

TurnLine

TINY^{INI}M^{INI}TURN

www.tungaloy.com

Tungaloy Report No. 402-G

TINYMINI-TURN

Solid boring bars applicable for
min $\varnothing 0.6$ mm bore!



Member IMC Group
Tungaloy



ACCELERATED MACHINING

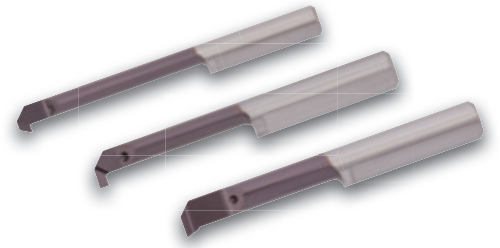
TurnLine

TINY^{INI}M^{INI}TURN
TUNGALOY

TUNG FORCE
TURN
ACCELERATED MACHINING



Excellent cutting edge offers high precision machining for a wide range of internal applications!



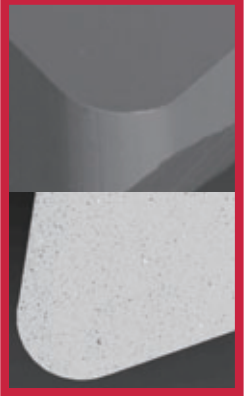
Stable machining and excellent surface finish for small-diameter internal turning!

Well-designed edge provides highly accurate machining

1. Super fine cutting edges

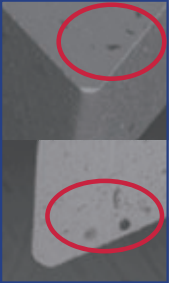
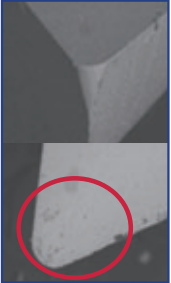
Comparison of tool surface and cutting edge

TINY^{INI}TURN



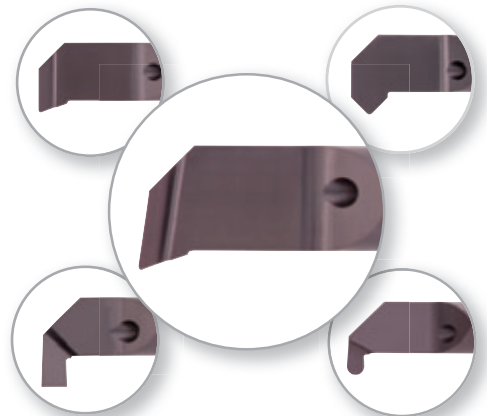
Fine edge and smooth coating

Improvement

Competitor A	Competitor B
	
<p>Foreign particles on surface, small chippings</p> <p>▶ Rough surface finish Decreased tool life due to welding</p>	

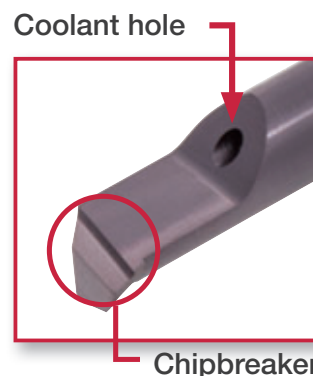
Cutting edge is extremely fine compared to competitors!!

- Generates fine surface finishes and prevents edge chipping.
- Smooth cutting edge leads to high precision products.



2. Coolant hole

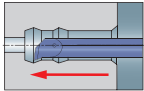
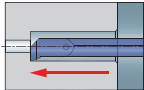
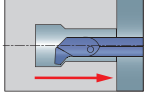
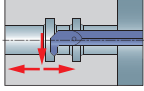
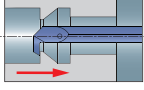
- Supplies coolant directly to the cutting edge.
- Offers remarkable chip evacuation.



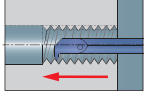
3. Wide range of items can be applied to a variety of internal operations.

- 146 solid bar items in a wide range of geometries
- Minimum boring diameter : $\varnothing D_m = 0.6 \text{ mm}$

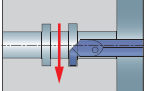
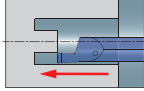
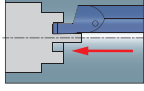
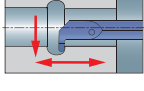
Boring, profiling, chamfering

Type	Application	Shank diameter $\varnothing D_s$ (mm)	Min. bore dia. $\varnothing D_m$ (mm)					
			0	2	4	6	8	10
JBT (P. 10)	 Boring, profiling, chamfering	$\varnothing 4, \varnothing 7$	$\varnothing 0.6$					$\varnothing 7.0$
JBP (P. 11)	 Boring, chamfering	$\varnothing 4, \varnothing 7$		$\varnothing 2.8$			$\varnothing 5.0$	
JBU (P. 12)	 Back boring, chamfering	$\varnothing 7$			$\varnothing 5.0$			
JBC (P. 12)	 Boring, 45° chamfering	$\varnothing 7$			$\varnothing 5.0$			$\varnothing 6.8$
JBB (P. 13)	 Back boring	$\varnothing 4, \varnothing 7$		$\varnothing 3.0$				$\varnothing 7.0$

Threading

Type	Application	Shank diameter $\varnothing D_s$ (mm)	Min. bore dia. $\varnothing D_m$ (mm)					
			0	2	4	6	8	10
JBI (P. 14)	 Threading (Metric thread)	$\varnothing 4, \varnothing 7$			$\varnothing 4.0$			$\varnothing 7.0$

Grooving

Type	Application	Shank diameter $\varnothing D_s$ (mm)	Groove widths W (mm)	Min. bore dia. $\varnothing D_m$ (mm)										
				0	2	4	6	8	10	12	14	15		
JBG (P. 15)	 Grooving	$\varnothing 4, \varnothing 7$	0.5 - 2.0	$\varnothing 2.0$					$\varnothing 6.8$					
JBF (P. 17)	 Face grooving	$\varnothing 7$	1.0 - 3.0			$\varnothing 6.0$						$\varnothing 15.0$		
JBS (P. 18)	 Face grooving (for shaft)	$\varnothing 7$	2.0			$\varnothing 6.0$								
JBR (P.16)	 Boring, profiling (full radius type)	$\varnothing 7$	1.0			$\varnothing 5.0$			$\varnothing 6.8$					

Well-designed edges with a wide range of items to generate high productivity for small parts machining!

