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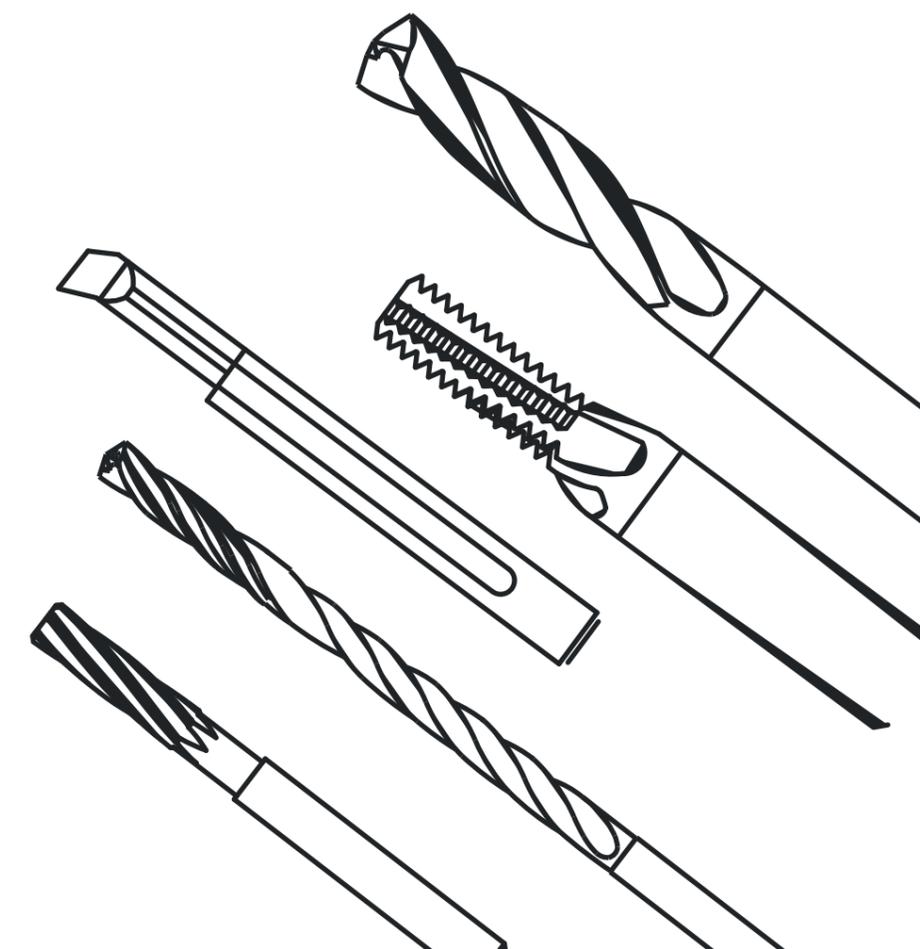
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# 2023 COMPREHENSIVE CATALOGUE

CUTTING TOOL SOLUTIONS FOR HOLE MACHINING



# APPLICATION

Growing environmental awareness constantly demands new technologies in vehicle development. In addition, rapid model changes and demanding economic framework conditions often necessitate increased production efficiency. Choosing Royi means choosing an experienced auto parts manufacturing expert.

In the machinery industry, in order to meet the needs of improving efficiency and innovative development, mechanical parts manufacturers are constantly facing new challenges. In various machining fields, Roy Tool provides intelligent solutions to help customers improve production efficiency, simplify processes and shorten production time.

Car crankshaft



Car connecting rod



Compressor crankshaft



Electric cylinder



semiconductor airflow plate



Integral turbine housing



fuel injector



Engine block

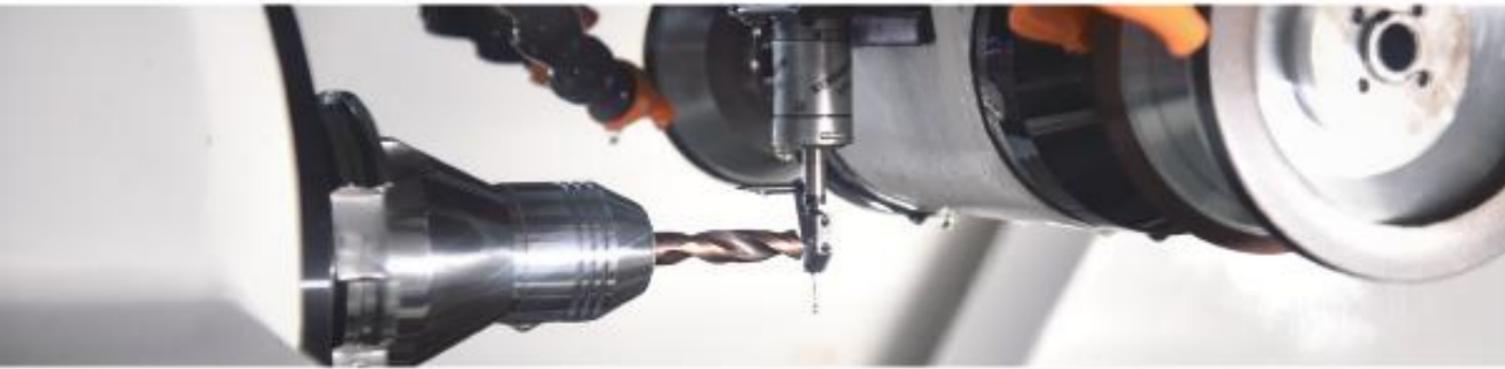


Hydraulic device



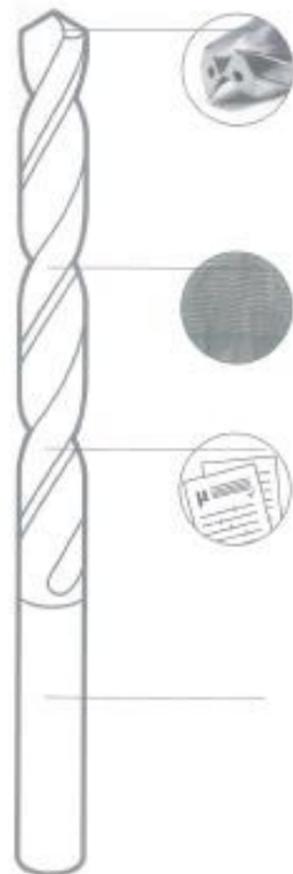
Car Gearbox





## Benefit from regrinding tools in original factory quality

Royi regrinding services make a significant contribution to reducing your production costs. At an attractive price-performance ratio, you get Royi tools in original factory quality and in the same quality as new.



### Original Groove

Cutting edge geometries are very complex. In order to restore it to its original state, Royi also made full use of her own superior professional skills in the renovation process.

### original coating

Coatings play a vital role in tool performance. Only Royi can coat tools with the original process.

### original tolerance

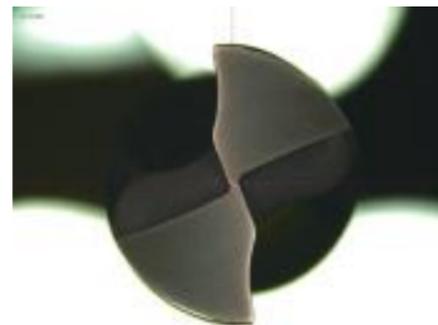
The tolerances and quality standards followed during regrinding are the same as in the production of new tools. To ensure this, Royi employs state-of-the-art measuring equipment.

### regrinding range

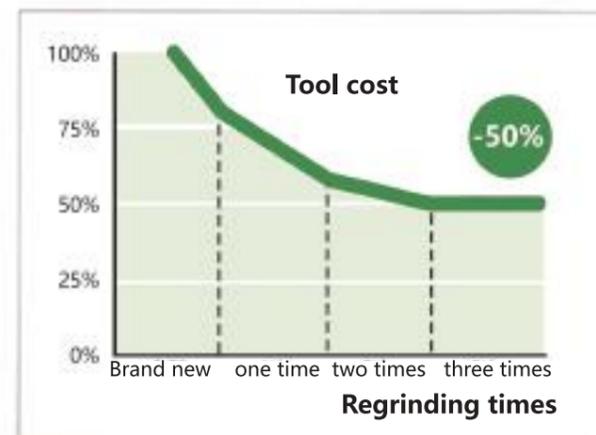
- regrinding range
- Solid carbide drills and milling cutters
- Solid carbide non-standard drill and non-standard milling cutter
- Efficient Solid Carbide Reamer
- Solid carbide thread milling cutter



Before regrinding



After regrinding



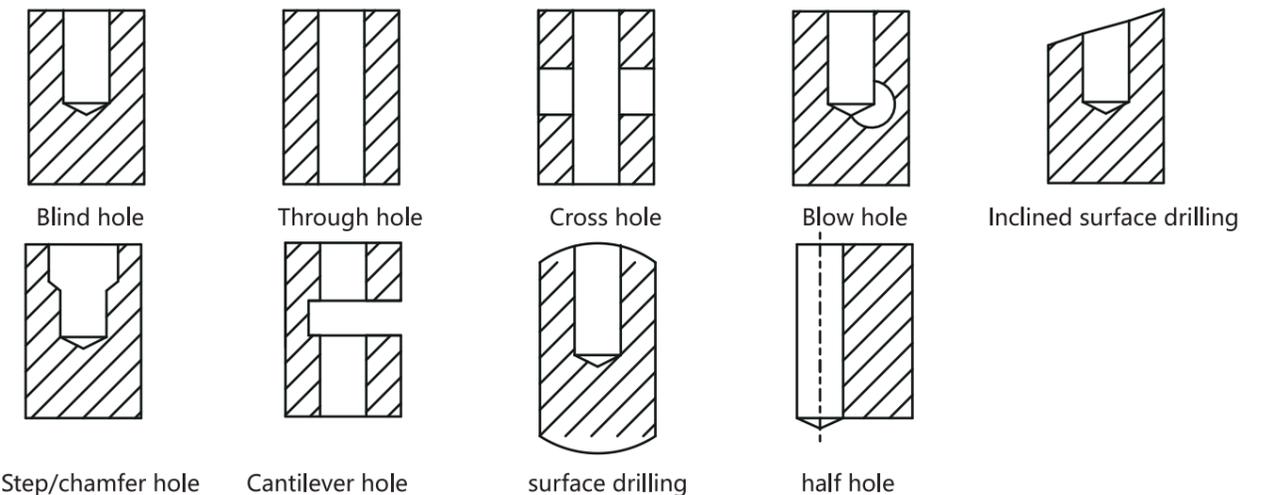
## 50% cost saving

Tools are often disposed of prematurely - although Royi can recondition them to original factory quality many times. You benefit from reduced costs, stable machining processes and constant tool life: The Royi reconditioning center reconditions your tools. This can save you up to 50 % on tool costs!

