0.06	~ 0.7	~ 0.06	Wet
Stainless steel	30 ~ 80	~ 0.7	~ 0.06	~ 0.7	~ 0.06	~ 0.7	~ 0.06	



EZ Bar dimensions

Description		Min. bore dia. (mm)	Dimensions (mm)									Drawing	MEGACOAT PR1225		Carbide GW05		Applicable sleeve
		DMIN	CW±0.03	RE	DCON	H	LF	LU	WF	WF2	CDX		R	L	R	L	
EZG R/L	040040-050	4	0.5	0.05 ±0.013	4	3.45	44.7	12	1.7	0	1	Fig.2	●	●	●		EZH040..
	040040-100		1.0										●	●	●		
	040040-150		1.5										●	●	●		
	040040-200		2.0										●	●	●		
	050050-100	5	1.0		5	4.3	52.8	20	2.15		1.5	Fig.1	●	●	●		EZH050..
	050050-150		1.5										●	●	●		
	050050-200		2.0										●	●	●		
	060060-100	6	1.0		6	5.15	60.7		2.65		2		●	●	●		EZH060..
	060060-150		1.5										●	●	●		
	060060-200		2.0										●	●	●		
	070070-100	7	1.0		7	6.2	63.7	25	3.05				●	●	●		EZH070..
	070070-150		1.5										●	●	●		
	070070-200		2.0										●	●	●		
	080070-100	8	1.0						3.45				●	●	●		
	080070-150		1.5										●	●	●		
	080070-200		2.0										●	●	●		
EZGR	030030-050S	3	0.5	0.05 ±0.013	3	2.5	38.7	5	1.25	0	0.8	Fig.2	●				EZH030..
	030030-100S		1.0										●				
	040040-050S	4	0.5		4	3.45	44.7	8	1.7		1		●				EZH040..
	040040-100S		1.0										●				
	040040-150S		1.5										●				
	040040-200S		2.0										●				
	050050-100S	5	1.0		5	4.3	52.8	10	2.15		1.5		●				EZH050..
	050050-150S		1.5										●				
	050050-200S		2.0										●				
	060060-100S	6	1.0		6	5.15	60.7		2.65		2		●				EZH060..
	060060-150S		1.5										●				
	060060-200S		2.0										●				
	070070-100S	7	1.0		7	6.2	63.7		3.05				●				EZH070..
	070070-150S		1.5										●				
	070070-200S		2.0										●				
	080070-100S	8	1.0						3.45				●				
	080070-150S		1.5										●				
	080070-200S		2.0										●				

CDX: Available grooving depth
Description: with suffix "S" indicates a short type

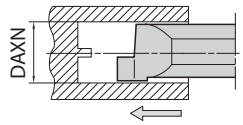
Bars are sold in 1 piece boxes
● : Available

Recommended cutting conditions

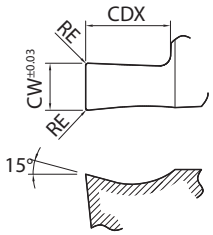
Workpiece	Vc: m/min		EZGR030030-...S	EZGR040040-... EZGR050050-... EZGR040040-...S EZGR050050-...S	EZGR060060-... EZGR070070-... EZGR080070-... EZGR060060-...S EZGR070070-...S EZGR080070-...S	Notes
	MEGACOAT	Carbide				
	PR1225	GW05	f : (mm/rev)			
Carbon steel • Alloy steel	★ 30 ~ 100	–	~ 0.02	~ 0.03	~ 0.05	Wet
Stainless steel	★ 30 ~ 80	–	~ 0.01	~ 0.02	~ 0.03	
Non-ferrous metals	–	★ ~ 300	–	~ 0.05	~ 0.08	

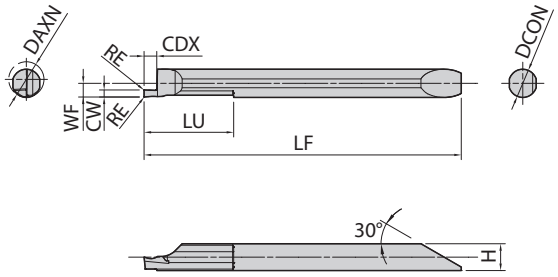
★ : 1st Recommendation

EZFG (Face grooving)



Edge detail





• Right-hand shown

EZ Bar dimensions

Description		Face grooving dia. (MIN.)	Dimensions (mm)								MEGACOAT		Carbide		Applicable sleeve
		DAXN	$CW^{\pm 0.03}$	RE	DCON	H	LF	LU	WF	CDX	PR1225		GW05		
											R	L	R	L	
EZFG R/L	050040-100	5	1.0	0.05 $^{\pm 0.013}$	4	3.8	45.0	12	1.9	1.5	●	●	●		EZH040..
	050040-150		1.5							2.0	●	●	●		
EZFG R/L	060050-100	6	1.0		5	4.8	53.2	25	2.4	1.5	●	●	●		EZH050..
	060050-150		1.5							2.5	●	●	●		
	060050-200		2.0							3.0	●	●	●		
EZFG R/L	080070-100	8	1.0		7	6.8	64.2	25	3.4	2.0	●	●	●		EZH070..
	080070-150		1.5							2.5	●	●	●		
	080070-200		2.0							3.0	●	●	●		
	080070-300		3.0								●	●	●		

CDX: Available grooving depth

Bars are sold in 1 piece boxes
●: Available

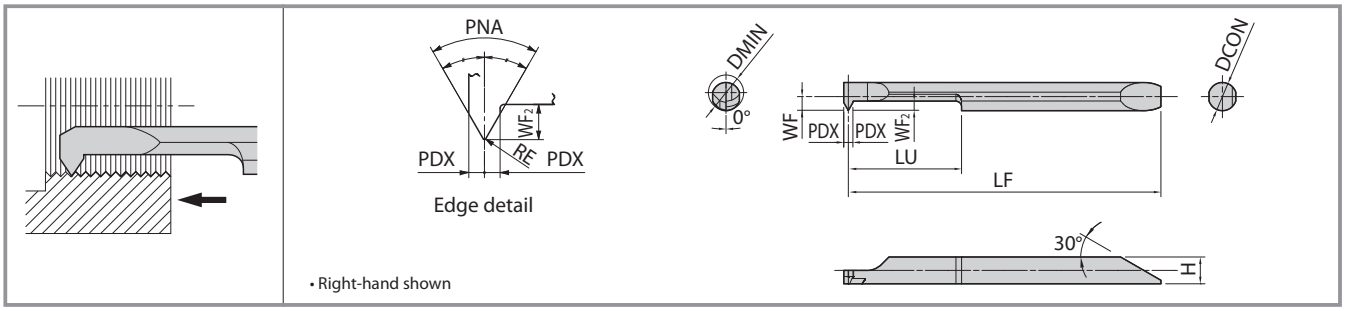
Recommended cutting conditions

Workpiece	Vc: m/min		EZFGR050040-100 EZFGR060050-100 EZFGR080070-100	EZFGR050040-150 EZFGR060050-150 EZFGR080070-150	EZFGR060050-200 EZFGR080070-200	EZFGR080070-300	Notes
	MEGACOAT	Carbide					
	PR1225	GW05	f : (mm/rev)				
Carbon steel • Alloy steel	★ 30 ~ 100	–	~ 0.02	~ 0.03	~ 0.04	~ 0.05	Wet
Stainless steel	★ 30 ~ 80	–	~ 0.01	- 0.02	~ 0.02	~ 0.03	
Non-ferrous metals	–	★ ~ 300	~ 0.03	~ 0.05	~ 0.06	~ 0.08	

★: 1st Recommendation

EZ Bar identification system (Internal grooving, face grooving)

EZ	G	R	030	030	-	050	S
Bar symbol (EZ Bar)	Application	Bar hand	Min. bore dia.	Shank dia.		Groove width	Type
	G: Internal grooving	R: Right-hand	030: 3 mm	030: 3 mm		050: 0.5 mm	S: Short type (LU Dimension)
	FG: Face grooving	L: Left-hand	⋮	⋮		100: 1.0 mm	
			Face grooving dia.			150: 1.5 mm	
			050: 5 mm			200: 2.0 mm	
			⋮				