Ideal sleeve with easy operation

1. Excellent repeatability of solid bars

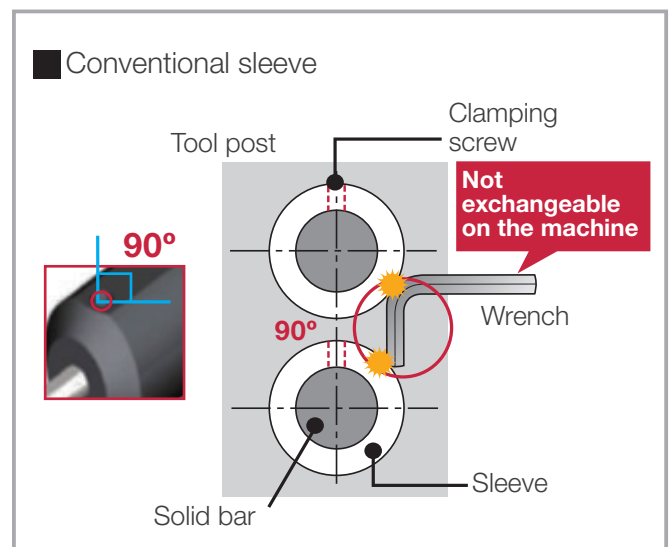
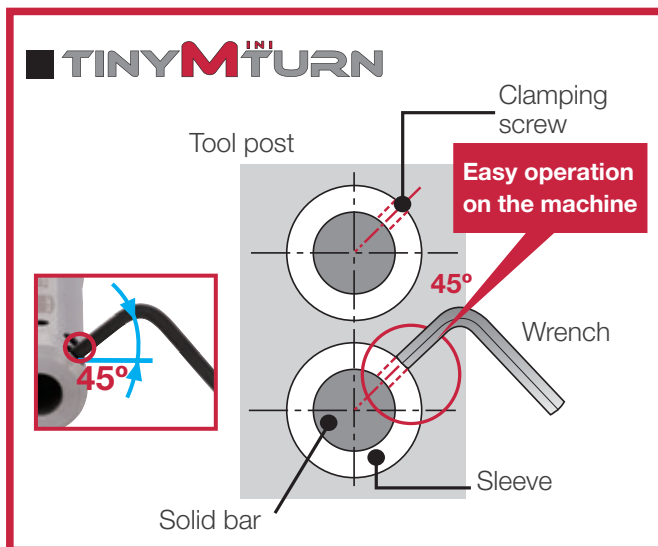
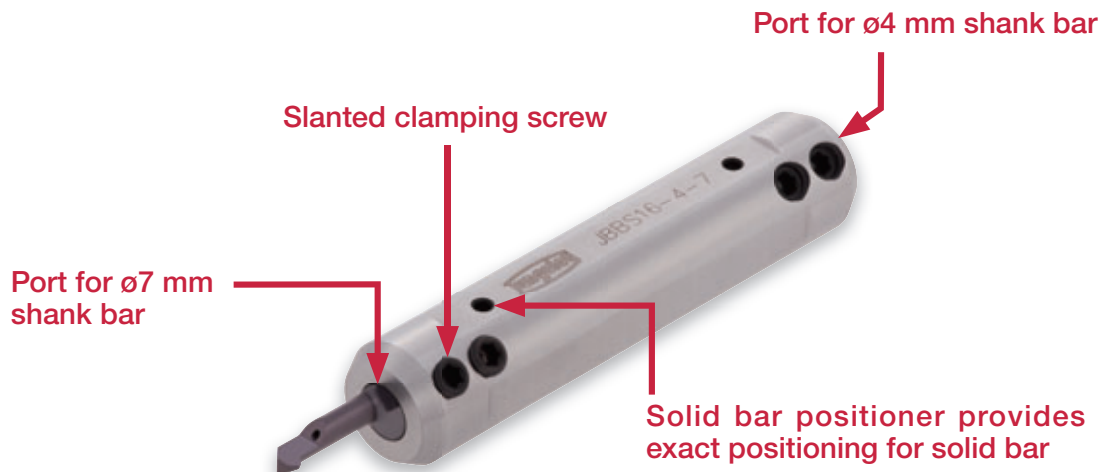
Exact positioning provides exceptional stability and reliability in tool changeovers

2. Double ported

ø4 mm and ø7 mm shank can be set on ONE sleeve

3. Easy tool changeovers

Solid bar can be changed to suit any type of tool head on the machine credit to the clamping screw tilted with 45°



Highly functional sleeve creates extremely stable machining!



Special sleeve with internal coolant supply

1. Easy connection with coolant hose

Connection screw R1/8 at the end of the sleeve

2. Enhanced range of overhang lengths

Perfect lengths of sleeve and cotter slot for adjustable overhang lengths

3. Excellent repeatability of solid bars and easy tool changeover

Solid bar positioner provides exact positioning of solid bars and tools can be changed easily on the machine



Grade

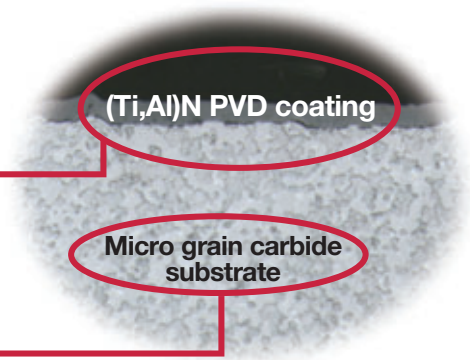
SH730 PVD coated grade

Delivers a stable performance with the combination of exclusive (Ti,Al)N coating and extremely tough substrate

Excellent chipping & welding resistance

Thin (Ti,Al)N coated layers are tightly adhered to create a sharp cutting edge

Improved plastic deformation resistance and toughness



Application	Application code	Grade	Substrate			Coating layer		Features
			Specific gravity	Hardness (HRA)	T.R.S. (GPa)	Main Composition	Thickness (μm)	
P Steel	P20 - P30	SH730	14.4	91.5	3.0	(Ti,Al)N	1.0	Versatile PVD coated grade for wide range of materials and applications.
M Stainless	M20 - M30	SH730	14.4	91.5	3.0	(Ti,Al)N	1.0	
K Cast iron	K20 - K30	SH730	14.4	91.5	3.0	(Ti,Al)N	1.0	
N Non-ferrous	N20 - N30	SH730	14.4	91.5	3.0	(Ti,Al)N	1.0	
S Superalloys	S20 - S30	SH730	14.4	91.5	3.0	(Ti,Al)N	1.0	

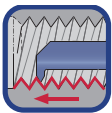
STANDARD CUTTING CONDITIONS



Boring, profiling, chamfering, back boring

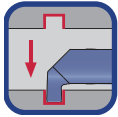
ISO	Workpiece materials	Grade	Cutting speed V _c (m/min)	Feed f (mm/rev)
P	Low carbon steels (C15, C20 etc.)	SH730	40 - 140	0.01 - 0.08 *
	Carbon steels, Alloy steels (C55, 42CrMoS4 etc.)	SH730	40 - 140	0.01 - 0.08 *
	Prehardened steels (NAK80, PX5 etc.)	SH730	40 - 140	0.01 - 0.08 *
M	Stainless steels (X5CrNi18-9, X5CrNiMo17-12-2 etc.)	SH730	40 - 140	0.01 - 0.08 *
K	Grey cast irons (250, 300 etc.)	SH730	30 - 100	0.01 - 0.08 *
	Ductile cast irons (400-15, 600-3 etc.)	SH730	30 - 100	0.01 - 0.08 *
N	Aluminium alloys, copper alloys Si < 12%	SH730	90 - 200	0.01 - 0.08 *
S	Titanium alloys (Ti-6Al-4V, etc.)	SH730	30 - 100	0.01 - 0.08 *
	Superalloys (Inconel718, etc.)	SH730	30 - 100	0.01 - 0.08 *

* JBTR/L04020004-D006,
JBTR/L04030004-D006
Max. f = 0.01 mm/rev



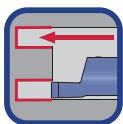
Threading (metric thread)