## STEP ONE: Select the corresponding material

mark letter	Processing material group	Workpiece material group	
<b>P</b>	P1-P15	steel	All kinds of steel and cast steel, excluding steel of austenitic structure
<b>M</b>	M1-M3	Stainless steel	Austenitic stainless steel, austenitic and ferritic duplex stainless steel, cast stainless steel
<b>K</b>	K1-K7	cast iron	Gray, Ductile, Malleable and Ductile Irons
<b>N</b>	N1-N10	Non-ferrous metals	Aluminum, other non-ferrous metals and non-ferrous materials
<b>S</b>	S1-S10	difficult-to-machine materials	Iron-based, nickel-based and cobalt-based heat-resistant alloys, titanium and titanium alloys
<b>H</b>	H1-H4	hard material	Hardened steel, hardened cast iron material, chilled cast iron
<b>O</b>	O1-O6	others	Plastics, glass fiber and carbon fiber reinforced plastics, graphite

## STEP TWO: Select processing application

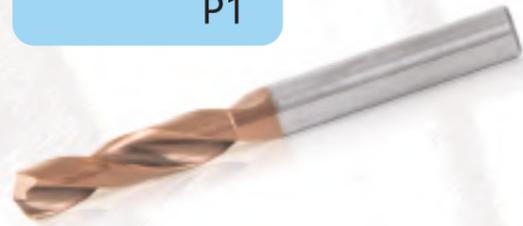


Processing machine model	cooling state	cooling type
Processing machine model	External cooling (water outlet from the water pipe, suitable for cutting with ordinary tools)	Water cooling (professional cutting fluid)
Vertical/gantry machining center	Internal cooling (water out from the center, suitable for deep hole internal cooling drilling)	Oil cooling (professional cooling oil)
Horizontal Machining Center/Floor Boring and Milling Machine		Oil mist (fog cooling oil)
CNC lathe		Air cooling (spindle air pipe blowing air cooling)
Special machine		Liquid nitrogen (liquefied nitrogen gas ultra-low temperature processing)

# PRODUCT TYPE

**RDT SERIES**

P1



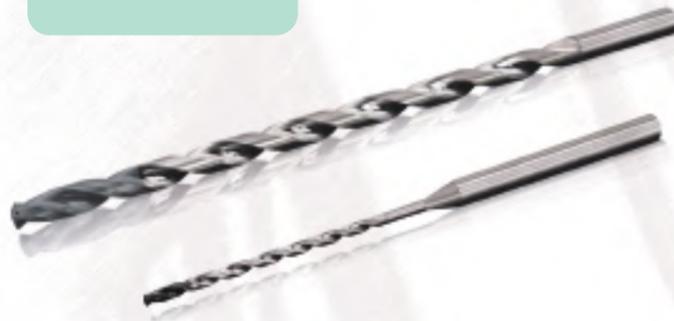
**RDM SERIES**

P19



**RDS SERIES**

P27



**RNT SERIES**

P24



**SMD Multi purpose  
crown bit**

P39



**Micro diameter  
boring cutter**



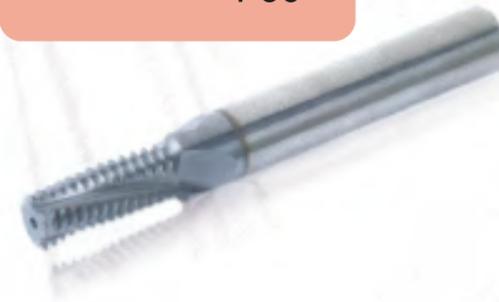
**Anti-vibration  
milling cutter**

P58



**Thread milling  
cutter**

P60



**Modular micro dia.  
milling cutter**

P95



**Modular milling  
cutter**

P112

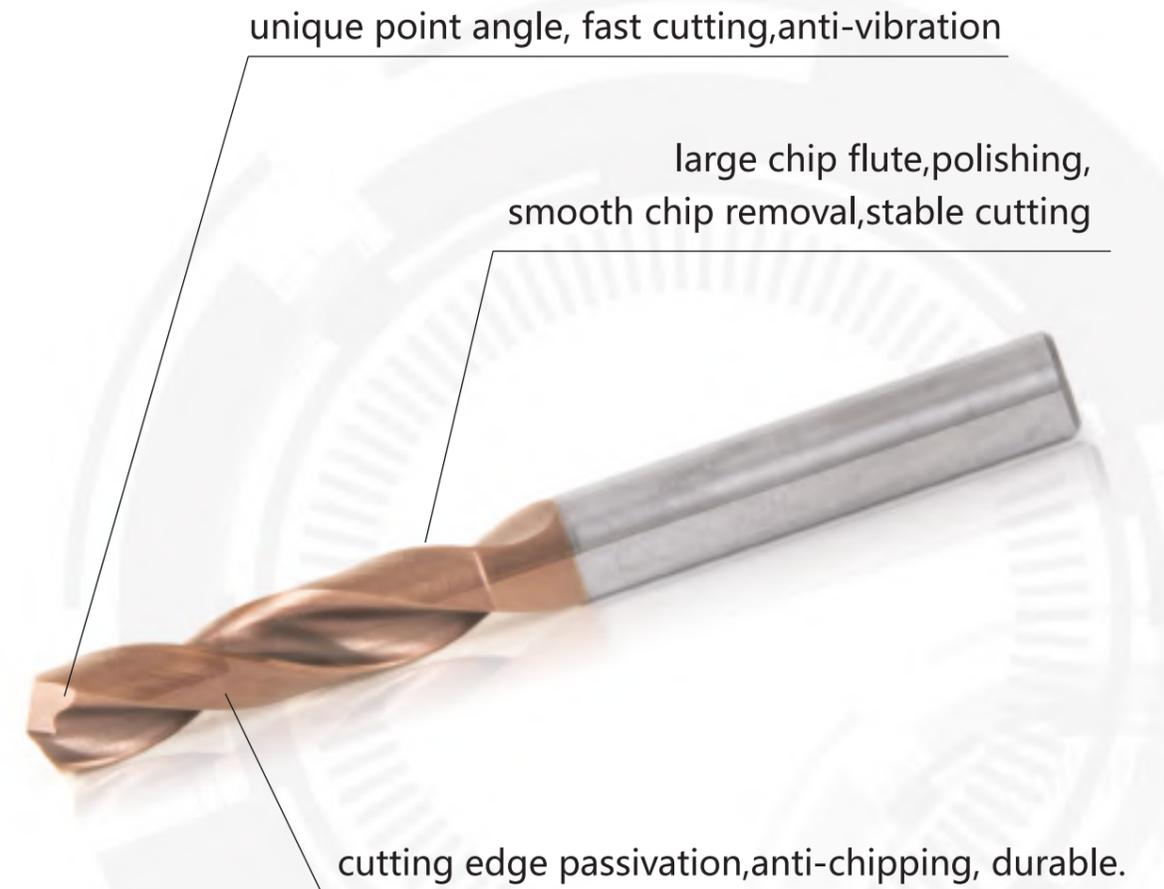


# RDT SERIES

With coolant supply/without coolant supply

## Drill order number explanation

R	D	T	03	10	-	0
↓	↓	↓	↓	↓	↓	↓
brand	Tool type	series	XD	diameter	Metric system	with coolant supply/ without coolant supply
<b>ROYI</b>	<b>D</b> drill	<b>T</b> for universal cutting	<b>03</b> 3D	for example:	- Metric system	<b>0</b> without coolant supply
	<b>N</b> micro drill	<b>M</b> Stainless steel	<b>05</b> 5D	<b>3mm=03</b>	. British system	<b>1</b> with coolant supply
	<b>M</b> milling cutter	<b>S</b> Deep hole drilling	<b>08</b> 8D	<b>10mm=10</b>		
	<b>T</b> thread cutter		<b>12</b> 12D	<b>10.5mm=105</b>		
	<b>B</b> Small diameter boring tool		<b>16</b> 16D			
			<b>20</b> 20D			
			<b>25</b> 25D			
			<b>30</b> 30D			



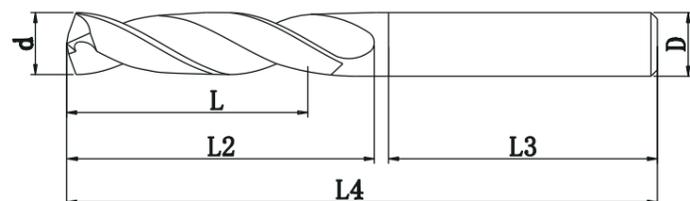
## Advantages:

- ◆ Unique drill point design, strong versatility, achieve good performance for carbon steel, alloy steel, cast iron cutting
- ◆ Cutting edge passivation, impact resistance
- ◆ Anti-chipping, increase tool life

## RDT SERIES



3D

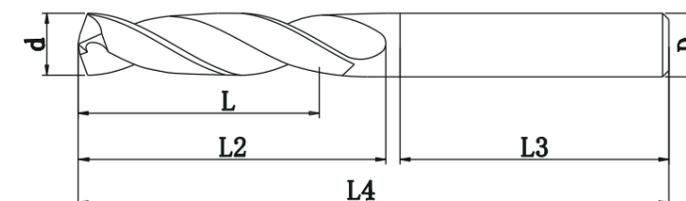
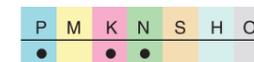


Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT03030-0	3.0	14	20	62	36	6	RDT03060-0	6.0	20	28	66	36	6
RDT03031-0	3.1	14	20	62	36	6	RDT03061-0	6.1	24	34	79	36	8
RDT03032-0	3.2	14	20	62	36	6	RDT03062-0	6.2	24	34	79	36	8
RDT03033-0	3.3	14	20	62	36	6	RDT03063-0	6.3	24	34	79	36	8
RDT03034-0	3.4	14	20	62	36	6	RDT03064-0	6.4	24	34	79	36	8
RDT03035-0	3.5	14	20	62	36	6	RDT03065-0	6.5	24	34	79	36	8
RDT03036-0	3.6	14	20	62	36	6	RDT03066-0	6.6	24	34	79	36	8
RDT03037-0	3.7	14	20	62	36	6	RDT03067-0	6.7	24	34	79	36	8
RDT03038-0	3.8	17	24	66	36	6	RDT03068-0	6.8	24	34	79	36	8
RDT03039-0	3.9	17	24	66	36	6	RDT03069-0	6.9	24	34	79	36	8
RDT03040-0	4.0	17	24	66	36	6	RDT03070-0	7.0	24	34	79	36	8
RDT03041-0	4.1	17	24	66	36	6	RDT03071-0	7.1	29	41	79	36	8
RDT03042-0	4.2	17	24	66	36	6	RDT03072-0	7.2	29	41	79	36	8
RDT03043-0	4.3	17	24	66	36	6	RDT03073-0	7.3	29	41	79	36	8
RDT03044-0	4.4	17	24	66	36	6	RDT03074-0	7.4	29	41	79	36	8
RDT03045-0	4.5	17	24	66	36	6	RDT03075-0	7.5	29	41	79	36	8
RDT03046-0	4.6	17	24	66	36	6	RDT03076-0	7.6	29	41	79	36	8
RDT03047-0	4.7	17	24	66	36	6	RDT03077-0	7.7	29	41	79	36	8
RDT03048-0	4.8	20	28	66	36	6	RDT03078-0	7.8	29	41	79	36	8
RDT03049-0	4.9	20	28	66	36	6	RDT03079-0	7.9	29	41	79	36	8
RDT03050-0	5.0	20	28	66	36	6	RDT03080-0	8.0	29	41	79	36	8
RDT03051-0	5.1	20	28	66	36	6	RDT03081-0	8.1	35	47	89	40	10
RDT03052-0	5.2	20	28	66	36	6	RDT03082-0	8.2	35	47	89	40	10
RDT03053-0	5.3	20	28	66	36	6	RDT03083-0	8.3	35	47	89	40	10
RDT03054-0	5.4	20	28	66	36	6	RDT03084-0	8.4	35	47	89	40	10
RDT03055-0	5.5	20	28	66	36	6	RDT03085-0	8.5	35	47	89	40	10
RDT03056-0	5.6	20	28	66	36	6	RDT03086-0	8.6	35	47	89	40	10
RDT03057-0	5.7	20	28	66	36	6	RDT03087-0	8.7	35	47	89	40	10
RDT03058-0	5.8	20	28	66	36	6	RDT03088-0	8.8	35	47	89	40	10
RDT03059-0	5.9	20	28	66	36	6	RDT03089-0	8.9	35	47	89	40	10