EZ Bar dimensions

Description		Min. bore dia. (mm)	Dimensions (mm)									MEGA COAT	Carbide	Applicable threads					
														Metric		Unified		American national pipe	
		DMIN	DCON	H	LF	LU	WF	WF_2	PDX	RE	PNA	PR 1225	GW05	Applicable thread	Pitch (mm)	Applicable thread	Pitch (TPI)	Applicable thread	Pitch (TPI)
EZTR	030025-60-002	3.0	2.5	2.3	34.5	6.0	1.19	1.0	0.5	$0.02^{\pm0.01}$	60°	●	●	M4 or more (M3.5 or more)	0.35 – 0.8	No.8-32UNC No.8-36UNF or more	36 – 32	–	–
	035030-60-002	3.5	3.0	2.8	38.4	8.4	1.44	1.2	0.6			●	●	M4.5 or more (M4.5 or more)	0.5 – 1.0	No.10-24UNC No.8-36UNF or more	36 – 24	–	–
	040035-60-004	4.0	3.5	3.3	41.4	10.4	1.69	1.2	0.6	$0.04^{\pm0.01}$		●	●	M5 or more (M6 or more)	0.75 – 1.25	No.12-24UNC No.12-28UNF or more	28 – 20	–	–
	050040-60-004	5.0	4.0	3.8	44.35	15.35	1.94	1.3	0.65			●	●	M7 or more (M6 or more)	0.75 – 1.5	1/4-20UNC 1/4-28UNF or more	28 – 18	–	–
	060050-60-004	6.0	5.0	4.8	52.4	19.2	2.44	1.6	0.8			●	●	M8 or more (M7 or more)	0.75 – 1.5	5/16-18UNC 5/16-24UNF or more	24 – 16	1/4NPT 3/8NPT	18
	070060-60-004	7.0	6.0	5.8	60.2	24.0	2.94	2.0	1.0			●	●	M9 or more (M8 or more)	0.75 – 1.75	3/8-16UNC 3/8-24UNF or more	24 – 16	1/4NPT or more	18,14
														Whitworth		Parallel Pipe / Tapered pipe			
EZTR	060050-55-008	6.0	5.0	4.8	52.4	19.2	2.44	1.6	0.8	$0.085^{\pm0.015}$	55°	●	●	W10 TPI 24 or more	24 – 20	G1/16 or more R1/16 or more	28	–	–
	080070-55-008	8.0	7.0	6.8	63.2	24.0	3.44	2.0	1.0			●	●	W11 TPI 20 or more	20 – 18	G1/8 or more R1/8 or more	28,19	–	–

For American National Pipe (NPT), use EZTR..-60-004. See page 18
See back cover for applicable sleeves

ap & number of passes (Metric)

Pitch (mm)	Total ap (mm)	No. of passes (Times)	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	0.04	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	0.05	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	0.05	0.04	0.04	0.04	0.03	0.03

ap & number of passes (Whitworth)

TPI (TPI/inch)	Total ap (mm)	No. of passes (Times)	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 (TPI/ inch)	Total ap (mm)	No. of passes (Times)	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	10	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.02	0.02								
32	0.5	11	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	0.05	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	0.06	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	0.05	0.04	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	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03

Bars are sold in 1 piece boxes
● : Available

Recommended cutting conditions

Workpiece	Recommended insert grade (Vc: m/min)	
	MEGACOAT	Carbide
	PR1225	GW05
Carbon steel • Alloy steel	★ 30 ~ 50	–
Stainless steel	★ 30 ~ 50	–
Non-ferrous metals	–	★ 30 ~ 50

Note

1) The standard cutting speed is Vc = 30 ~ 50 m/min
The table feed may not follow the expected conditions when machining small diameter workpieces at high speeds

2) Coolant is recommended

★ : 1st recommendation

Application of parallel pipe and tapered pipe thread

Parallel pipe: G (PF), Rp (PS)

Applicable thread	TPI (TPI/inch)	Internal threading		Same root's radius external threading internal threading
Symbol (Previous symbol)		Insert	Bore dia.	
G 1/16 (–)	28	EZTR 060050-55-008	6.56	0.12
G 1/8 (PF 1/8)		080070-55-008	8.57	
G 1/4 (PF 1/4)	19	EZTR 080070-55-008	11.45	0.18
G 3/8 (PF 3/8)			14.95	

Tapered pipe: R, Rc (PT) (BSPT)

Applicable thread	TPI (TPI/inch)	Internal threading		Same root's radius external threading internal threading
Symbol (Previous symbol)		Insert	Bore Dia.	
R 1/16, Rc 1/16 (–)	28	EZTR 060050-55-008	–	0.12
R 1/8, Rc 1/8 (PT 1/8)		080070-55-008	–	
R 1/4, Rc 1/4 (PT 1/4)	19	EZTR 080070-55-008	–	0.18
R 3/8, Rc 3/8 (PT 3/8)			–	

When using "EZT type" for parallel pipe / tapered pipe threading, 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

ap & number of passes (Parallel pipe / Tapered pipe)

TPI (TPI/inch)	Total ap (mm)	No. of Passes (Times)	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

Application for NPT

Applicable thread	TPI (TPI/inch)	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	14	SINR1616S-16	–	16IR14NPT
3/4 NPT		SINR2016S-16		

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, therefore the above inserts are not available for NPTF

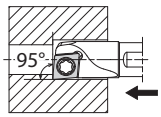
ap & number of passes (American national pipe)

TPI (TPI/inch)	Total ap (mm)	No. of passes (Times)	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

Applicable inserts: ☐045X... = CC...03... ☐050X... = CC...03...
☐060X... = CC...04... ☐070X... = CC...04...
☐080X... = CC...06...

Toolholder dimensions

S-SCLC



Maximum overhang length L/D = 3 • Right-hand shown • Left-hand Insert for right-hand toolholder

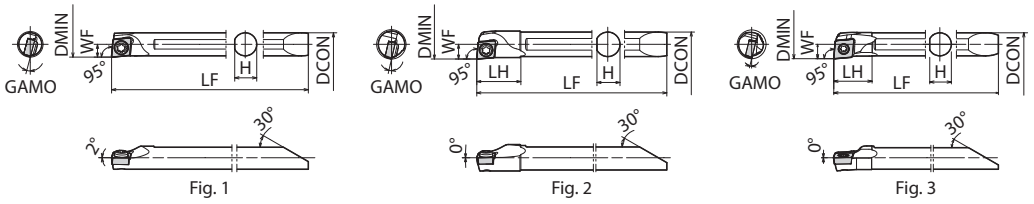
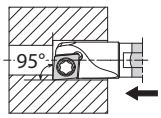


Fig. 1 Fig. 2 Fig. 3

C-SCLC



Maximum overhang length L/D = 5 • Right-hand shown • Left-hand insert for right-hand toolholder

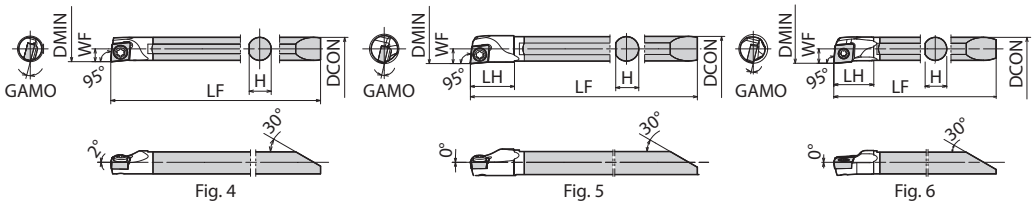


Fig. 4 Fig. 5 Fig. 6

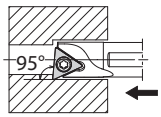
Description		Availability	Min. bore dia. (mm)	Dimensions (mm)					GAMO	Std. corner-R(RE)	Coolant hole	Drawing	Spare parts		Applicable sleeve
													Clamp screw	Wrench	
		R	DMIN	DCON	H	LF	LH	WF							
Steel	S045X-SCLCR03-050EZP	●	5	4.5	4.3	42.4	–	2.5	15°	0.2	No	Fig.1	SB-1635TR	FT-6	EZH045…
	S050X-SCLCR03-060EZP	●	6	5	4.7	48.4	9	3	13°			Fig.2			EZH050…
	S060X-SCLCR04-070EZP	●	7	6	5.7	54.4	10	3.5				Fig.2	SB-2035TR		EZH060…
	S070X-SCLCR04-080EZP	●	8	7	6.7	60.4	10.3	4	11°						EZH070…
	S080X-SCLCR06-100EZP	●	10	8	7.5	69.5	13.3	5	14°	0.4		Fig.3	SB-2545TR	FT-8	EZH080…
Carbide	C045X-SCLCR03-050EZP	●	5	4.5	4.3	51.4	–	2.5	15°	0.2	No	Fig.4	SB-1635TR	FT-6	EZH045…
	C050X-SCLCR03-060EZP	●	6	5	4.7	58.4	9	3	13°			Fig.5			EZH050…
	C060X-SCLCR04-070EZP	●	7	6	5.7	66.4	10	3.5				Fig.5	SB-2035TR		EZH060…
	C070X-SCLCR04-080EZP	●	8	7	6.7	74.4	11	4	11°						EZH070…
	C080X-SCLCR06-100EZP	●	10	8	7.5	85.5	14	5	14°	0.4		Fig.6	SB-2545TR	FT-8	EZH080…

●: Available

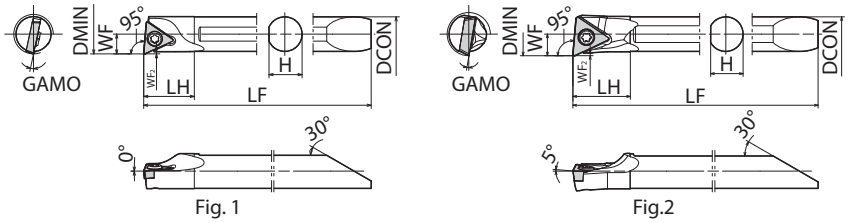
Toolholder dimensions

Applicable inserts: ☐070X... = TB...06...
☐080X... = TP...09...