ISO	Workpiece materials	Grade	Cutting speed V _c (m/min)	Number of passes Pitch (mm)				
				0.5	0.75	1	1.25	1.5
P	Low carbon steels (C15, C20 etc.)	SH730	40 - 140	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
	Carbon steels, Alloy steels (C55, 42CrMoS4 etc.)	SH730	40 - 140	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
	Prehardened steels (NAK80, PX5 etc.)	SH730	40 - 140	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
M	Stainless steels (X5CrNi18-9, X5CrNiMo17-12-2 etc.)	SH730	40 - 140	8	10	12	15	18
K	Grey cast irons (250, 300 etc.)	SH730	30 - 100	7	9	12	14	17
	Ductile cast irons (400-15, 600-3 etc.)	SH730	30 - 100	7	9	12	14	17
N	Aluminium alloys, copper alloys Si < 12%	SH730	90 - 200	6	8	10	12	15



Internal grooving

ISO	Workpiece materials	Grade	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	Low carbon steels (C15, C20 etc.)	SH730	40 - 140	0.01 - 0.03
	Carbon steels, Alloy steels (C55, 42CrMoS4 etc.)	SH730	40 - 140	0.01 - 0.03
	Prehardened steels (NAK80, PX5 etc.)	SH730	40 - 140	0.01 - 0.03
M	Stainless steels (X5CrNi18-9, X5CrNiMo17-12-2 etc.)	SH730	40 - 140	0.01 - 0.03
K	Grey cast irons (250, 300 etc.)	SH730	30 - 100	0.01 - 0.03
	Ductile cast irons (400-15, 600-3 etc.)	SH730	30 - 100	0.01 - 0.03
N	Aluminium alloys, copper alloys Si < 12%	SH730	90 - 200	0.01 - 0.03
S	Titanium alloys Ti-6Al-4V etc.	SH730	30 - 100	0.01 - 0.03
	Superalloys (Inconel718, etc.)	SH730	30 - 100	0.01 - 0.03



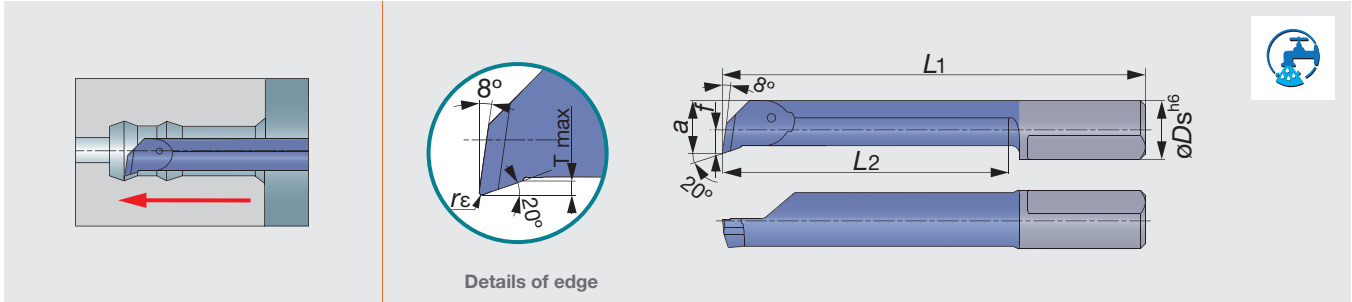
Face grooving

ISO	Workpiece materials	Grade	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	Low carbon steels (C15, C20 etc.)	SH730	40 - 140	0.01 - 0.05
	Carbon steels, Alloy steels (C55, 42CrMoS4 etc.)	SH730	40 - 140	0.01 - 0.05
	Prehardened steels (NAK80, PX5 etc.)	SH730	40 - 140	0.01 - 0.05
M	Stainless steels (X5CrNi18-9, X5CrNiMo17-12-2 etc.)	SH730	40 - 140	0.01 - 0.05
K	Grey cast irons (250, 300 etc.)	SH730	30 - 100	0.01 - 0.05
	Ductile cast irons (400-15, 600-3 etc.)	SH730	30 - 100	0.01 - 0.05
N	Aluminium alloys, copper alloys Si < 12%	SH730	90 - 200	0.01 - 0.05
S	Titanium alloys Ti-6Al-4V etc.	SH730	30 - 100	0.01 - 0.05
	Superalloys (Inconel718, etc.)	SH730	30 - 100	0.01 - 0.05

Solid boring bars for boring, profiling & chamfering

BORING, PROFILING, CHAMFERING

TinyMini-Turn JBTR/L



Details of edge

Right hand (R) shown.

Designation	Grade		øD _m	øD _s	f	a	L ₁	L ₂	T max	r _ε ^{+0.05} ₀
	R	L								
JBTR/L04020004-D006	●		0.6	4	-	0.5	18.5	2	0.08	0.04
JBTR/L04030004-D006	●		0.6	4	-	0.5	19.5	3	0.08	0.04
JBTR/L04045005-D010	●		1	4	-	0.9	21	4.5	0.1	0.05
JBTR/L04065005-D010	●		1	4	-	0.9	23	6.5	0.1	0.05
JBTR/L04040005-D020	●		2	4	-	1.7	20.5	4	0.1	0.05
JBTR/L04090005-D020	●		2	4	-	1.7	25.5	9	0.1	0.05
JBTR/L04140005-D020	●		2	4	-	1.7	30.5	14	0.1	0.05
JBTR/L04090010-D028	●	●	2.8	4	0.6	2.6	25.5	9	0.2	0.10
JBTR/L04150010-D028	●	●	2.8	4	0.6	2.6	31.5	15	0.2	0.10
JBTR/L04190010-D028	●	●	2.8	4	0.6	2.6	35.5	19	0.2	0.10
JBTR/L04090010-D040	●	●	4	4	1.5	3.5	25.5	9	0.3	0.10
JBTR/L04150010-D040	●	●	4	4	1.5	3.5	31.5	15	0.3	0.10
JBTR/L04190010-D040	●	●	4	4	1.5	3.5	35.5	19	0.3	0.10
JBTR/L04230010-D040	●		4	4	1.5	3.5	39.5	23	0.3	0.10
JBTR/L04270010-D040	●		4	4	1.5	3.5	43.5	27	0.3	0.10
JBTR/L07090015-D050	●	●	5	7	0.9	4.4	25	9	0.5	0.15
JBTR/L07140015-D050	●	●	5	7	0.9	4.4	30	14	0.5	0.15
JBTR/L07190015-D050	●	●	5	7	0.9	4.4	35	19	0.5	0.15
JBTR/L07240015-D050	●	●	5	7	0.9	4.4	40	24	0.5	0.15
JBTR/L07290015-D050	●	●	5	7	0.9	4.4	45	29	0.5	0.15
JBTR/L07340015-D050	●		5	7	0.9	4.4	50	34	0.5	0.15
JBTR/L07140015-D060	●	●	6	7	1.8	5.3	30	14	0.5	0.15
JBTR/L07210015-D060	●	●	6	7	1.8	5.3	37	21	0.5	0.15
JBTR/L07240015-D060	●	●	6	7	1.8	5.3	40	24	0.5	0.15
JBTR/L07290015-D060	●	●	6	7	1.8	5.3	45	29	0.5	0.15
JBTR/L07340015-D060	●		6	7	1.8	5.3	50	34	0.5	0.15
JBTR/L07410015-D060	●		6	7	1.8	5.3	57	41	0.5	0.15
JBTR/L07190015-D068	●	●	6.8	7	2.8	6.3	35	19	0.6	0.15
JBTR/L07240015-D068	●		6.8	7	2.8	6.3	40	24	0.6	0.15