## RDT SERIES



3D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT03090-0	9.0	35	47	89	40	10	RDT03120-0	12.0	40	55	102	45	12
RDT03091-0	9.1	35	47	89	40	10	RDT03121-0	12.1	43	60	107	45	14
RDT03092-0	9.2	35	47	89	40	10	RDT03122-0	12.2	43	60	107	45	14
RDT03093-0	9.3	35	47	89	40	10	RDT03123-0	12.3	43	60	107	45	14
RDT03094-0	9.4	35	47	89	40	10	RDT03124-0	12.4	43	60	107	45	14
RDT03095-0	9.5	35	47	89	40	10	RDT03125-0	12.5	43	60	107	45	14
RDT03096-0	9.6	35	47	89	40	10	RDT03126-0	12.6	43	60	107	45	14
RDT03097-0	9.7	35	47	89	40	10	RDT03127-0	12.7	43	60	107	45	14
RDT03098-0	9.8	35	47	89	40	10	RDT03128-0	12.8	43	60	107	45	14
RDT03099-0	9.9	35	47	89	40	10	RDT03129-0	12.9	43	60	107	45	14
RDT03100-0	10.0	35	47	89	40	10	RDT03130-0	13.0	43	60	107	45	14
RDT03101-0	10.1	40	55	102	45	12	RDT03131-0	13.1	43	60	107	45	14
RDT03102-0	10.2	40	55	102	45	12	RDT03132-0	13.2	43	60	107	45	14
RDT03103-0	10.3	40	55	102	45	12	RDT03133-0	13.3	43	60	107	45	14
RDT03104-0	10.4	40	55	102	45	12	RDT03134-0	13.4	43	60	107	45	14
RDT03105-0	10.5	40	55	102	45	12	RDT03135-0	13.5	43	60	107	45	14
RDT03106-0	10.6	40	55	102	45	12	RDT03136-0	13.6	43	60	107	45	14
RDT03107-0	10.7	40	55	102	45	12	RDT03137-0	13.7	43	60	107	45	14
RDT03108-0	10.8	40	55	102	45	12	RDT03138-0	13.8	43	60	107	45	14
RDT03109-0	10.9	40	55	102	45	12	RDT03139-0	13.9	43	60	107	45	14
RDT03110-0	11.0	40	55	102	45	12	RDT03140-0	14.0	43	60	107	45	14
RDT03111-0	11.1	40	55	102	45	12	RDT03141-0	14.1	45	65	115	48	16
RDT03112-0	11.2	40	55	102	45	12	RDT03142-0	14.2	45	65	115	48	16
RDT03113-0	11.3	40	55	102	45	12	RDT03143-0	14.3	45	65	115	48	16
RDT03114-0	11.4	40	55	102	45	12	RDT03144-0	14.4	45	65	115	48	16
RDT03115-0	11.5	40	55	102	45	12	RDT03145-0	14.5	45	65	115	48	16
RDT03116-0	11.6	40	55	102	45	12	RDT03146-0	14.6	45	65	115	48	16
RDT03117-0	11.7	40	55	102	45	12	RDT03147-0	14.7	45	65	115	48	16
RDT03118-0	11.8	40	55	102	45	12	RDT03148-0	14.8	45	65	115	48	16
RDT03119-0	11.9	40	55	102	45	12	RDT03149-0	14.9	45	65	115	48	16

## RDT SERIES



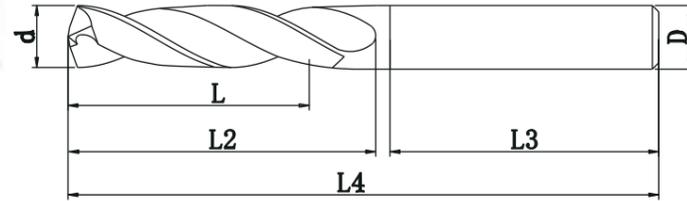
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE

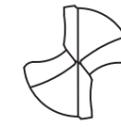


3D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT03150-0	15.0	45	65	115	48	16	RDT03180-0	18.0	51	73	123	48	18
RDT03151-0	15.1	45	65	115	48	16	RDT03181-0	18.1	55	79	131	50	20
RDT03152-0	15.2	45	65	115	48	16	RDT03182-0	18.2	55	79	131	50	20
RDT03153-0	15.3	45	65	115	48	16	RDT03183-0	18.3	55	79	131	50	20
RDT03154-0	15.4	45	65	115	48	16	RDT03184-0	18.4	55	79	131	50	20
RDT03155-0	15.5	45	65	115	48	16	RDT03185-0	18.5	55	79	131	50	20
RDT03156-0	15.6	45	65	115	48	16	RDT03186-0	18.6	55	79	131	50	20
RDT03157-0	15.7	45	65	115	48	16	RDT03187-0	18.7	55	79	131	50	20
RDT03158-0	15.8	45	65	115	48	16	RDT03188-0	18.8	55	79	131	50	20
RDT03159-0	15.9	45	65	115	48	16	RDT03189-0	18.9	55	79	131	50	20
RDT03160-0	16.0	45	65	115	48	16	RDT03190-0	19.0	55	79	131	50	20
RDT03161-0	16.1	51	73	123	48	18	RDT03191-0	19.1	55	79	131	50	20
RDT03162-0	16.2	51	73	123	48	18	RDT03192-0	19.2	55	79	131	50	20
RDT03163-0	16.3	51	73	123	48	18	RDT03193-0	19.3	55	79	131	50	20
RDT03164-0	16.4	51	73	123	48	18	RDT03194-0	19.4	55	79	131	50	20
RDT03165-0	16.5	51	73	123	48	18	RDT03195-0	19.5	55	79	131	50	20
RDT03166-0	16.6	51	73	123	48	18	RDT03196-0	19.6	55	79	131	50	20
RDT03167-0	16.7	51	73	123	48	18	RDT03197-0	19.7	55	79	131	50	20
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RDT03169-0	16.9	51	73	123	48	18	RDT03199-0	19.9	55	79	131	50	20
RDT03170-0	17.0	51	73	123	48	18	RDT03200-0	20.0	55	79	131	50	20
RDT03171-0	17.1	51	73	123	48	18	RDT03201-0	20.1	76	96	146	50	25
RDT03172-0	17.2	51	73	123	48	18	RDT03202-0	20.2	76	96	146	50	25
RDT03173-0	17.3	51	73	123	48	18	RDT03203-0	20.3	76	96	146	50	25
RDT03174-0	17.4	51	73	123	48	18	RDT03204-0	20.4	76	96	146	50	25
RDT03175-0	17.5	51	73	123	48	18	RDT03205-0	20.5	76	96	146	50	25
RDT03176-0	17.6	51	73	123	48	18	RDT03206-0	20.6	76	96	146	50	25
RDT03177-0	17.7	51	73	123	48	18	RDT03207-0	20.7	76	96	146	50	25
RDT03178-0	17.8	51	73	123	48	18	RDT03208-0	20.8	76	96	146	50	25
RDT03179-0	17.9	51	73	123	48	18	RDT03209-0	20.9	76	96	146	50	25

## RDT SERIES



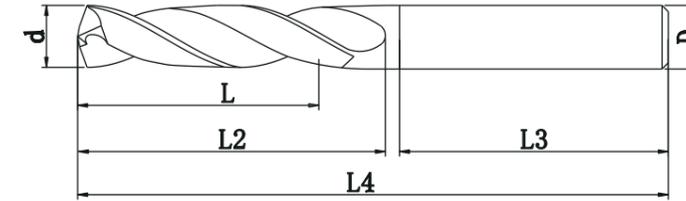
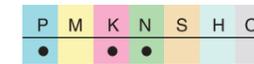
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



3D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT03210-0	21.0	76	96	146	50	25	RDT03240-0	24.0	83	103	153	50	25
RDT03211-0	21.1	76	96	146	50	25	RDT03241-0	24.1	83	103	153	50	25
RDT03212-0	21.2	76	96	146	50	25	RDT03242-0	24.2	83	103	153	50	25
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RDT03214-0	21.4	76	96	146	50	25	RDT03244-0	24.4	83	103	153	50	25
RDT03215-0	21.5	76	96	146	50	25	RDT03245-0	24.5	83	103	153	50	25
RDT03216-0	21.6	76	96	146	50	25	RDT03246-0	24.6	83	103	153	50	25
RDT03217-0	21.7	76	96	146	50	25	RDT03247-0	24.7	83	103	153	50	25
RDT03218-0	21.8	76	96	146	50	25	RDT03248-0	24.8	83	103	153	50	25
RDT03219-0	21.9	76	96	146	50	25	RDT03249-0	24.9	83	103	153	50	25
RDT03220-0	22.0	76	96	146	50	25	RDT03250-0	25.0	83	103	153	50	25
RDT03221-0	22.1	83	103	153	50	25							
RDT03222-0	22.2	83	103	153	50	25							
RDT03223-0	22.3	83	103	153	50	25							
RDT03224-0	22.4	83	103	153	50	25							
RDT03225-0	22.5	83	103	153	50	25							
RDT03226-0	22.6	83	103	153	50	25							
RDT03227-0	22.7	83	103	153	50	25							
RDT03228-0	22.8	83	103	153	50	25							
RDT03229-0	22.9	83	103	153	50	25							
RDT03230-0	23.0	83	103	153	50	25							
RDT03231-0	23.1	83	103	153	50	25							
RDT03232-0	23.2	83	103	153	50	25							
RDT03233-0	23.3	83	103	153	50	25							
RDT03234-0	23.4	83	103	153	50	25							
RDT03235-0	23.5	83	103	153	50	25							
RDT03236-0	23.6	83	103	153	50	25							
RDT03237-0	23.7	83	103	153	50	25							
RDT03238-0	23.8	83	103	153	50	25							
RDT03239-0	23.9	83	103	153	50	25							

## RDT SERIES



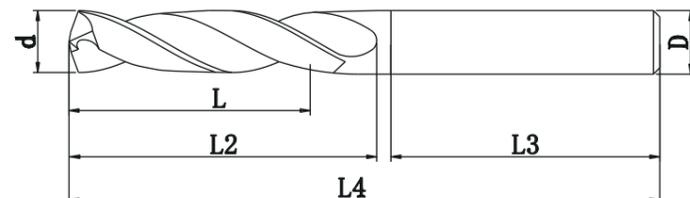
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