S-STL



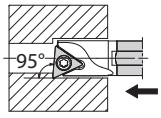
Maximum overhang length L/D = 3



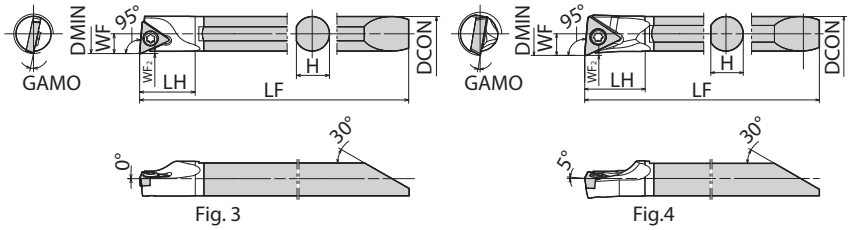
• Right-hand shown
• Left-hand insert for Right-hand toolholder

Fig. 1 Fig.2

C-STL



Maximum overhang length L/D = 5



• Right-hand shown
• Left-hand insert for Right-hand toolholder

Fig. 3 Fig.4

Description		Availability	Min. bore dia. (mm)	Dimensions (mm)						GAMO	Std. corner-R(RE)	Coolant hole	Drawing	Spare parts		Applicable sleeve
														Clamp screw	Wrench	
		R	DMIN	DCON	H	LF	LH	WF	WF_2							
Steel	S070X-STLBR06-080EZP *	●	8	7	6.7	60.4	10.3	4	0.4	12°	0.2	No	Fig.1	SB-2035TR	FT-6	EZH070…
	S080X-STLPR09-100EZP	●	10	8	7.5	69.5	13.3	5	0.5	10°	0.4		Fig.2	SB-2545TR	FT-8	EZH080…
Carbide	C070X-STLBR06-080EZP *	●	8	7	6.7	74.4	11	4	0.4	12°	0.2		Fig.3	SB-2035TR	FT-6	EZH070…
	C080X-STLPR09-100EZP	●	10	8	7.5	85.5	14	5	0.5	10°	0.4		Fig.4	SB-2545TR	FT-8	EZH080…

*TB**06**08 Inserts cannot be used

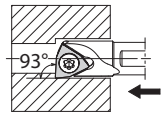
●: Available

EZ Bar PLUS (Indexable boring bar)

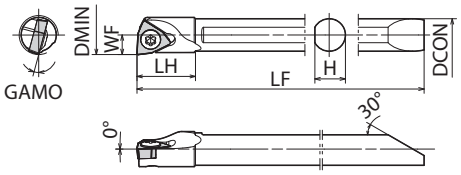
Toolholder dimensions

Applicable Inserts: ☐ 050X... = WB...06... ☐ 060X... = WB...06...
☐ 070X... = WB...08...

S-SWUB



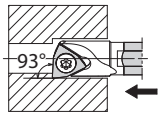
Maximum Overhang length L/D = 3



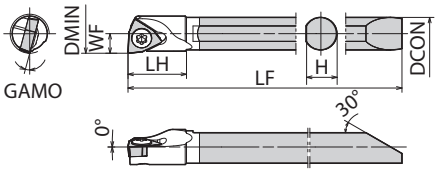
• Right-hand shown
• Left-hand insert for right-hand toolholder

Fig.1

C-SWUB



Maximum overhang Length L/D = 5



• Right-hand shown
• Left-hand insert for right-hand toolholder

Fig.2

Description		Avail-ability	Min. bore dia. (mm)	Dimensions (mm)					GAMO	Std. Corner-R(RE)	Coolant hole	Drawing	Spare parts		Applicable sleeve
													Clamp screw	Wrench	
		R	DMIN	DCON	H	LF	LH	WF							
Steel	S050X-SWUBR06-060EZP	●	6	5	4.7	48.4	9	3	15°	0.2	No	Fig.1	SB-2035TR	FT-6	EZH050…
	S060X-SWUBR06-070EZP	●	7	6	5.7	54.4	10	3.5	13°						EZH060…
	S070X-SWUBR08-080EZP	●	8	7	6.7	60.4	10.3	4	15°						EZH070…
Carbide	C050X-SWUBR06-060EZP	●	6	5	4.7	58.4	9	3	15°	0.2	No	Fig.2	SB-2035TR	FT-6	EZH050…
	C060X-SWUBR06-070EZP	●	7	6	5.7	66.4	10	3.5	13°						EZH060…
	C070X-SWUBR08-080EZP	●	8	7	6.7	74.4	11	4	15°						EZH070…

●: Available

Applicable sleeve

With coolant hole and EZ adjust structure

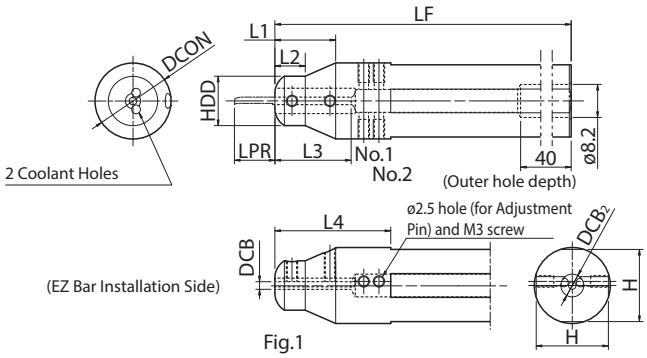


Fig.1

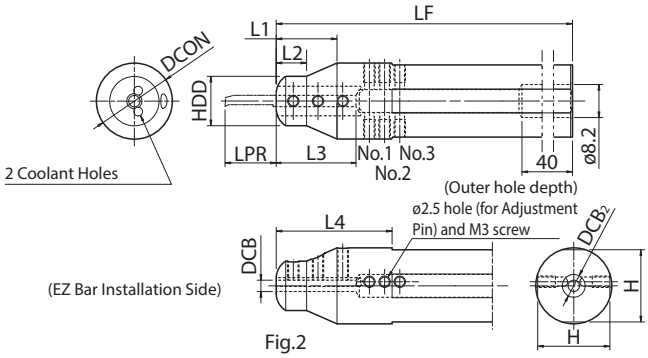


Fig.2

Sleeve dimensions

Description		Avail-ability	Dimensions (mm)										Bar overhang length*LPR (mm) Adjustment pin setting				Drawing	Applicable EZ Bar
			DCB	DCON	HDD	DCB2	H	LF	L1	L2	*1L3	L4	No.1	No.2	No.3	No.4		
EZH	01719CT-120	●	1.7	19.05	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	●		25.4			24.4	120										
EZH	02019CT-120	●	2	19.05	13	6	18	120	16	8	20	30.5	8.5	4.5	–	–	Fig.1	EZB R/L…020…
	02020CT-120	●		20			19	120										
	02022CT-135	●		22			21	135				41.5						
	02025.0CT-135	●		25			24	135				30.5						
	02025.4CT-120	●		25.4			24.4	120										
EZH	02519CT-120	●	2.5	19.05	13	6	18	120	16	8	20	30.5	11	7	–	–	Fig.1	EZB R/L…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	●		25.4			24.4	120										
EZH	03019CT-120	●	3	19.05	13	6	18	120	16	8	21	30.5	13.5	9.5	5.5	–	Fig.2	EZB R/L…030… EZBFR…030… EZVBR…030… EZGR…030… EZTR…030…
	03020CT-120	●		20			19	120										
	03022CT-135	●		22			21	135				41.5						
	03025.0CT-135	●		25			24	135				30.5						
	03025.4CT-120	●		25.4			24.4	120										
EZH	03519CT-120	●	3.5	19.05	13	6	18	120	16	8	21	31.1	15.5	11.5	7.5	–	Fig.2	EZB R/L…035… EZTR…035…
	03520CT-120	●		20			19	120										
	03522CT-135	●		22			21	135				41.5						
	03525.0CT-135	●		25			24	135				31.1						
	03525.4CT-120	●		25.4			24.4	120										