● : Line-up

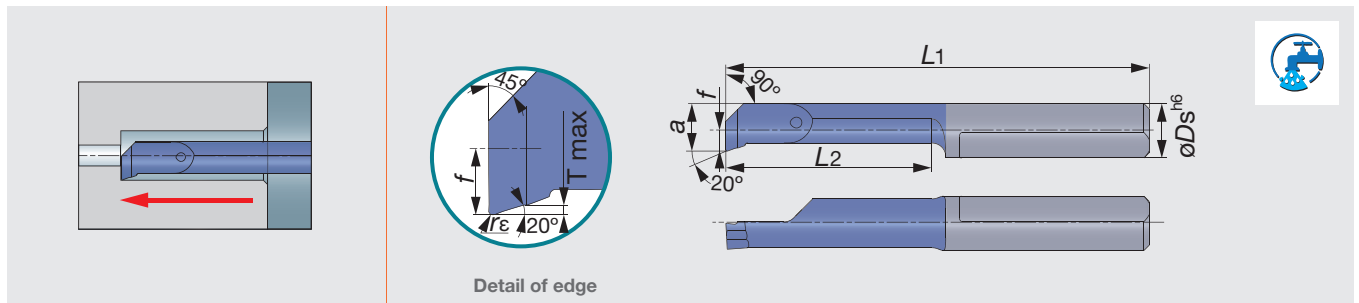
Designation	Grade		ϕD_m	ϕD_s	f	a	L_1	L_2	T max	$r\epsilon_0^{+0.05}$
	R	L								
JBTR/L07290015-D068	●	●	6.8	7	2.8	6.3	45	29	0.6	0.15
JBTR/L07340015-D070	●	●	7	7	2.8	6.3	50	34	0.6	0.15
JBTR/L07390015-D070	●		7	7	2.8	6.3	55	39	0.6	0.15
JBTR/L07440015-D070	●		7	7	2.8	6.3	60	44	0.6	0.15
JBTR/L07490015-D070	●		7	7	2.8	6.3	65	49	0.6	0.15

● : Line-up

Solid boring bars for boring & chamfering

BORING, CHAMFERING

TinyMini-Turn JBPR



Detail of edge

Right hand (R) shown.

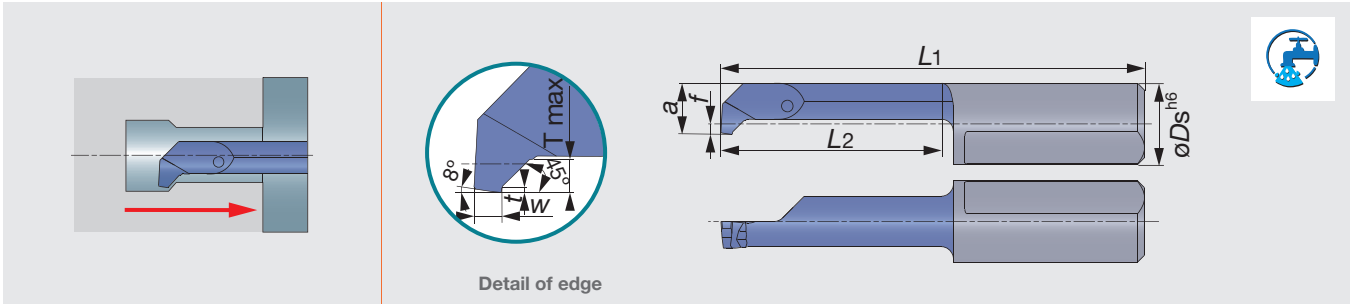
Designation	Grade		ϕD_m	ϕD_s	f	a	L_1	L_2	T max	$r\epsilon_0^{+0.05}$
	R	L								
JBPR04090010-D028	●		2.8	4	0.6	2.6	25.5	9	0.2	0.10
JBPR04150010-D028	●		2.8	4	0.6	2.6	31.5	15	0.2	0.10
JBPR04090010-D040	●		4	4	1.5	3.5	25.5	9	0.3	0.10
JBPR04150010-D040	●		4	4	1.5	3.5	31.5	15	0.3	0.10
JBPR07140015-D050	●		5	7	0.9	4.4	30	14	0.5	0.15
JBPR07190015-D050	●		5	7	0.9	4.4	35	19	0.5	0.15

● : Line-up

Solid boring bars for back boring & chamfering

BACK BORING, CHAMFERING

TinyMini-Turn JBUR



Right hand (R) shown.

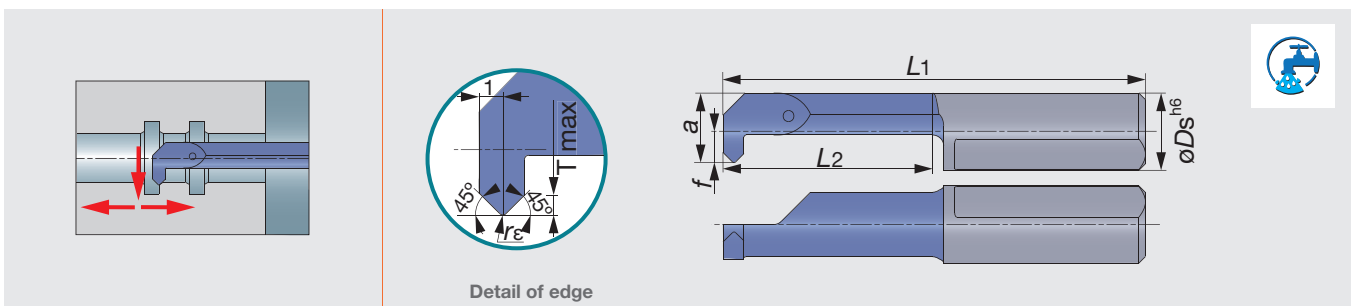
Designation	Grade	ϕD_m	ϕD_s	f	a	L_1	L_2	t	T max	$W^{+0.05}_0$
JBUR07140010-D050	● SH730	5	7	0.9	4.4	30	14	0.2	1	1
JBUR07190010-D050	● SH730	5	7	0.9	4.4	35	19	0.2	1	1

● : Line-up

Solid boring bars for 45deg chamfering

45° CHAMFERING

TinyMini-Turn JBCR



Right hand (R) shown.