5D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT05030-0	3.0	23	28	66	36	6	RDT05060-0	6.0	35	44	82	36	6
RDT05031-0	3.1	23	28	66	36	6	RDT05061-0	6.1	43	53	91	36	8
RDT05032-0	3.2	23	28	66	36	6	RDT05062-0	6.2	43	53	91	36	8
RDT05033-0	3.3	23	28	66	36	6	RDT05063-0	6.3	43	53	91	36	8
RDT05034-0	3.4	23	28	66	36	6	RDT05064-0	6.4	43	53	91	36	8
RDT05035-0	3.5	23	28	66	36	6	RDT05065-0	6.5	43	53	91	36	8
RDT05036-0	3.6	23	28	66	36	6	RDT05066-0	6.6	43	53	91	36	8
RDT05037-0	3.7	23	28	66	36	6	RDT05067-0	6.7	43	53	91	36	8
RDT05038-0	3.8	29	36	74	36	6	RDT05068-0	6.8	43	53	91	36	8
RDT05039-0	3.9	29	36	74	36	6	RDT05069-0	6.9	43	53	91	36	8
RDT05040-0	4.0	29	36	74	36	6	RDT05070-0	7.0	43	53	91	36	8
RDT05041-0	4.1	29	36	74	36	6	RDT05071-0	7.1	43	53	91	36	8
RDT05042-0	4.2	29	36	74	36	6	RDT05072-0	7.2	43	53	91	36	8
RDT05043-0	4.3	29	36	74	36	6	RDT05073-0	7.3	43	53	91	36	8
RDT05044-0	4.4	29	36	74	36	6	RDT05074-0	7.4	43	53	91	36	8
RDT05045-0	4.5	29	36	74	36	6	RDT05075-0	7.5	43	53	91	36	8
RDT05046-0	4.6	29	36	74	36	6	RDT05076-0	7.6	43	53	91	36	8
RDT05047-0	4.7	29	36	74	36	6	RDT05077-0	7.7	43	53	91	36	8
RDT05048-0	4.8	35	44	82	36	6	RDT05078-0	7.8	43	53	91	36	8
RDT05049-0	4.9	35	44	82	36	6	RDT05079-0	7.9	43	53	91	36	8
RDT05050-0	5	35	44	82	36	6	RDT05080-0	8.0	43	53	91	36	8
RDT05051-0	5.1	35	44	82	36	6	RDT05081-0	8.1	49	61	103	40	10
RDT05052-0	5.2	35	44	82	36	6	RDT05082-0	8.2	49	61	103	40	10
RDT05053-0	5.3	35	44	82	36	6	RDT05083-0	8.3	49	61	103	40	10
RDT05054-0	5.4	35	44	82	36	6	RDT05084-0	8.4	49	61	103	40	10
RDT05055-0	5.5	35	44	82	36	6	RDT05085-0	8.5	49	61	103	40	10
RDT05056-0	5.6	35	44	82	36	6	RDT05086-0	8.6	49	61	103	40	10
RDT05057-0	5.7	35	44	82	36	6	RDT05087-0	8.7	49	61	103	40	10
RDT05058-0	5.8	35	44	82	36	6	RDT05088-0	8.8	49	61	103	40	10
RDT05059-0	5.9	35	44	82	36	6	RDT05089-0	8.9	49	61	103	40	10

## RDT SERIES



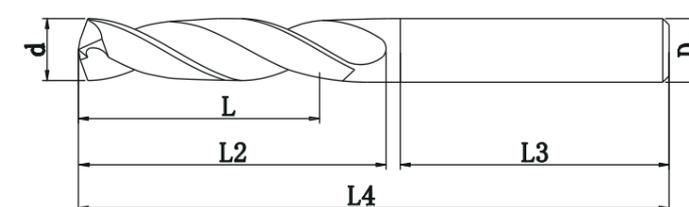
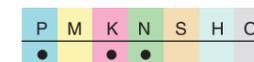
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



5D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT05090-0	9	49	61	103	40	10	RDT05120-0	12	56	71	118	45	12
RDT05091-0	9.1	49	61	103	40	10	RDT05121-0	12.1	60	77	124	45	14
RDT05092-0	9.2	49	61	103	40	10	RDT05122-0	12.2	60	77	124	45	14
RDT05093-0	9.3	49	61	103	40	10	RDT05123-0	12.3	60	77	124	45	14
RDT05094-0	9.4	49	61	103	40	10	RDT05124-0	12.4	60	77	124	45	14
RDT05095-0	9.5	49	61	103	40	10	RDT05125-0	12.5	60	77	124	45	14
RDT05096-0	9.6	49	61	103	40	10	RDT05126-0	12.6	60	77	124	45	14
RDT05097-0	9.7	49	61	103	40	10	RDT05127-0	12.7	60	77	124	45	14
RDT05098-0	9.8	49	61	103	40	10	RDT05128-0	12.8	60	77	124	45	14
RDT05099-0	9.9	49	61	103	40	10	RDT05129-0	12.9	60	77	124	45	14
RDT05100-0	10.0	49	61	103	40	10	RDT05130-0	13	60	77	124	45	14
RDT05101-0	10.1	56	71	118	45	12	RDT05131-0	13.1	60	77	124	45	14
RDT05102-0	10.2	56	71	118	45	12	RDT05132-0	13.2	60	77	124	45	14
RDT05103-0	10.3	56	71	118	45	12	RDT05133-0	13.3	60	77	124	45	14
RDT05104-0	10.4	56	71	118	45	12	RDT05134-0	13.4	60	77	124	45	14
RDT05105-0	10.5	56	71	118	45	12	RDT05135-0	13.5	60	77	124	45	14
RDT05106-0	10.6	56	71	118	45	12	RDT05136-0	13.6	60	77	124	45	14
RDT05107-0	10.7	56	71	118	45	12	RDT05137-0	13.7	60	77	124	45	14
RDT05108-0	10.8	56	71	118	45	12	RDT05138-0	13.8	60	77	124	45	14
RDT05109-0	10.9	56	71	118	45	12	RDT05139-0	13.9	60	77	124	45	14
RDT05110-0	11	56	71	118	45	12	RDT05140-0	14	60	77	124	45	14
RDT05111-0	11.1	56	71	118	45	12	RDT05141-0	14.1	63	83	133	48	16
RDT05112-0	11.2	56	71	118	45	12	RDT05142-0	14.2	63	83	133	48	16
RDT05113-0	11.3	56	71	118	45	12	RDT05143-0	14.3	63	83	133	48	16
RDT05114-0	11.4	56	71	118	45	12	RDT05144-0	14.4	63	83	133	48	16
RDT05115-0	11.5	56	71	118	45	12	RDT05145-0	14.5	63	83	133	48	16
RDT05116-0	11.6	56	71	118	45	12	RDT05146-0	14.6	63	83	133	48	16
RDT05117-0	11.7	56	71	118	45	12	RDT05147-0	14.7	63	83	133	48	16
RDT05118-0	11.8	56	71	118	45	12	RDT05148-0	14.8	63	83	133	48	16
RDT05119-0	11.9	56	71	118	45	12	RDT05149-0	14.9	63	83	133	48	16

## RDT SERIES



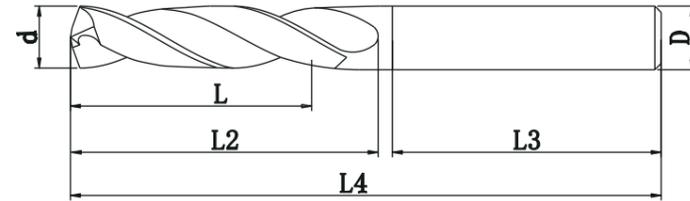
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



5D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT05150-0	15.0	63	83	133	48	16	RDT05180-0	18	71	93	143	48	18
RDT05151-0	15.1	63	83	133	48	16	RDT05181-0	18.1	77	101	153	50	20
RDT05152-0	15.2	63	83	133	48	16	RDT05182-0	18.2	77	101	153	50	20
RDT05153-0	15.3	63	83	133	48	16	RDT05183-0	18.3	77	101	153	50	20
RDT05154-0	15.4	63	83	133	48	16	RDT05184-0	18.4	77	101	153	50	20
RDT05155-0	15.5	63	83	133	48	16	RDT05185-0	18.5	77	101	153	50	20
RDT05156-0	15.6	63	83	133	48	16	RDT05186-0	18.6	77	101	153	50	20
RDT05157-0	15.7	63	83	133	48	16	RDT05187-0	18.7	77	101	153	50	20
RDT05158-0	15.8	63	83	133	48	16	RDT05188-0	18.8	77	101	153	50	20
RDT05159-0	15.9	63	83	133	48	16	RDT05189-0	18.9	77	101	153	50	20
RDT05160-0	16	63	83	133	48	16	RDT05190-0	19.0	77	101	153	50	20
RDT05161-0	16.1	71	93	143	48	18	RDT05191-0	19.1	77	101	153	50	20
RDT05162-0	16.2	71	93	143	48	18	RDT05192-0	19.2	77	101	153	50	20
RDT05163-0	16.3	71	93	143	48	18	RDT05193-0	19.3	77	101	153	50	20
RDT05164-0	16.4	71	93	143	48	18	RDT05194-0	19.4	77	101	153	50	20
RDT05165-0	16.5	71	93	143	48	18	RDT05195-0	19.5	77	101	153	50	20
RDT05166-0	16.6	71	93	143	48	18	RDT05196-0	19.6	77	101	153	50	20
RDT05167-0	16.7	71	93	143	48	18	RDT05197-0	19.7	77	101	153	50	20
RDT05168-0	16.8	71	93	143	48	18	RDT05198-0	19.8	77	101	153	50	20
RDT05169-0	16.9	71	93	143	48	18	RDT05199-0	19.9	77	101	153	50	20
RDT05170-0	17.0	71	93	143	48	18	RDT05200-0	20.0	77	101	153	50	20
RDT05171-0	17.1	71	93	143	48	18	RDT05201-0	20.1	88	108	166	55	25
RDT05172-0	17.2	71	93	143	48	18	RDT05202-0	20.2	88	108	166	55	25
RDT05173-0	17.3	71	93	143	48	18	RDT05203-0	20.3	88	108	166	55	25
RDT05174-0	17.4	71	93	143	48	18	RDT05204-0	20.4	88	108	166	55	25
RDT05175-0	17.5	71	93	143	48	18	RDT05205-0	20.5	88	108	166	55	25
RDT05176-0	17.6	71	93	143	48	18	RDT05206-0	20.6	88	108	166	55	25
RDT05177-0	17.7	71	93	143	48	18	RDT05207-0	20.7	88	108	166	55	25
RDT05178-0	17.8	71	93	143	48	18	RDT05208-0	20.8	88	108	166	55	25
RDT05179-0	17.9	71	93	143	48	18	RDT05209-0	20.9	88	108	166	55	25

## RDT SERIES



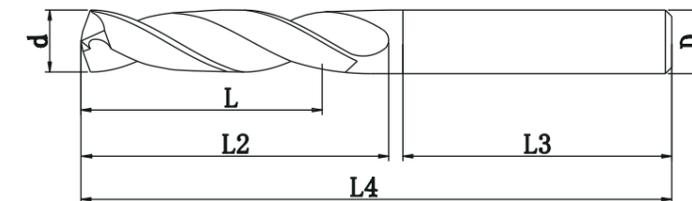
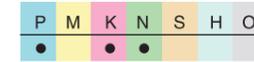
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