*1. L3 shows DCB length
*2. LPR shows overhang length of the EZB Bar (except for long type) when attached to sleeve
Choose sleeves (DCB) to meet with DCON dimension of bar
A hole on the rear end of sleeve is prepared hole for Rc1/8 threading. Please modify by additional processing if necessary. The body hardness is 42HRC

●: Available

Applicable sleeve

With coolant hole and EZ adjust structure

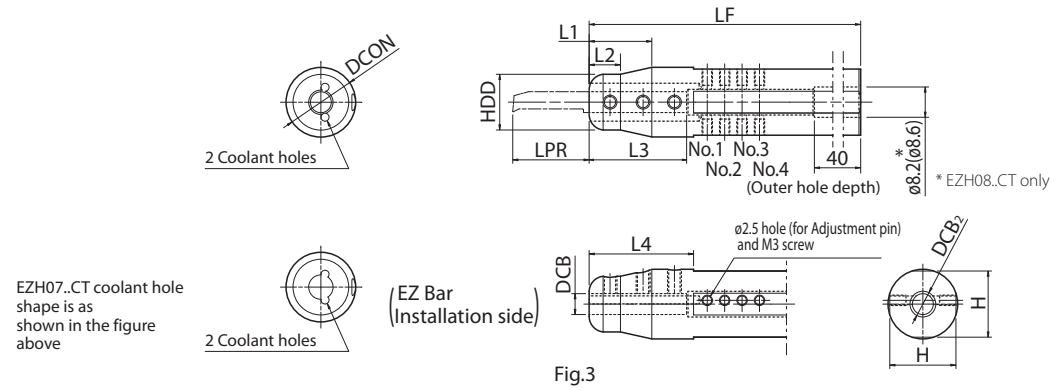


Fig.3

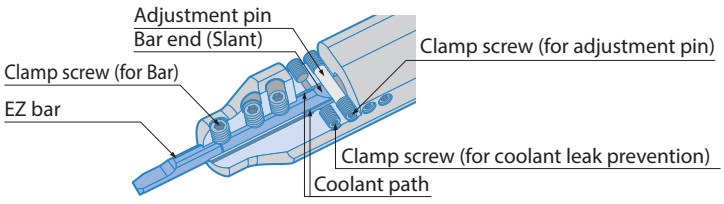
Sleeve dimensions

Description		Avail-ability	Dimensions (mm)										Bar overhang length*2 LPR (mm) Adjustment pin setting				Drawing	Applicable EZ Bar
			DCB	DCON	HDD	DCB_2	H	LF	L1	L2	*1L3	L4	No.1	No.2	No.3	No.4		
EZH	04019CT-120	●	4	19.05	13	6	18	120	16	8	22	32.7	20.5	16.5	12.5	8.5	Fig.3	EZB R/L…040… EZBFR…040… EZBTR…040… EZVBR…040… EZG R/L…040… EZFG R/L…040… EZTR…040…
	04020CT-120	●		20			19	120										
	04022CT-135	●		22			21	135				41.5						
	04025.0CT-135	●		25			24	135				32.7						
	04025.4CT-135	●		25.4			24.4	120										
EZH	04519CT-120	●	4.5	19.05	16	6	18	120	18	9	23	30.0	23 (14)	18.5 (9.5)	14 (–)	9.5 (–)	Fig.3	EZB R/L…045… _045X-…-050EZP
	04520CT-120	●		20			19	120										
	04522CT-135	●		22			21	135				44.0						
	04525.0CT-135	●		25			24	135				30.0						
	04525.4CT-120	●		25.4			24.4	120										
EZH	05019CT-120	●	5	19.05	16	6	18	120	18	9	26	30.0	25.5 (15.5)	20.5 (10.5)	15.5 (–)	10.5 (–)	Fig.3	EZB R/L…050… EZBFR…050… EZBTR…050… EZVBR…050… EZG R/L…050… EZFG R/L…050… EZTR…050… _050X…-060EZP
	05020CT-120	●		20			19	120										
	05022CT-135	●		22			21	135				44.0						
	05025.0CT-135	●		25			24	135				30.0						
	05025.4CT-120	●		25.4			24.4	120										
EZH	06019CT-120	●	6	19.05	16	7.4	18	120	18	9	28	30.0	30.5 (18.5)	25.5 (13.5)	20.5 (–)	15.5 (–)	Fig.3	EZB R/L…060… EZBFR…060… EZVBR…060… EZG R/L…060… EZTR…060… _060X…-070EZP
	06020CT-120	●		20			19	120										
	06022CT-135	●		22			21	135				41.5						
	06025.0CT-135	●		25			24	135				30.0						
	06025.4CT-120	●		25.4			24.4	120										
EZH	07019CT-120	●	7	19.05	16	7.4	18	120	18	9	29	30.0	35.5 (21.5)	30.5 (16.5)	25.5 (11.5)	20.5 (–)	Fig.3	EZB R/L…070… EZG R/L…070… EZFG R/L…070… EZTR…070… _070X…-080EZP
	07020CT-120	●		20			19	120										
	07022CT-135	●		22			21	135				44.0						
	07025.0CT-135	●		25			24	135				30.0						
	07025.4CT-120	●		25.4			24.4	120										
EZH	08019CT-120	●	8	19.05	16	8.6	18	120	18	9	33	34.0	40.5 (24.5)	35.5 (19.5)	30.5 (14.5)	25.5 (–)	Fig.3	EZB R/L…080… _080X-…-100EZP
	08020CT-120	●		20			19	120										
	08022CT-135	●		22			21	135				44.0						
	08025.0CT-135	●		25			24	135				34.0						
	08025.4CT-120	●		25.4			24.4	120										

*1. L3 shows DCB length
*2. LPR shows overhang length of the EZB Bar (except for long type) when attached to sleeve
( ) value indicates the overhang length when installed the steel boring bar (EZ Bar PLUS)
Choose sleeves (DCB) to meet with DCON dimension of bar
A hole on the rear end of sleeve is prepared hole for Rc1/8 threading. Please modify by additional processing if necessary. The body hardness is 42HRC

● : Available

EZH-CT internal structure

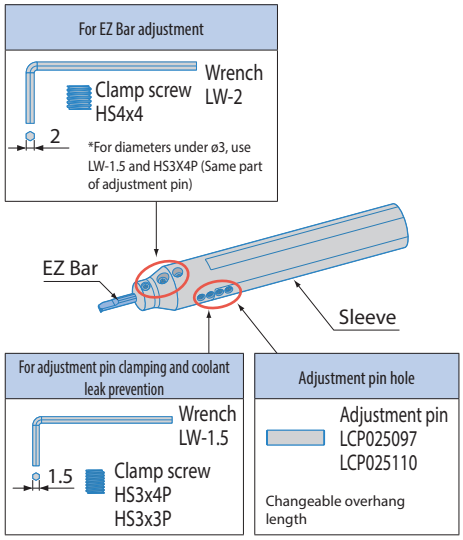


Parts (For EZH-CT sleeves)

Description		Spare parts				
		Adjustment pin	Clamp screw (for adjustment pin)	Wrench	Clamp screw (for Bar)	Wrench
EZH	017...CT-..	LCP025097	HS3X4P (for adjustment pin and liquid leak prevention)	LW-1.5 Tightening torque 1N・m	HS3X4P	LW-1.5 Tightening torque 1N・m
	020...CT-..					
	025...CT-..					
	030...CT-..					
EZH	035...CT-..	LCP025097	HS3X4P (for adjustment pin and liquid leak prevention)	LW-1.5 Tightening torque 1N・m	HS4X4P (for bar)	LW-2 Tightening torque 2N・m
	040...CT-..					
	045...CT-..					
	050...CT-..					
	060...CT-..					
	070...CT-..					
	080...CT-..	LCP025110	HS3X3P (for adjustment pin and liquid leak prevention)			

1) If shank dia. is ø2.5 mm or less, use clamp screw (HS3X4P)
- For adjustment pin ····· 2 pcs
- For liquid leak prevention ····· 2 pcs
- For EZ Bar ····· 2 pcs

