



For more information

Multifunctional tool for drilling and turning

TUNGB^{ORE}MINI

Tungaloy Report No. 529S3-G

Expansion of **DMIN 8mm** to the lineup

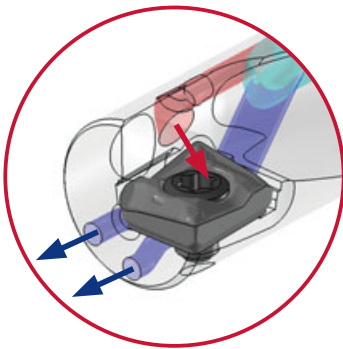


New toolholders for the minimum bore diameter (DMIN) range of $\varnothing 8$ mm

■ New Line ups

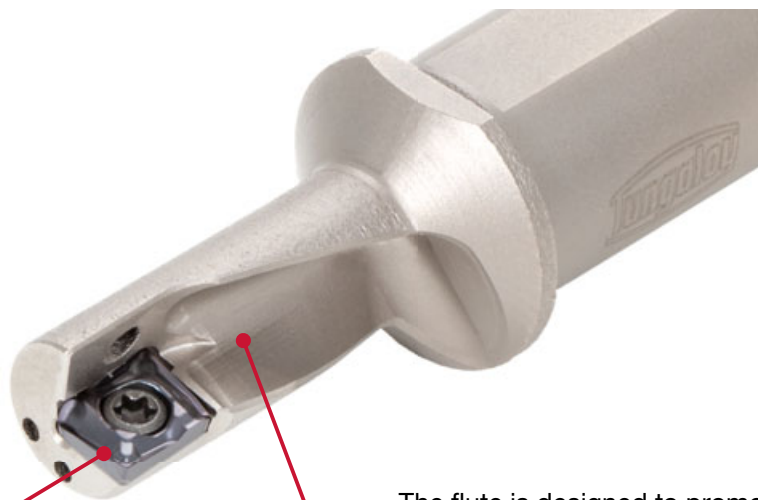
TUNGB ^{ORE} MINI	Minimum bore diameter: DMIN (mm)								
	$\varnothing 8$	$\varnothing 10$	$\varnothing 12$	$\varnothing 14$	$\varnothing 16$	$\varnothing 18$	$\varnothing 20$	$\varnothing 25$	$\varnothing 32$
	New								

■ Features

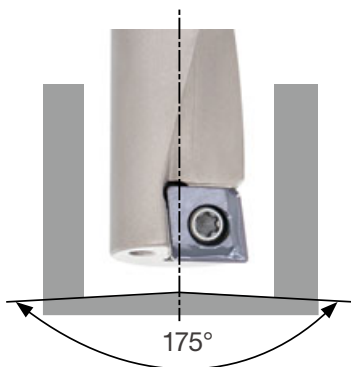


Optimized through-coolant ensures effective chip evacuation during machining

Single-sided insert with 2 corners

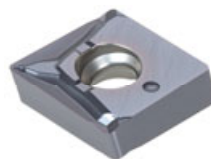


The flute is designed to promote smooth chip flow, while ensuring tool rigidity



Creates a near-flat hole bottom

Optimized chipbreaker design enables effective chip control in all applications



XOMU-PS

For toolholders for DMIN = 10 - 32 mm



New

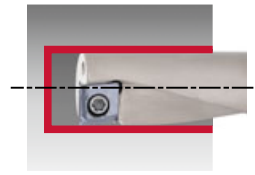
XCMT-PS

For toolholders for DMIN = 8 mm

CUTTING PERFORMANCE

Drilling

P Holder : TBM08RF12-2.25
 Insert : XCMT040102R-PS AH725
 Workpiece material : S45C / C45
 Cutting speed : $V_c = 100$ m/min
 Application : Drilling
 Coolant : Internal



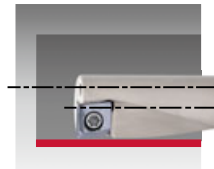
Drilling

0.02	0.03	0.04	0.05
Feed: f (mm/rev)			

Stable machining and excellent chip control during hole making process.