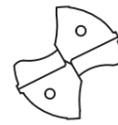
5D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT05210-0	21.0	88	108	166	55	25	RDT05240-0	24.0	95	115	173	55	25
RDT05211-0	21.1	88	108	166	55	25	RDT05241-0	24.1	100	122	180	55	25
RDT05212-0	21.2	88	108	166	55	25	RDT05242-0	24.2	100	122	180	55	25
RDT05213-0	21.3	88	108	166	55	25	RDT05243-0	24.3	100	122	180	55	25
RDT05214-0	21.4	88	108	166	55	25	RDT05244-0	24.4	100	122	180	55	25
RDT05215-0	21.5	88	108	166	55	25	RDT05245-0	24.5	100	122	180	55	25
RDT05216-0	21.6	88	108	166	55	25	RDT05246-0	24.6	100	122	180	55	25
RDT05217-0	21.7	88	108	166	55	25	RDT05247-0	24.7	100	122	180	55	25
RDT05218-0	21.8	88	108	166	55	25	RDT05248-0	24.8	100	122	180	55	25
RDT05219-0	21.9	88	108	166	55	25	RDT05249-0	24.9	100	122	180	55	25
RDT05220-0	22.0	88	108	166	55	25	RDT05250-0	25.0	100	122	180	55	25
RDT05221-0	22.1	95	115	173	55	25							
RDT05222-0	22.2	95	115	173	55	25							
RDT05223-0	22.3	95	115	173	55	25							
RDT05224-0	22.4	95	115	173	55	25							
RDT05225-0	22.5	95	115	173	55	25							
RDT05226-0	22.6	95	115	173	55	25							
RDT05227-0	22.7	95	115	173	55	25							
RDT05228-0	22.8	95	115	173	55	25							
RDT05229-0	22.9	95	115	173	55	25							
RDT05230-0	23.0	95	115	173	55	25							
RDT05231-0	23.1	95	115	173	55	25							
RDT05232-0	23.2	95	115	173	55	25							
RDT05233-0	23.3	95	115	173	55	25							
RDT05234-0	23.4	95	115	173	55	25							
RDT05235-0	23.5	95	115	173	55	25							
RDT05236-0	23.6	95	115	173	55	25							
RDT05237-0	23.7	95	115	173	55	25							
RDT05238-0	23.8	95	115	173	55	25							
RDT05239-0	23.9	95	115	173	55	25							

## RDT SERIES

With coolant supply



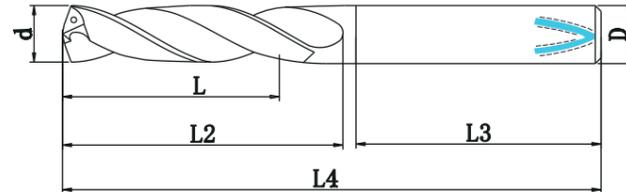
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



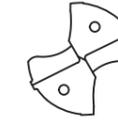
3D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT03030-1	3.0	14	20	62	36	6	RDT03060-1	6.0	20	28	66	36	6
RDT03031-1	3.1	14	20	62	36	6	RDT03061-1	6.1	24	34	79	36	8
RDT03032-1	3.2	14	20	62	36	6	RDT03062-1	6.2	24	34	79	36	8
RDT03033-1	3.3	14	20	62	36	6	RDT03063-1	6.3	24	34	79	36	8
RDT03034-1	3.4	14	20	62	36	6	RDT03064-1	6.4	24	34	79	36	8
RDT03035-1	3.5	14	20	62	36	6	RDT03065-1	6.5	24	34	79	36	8
RDT03036-1	3.6	14	20	62	36	6	RDT03066-1	6.6	24	34	79	36	8
RDT03037-1	3.7	14	20	62	36	6	RDT03067-1	6.7	24	34	79	36	8
RDT03038-1	3.8	17	24	66	36	6	RDT03068-1	6.8	24	34	79	36	8
RDT03039-1	3.9	17	24	66	36	6	RDT03069-1	6.9	24	34	79	36	8
RDT03040-1	4.0	17	24	66	36	6	RDT03070-1	7.0	24	34	79	36	8
RDT03041-1	4.1	17	24	66	36	6	RDT03071-1	7.1	29	41	79	36	8
RDT03042-1	4.2	17	24	66	36	6	RDT03072-1	7.2	29	41	79	36	8
RDT03043-1	4.3	17	24	66	36	6	RDT03073-1	7.3	29	41	79	36	8
RDT03044-1	4.4	17	24	66	36	6	RDT03074-1	7.4	29	41	79	36	8
RDT03045-1	4.5	17	24	66	36	6	RDT03075-1	7.5	29	41	79	36	8
RDT03046-1	4.6	17	24	66	36	6	RDT03076-1	7.6	29	41	79	36	8
RDT03047-1	4.7	17	24	66	36	6	RDT03077-1	7.7	29	41	79	36	8
RDT03048-1	4.8	20	28	66	36	6	RDT03078-1	7.8	29	41	79	36	8
RDT03049-1	4.9	20	28	66	36	6	RDT03079-1	7.9	29	41	79	36	8
RDT03050-1	5.0	20	28	66	36	6	RDT03080-1	8.0	29	41	79	36	8
RDT03051-1	5.1	20	28	66	36	6	RDT03081-1	8.1	35	47	89	40	10
RDT03052-1	5.2	20	28	66	36	6	RDT03082-1	8.2	35	47	89	40	10
RDT03053-1	5.3	20	28	66	36	6	RDT03083-1	8.3	35	47	89	40	10
RDT03054-1	5.4	20	28	66	36	6	RDT03084-1	8.4	35	47	89	40	10
RDT03055-1	5.5	20	28	66	36	6	RDT03085-1	8.5	35	47	89	40	10
RDT03056-1	5.6	20	28	66	36	6	RDT03086-1	8.6	35	47	89	40	10
RDT03057-1	5.7	20	28	66	36	6	RDT03087-1	8.7	35	47	89	40	10
RDT03058-1	5.8	20	28	66	36	6	RDT03088-1	8.8	35	47	89	40	10
RDT03059-1	5.9	20	28	66	36	6	RDT03089-1	8.9	35	47	89	40	10

## RDT SERIES

With coolant supply



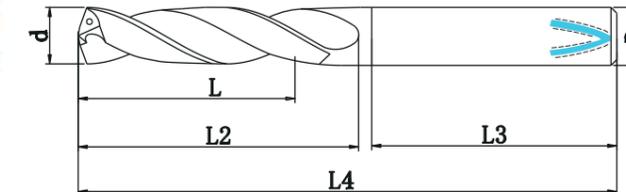
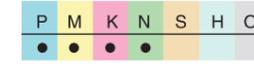
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



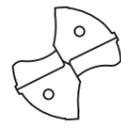
3D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT03090-1	9.0	35	47	89	40	10	RDT03120-1	12.0	40	55	102	45	12
RDT03091-1	9.1	35	47	89	40	10	RDT03121-1	12.1	43	60	107	45	14
RDT03092-1	9.2	35	47	89	40	10	RDT03122-1	12.2	43	60	107	45	14
RDT03093-1	9.3	35	47	89	40	10	RDT03123-1	12.3	43	60	107	45	14
RDT03094-1	9.4	35	47	89	40	10	RDT03124-1	12.4	43	60	107	45	14
RDT03095-1	9.5	35	47	89	40	10	RDT03125-1	12.5	43	60	107	45	14
RDT03096-1	9.6	35	47	89	40	10	RDT03126-1	12.6	43	60	107	45	14
RDT03097-1	9.7	35	47	89	40	10	RDT03127-1	12.7	43	60	107	45	14
RDT03098-1	9.8	35	47	89	40	10	RDT03128-1	12.8	43	60	107	45	14
RDT03099-1	9.9	35	47	89	40	10	RDT03129-1	12.9	43	60	107	45	14
RDT03100-1	10.0	35	47	89	40	10	RDT03130-1	13.0	43	60	107	45	14
RDT03101-1	10.1	40	55	102	45	12	RDT03131-1	13.1	43	60	107	45	14
RDT03102-1	10.2	40	55	102	45	12	RDT03132-1	13.2	43	60	107	45	14
RDT03103-1	10.3	40	55	102	45	12	RDT03133-1	13.3	43	60	107	45	14
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RDT03107-1	10.7	40	55	102	45	12	RDT03137-1	13.7	43	60	107	45	14
RDT03108-1	10.8	40	55	102	45	12	RDT03138-1	13.8	43	60	107	45	14
RDT03109-1	10.9	40	55	102	45	12	RDT03139-1	13.9	43	60	107	45	14
RDT03110-1	11.0	40	55	102	45	12	RDT03140-1	14.0	43	60	107	45	14
RDT03111-1	11.1	40	55	102	45	12	RDT03141-1	14.1	45	65	115	48	16
RDT03112-1	11.2	40	55	102	45	12	RDT03142-1	14.2	45	65	115	48	16
RDT03113-1	11.3	40	55	102	45	12	RDT03143-1	14.3	45	65	115	48	16
RDT03114-1	11.4	40	55	102	45	12	RDT03144-1	14.4	45	65	115	48	16
RDT03115-1	11.5	40	55	102	45	12	RDT03145-1	14.5	45	65	115	48	16
RDT03116-1	11.6	40	55	102	45	12	RDT03146-1	14.6	45	65	115	48	16
RDT03117-1	11.7	40	55	102	45	12	RDT03147-1	14.7	45	65	115	48	16
RDT03118-1	11.8	40	55	102	45	12	RDT03148-1	14.8	45	65	115	48	16
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# RDT SERIES

With coolant supply



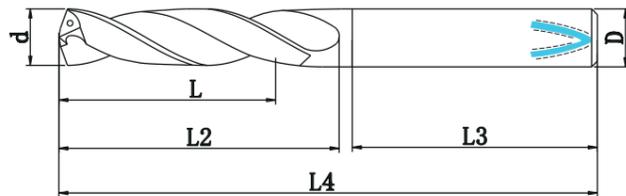
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