2) If shank dia. is ø3mm, use clamp screw (HS3X4P)
- For adjustment pin ····· 2 pcs
- For liquid leak prevention ····· 4 pcs
- For EZ Bar ····· 3 pcs



EZ Bar mounting procedure (EZH-CT sleeve)

How to use adjustment pin and prevent liquid leak (Fig. 4)
(1) Put the adjustment pin into the hole. Push it into the sleeve, using the wrench "LW-1.5"
(2) Tighten the clamp screw for the adjustment pin (HS3X4P, HS3X3P) using the wrench (LW-1.5) from the both sides of the sleeve
(3) Put the clamp screws (HS3X4P, HS3X3P) into the holes for liquid leak prevention, using the wrench (LW-1.5) and fix them from the both sides of the sleeve

How to secure bar (Fig.5)
(1) 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.6)
(2) Tighten the clamp screw with wrench "LW-2" and secure the bar
(Use "LW-1.5" if shank dia. is 3 mm or less)

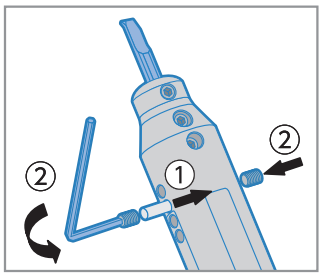


Fig. 4 How to use adjustment pin

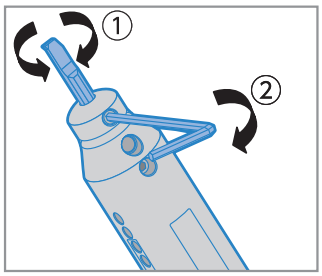


Fig. 5 How to secure bar

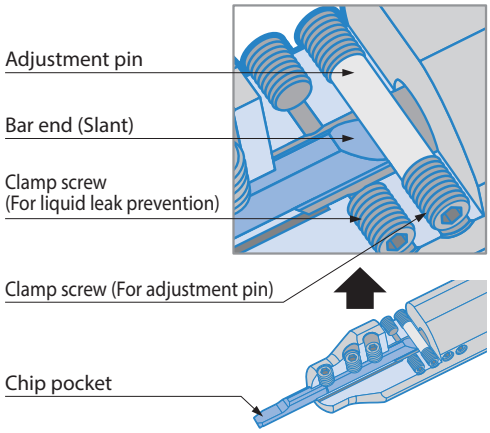


Fig. 6 clamped bar

Sleeve identification system

EZ	H	020	19	CT	-	120
Bar symbol (EZ Bar)	Application	Shank dia. of EZ Bar	Sleeve shank dia.	Precision symbol		Overall length of sleeve
	H: Sleeve	020: 2.0 mm / 025: 2.5 mm	19: 19.05 mm / 25.4: 25.4 mm	CT: With coolant hole and EZ adjust structure		120: 120 mm / 135: 135 mm
				HP: EZ adjust structure	ST: Standard	

Applicable sleeve

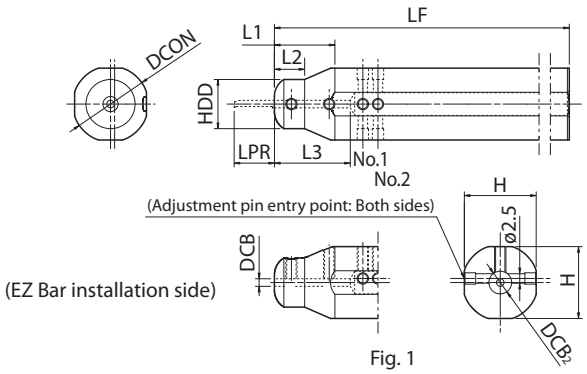


Fig. 1

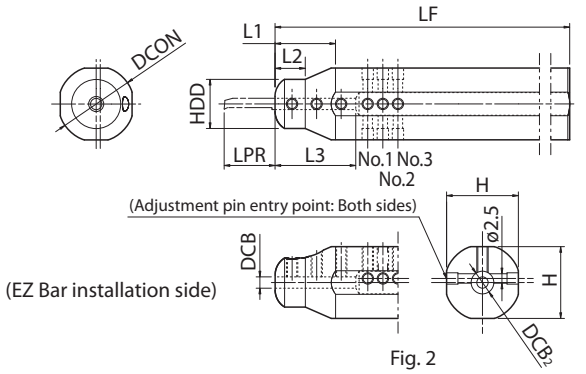


Fig. 2

Sleeve dimensions

Description		Avail-ability	Dimensions (mm)									Bar overhang length*2 LPR (mm) Adjustment pin setting				Drawing	Applicable EZ Bar
			DCB	DCON	HDD	DCB_2	H	LF	L1	L2	*1 L3	No.1	No.2	No.3	No.4		
EZH	01716HP-100	●	1.7	16	13	6	15	100	16	8	16	7.5	3.5	–	–	Fig.1	EZBR…017…
	01719HP-120	●		19.05			18	120									
	01720HP-120	●		20			19	120									
	01722HP-135	●		22			21	135									
	01725.0HP-135	●		25			24	135									
	01725.4HP-120	●		25.4			24.4	120									
EZH	02016HP-100	●	2	16	13	6	15	100	16	8	20	8.5	4.5	–	–	Fig.1	EZB R/L…020…
	02019HP-120	●		19.05			18	120									
	02020HP-120	●		20			19	120									
	02022HP-135	●		22			21	135									
	02025.0HP-135	●		25			24	135									
	02025.4HP-120	●		25.4			24.4	120									
EZH	02516HP-100	●	2.5	16	13	6	15	100	16	8	20	11	7	–	–	Fig.1	EZB R/L…025… EZTR…025…
	02519HP-120	●		19.05			18	120									
	02520HP-120	●		20			19	120									
	02522HP-135	●		22			21	135									
	02525.0HP-135	●		25			24	135									
	02525.4HP-120	●		25.4			24.4	120									
EZH	03016HP-100	●	3	16	13	6	15	100	16	8	21	13.5	9.5	5.5	–	Fig.2	EZB R/L…030… EZBFR…030… EZVBR…030… EZGR…030… EZTR…030…
	03019HP-120	●		19.05			18	120									
	03020HP-120	●		20			19	120									
	03022HP-135	●		22			21	135									
	03025.0HP-135	●		25			24	135									
	03025.4HP-120	●		25.4			24.4	120									
EZH	03516HP-100	●	3.5	16	13	6	15	100	16	8	22	15.5	11.5	7.5	–	Fig.2	EZB R/L…035… EZTR…035…
	03519HP-120	●		19.05			18	120									
	03520HP-120	●		20			19	120									
	03522HP-135	●		22			21	135									
	03525.0HP-135	●		25			24	135									
	03525.4HP-120	●		25.4			24.4	120									
EZH	04016HP-100	●	4	16	13	6	15	100	16	8	24	20.5	16.5	12.5	8.5	Fig.4	EZB R/L…040… EZBFR…040… EZBTR…040… EZVBR…040… EZG R/L…040… EZFG R/L…040… EZTR…040…
	04019HP-120	●		19.05			18	120									
	04020HP-120	●		20			19	120									
	04022HP-135	●		22			21	135									
	04025.0HP-135	●		25			24	135									
	04025.4HP-120	●		25.4			24.4	120									

*1. L3 shows DCB length
*2. LPR shows overhang length of the EZB Bar when attached to sleeve
Choose sleeves (DCB) to meet with DCON dimension of bar

● : Available

Parts (For EZH-HP sleeves)

Description		Spare parts				
		Adjustment pin	Clamp screw (for adjustment pin)	Wrench	Clamp screw (for bar)	Wrench
EZH	017...HP-..	LCP025140	HS3X4P (for both adjustment pin and bar)	LW-1.5 Tightening torque 1N・m	HS3X4P	LW-1.5 Tightening torque 1N・m
	020...HP-..					
	025...HP-..					
	030...HP-..					
EZH	035...HP-..	LCP025140	HS3X4P	LW-1.5 Tightening torque 1N・m	HS4X4P	LW-2 Tightening torque 2N・m
	040...HP-..					
	045...HP-..					
	050...HP-..					
	060...HP-..					
	070...HP-..					
	080...HP-..					