Internal turning

P Holder : TBM08RF12-2.25
 Insert : XCMT040102R-PS AH725
 Workpiece material : S45C / C45
 Cutting speed : $V_c = 150$ m/min
 Application : Internal turning
 Coolant : Internal



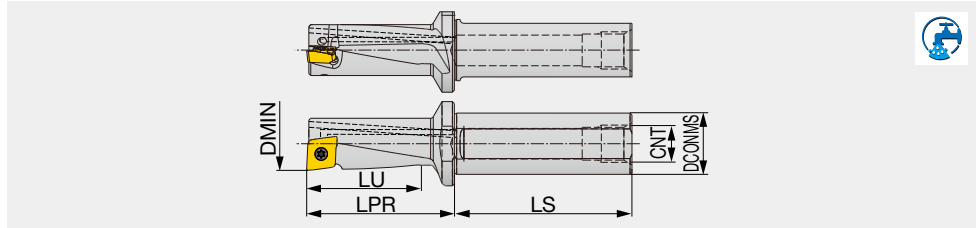
Turning

Depth of cut: ap (mm)	1				
	0.5				
	0.2				
		0.04	0.06	0.1	0.12
Feed: f (mm/rev)					

Excellent chip control during I.D. finishing operation.

TBM

Maximum hole depth for L/D = 2.25



Designation	DMIN	DCONMS	LU	LS	LPR	CNT	Insert	Torque*
New TBM08RF12-2.25	8	12	18	41.5	22.5	-	XCMT040102R-PS	0.7
TBM10R/LF12-2.25	10	12	22.5	41.5	28.45	UNF 5/16-24	XOMU05X204-PS	0.7
TBM12R/LF16-2.25	12	16	27	43.9	33.53	G 1/8	XOMU06H204-PS	1
TBM14R/LF16-2.25	14	16	31.5	46.4	38.57	G 1/8	XOMU07H304-PS	1.3
TBM16R/LF20-2.25	16	20	36	57.1	42.9	G 1/8	XOMU08T304-PS	2.3
TBM18RF25-2.25	18	25	40.5	54	53.96	G 1/8	XOMU09T304-PS	2.3
TBM20RF25-2.25	20	25	45	54	54.94	G 1/8	XOMU100404-PS	3.5
TBM25RF32-2.25	25	32	56.5	59	69	G 1/8	XOMU120404-PS	3.5
TBM32RF40-2.25	32	40	72	69	87.95	G 1/8	XOMU160508-PS	3.5

Torque*: Recommended clamping torque (N·m)

SPARE PARTS

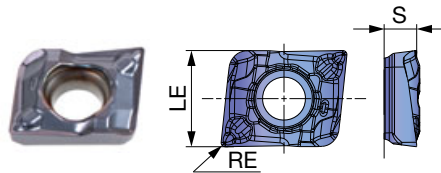
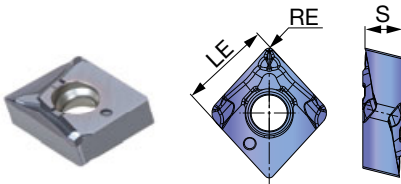


Designation	Clamping screw	Wrench
TBM08R...	CSTD-1.8	T-6D
TBM10R...	CSTB-2L040	T-6D
TBM12R...	CSPB-2.2	IP-7D
TBM14R...	CSPB-2.5	IP-8D
TBM16R..., TBM18RF...	CSTB-3	T-9D
TBM20RF...	CSPB-3.5	IP-15D
TBM25RF...	CSTB-4	T-15D
TBM32RF...	CSTB-4.5L110P	T-15D

INSERT

XOMU-PS

XCMT-PS



P Steel	★									
M Stainless	★									
K Cast iron	★									
N Non-ferrous	★									
S Superalloys										
H Hard materials										

★ : First choice

Designation	RE	Coated										S	LE	
		AH725												
XCMT040102R-PS	0.2	●											1.59	4.7
XOMU05X204-PS	0.4	●											2.3	5.56
XOMU06H204-PS	0.4	●											2.7	6.3
XOMU07H304-PS	0.4	●											3.3	7.3
XOMU08T304-PS	0.4	●											3.97	8.3
XOMU09T304-PS	0.4	●											3.97	9.3
XOMU100404-PS	0.4	●											4.76	10.3
XOMU120404-PS	0.4	●											4.76	12.8
XOMU160508-PS	0.8	●											5.56	16.3