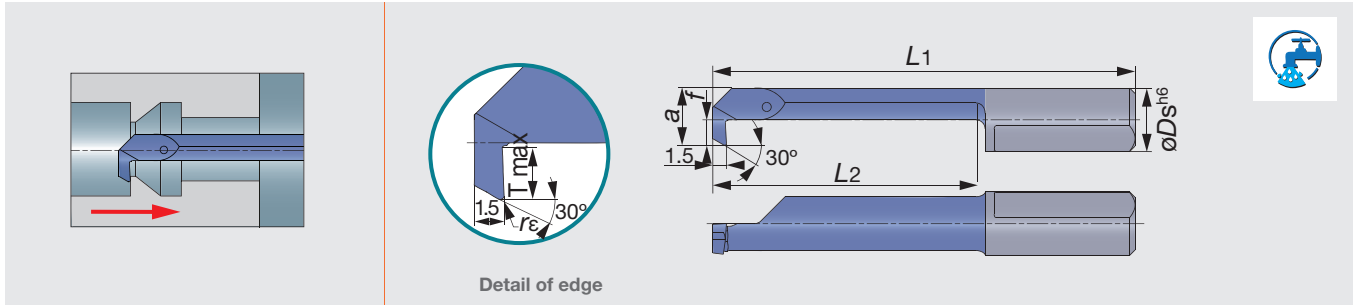
Designation	Grade	ϕD_m	ϕD_s	f	a	L_1	L_2	T max	$r\epsilon^{\pm 0.05}$
JBCR07140020-D050	● SH730	5	7	0.9	4.4	30	14	0.7	0.2
JBCR07190020-D050	● SH730	5	7	0.9	4.4	35	19	0.7	0.2
JBCR07190020-D068	● SH730	6.8	7	2.8	6.3	35	19	0.7	0.2

● : Line-up

Solid boring bars for back boring

BACK BORING

TinyMini-Turn JBBER



Right hand (R) shown.

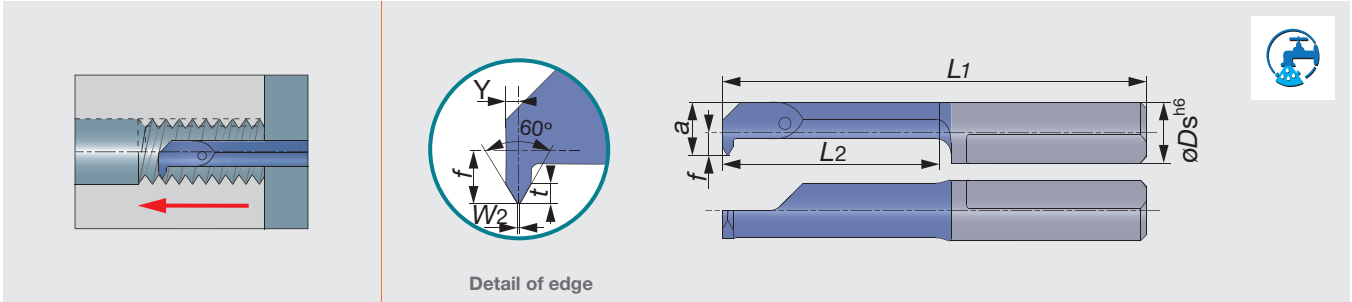
Designation	Grade SH730	ϕD_m	ϕD_s	f	a	L_1	L_2	T max	$r_e^{\pm 0.05}$
JBBR04140020-D030	●	3	4	0.6	2.6	30	14	0.5	0.2
JBBR04190020-D030	●	3	4	0.6	2.6	35	19	0.5	0.2
JBBR04140015-D040	●	4	4	1.5	3.5	30	14	0.8	0.15
JBBR04240015-D040	●	4	4	1.5	3.5	40	24	0.8	0.15
JBBR07190020-D050	●	5	7	0.9	4.4	35	19	1	0.2
JBBR07290020-D050	●	5	7	0.9	4.4	45	29	1	0.2
JBBR07190020-D060	●	6	7	1.8	5.3	35	19	1.8	0.2
JBBR07290020-D060	●	6	7	1.8	5.3	45	29	1.8	0.2
JBBR07190020-D070	●	7	7	2.8	6.3	35	19	2.5	0.2
JBBR07290020-D070	●	7	7	2.8	6.3	45	29	2.5	0.2

● : Line-up

Solid boring bars for threading, metric thread

THREADING (METRIC THREAD)

TinyMini-Turn JBIR



Detail of edge

Right hand (R) shown.

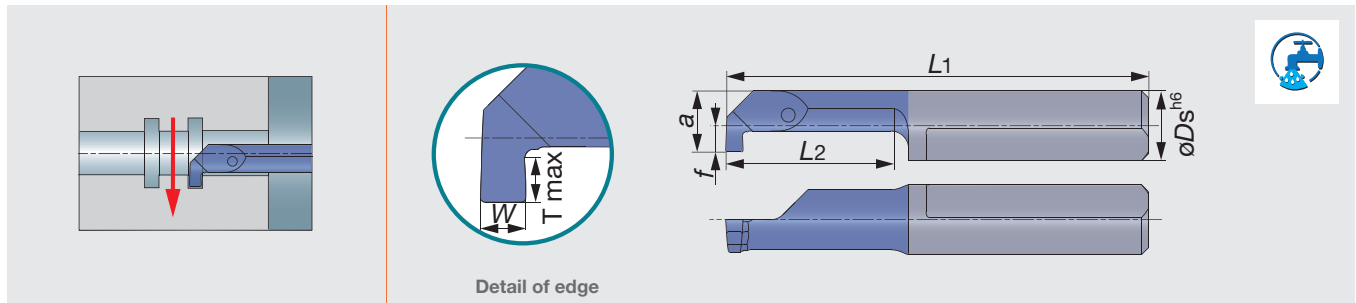
Designation	Grade SH730	Pitch	ϕD_m	$W_2^{0-0.02}$	ϕD_s	f	a	L_1	L_2	t	Y
JBIR04140050-D040	●	0.5	4	0.06	4	1.5	3.5	30	14	0.3	0.35
JBIR07140050-D050	●	0.5	5	0.06	7	0.9	4.4	30	14	0.3	0.35
JBIR07140075-D050	●	0.75	5	0.09	7	0.9	4.4	30	14	0.4	0.45
JBIR07140100-D048	●	1.0	4.8	0.12	7	0.9	4.4	30	14	0.6	0.55
JBIR07140100-D060	●	1.0	6	0.12	7	1.8	5.3	30	14	0.6	0.55
JBIR07140125-D060	●	1.25	6	0.15	7	1.8	5.3	30	14	0.7	0.65
JBIR07140150-D060	●	1.5	6	0.18	7	1.8	5.3	30	14	0.8	0.75
JBIR07140150-D070	●	1.5	7	0.18	7	2.8	6.3	30	14	0.8	0.75

● : Line-up

Solid boring bars for internal grooving

GROOVING

TinyMini-Turn JBGR/L



Detail of edge

Right hand (R) shown.