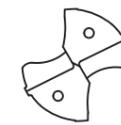
3D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT03150-1	15.0	45	65	115	48	16	RDT03180-1	18.0	51	73	123	48	18
RDT03151-1	15.1	45	65	115	48	16	RDT03181-1	18.1	55	79	131	50	20
RDT03152-1	15.2	45	65	115	48	16	RDT03182-1	18.2	55	79	131	50	20
RDT03153-1	15.3	45	65	115	48	16	RDT03183-1	18.3	55	79	131	50	20
RDT03154-1	15.4	45	65	115	48	16	RDT03184-1	18.4	55	79	131	50	20
RDT03155-1	15.5	45	65	115	48	16	RDT03185-1	18.5	55	79	131	50	20
RDT03156-1	15.6	45	65	115	48	16	RDT03186-1	18.6	55	79	131	50	20
RDT03157-1	15.7	45	65	115	48	16	RDT03187-1	18.7	55	79	131	50	20
RDT03158-1	15.8	45	65	115	48	16	RDT03188-1	18.8	55	79	131	50	20
RDT03159-1	15.9	45	65	115	48	16	RDT03189-1	18.9	55	79	131	50	20
RDT03160-1	16.0	45	65	115	48	16	RDT03190-1	19.0	55	79	131	50	20
RDT03161-1	16.1	51	73	123	48	18	RDT03191-1	19.1	55	79	131	50	20
RDT03162-1	16.2	51	73	123	48	18	RDT03192-1	19.2	55	79	131	50	20
RDT03163-1	16.3	51	73	123	48	18	RDT03193-1	19.3	55	79	131	50	20
RDT03164-1	16.4	51	73	123	48	18	RDT03194-1	19.4	55	79	131	50	20
RDT03165-1	16.5	51	73	123	48	18	RDT03195-1	19.5	55	79	131	50	20
RDT03166-1	16.6	51	73	123	48	18	RDT03196-1	19.6	55	79	131	50	20
RDT03167-1	16.7	51	73	123	48	18	RDT03197-1	19.7	55	79	131	50	20
RDT03168-1	16.8	51	73	123	48	18	RDT03198-1	19.8	55	79	131	50	20
RDT03169-1	16.9	51	73	123	48	18	RDT03199-1	19.9	55	79	131	50	20
RDT03170-1	17.0	51	73	123	48	18	RDT03200-1	20.0	55	79	131	50	20
RDT03171-1	17.1	51	73	123	48	18	RDT03201-1	20.1	76	96	146	50	25
RDT03172-1	17.2	51	73	123	48	18	RDT03202-1	20.2	76	96	146	50	25
RDT03173-1	17.3	51	73	123	48	18	RDT03203-1	20.3	76	96	146	50	25
RDT03174-1	17.4	51	73	123	48	18	RDT03204-1	20.4	76	96	146	50	25
RDT03175-1	17.5	51	73	123	48	18	RDT03205-1	20.5	76	96	146	50	25
RDT03176-1	17.6	51	73	123	48	18	RDT03206-1	20.6	76	96	146	50	25
RDT03177-1	17.7	51	73	123	48	18	RDT03207-1	20.7	76	96	146	50	25
RDT03178-1	17.8	51	73	123	48	18	RDT03208-1	20.8	76	96	146	50	25
RDT03179-1	17.9	51	73	123	48	18	RDT03209-1	20.9	76	96	146	50	25

# RDT SERIES

With coolant supply



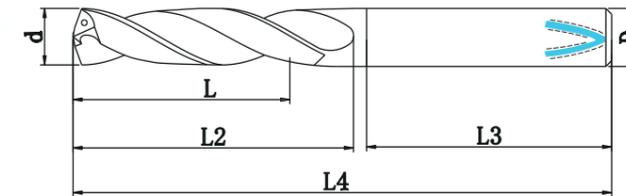
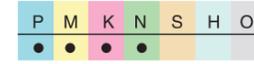
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



3D



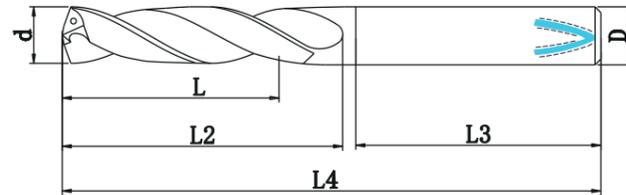
Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT03210-1	21.0	76	96	146	50	25	RDT03240-1	24.0	83	103	153	50	25
RDT03211-1	21.1	76	96	146	50	25	RDT03241-1	24.1	83	103	153	50	25
RDT03212-1	21.2	76	96	146	50	25	RDT03242-1	24.2	83	103	153	50	25
RDT03213-1	21.3	76	96	146	50	25	RDT03243-1	24.3	83	103	153	50	25
RDT03214-1	21.4	76	96	146	50	25	RDT03244-1	24.4	83	103	153	50	25
RDT03215-1	21.5	76	96	146	50	25	RDT03245-1	24.5	83	103	153	50	25
RDT03216-1	21.6	76	96	146	50	25	RDT03246-1	24.6	83	103	153	50	25
RDT03217-1	21.7	76	96	146	50	25	RDT03247-1	24.7	83	103	153	50	25
RDT03218-1	21.8	76	96	146	50	25	RDT03248-1	24.8	83	103	153	50	25
RDT03219-1	21.9	76	96	146	50	25	RDT03249-1	24.9	83	103	153	50	25
RDT03220-1	22.0	76	96	146	50	25	RDT03250-1	25.0	83	103	153	50	25
RDT03221-1	22.1	83	103	153	50	25							
RDT03222-1	22.2	83	103	153	50	25							
RDT03223-1	22.3	83	103	153	50	25							
RDT03224-1	22.4	83	103	153	50	25							
RDT03225-1	22.5	83	103	153	50	25							
RDT03226-1	22.6	83	103	153	50	25							
RDT03227-1	22.7	83	103	153	50	25							
RDT03228-1	22.8	83	103	153	50	25							
RDT03229-1	22.9	83	103	153	50	25							
RDT03230-1	23.0	83	103	153	50	25							
RDT03231-1	23.1	83	103	153	50	25							
RDT03232-1	23.2	83	103	153	50	25							
RDT03233-1	23.3	83	103	153	50	25							
RDT03234-1	23.4	83	103	153	50	25							
RDT03235-1	23.5	83	103	153	50	25							
RDT03236-1	23.6	83	103	153	50	25							
RDT03237-1	23.7	83	103	153	50	25							
RDT03238-1	23.8	83	103	153	50	25							
RDT03239-1	23.9	83	103	153	50	25							

# RDT SERIES

With coolant supply



5D



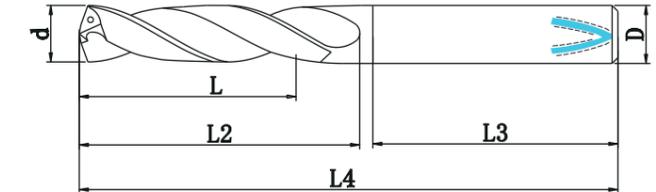
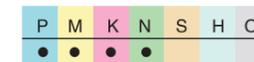
Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT05030-1	3.0	23	28	66	36	6	RDT05060-1	6.0	35	44	82	36	6
RDT05031-1	3.1	23	28	66	36	6	RDT05061-1	6.1	43	53	91	36	8
RDT05032-1	3.2	23	28	66	36	6	RDT05062-1	6.2	43	53	91	36	8
RDT05033-1	3.3	23	28	66	36	6	RDT05063-1	6.3	43	53	91	36	8
RDT05034-1	3.4	23	28	66	36	6	RDT05064-1	6.4	43	53	91	36	8
RDT05035-1	3.5	23	28	66	36	6	RDT05065-1	6.5	43	53	91	36	8
RDT05036-1	3.6	23	28	66	36	6	RDT05066-1	6.6	43	53	91	36	8
RDT05037-1	3.7	23	28	66	36	6	RDT05067-1	6.7	43	53	91	36	8
RDT05038-1	3.8	29	36	74	36	6	RDT05068-1	6.8	43	53	91	36	8
RDT05039-1	3.9	29	36	74	36	6	RDT05069-1	6.9	43	53	91	36	8
RDT05040-1	4.0	29	36	74	36	6	RDT05070-1	7.0	43	53	91	36	8
RDT05041-1	4.1	29	36	74	36	6	RDT05071-1	7.1	43	53	91	36	8
RDT05042-1	4.2	29	36	74	36	6	RDT05072-1	7.2	43	53	91	36	8
RDT05043-1	4.3	29	36	74	36	6	RDT05073-1	7.3	43	53	91	36	8
RDT05044-1	4.4	29	36	74	36	6	RDT05074-1	7.4	43	53	91	36	8
RDT05045-1	4.5	29	36	74	36	6	RDT05075-1	7.5	43	53	91	36	8
RDT05046-1	4.6	29	36	74	36	6	RDT05076-1	7.6	43	53	91	36	8
RDT05047-1	4.7	29	36	74	36	6	RDT05077-1	7.7	43	53	91	36	8
RDT05048-1	4.8	35	44	82	36	6	RDT05078-1	7.8	43	53	91	36	8
RDT05049-1	4.9	35	44	82	36	6	RDT05079-1	7.9	43	53	91	36	8
RDT05050-1	5	35	44	82	36	6	RDT05080-1	8.0	43	53	91	36	8
RDT05051-1	5.1	35	44	82	36	6	RDT05081-1	8.1	49	61	103	40	10
RDT05052-1	5.2	35	44	82	36	6	RDT05082-1	8.2	49	61	103	40	10
RDT05053-1	5.3	35	44	82	36	6	RDT05083-1	8.3	49	61	103	40	10
RDT05054-1	5.4	35	44	82	36	6	RDT05084-1	8.4	49	61	103	40	10
RDT05055-1	5.5	35	44	82	36	6	RDT05085-1	8.5	49	61	103	40	10
RDT05056-1	5.6	35	44	82	36	6	RDT05086-1	8.6	49	61	103	40	10
RDT05057-1	5.7	35	44	82	36	6	RDT05087-1	8.7	49	61	103	40	10
RDT05058-1	5.8	35	44	82	36	6	RDT05088-1	8.8	49	61	103	40	10
RDT05059-1	5.9	35	44	82	36	6	RDT05089-1	8.9	49	61	103	40	10

# RDT SERIES

With coolant supply



5D



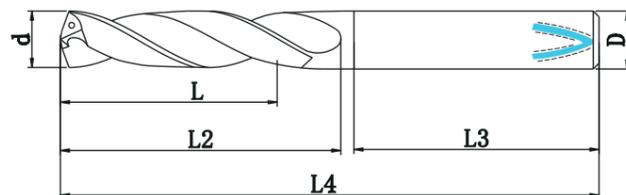
Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT05090-1	9	49	61	103	40	10	RDT05120-1	12	56	71	118	45	12
RDT05091-1	9.1	49	61	103	40	10	RDT05121-1	12.1	60	77	124	45	14
RDT05092-1	9.2	49	61	103	40	10	RDT05122-1	12.2	60	77	124	45	14
RDT05093-1	9.3	49	61	103	40	10	RDT05123-1	12.3	60	77	124	45	14
RDT05094-1	9.4	49	61	103	40	10	RDT05124-1	12.4	60	77	124	45	14
RDT05095-1	9.5	49	61	103	40	10	RDT05125-1	12.5	60	77	124	45	14
RDT05096-1	9.6	49	61	103	40	10	RDT05126-1	12.6	60	77	124	45	14
RDT05097-1	9.7	49	61	103	40	10	RDT05127-1	12.7	60	77	124	45	14
RDT05098-1	9.8	49	61	103	40	10	RDT05128-1	12.8	60	77	124	45	14
RDT05099-1	9.9	49	61	103	40	10	RDT05129-1	12.9	60	77	124	45	14
RDT05100-1	10.0	49	61	103	40	10	RDT05130-1	13	60	77	124	45	14
RDT05101-1	10.1	56	71	118	45	12	RDT05131-1	13.1	60	77	124	45	14
RDT05102-1	10.2	56	71	118	45	12	RDT05132-1	13.2	60	77	124	45	14
RDT05103-1	10.3	56	71	118	45	12	RDT05133-1	13.3	60	77	124	45	14
RDT05104-1	10.4	56	71	118	45	12	RDT05134-1	13.4	60	77	124	45	14
RDT05105-1	10.5	56	71	118	45	12	RDT05135-1	13.5	60	77	124	45	14
RDT05106-1	10.6	56	71	118	45	12	RDT05136-1	13.6	60	77	124	45	14
RDT05107-1	10.7	56	71	118	45	12	RDT05137-1	13.7	60	77	124	45	14
RDT05108-1	10.8	56	71	118	45	12	RDT05138-1	13.8	60	77	124	45	14
RDT05109-1	10.9	56	71	118	45	12	RDT05139-1	13.9	60	77	124	45	14
RDT05110-1	11	56	71	118	45	12	RDT05140-1	14	60	77	124	45	14
RDT05111-1	11.1	56	71	118	45	12	RDT05141-1	14.1	63	83	133	48	16
RDT05112-1	11.2	56	71	118	45	12	RDT05142-1	14.2	63	83	133	48	16
RDT05113-1	11.3	56	71	118	45	12	RDT05143-1	14.3	63	83	133	48	16
RDT05114-1	11.4	56	71	118	45	12	RDT05144-1	14.4	63	83	133	48	16
RDT05115-1	11.5	56	71	118	45	12	RDT05145-1	14.5	63	83	133	48	16
RDT05116-1	11.6	56	71	118	45	12	RDT05146-1	14.6	63	83	133	48	16
RDT05117-1	11.7	56	71	118	45	12	RDT05147-1	14.7	63	83	133	48	16
RDT05118-1	11.8	56	71	118	45	12	RDT05148-1	14.8	63	83	133	48	16
RDT05119-1	11.9	56	71	118	45	12	RDT05149-1	14.9	63	83	133	48	16