Applicable sleeve

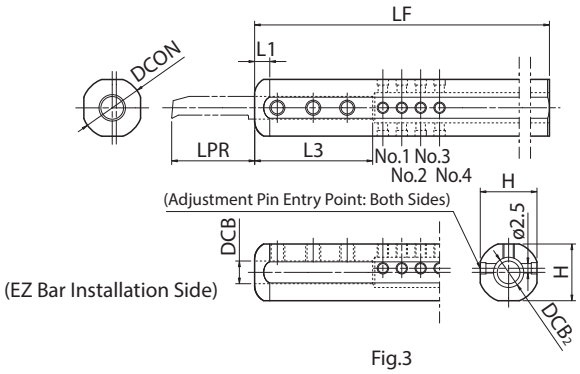


Fig.3

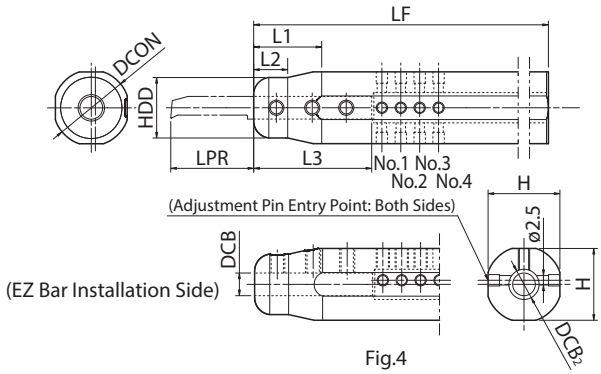


Fig.4

Sleeve dimensions

Description		Avail-ability	Dimensions (mm)									Bar overhang length*2 LPR (mm) Adjustment pin setting				Drawing	Applicable EZ Bar
			DCB	DCON	HDD	DCB_2	H	LF	L1	L2	*1 L3	No.1	No.2	No.3	No.4		
EZH	04516HP-100	●	4.5	16	16	6	15	100	4	–	25.3	23 (14)	18.5 (9.5)	14 (–)	9.5 (–)	Fig.3	EZB R/L…045… _045X…-050EZP
	04519HP-120	●		19.05			18	120	18	9						Fig.4	
	04520HP-120	●		20			19	120									
	04522HP-135	●		22			21	135									
	04525.0HP-135	●		25			24	135									
	04525.4HP-120	●		25.4			24.4	120									
EZH	05016HP-100	●	5	16	16	6	15	100	4	–	29	25.5 (15.5)	20.5 (10.5)	15.5 (–)	10.5 (–)	Fig.3	EZB R/L…050… EZBFR…050… EZBTR…050… EZVBR…050… EZG R/L…050… EZFG R/L…050… EZTR…050… _050X…-060EZP
	05019HP-120	●		19.05			18	120	18	9						Fig.4	
	05020HP-120	●		20			19	120									
	05022HP-135	●		22			21	135									
	05025.0HP-135	●		25			24	135									
	05025.4HP-120	●		25.4			24.4	120									
EZH	06016HP-100	●	6	16	16	8	15	100	4	–	31	30.5 (18.5)	25.5 (13.5)	20.5 (–)	15.5 (–)	Fig.3	EZB R/L…060… EZBFR…060… EZVBR…060… EZG R/L…060… EZTR…060… _060X…-070EZP
	06019HP-120	●		19.05			18	120	18	9						Fig.4	
	06020HP-120	●		20			19	120									
	06022HP-135	●		22			21	135									
	06025.0HP-135	●		25			24	135									
	06025.4HP-120	●		25.4			24.4	120									
EZH	07016HP-100	●	7	16	16	8	15	100	4	–	33	35.5 (21.5)	30.5 (16.5)	25.5 (11.5)	20.5 (–)	Fig.3	EZB R/L…070… EZG R/L…070… EZFG R/L…070… EZTR…070… _070X…-080EZP
	07019HP-120	●		19.05			18	120	18	9						Fig.4	
	07020HP-120	●		20			19	120									
	07022HP-135	●		22			21	135									
	07025.0HP-135	●		25			24	135									
	07025.4HP-120	●		25.4			24.4	120									
EZH	08019HP-120	●	8	19.05	16	8.4	18	120	18	9	37	40.5 (24.5)	35.5 (19.5)	30.5 (14.5)	25.5 (–)	Fig.4	EZB R/L…080… _080X…-100EZP
	08020HP-120	●		20			19	120									
	08022HP-135	●		22			21	135									
	08025.0HP-135	●		25			24	135									
	08025.4HP-120	●		25.4			24.4	120									

*1. L3 shows DCB length *2. LPR shows overhang length of the EZB Bar when attached to sleeve ●: Available
( ) value indicates the overhang length when installed the steel boring bar (EZ Bar PLUS). Choose sleeves (DCB) to meet with DCON dimension of bar

Sleeve identification system

EZ — Bar symbol (EZ Bar)

H — Application: H: Sleeve

017 — Shank dia. of EZ Bar: 017: 1.7 mm | 025: 2.5 mm

16 — Sleeve shank dia.: 16: 16 Mm | 25.4: 25.4 Mm

HP — Precision symbol: CT: with coolant hole and EZ adjust structure | Hp: EZ adjust structure | St: standard

100 — Overall length of sleeve: 100: 100 mm | 120: 120 mm

EZ Bar mounting procedure (EZH-HP sleeve)

How to use adjustment pin (Fig. 5)

(1) Put the adjustment pin into the hole

(2) Push it into the sleeve, using the wrench "LW-1.5"

(3) Tighten the clamp screw "HS3x4P" with wrench "LW-1.5" to fix the adjustment screw

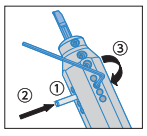


Fig.5 How to use adjustment pin

How to secure bar (Fig. 6)

(1) 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.7)

(2) Tighten the clamp screw with wrench "LW-2" and secure the bar (Use "LW-1.5" if shank dia. is 3 mm or less)