Designation	Grade		$W_0^{+0.05}$	ϕD_m	ϕD_s	f	a	L_1	L_2	T max
	SH730	R L								
JBGR/L04050050-D020	●		0.5	2	4	0.2	1.8	21	5	0.4
JBGR/L04100050-D020	●		0.5	2	4	0.2	1.8	26	10	0.4
JBGR/L04050070-D030	●		0.7	3	4	0.7	2.7	21	5	0.6
JBGR/L04100070-D030	●		0.7	3	4	0.7	2.7	26	10	0.6
JBGR/L04090100-D040	●		1	4	4	1.5	3.5	25.5	9	0.8
JBGR/L04150100-D040	●		1	4	4	1.5	3.5	31.5	15	0.8
JBGR/L07090100-D050	●		1	5	7	0.9	4.4	25	9	1
JBGR/L07140100-D050	●		1	5	7	0.9	4.4	30	14	1
JBGR/L07090150-D050	●		1.5	5	7	0.9	4.4	25	9	1
JBGR/L07140150-D050	●		1.5	5	7	0.9	4.4	30	14	1
JBGR/L07090200-D050	●		2	5	7	0.9	4.4	25	9	1
JBGR/L07190200-D050	●		2	5	7	0.9	4.4	35	19	1
JBGR/L07090100-D060	●	●	1	6	7	1.8	5.3	25	9	1.8
JBGR/L07140100-D060	●		1	6	7	1.8	5.3	30	14	1.8
JBGR/L07210100-D060	●		1	6	7	1.8	5.3	37	21	1.8
JBGR/L07290100-D060	●		1	6	7	1.8	5.3	45	29	1.8
JBGR/L07090150-D060	●	●	1.5	6	7	1.8	5.3	25	9	1.8
JBGR/L07140150-D060	●		1.5	6	7	1.8	5.3	30	14	1.8
JBGR/L07210150-D060	●		1.5	6	7	1.8	5.3	37	21	1.8
JBGR/L07240150-D060	●		1.5	6	7	1.8	5.3	40	24	1.8
JBGR/L07290150-D060	●		1.5	6	7	1.8	5.3	45	29	1.8
JBGR/L07090200-D060	●		2	6	7	1.8	5.3	25	9	1.8
JBGR/L07140200-D060	●		2	6	7	1.8	5.3	30	14	1.8
JBGR/L07210200-D060	●		2	6	7	1.8	5.3	37	21	1.8
JBGR/L07240200-D060	●		2	6	7	1.8	5.3	40	24	1.8
JBGR/L07290200-D060	●		2	6	7	1.8	5.3	45	29	1.8
JBGR/L07090100-D068	●		1	6.8	7	2.7	6.2	25	9	2.5
JBGR/L07140100-D068	●		1	6.8	7	2.7	6.2	30	14	2.5

Corner radius : less than 0.01 mm.

● : Line-up

Designation	Grade		$W_0^{+0.05}$	ϕD_m	ϕD_s	f	a	L_1	L_2	T max
	SH730	R L								
JBGR/L07210100-D068	●		1	6.8	7	2.7	6.2	37	21	2.5
JBGR/L07090150-D068	●		1.5	6.8	7	2.7	6.2	25	9	2.5
JBGR/L07140150-D068	●		1.5	6.8	7	2.7	6.2	30	14	2.5
JBGR/L07210150-D068	●		1.5	6.8	7	2.7	6.2	37	21	2.5
JBGR/L07290150-D068	●		1.5	6.8	7	2.7	6.2	45	29	2.5
JBGR/L07090200-D068	●		2	6.8	7	2.7	6.2	25	9	2.5
JBGR/L07140200-D068	●	●	2	6.8	7	2.7	6.2	30	14	2.5
JBGR/L07210200-D068	●		2	6.8	7	2.7	6.2	37	21	2.5
JBGR/L07250200-D068	●		2	6.8	7	2.7	6.2	40	25	2.5
JBGR/L07290200-D068	●		2	6.8	7	2.7	6.2	45	29	2.5

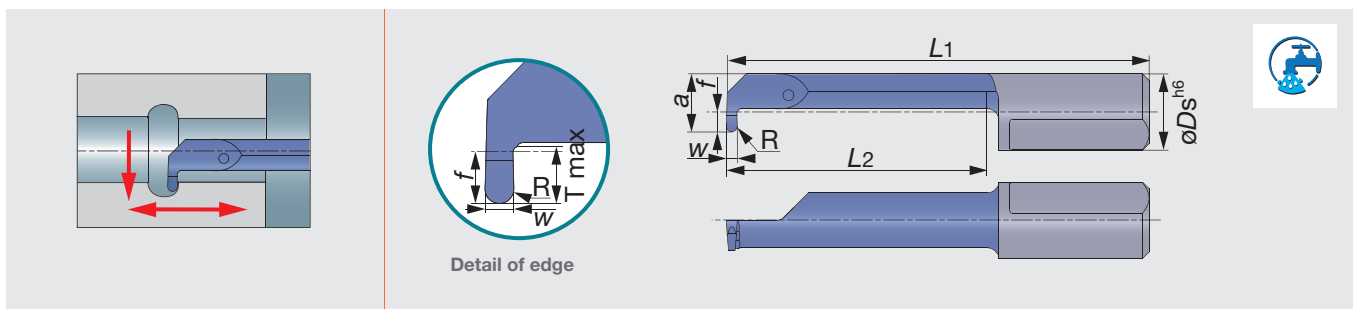
Corner radius : less than 0.01 mm.

● : Line-up

Solid boring bars for grooving & profiling, full radius type

GROOVING, PROFILING (FULL RADIUS TYPE)

TinyMini-Turn JBRR



Right hand (R) shown.

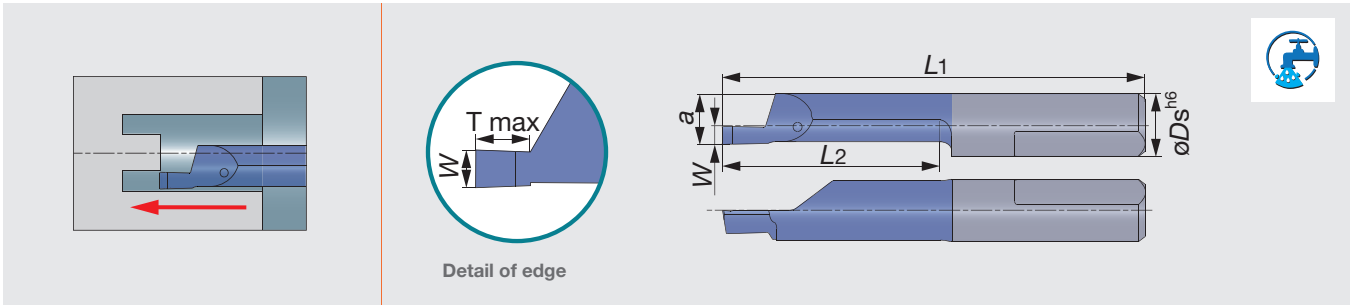
Designation	Grade		$W_0^{+0.05}$	ϕD_m	ϕD_s	f	a	L_1	L_2	T max	R
	SH730	R									
JBRR07190050-D050	●		1	5	7	0.9	4.4	35	19	1	0.5
JBRR07240050-D060	●		1	6	7	1.8	5.3	40	24	1.8	0.5
JBRR07290050-D068	●		1	6.8	7	2.8	6.3	45	29	2.5	0.5

● : Line-up

Solid boring bars for face grooving along bore

FACE GROOVING

TinyMini-Turn JBFR/L



Right hand (R) shown.