# RDT SERIES

With coolant supply



5D



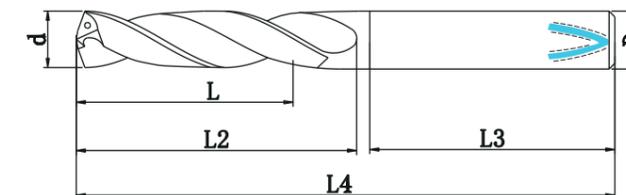
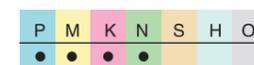
Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT05150-1	15.0	63	83	133	48	16	RDT05180-1	18	71	93	143	48	18
RDT05151-1	15.1	63	83	133	48	16	RDT05181-1	18.1	77	101	153	50	20
RDT05152-1	15.2	63	83	133	48	16	RDT05182-1	18.2	77	101	153	50	20
RDT05153-1	15.3	63	83	133	48	16	RDT05183-1	18.3	77	101	153	50	20
RDT05154-1	15.4	63	83	133	48	16	RDT05184-1	18.4	77	101	153	50	20
RDT05155-1	15.5	63	83	133	48	16	RDT05185-1	18.5	77	101	153	50	20
RDT05156-1	15.6	63	83	133	48	16	RDT05186-1	18.6	77	101	153	50	20
RDT05157-1	15.7	63	83	133	48	16	RDT05187-1	18.7	77	101	153	50	20
RDT05158-1	15.8	63	83	133	48	16	RDT05188-1	18.8	77	101	153	50	20
RDT05159-1	15.9	63	83	133	48	16	RDT05189-1	18.9	77	101	153	50	20
RDT05160-1	16	63	83	133	48	16	RDT05190-1	19.0	77	101	153	50	20
RDT05161-1	16.1	71	93	143	48	18	RDT05191-1	19.1	77	101	153	50	20
RDT05162-1	16.2	71	93	143	48	18	RDT05192-1	19.2	77	101	153	50	20
RDT05163-1	16.3	71	93	143	48	18	RDT05193-1	19.3	77	101	153	50	20
RDT05164-1	16.4	71	93	143	48	18	RDT05194-1	19.4	77	101	153	50	20
RDT05165-1	16.5	71	93	143	48	18	RDT05195-1	19.5	77	101	153	50	20
RDT05166-1	16.6	71	93	143	48	18	RDT05196-1	19.6	77	101	153	50	20
RDT05167-1	16.7	71	93	143	48	18	RDT05197-1	19.7	77	101	153	50	20
RDT05168-1	16.8	71	93	143	48	18	RDT05198-1	19.8	77	101	153	50	20
RDT05169-1	16.9	71	93	143	48	18	RDT05199-1	19.9	77	101	153	50	20
RDT05170-1	17.0	71	93	143	48	18	RDT05200-1	20.0	77	101	153	50	20
RDT05171-1	17.1	71	93	143	48	18	RDT05201-1	20.1	88	108	166	55	25
RDT05172-1	17.2	71	93	143	48	18	RDT05202-1	20.2	88	108	166	55	25
RDT05173-1	17.3	71	93	143	48	18	RDT05203-1	20.3	88	108	166	55	25
RDT05174-1	17.4	71	93	143	48	18	RDT05204-1	20.4	88	108	166	55	25
RDT05175-1	17.5	71	93	143	48	18	RDT05205-1	20.5	88	108	166	55	25
RDT05176-1	17.6	71	93	143	48	18	RDT05206-1	20.6	88	108	166	55	25
RDT05177-1	17.7	71	93	143	48	18	RDT05207-1	20.7	88	108	166	55	25
RDT05178-1	17.8	71	93	143	48	18	RDT05208-1	20.8	88	108	166	55	25
RDT05179-1	17.9	71	93	143	48	18	RDT05209-1	20.9	88	108	166	55	25

# RDT SERIES

With coolant supply



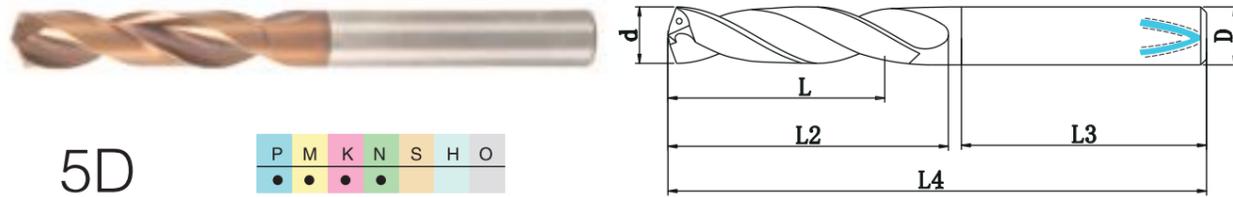
5D



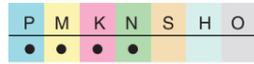
Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT05210-1	21.0	88	108	166	55	25	RDT05240-1	24.0	95	115	173	55	25
RDT05211-1	21.1	88	108	166	55	25	RDT05241-1	24.1	100	122	180	55	25
RDT05212-1	21.2	88	108	166	55	25	RDT05242-1	24.2	100	122	180	55	25
RDT05213-1	21.3	88	108	166	55	25	RDT05243-1	24.3	100	122	180	55	25
RDT05214-1	21.4	88	108	166	55	25	RDT05244-1	24.4	100	122	180	55	25
RDT05215-1	21.5	88	108	166	55	25	RDT05245-1	24.5	100	122	180	55	25
RDT05216-1	21.6	88	108	166	55	25	RDT05246-1	24.6	100	122	180	55	25
RDT05217-1	21.7	88	108	166	55	25	RDT05247-1	24.7	100	122	180	55	25
RDT05218-1	21.8	88	108	166	55	25	RDT05248-1	24.8	100	122	180	55	25
RDT05219-1	21.9	88	108	166	55	25	RDT05249-1	24.9	100	122	180	55	25
RDT05220-1	22.0	88	108	166	55	25	RDT05250-1	25.0	100	122	180	55	25
RDT05221-1	22.1	95	115	173	55	25							
RDT05222-1	22.2	95	115	173	55	25							
RDT05223-1	22.3	95	115	173	55	25							
RDT05224-1	22.4	95	115	173	55	25							
RDT05225-1	22.5	95	115	173	55	25							
RDT05226-1	22.6	95	115	173	55	25							
RDT05227-1	22.7	95	115	173	55	25							
RDT05228-1	22.8	95	115	173	55	25							
RDT05229-1	22.9	95	115	173	55	25							
RDT05230-1	23.0	95	115	173	55	25							
RDT05231-1	23.1	95	115	173	55	25							
RDT05232-1	23.2	95	115	173	55	25							
RDT05233-1	23.3	95	115	173	55	25							
RDT05234-1	23.4	95	115	173	55	25							
RDT05235-1	23.5	95	115	173	55	25							
RDT05236-1	23.6	95	115	173	55	25							
RDT05237-1	23.7	95	115	173	55	25							
RDT05238-1	23.8	95	115	173	55	25							
RDT05239-1	23.9	95	115	173	55	25							