● : New product

● : Line up

STANDARD CUTTING CONDITIONS

Drilling

ISO	Workpiece materials	Cutting speed Vc (m/min)	Minimum bore diameter: DMIN (mm)								
			ø8	ø10	ø12	ø14	ø16	ø18	ø20	ø25	ø32
P	Low carbon steel Carbon steel	50 - 180	0.02 - 0.05	0.02 - 0.05	0.02 - 0.07	0.01 - 0.075	0.01 - 0.08	0.05 - 0.13	0.05 - 0.13	0.05 - 0.14	0.05 - 0.14
M	Stainless steel	50 - 160	0.02 - 0.05	0.02 - 0.05	0.02 - 0.07	0.01 - 0.075	0.01 - 0.08	0.05 - 0.13	0.05 - 0.13	0.05 - 0.14	0.05 - 0.14
K	Cast iron	50 - 180	0.02 - 0.05	0.02 - 0.05	0.02 - 0.07	0.01 - 0.075	0.01 - 0.08	0.05 - 0.13	0.05 - 0.13	0.05 - 0.14	0.05 - 0.14
N	Aluminium alloys	100 - 300	0.02 - 0.05	0.02 - 0.05	0.02 - 0.07	0.01 - 0.075	0.01 - 0.08	0.05 - 0.13	0.05 - 0.13	0.05 - 0.14	0.05 - 0.14

Internal turning

ISO	Workpiece materials	Cutting speed Vc (m/min)	Minimum bore diameter: DMIN (mm)								
			ø8	ø10	ø12	ø14	ø16	ø18	ø20	ø25	ø32
P	Low carbon steel Carbon steel	50 - 180	Depth of cut: ap (mm)								
			0.2 - 2.5	0.5 - 3	0.5 - 3.5	0.5 - 4.5	0.5 - 5	0.5 - 5.5	0.5 - 6	0.5 - 6.5	0.5 - 7
			Feed: f (mm/rev)								
			0.02 - 0.12	0.05 - 0.2	0.05 - 0.2	0.05 - 0.2	0.05 - 0.2	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3	0.1 - 0.4

ISO	Workpiece materials	Cutting speed Vc (m/min)	Minimum bore diameter: DMIN (mm)								
			ø8	ø10	ø12	ø14	ø16	ø18	ø20	ø25	ø32
M	Stainless steel	50 - 160	Depth of cut: ap (mm)								
			0.2 - 2.5	0.5 - 3	0.5 - 3.5	0.5 - 4.5	0.5 - 5	0.5 - 5.5	0.5 - 6	0.5 - 6.5	0.5 - 7
			Feed: f (mm/rev)								
			0.02 - 0.12	0.05 - 0.2	0.05 - 0.2	0.05 - 0.2	0.05 - 0.2	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3	0.1 - 0.4

ISO	Workpiece materials	Cutting speed Vc (m/min)	Minimum bore diameter: DMIN (mm)								
			ø8	ø10	ø12	ø14	ø16	ø18	ø20	ø25	ø32
K	Cast iron	50 - 180	Depth of cut: ap (mm)								
			0.2 - 2.5	0.5 - 3	0.5 - 3.5	0.5 - 4.5	0.5 - 5	0.5 - 5.5	0.5 - 6	0.5 - 6.5	0.5 - 7
			Feed: f (mm/rev)								
			0.02 - 0.12	0.05 - 0.2	0.05 - 0.2	0.05 - 0.2	0.05 - 0.2	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3	0.1 - 0.4

ISO	Workpiece materials	Cutting speed Vc (m/min)	Minimum bore diameter: DMIN (mm)								
			ø8	ø10	ø12	ø14	ø16	ø18	ø20	ø25	ø32
N	Aluminium alloys	100 - 300	Depth of cut: ap (mm)								
			0.2 - 2.5	0.5 - 3	0.5 - 3.5	0.5 - 4.5	0.5 - 5	0.5 - 5.5	0.5 - 6	0.5 - 6.5	0.5 - 7
			Feed: f (mm/rev)								
			0.02 - 0.12	0.05 - 0.2	0.05 - 0.2	0.05 - 0.2	0.05 - 0.2	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3	0.1 - 0.4

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