Designation	Grade		$W^{+0.05}_0$	ϕD_m	ϕD_s	a	L1	L2	T max
	R	L							
JBFR/L07110100-D060	●		1	6	7	5.2	26	10	1.5
JBFR/L07110150-D060	●		1.5	6	7	5.2	26	10	2
JBFR/L07110200-D060	●		2	6	7	5.2	26	10	3
JBFR/L07110100-D080	●		1	8	7	5.9	27	11	1.5
JBFR/L07110150-D080	●		1.5	8	7	5.9	27	11	2.5
JBFR/L07110200-D080	●		2	8	7	5.9	27	11	3
JBFR/L07110250-D080	●		2.5	8	7	5.9	27	11	3.5
JBFR/L07110300-D080	●		3	8	7	5.9	27	11	3.5
JBFR/L07200200-D080	●		2	8	7	5.9	36	20	3
JBFR/L07210150-D080	●	●	1.5	8	7	5.9	36	21	2.5
JBFR/L07210200-D080	●		2	8	7	5.9	36	21	3
JBFR/L07210250-D080	●		2.5	8	7	5.9	36	21	3.5
JBFR/L07210300-D080	●		3	8	7	5.9	36	21	3.5
JBFR/L07300200-D080	●	●	2	8	7	5.9	46	30	3
JBFR/L07300300-D080	●		3	8	7	5.9	46	30	3.5
JBFR/L07200250-D150	●		2.5	15	7	5.9	36	20	20
JBFR/L07200300-D150	●		3	15	7	5.9	36	20	20
JBFR/L07300300-D150	●		3	15	7	5.9	46	30	30

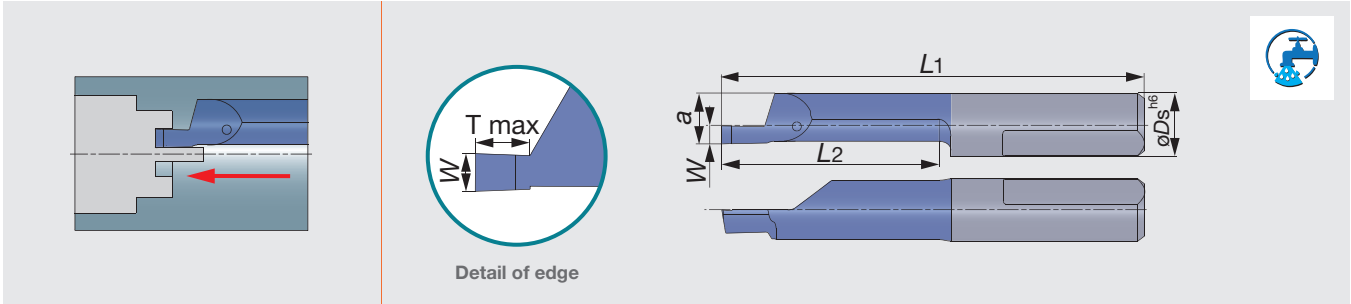
Corner radius : less than 0.01 mm.

● : Line-up

Solid boring bars for face grooving along shaft

FACE GROOVING (FOR MACHINING SHAFT)

TinyMini-Turn JBSR



Right hand (R) shown.

Designation	Grade	$W^{+0.05}_0$	ϕD_m	ϕD_s	a	L_1	L_2	T max
JBSR07200200-D060	SH730 ●	2	6	7	5.2	36	20	4

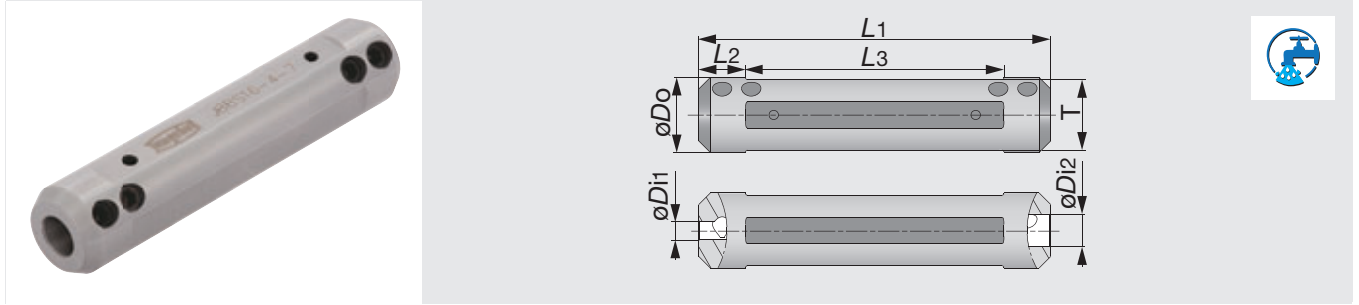
Corner radius : less than 0.01 mm.

● : Line-up

Sleeve with double and clamping two different size carbide shank with coolant supply

SLEEVE FOR CLAMPING TWO DIFFERENT SHANK SIZE

TinyMini-Turn JBBS



Designation	$\varnothing D_o$	$\varnothing D_{i1}$	$\varnothing D_{i2}$	L_1	L_2	L_3	T
JBBS12-4-4	12	4	4	75	10	55	10.3
JBBS127-4-4	12.7	4	4	76.2	10	56.2	11.6
JBBS14-4-4	14	4	4	75	10	55	12
JBBS159-4-7	15.875	4	7	76.2	10	56.2	14
JBBS16-4-7	16	4	7	75	10	55	15
JBBS19-4-7	19.05	4	7	89	10	69	17.2
JBBS20-4-7	20	4	7	90	10	70	18
JBBS22-4-7	22	4	7	90	10	70	20
JBBS25-4-7	25	4	7	100	10	80	23
JBBS254-4-7	25.4	4	7	90	10	70	23.4

SPARE PARTS

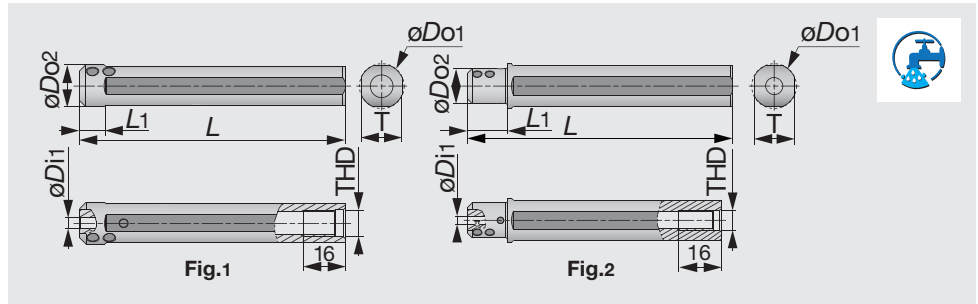


Designation	Clamping screw	Wrench
JBBS12-4-4	SSHM5-4PF-S	P-2.5
JBBS14-4-4	SSHM5-4PF-S	P-2.5
JBBS127-4-4	SSHM5-6PF-S	P-2.5
JBBS...-4-7	SSHM5-6PF-S	P-2.5