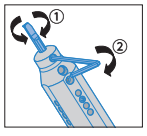


Fig.6 How to secure bar

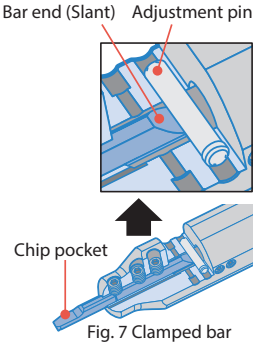


Fig. 7 Clamped bar

Applicable sleeve

NOT adjustable

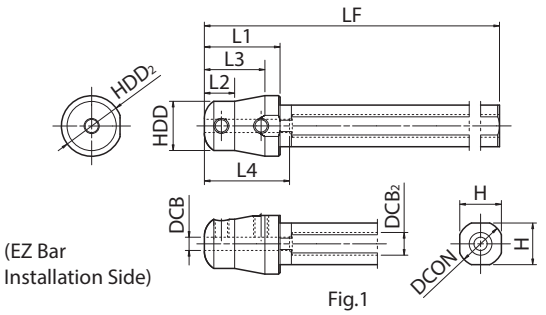


Fig.1

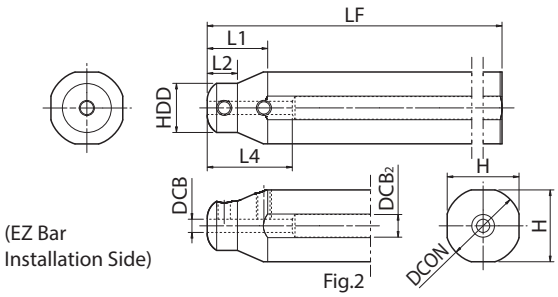


Fig.2

Sleeve dimensions

Description		Avail-ability	Dimensions (mm)											Drawing	Applicable EZ Bar
			DCB	DCON	HDD	HDD_2	DCB_2	H	LF	L1	L2	L3	*L4		
EZH	01712ST-80	●	1.7	12	13	16	6	11	80	20	8	16	16	Fig.1	EZBR…017…
	01716ST-100	●		16		–		15	100	16		–		Fig.2	
	01719ST-120	●		19.05				18	120						
	01720ST-120	●		20				19	120						
	01722ST-135	●		22				21	135						
	01725.0ST-135	●		25				24	135						
	01725.4ST-120	●		25.4				24.4	120						
EZH	02012ST-80	●	2	12	13	16	6	11	80	20	8	16	20	Fig.1	EZB R/L…020…
	02016ST-100	●		16		–		15	100	16		–		Fig.2	
	02019ST-120	●		19.05				18	120						
	02020ST-120	●		20				19	120						
	02022ST-135	●		22				21	135						
	02025.0ST-135	●		25				24	135						
	02025.4ST-120	●		25.4				24.4	120						
EZH	02512ST-80	●	2.5	12	13	16	6	11	80	20	8	16	20	Fig.1	EZB R/L…025… EZTR…025…
	02516ST-100	●		16		–		15	100	16		–		Fig.2	
	02519ST-120	●		19.05				18	120						
	02520ST-120	●		20				19	120						
	02522ST-135	●		22				21	135						
	02525.0ST-135	●		25				24	135						
	02525.4ST-120	●		25.4				24.4	120						
EZH	03012ST-80	●	3	12	13	16	6	11	80	20	8	16	21	Fig.1	EZB R/L…030… EZBFR…030… EZVBR…030… EZGR…030… EZTR…030…
	03016ST-100	●		16		–		15	100	16		–		Fig.2	
	03019ST-120	●		19.05				18	120						
	03020ST-120	●		20				19	120						
	03022ST-135	●		22				21	135						
	03025.0ST-135	●		25				24	135						
	03025.4ST-120	●		25.4				24.4	120						
EZH	03512ST-80	●	3.5	12	13	16	6	11	80	20	8	16	22	Fig.1	EZB R/L…035… EZTR…035…
	03516ST-100	●		16		–		15	100	16		–		Fig.2	
	03519ST-120	●		19.05				18	120						
	03520ST-120	●		20				19	120						
	03522ST-135	●		22				21	135						
	03525.0ST-135	●		25				24	135						
	03525.4ST-120	●		25.4				24.4	120						
EZH	04012ST-80	●	4	12	13	16	6	11	80	20	8	16	24	Fig.1	EZB R/L…040… EZBFR…040… EZBTR…040… EZVBR…040… EZG R/L…040… EZFG R/L…040… EZTR…040…
	04016ST-100	●		16		–		15	100	16		–		Fig.2	
	04019ST-120	●		19.05				18	120						
	04020ST-120	●		20				19	120						
	04022ST-135	●		22				21	135						
	04025.0ST-135	●		25				24	135						
	04025.4ST-120	●		25.4				24.4	120						

*L4 shows DCB length
Choose sleeves (DCB) to meet with DCON dimension of bar
Adjustment pin cannot be installed to EZH-ST sleeves. To adjust overhang of the bar, please use EZH-CT / HP sleeves

● : Available

Applicable sleeve

NOT adjustable

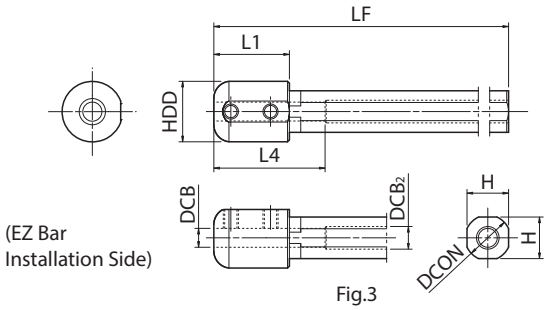


Fig.3

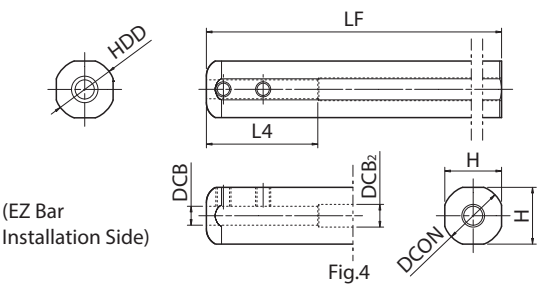


Fig.4

Sleeve dimensions

Description		Avail-ability	Dimensions (mm)											Drawing	Applicable EZ Bar
			DCB	DCON	HDD	HDD2	DCB2	H	LF	L1	L2	L3	*L4		
EZH	05012ST-80	●	5	12	16	–	6	11	80	20	–	–	29	Fig.3	EZB R/L…050… EZBFR…050… EZBTR…050… EZVBR…050… EZG R/L…050… EZFG R/L…050… EZTR…050… _050X…-060EZP
	05016ST-100	●		16				15	100	–				Fig.4	
	05019ST-120	●		19.05				18	120	18	9			Fig.2	
	05020ST-120	●		20				19	120						
	05022ST-135	●		22				21	135						
	05025.0ST-135	●		25				24	135						
	05025.4ST-120	●		25.4				24.4	120						
EZH	06012ST-80	●	6	12	16	–	8	11	80	20	–	–	31	Fig.3	EZB R/L…060… EZBFR…060… EZVBR…060… EZG R/L…060… EZTR…060… _060X…-070EZP
	06016ST-100	●		16				15	100	–				Fig.4	
	06019ST-120	●		19.05				18	120	18	9			Fig.2	
	06020ST-120	●		20				19	120						
	06022ST-135	●		22				21	135						
	06025.0ST-135	●		25				24	135						
	06025.4ST-120	●		25.4				24.4	120						
EZH	07012ST-80	●	7	12	16	–	8	11	80	20	–	–	33	Fig.3	EZB R/L…070… EZG R/L…070… EZFG R/L…070… EZTR…070… _070X…-080EZP
	07016ST-100	●		16				15	100	–				Fig.4	
	07019ST-120	●		19.05				18	120	18	9			Fig.2	
	07020ST-120	●		20				19	120						
	07022ST-135	●		22				21	135						
	07025.0ST-135	●		25				24	135						
	07025.4ST-120	●		25.4				24.4	120						
EZH	08016ST-100	●	8	16	16	–	8.4	15	100	–	–	–	37	Fig.4	EZB R/L…080… _080X…-100EZP
	08019ST-120	●		19.05				18	120	18	9			Fig.2	
	08020ST-120	●		20				19	120						
	08022ST-135	●		22				21	135						
	08025.0ST-135	●		25				24	135						
	08025.4ST-120	●		25.4				24.4	120						

*L4 shows DCB length
Choose sleeves (DCB) to meet with DCON dimension of bar
Adjustment pin cannot be installed to EZH-ST sleeves. To adjust overhang of the bar, please use EZH-CT / HP sleeves

●: Available

Parts (For EZH-ST sleeves)

Description		Spare parts		Applicable EZ Bar		EZ Bar PLUS
		Clamp screw	Wrench	EZB-HP EZB-HP-LT EZB-ST EZB-NB	EZBF EZBT EZVB EZG EZFG EZT	S/C-SCLC S/C-STLB(P) S/C-SWUB
						
EZH	017…ST-..	HS3X4P	LW-1.5 Tightening torque 1N • m	EZBR…017…	–	–
	020…ST-..			EZB R/L…020…		
	025…ST-..			EZB R/L…025…	EZTR…025-…	–
	030…ST-..			EZB R/L…030…	EZ_R…030-…	–
EZH	035…ST-..	HS3X4P	LW-2 Tightening torque 2N • m	EZB R/L…035…	EZTR…035-…	–
	040…ST-..			EZB R/L…040…	EZ_R…040-…	–
	050…ST-..			EZB R/L…050…	EZ_R…050-…	_050X-…-060EZP
	060…ST-..			EZB R/L…060…	EZ_R…060-…	_060X-…-070EZ(P)
	070…ST-..			EZB R/L…070…	EZ_R…070-…	_070X-…-080EZP
	080…ST-..			EZB R/L…080…	–	_080X-…-100EZP