Single and sleeve with external coolant insert

SLEEVE WITH EXTERNAL COOLANT INLET

TinyMini-Turn JBBS-C



Designation	øDo1	øDo2	øDi1	L	L1	T	THD	Fig
JBBS159-4-L100C	15.875	15.875	4	100	10	14.58	R1/8	1
JBBS159-7-L100C	15.875	15.875	7	100	10	14.58	R1/8	1
JBBS16-4-L100C	16	16	4	100	10	15	R1/8	1
JBBS16-7-L100C	16	16	7	100	10	15	R1/8	1
JBBS19-4-L100C	19.05	17.5	4	100	20	17.2	R1/8	2
JBBS19-7-L100C	19.05	17.5	7	100	20	17.2	R1/8	2
JBBS20-4-L100C	20	17.5	4	100	20	18	R1/8	2
JBBS20-7-L100C	20	17.5	7	100	20	18	R1/8	2
JBBS22-4-L100C	22	17.5	4	100	20	20	R1/8	2
JBBS22-7-L100C	22	17.5	7	100	20	20	R1/8	2
JBBS25-4-L100C	25	18	4	100	23	23	R1/8	2
JBBS25-7-L100C	25	18	7	100	23	23	R1/8	2
JBBS254-4-L100C	25.4	18	4	100	23	23.4	R1/8	2
JBBS254-7-L100C	25.4	18	7	100	23	23.4	R1/8	2

SPARE PARTS

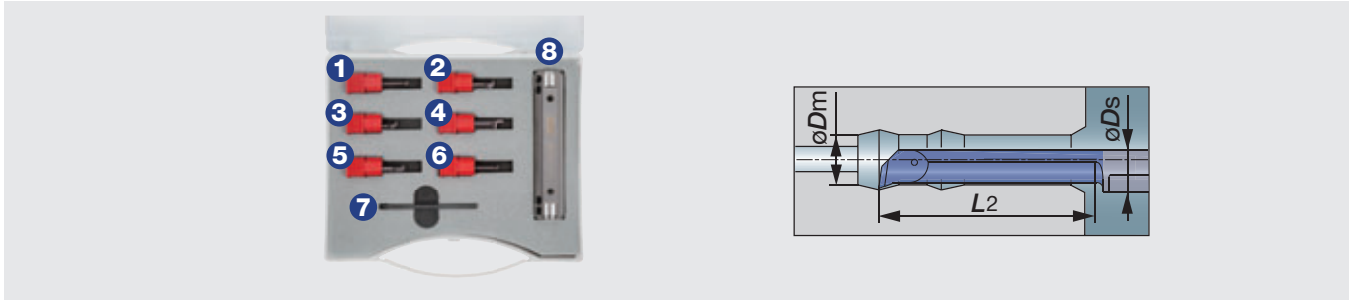


Designation	Clamping screw	Wrench
JBBS...-4-L100C	SSHM5-6PF-S	P-2.5
JBBS...-7-L100C	SSHM5-4PF-S	P-2.5

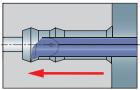
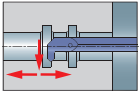
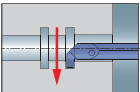
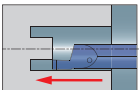
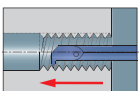
TINY^{INI}TURN Kit

GENERAL KIT

KIT-TINYTURN-GENERAL



Cat. No.	Kit
KIT-TINYTURN-GENERAL	General

Applications	Cat. No.	ϕD_m (mm)	ϕD_s (mm)	L_2 (mm)	r_c (mm)	W (mm)	Pitch
 Boring	① JBTR04150010-D040	4.0	4.0	15.0	0.1	-	-
	② JBTR07140015-D060	6.0	7.0	14.0	0.15	-	-
 Boring 45° Chamfering	⑤ JBTR07140020-D050	5.0	7.0	14.0	0.2	-	-
 Internal Grooving	③ JBGR07090100-D060	6.0	7.0	9.0	-	1.0	-
 Face Grooving	④ JBFR07110200-D060	6.0	7.0	11.0	-	2.0	-
 Threading	⑥ JBIR07140125-D060	6.0	7.0	14.0	-	1.25	1.25

Parts	Cat. No.
Wrench	⑦ P-2.5

Parts	Cat. No.
Sleeve	⑧ JBBS20-4-7

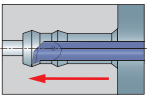
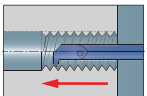
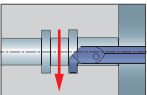


BORING, THREADING AND GROOVING KIT

KIT-TINYTURN-THREADING



Cat. No.	Kit
KIT-TINYTURN-THREADING	Boring, Threading and Grooving

Applications	Cat. No.	ϕD_m (mm)	ϕD_s (mm)	L_2 (mm)	r_ϵ (mm)	W (mm)	Pitch
 Boring	① JBTR04150010-D040	4.0	4.0	15.0	0.1	-	-
 Threading	③ JBIR04140050-D040	4.0	4.0	14.0	-	-	0.5
	④ JBIR07140075-D050	5.0	7.0	14.0	-	-	0.75
 Internal Grooving	② JBGR04150100-D040	4.0	4.0	15.0	-	1.0	-

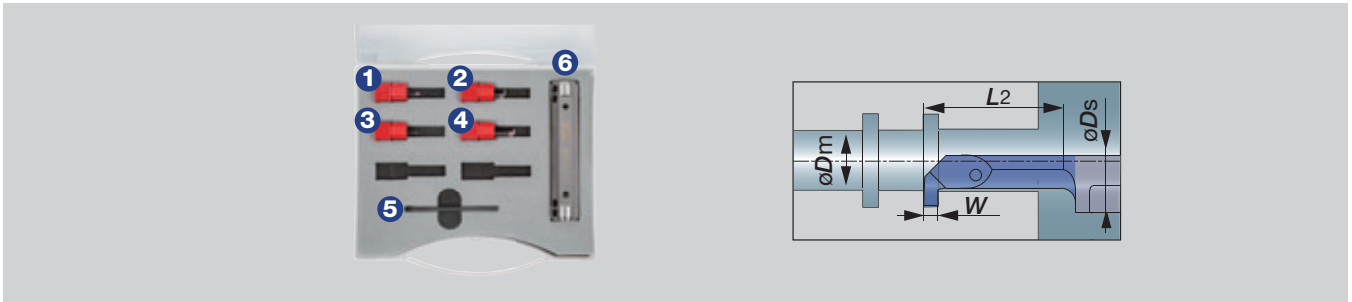
Parts	Cat. No.
Wrench	⑤ P-2.5

Parts	Cat. No.
Sleeve	⑥ JBBS20-4-7

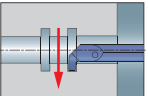
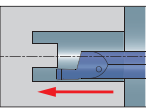


GROOVING KIT

KIT-TINYTURN-GROOVING



Cat. No.	Kit
KIT-TINYTURN-GROOVING	Grooving

Applications	Cat. No.	ϕD_m (mm)	ϕD_s (mm)	L_2 (mm)	r_E (mm)
 Internal Grooving	① JBGR07090100-D060	6.0	7.0	9.0	1.0
	② JBGR07140200-D068	6.8	7.0	14.0	2.0
 Face Grooving	③ JBFR07110150-D060	6.0	7.0	15.0	1.5
	④ JBFR07110200-D060	6.0	7.0	11.0	2.0

Parts	Cat. No.
Wrench	⑤ P-2.5

Parts	Cat. No.
Sleeve	⑥ JBBS20-4-7



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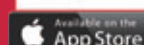
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