Applicable sleeves for machine manufacturers

Sleeve description				Applicable EZ Bar				Applicable machine manufacturer
EZH-CT (EZ Adjust structure and with coolant hole)	EZH-HP (Adjustable)	EZH-ST	Sleeve shank dia. DCON (mm)	EZB	EZBF • EZBT • EZVB • EZBP • EZBC • EZG • EZFG • EZT	EZ Bar PLUS	Shank dia. DCON (mm)	
–	–	EZH 01712ST-80	12	EZBR ...017...	–	–	1.7	(General Machines)
		02012ST-80		EZB R/L ...020...	EZBPR ...020-...		2	
		02512ST-80		EZB R/L ...025...	EZ__ ...025-...		2.5	
		03012ST-80		EZB R/L ...030...	EZ__ ...030-...		3	
		03512ST-80		EZB R/L ...035...	EZ__ ...035-...		3.5	
		04012ST-80		EZB R/L ...040...	EZ__ ...040-...		4	
		05012ST-80		EZB R/L ...050...	EZ__ ...050-...		5	
		06012ST-80		EZB R/L ...060...	EZ__ ...060-...		6	
		07012ST-80		EZBR ...070...	EZ__ ...070-...		7	
–	EZH 01716HP-100	EZH 01716ST-100	16	EZBR ...017...	–	–	1.7	(General Machines)
	02016HP-100	02016ST-100		EZB R/L ...020...	EZBPR ...020-...		2	
	02516HP-100	02516ST-100		EZB R/L ...025...	EZ__ ...025-...		2.5	
	03016HP-100	03016ST-100		EZB R/L ...030...	EZ__ ...030-...		3	
	03516HP-100	03516ST-100		EZB R/L ...035...	EZ__ ...035-...		3.5	
	04016HP-100	04016ST-100		EZB R/L ...040...	EZ__ ...040-...		4	
	04516HP-100	–		EZB R/L ...045...	–	5/C045X- ...-050EZP	4.5	
	05016HP-100	05016ST-100		EZB R/L ...050...	EZ__ ...050-...	5/C050X- ...-060EZP	5	
	06016HP-100	06016ST-100		EZB R/L ...060...	EZ__ ...060-...	5/C060X- ...-070EZP	6	
	07016HP-100	07016ST-100		EZBR ...070...	EZ__ ...070-...	5/C070X- ...-080EZP	7	
	–	08016ST-100		EZB R/L ...080...	–	5/C080X- ...-100EZP	8	
EZH 01719CT-120	EZH 01719HP-120	EZH 01719ST-120	19.05	EZBR ...017...	–	–	1.7	Citizen Machinery
02019CT-120	02019HP-120	02019ST-120		EZB R/L ...020...	EZBPR ...020-...		2	
02519CT-120	02519HP-120	02519ST-120		EZB R/L ...025...	EZ__ ...025-...		2.5	
03019CT-120	03019HP-120	03019ST-120		EZB R/L ...030...	EZ__ ...030-...		3	
03519CT-120	03519HP-120	03519ST-120		EZB R/L ...035...	EZ__ ...035-...		3.5	
04019CT-120	04019HP-120	04019ST-120		EZB R/L ...040...	EZ__ ...040-...		4	
04519CT-120	04519HP-120	–		EZB R/L ...045...	–	5/C045X- ...-050EZP	4.5	
05019CT-120	05019HP-120	05019ST-120		EZB R/L ...050...	EZ__ ...050-...	5/C050X- ...-060EZP	5	
06019CT-120	06019HP-120	06019ST-120		EZB R/L ...060...	EZ__ ...060-...	5/C060X- ...-070EZP	6	
07019CT-120	07019HP-120	07019ST-120		EZBR ...070...	EZ__ ...070-...	5/C070X- ...-080EZP	7	
08019CT-120	08019HP-120	08019ST-120		EZB R/L ...080...	–	5/C080X- ...-100EZP	8	
EZH 01720CT-120	EZH 01720HP-120	EZH 01720ST-120	20	EZBR ...017...	–	–	1.7	Eguro Tsugami Citizen Machinery (General Machines)
02020CT-120	02020HP-120	02020ST-120		EZB R/L ...020...	EZBPR ...020-...		2	
02520CT-120	02520HP-120	02520ST-120		EZB R/L ...025...	EZ__ ...025-...		2.5	
03020CT-120	03020HP-120	03020ST-120		EZB R/L ...030...	EZ__ ...030-...		3	
03520CT-120	03520HP-120	03520ST-120		EZB R/L ...035...	EZ__ ...035-...		3.5	
04020CT-120	04020HP-120	04020ST-120		EZB R/L ...040...	EZ__ ...040-...		4	
04520CT-120	04520HP-120	–		EZB R/L ...045...	–	5/C045X- ...-050EZP	4.5	
05020CT-120	05020HP-120	05020ST-120		EZB R/L ...050...	EZ__ ...050-...	5/C050X- ...-060EZP	5	
06020CT-120	06020HP-120	06020ST-120		EZB R/L ...060...	EZ__ ...060-...	5/C060X- ...-070EZP	6	
07020CT-120	07020HP-120	07020ST-120		EZBR ...070...	EZ__ ...070-...	5/C070X- ...-080EZP	7	
08020CT-120	08020HP-120	08020ST-120		EZB R/L ...080...	–	5/C080X- ...-100EZP	8	
EZH 01722CT-135	EZH 01722HP-135	EZH 01722ST-135	22	EZBR ...017...	–	–	1.7	Star Micronics Nomura DS Tsugami
02022CT-135	02022HP-135	02022ST-135		EZB R/L ...020...	EZBPR ...020-...		2	
02522CT-135	02522HP-135	02522ST-135		EZB R/L ...025...	EZ__ ...025-...		2.5	
03022CT-135	03022HP-135	03022ST-135		EZB R/L ...030...	EZ__ ...030-...		3	
03522CT-135	03522HP-135	03522ST-135		EZB R/L ...035...	EZ__ ...035-...		3.5	
04022CT-135	04022HP-135	04022ST-135		EZB R/L ...040...	EZ__ ...040-...		4	
04522CT-135	04522HP-135	–		EZB R/L ...045...	–	5/C045X- ...-050EZP	4.5	
05022CT-135	05022HP-135	05022ST-135		EZB R/L ...050...	EZ__ ...050-...	5/C050X- ...-060EZP	5	
06022CT-135	06022HP-135	06022ST-135		EZB R/L ...060...	EZ__ ...060-...	5/C060X- ...-070EZP	6	
07022CT-135	07022HP-135	07022ST-135		EZBR ...070...	EZ__ ...070-...	5/C070X- ...-080EZP	7	
08022CT-135	08022HP-135	08022ST-135		EZB R/L ...080...	–	5/C080X- ...-100EZP	8	
EZH 01725.0CT-135	EZH 01725.0HP-135	EZH 01725.0ST-135	25	EZBR ...017...	–	–	1.7	Eguro Tsugami Citizen Machinery (General Machines)
02025.0CT-135	02025.0HP-135	02025.0ST-135		EZB R/L ...020...	EZBPR ...020-...		2	
02525.0CT-135	02525.0HP-135	02525.0ST-135		EZB R/L ...025...	EZ__ ...025-...		2.5	
03025.0CT-135	03025.0HP-135	03025.0ST-135		EZB R/L ...030...	EZ__ ...030-...		3	
03525.0CT-135	03525.0HP-135	03525.0ST-135		EZB R/L ...035...	EZ__ ...035-...		3.5	
04025.0CT-135	04025.0HP-135	04025.0ST-135		EZB R/L ...040...	EZ__ ...040-...		4	
04525.0CT-135	04525.0HP-135	–		EZB R/L ...045...	–	5/C045X- ...-050EZP	4.5	
05025.0CT-135	05025.0HP-135	05025.0ST-135		EZB R/L ...050...	EZ__ ...050-...	5/C050X- ...-060EZP	5	
06025.0CT-135	06025.0HP-135	06025.0ST-135		EZB R/L ...060...	EZ__ ...060-...	5/C060X- ...-070EZP	6	
07025.0CT-135	07025.0HP-135	07025.0ST-135		EZBR ...070...	EZ__ ...070-...	5/C070X- ...-080EZP	7	
08025.0CT-135	08025.0HP-135	08025.0ST-135		EZB R/L ...080...	–	5/C080X- ...-100EZP	8	
EZH 01725.4CT-120	EZH 01725.4HP-120	EZH 01725.4ST-120	25.4	EZBR ...017...	–	–	1.7	Citizen Machinery
02025.4CT-120	02025.4HP-120	02025.4ST-120		EZB R/L ...020...	EZBPR ...020-...		2	
02525.4CT-120	02525.4HP-120	02525.4ST-120		EZB R/L ...025...	EZ__ ...025-...		2.5	
03025.4CT-120	03025.4HP-120	03025.4ST-120		EZB R/L ...030...	EZ__ ...030-...		3	
03525.4CT-120	03525.4HP-120	03525.4ST-120		EZB R/L ...035...	EZ__ ...035-...		3.5	
04025.4CT-120	04025.4HP-120	04025.4ST-120		EZB R/L ...040...	EZ__ ...040-...		4	
04525.4CT-120	04525.4HP-120	–		EZB R/L ...045...	–	5/C045X- ...-050EZP	4.5	
05025.4CT-120	05025.4HP-120	05025.4ST-120		EZB R/L ...050...	EZ__ ...050-...	5/C050X- ...-060EZP	5	
06025.4CT-120	06025.4HP-120	06025.4ST-120		EZB R/L ...060...	EZ__ ...060-...	5/C060X- ...-070EZP	6	
07025.4CT-120	07025.4HP-120	07025.4ST-120		EZBR ...070...	EZ__ ...070-...	5/C070X- ...-080EZP	7	
08025.4CT-120	08025.4HP-120	08025.4ST-120		EZB R/L ...080...	–	5/C080X- ...-100EZP	8	

· Choose sleeves (DCB) to meet with DCON dimension of bar
· Adjustment pin cannot be installed to EZH-ST sleeves. To adjust overhang of the bar, please use EZH-CT / HP sleeves
· Machine manufacturers in random order