# RDT SERIES

With coolant supply



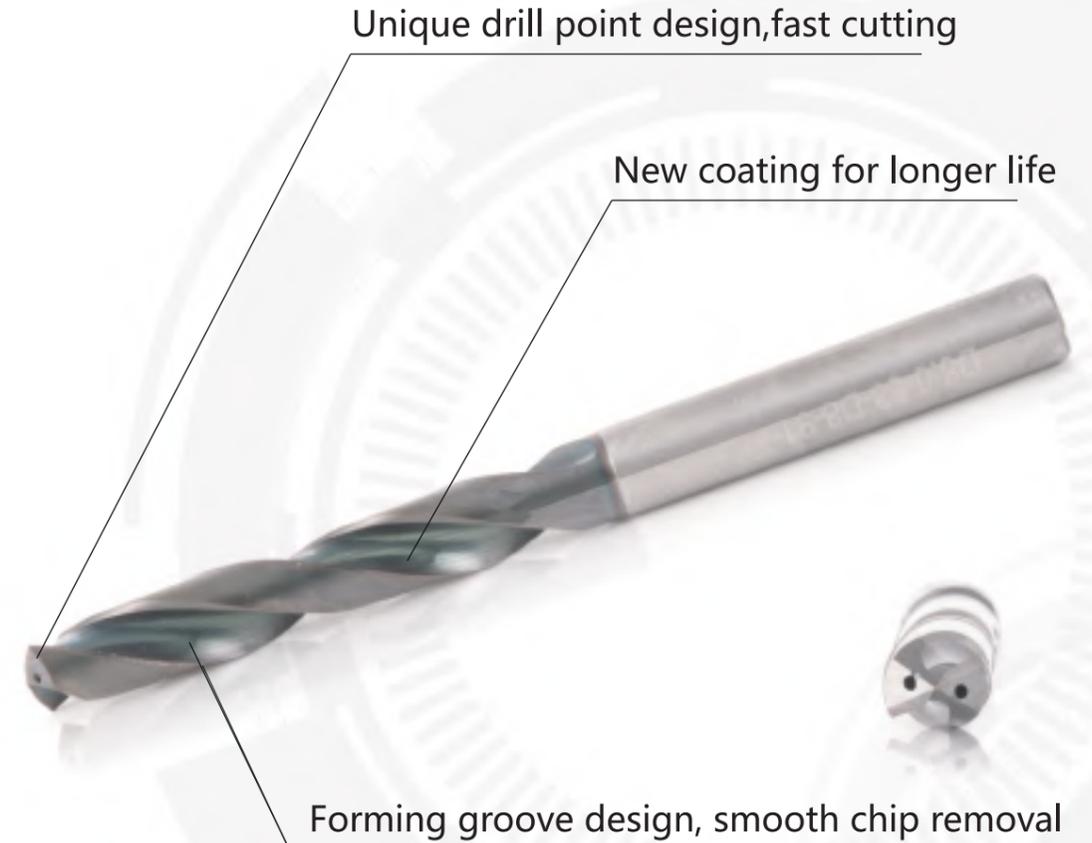
5D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDT05030-1	3.0	23	28	66	36	6	RDT05060-1	6.0	35	44	82	36	6
RDT05031-1	3.1	23	28	66	36	6	RDT05061-1	6.1	43	53	91	36	8
RDT05032-1	3.2	23	28	66	36	6	RDT05062-1	6.2	43	53	91	36	8
RDT05033-1	3.3	23	28	66	36	6	RDT05063-1	6.3	43	53	91	36	8
RDT05034-1	3.4	23	28	66	36	6	RDT05064-1	6.4	43	53	91	36	8
RDT05035-1	3.5	23	28	66	36	6	RDT05065-1	6.5	43	53	91	36	8
RDT05036-1	3.6	23	28	66	36	6	RDT05066-1	6.6	43	53	91	36	8
RDT05037-1	3.7	23	28	66	36	6	RDT05067-1	6.7	43	53	91	36	8
RDT05038-1	3.8	29	36	74	36	6	RDT05068-1	6.8	43	53	91	36	8
RDT05039-1	3.9	29	36	74	36	6	RDT05069-1	6.9	43	53	91	36	8
RDT05040-1	4.0	29	36	74	36	6	RDT05070-1	7.0	43	53	91	36	8
RDT05041-1	4.1	29	36	74	36	6	RDT05071-1	7.1	43	53	91	36	8
RDT05042-1	4.2	29	36	74	36	6	RDT05072-1	7.2	43	53	91	36	8
RDT05043-1	4.3	29	36	74	36	6	RDT05073-1	7.3	43	53	91	36	8
RDT05044-1	4.4	29	36	74	36	6	RDT05074-1	7.4	43	53	91	36	8
RDT05045-1	4.5	29	36	74	36	6	RDT05075-1	7.5	43	53	91	36	8
RDT05046-1	4.6	29	36	74	36	6	RDT05076-1	7.6	43	53	91	36	8
RDT05047-1	4.7	29	36	74	36	6	RDT05077-1	7.7	43	53	91	36	8
RDT05048-1	4.8	35	44	82	36	6	RDT05078-1	7.8	43	53	91	36	8
RDT05049-1	4.9	35	44	82	36	6	RDT05079-1	7.9	43	53	91	36	8
RDT05050-1	5	35	44	82	36	6	RDT05080-1	8.0	43	53	91	36	8
RDT05051-1	5.1	35	44	82	36	6	RDT05081-1	8.1	49	61	103	40	10
RDT05052-1	5.2	35	44	82	36	6	RDT05082-1	8.2	49	61	103	40	10
RDT05053-1	5.3	35	44	82	36	6	RDT05083-1	8.3	49	61	103	40	10
RDT05054-1	5.4	35	44	82	36	6	RDT05084-1	8.4	49	61	103	40	10
RDT05055-1	5.5	35	44	82	36	6	RDT05085-1	8.5	49	61	103	40	10
RDT05056-1	5.6	35	44	82	36	6	RDT05086-1	8.6	49	61	103	40	10
RDT05057-1	5.7	35	44	82	36	6	RDT05087-1	8.7	49	61	103	40	10
RDT05058-1	5.8	35	44	82	36	6	RDT05088-1	8.8	49	61	103	40	10
RDT05059-1	5.9	35	44	82	36	6	RDT05089-1	8.9	49	61	103	40	10

# RDM SERIES

With coolant supply

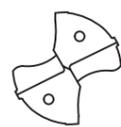


## Advantages:

- ◆ Forming groove design, smooth chip removal
- ◆ Unique drill point design, fast cutting
- ◆ New coating for longer life
- ◆ Good life for stainless steel and titanium alloys cutting

# RDM SERIES

With coolant supply



TOOL MATERIAL



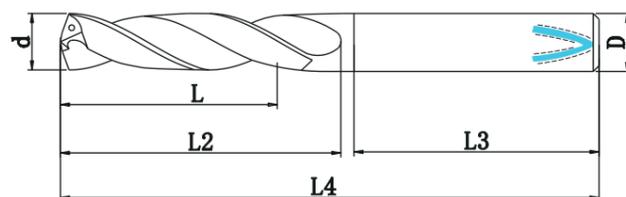
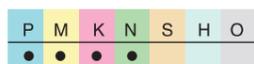
SHANK DIA. TOLERANCE



POINT ANGLE



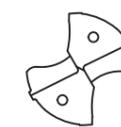
5D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDM05030-1	3.0	23	28	66	36	6	RDM05060-1	6.0	35	44	82	36	6
RDM05031-1	3.1	23	28	66	36	6	RDM05061-1	6.1	43	53	91	36	8
RDM05032-1	3.2	23	28	66	36	6	RDM05062-1	6.2	43	53	91	36	8
RDM05033-1	3.3	23	28	66	36	6	RDM05063-1	6.3	43	53	91	36	8
RDM05034-1	3.4	23	28	66	36	6	RDM05064-1	6.4	43	53	91	36	8
RDM05035-1	3.5	23	28	66	36	6	RDM05065-1	6.5	43	53	91	36	8
RDM05036-1	3.6	23	28	66	36	6	RDM05066-1	6.6	43	53	91	36	8
RDM05037-1	3.7	23	28	66	36	6	RDM05067-1	6.7	43	53	91	36	8
RDM05038-1	3.8	29	36	74	36	6	RDM05068-1	6.8	43	53	91	36	8
RDM05039-1	3.9	29	36	74	36	6	RDM05069-1	6.9	43	53	91	36	8
RDM05040-1	4.0	29	36	74	36	6	RDM05070-1	7.0	43	53	91	36	8
RDM05041-1	4.1	29	36	74	36	6	RDM05071-1	7.1	43	53	91	36	8
RDM05042-1	4.2	29	36	74	36	6	RDM05072-1	7.2	43	53	91	36	8
RDM05043-1	4.3	29	36	74	36	6	RDM05073-1	7.3	43	53	91	36	8
RDM05044-1	4.4	29	36	74	36	6	RDM05074-1	7.4	43	53	91	36	8
RDM05045-1	4.5	29	36	74	36	6	RDM05075-1	7.5	43	53	91	36	8
RDM05046-1	4.6	29	36	74	36	6	RDM05076-1	7.6	43	53	91	36	8
RDM05047-1	4.7	29	36	74	36	6	RDM05077-1	7.7	43	53	91	36	8
RDM05048-1	4.8	35	44	82	36	6	RDM05078-1	7.8	43	53	91	36	8
RDM05049-1	4.9	35	44	82	36	6	RDM05079-1	7.9	43	53	91	36	8
RDM05050-1	5	35	44	82	36	6	RDM05080-1	8.0	43	53	91	36	8
RDM05051-1	5.1	35	44	82	36	6	RDM05081-1	8.1	49	61	103	40	10
RDM05052-1	5.2	35	44	82	36	6	RDM05082-1	8.2	49	61	103	40	10
RDM05053-1	5.3	35	44	82	36	6	RDM05083-1	8.3	49	61	103	40	10
RDM05054-1	5.4	35	44	82	36	6	RDM05084-1	8.4	49	61	103	40	10
RDM05055-1	5.5	35	44	82	36	6	RDM05085-1	8.5	49	61	103	40	10
RDM05056-1	5.6	35	44	82	36	6	RDM05086-1	8.6	49	61	103	40	10
RDM05057-1	5.7	35	44	82	36	6	RDM05087-1	8.7	49	61	103	40	10
RDM05058-1	5.8	35	44	82	36	6	RDM05088-1	8.8	49	61	103	40	10
RDM05059-1	5.9	35	44	82	36	6	RDM05089-1	8.9	49	61	103	40	10

# RDM SERIES

With coolant supply



TOOL MATERIAL



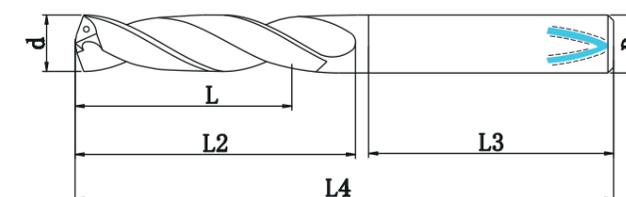
SHANK DIA. TOLERANCE



POINT ANGLE



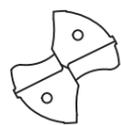
5D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDM05090-1	9	49	61	103	40	10	RDM05120-1	12.0	56	71	118	45	12
RDM05091-1	9.1	49	61	103	40	10	RDM05121-1	12.1	60	77	124	45	14
RDM05092-1	9.2	49	61	103	40	10	RDM05122-1	12.2	60	77	124	45	14
RDM05093-1	9.3	49	61	103	40	10	RDM05123-1	12.3	60	77	124	45	14
RDM05094-1	9.4	49	61	103	40	10	RDM05124-1	12.4	60	77	124	45	14
RDM05095-1	9.5	49	61	103	40	10	RDM05125-1	12.5	60	77	124	45	14
RDM05096-1	9.6	49	61	103	40	10	RDM05126-1	12.6	60	77	124	45	14
RDM05097-1	9.7	49	61	103	40	10	RDM05127-1	12.7	60	77	124	45	14
RDM05098-1	9.8	49	61	103	40	10	RDM05128-1	12.8	60	77	124	45	14
RDM05099-1	9.9	49	61	103	40	10	RDM05129-1	12.9	60	77	124	45	14
RDM05100-1	10.0	49	61	103	40	10	RDM05130-1	13	60	77	124	45	14
RDM05101-1	10.1	56	71	118	45	12	RDM05131-1	13.1	60	77	124	45	14
RDM05102-1	10.2	56	71	118	45	12	RDM05132-1	13.2	60	77	124	45	14
RDM05103-1	10.3	56	71	118	45	12	RDM05133-1	13.3	60	77	124	45	14
RDM05104-1	10.4	56	71	118	45	12	RDM05134-1	13.4	60	77	124	45	14
RDM05105-1	10.5	56	71	118	45	12	RDM05135-1	13.5	60	77	124	45	14
RDM05106-1	10.6	56	71	118	45	12	RDM05136-1	13.6	60	77	124	45	14
RDM05107-1	10.7	56	71	118	45	12	RDM05137-1	13.7	60	77	124	45	14
RDM05108-1	10.8	56	71	118	45	12	RDM05138-1	13.8	60	77	124	45	14
RDM05109-1	10.9	56	71	118	45	12	RDM05139-1	13.9	60	77	124	45	14
RDM05110-1	11.0	56	71	118	45	12	RDM05140-1	14	60	77	124	45	14
RDM05111-1	11.1	56	71	118	45	12	RDM05141-1	14.1	63	83	133	48	16
RDM05112-1	11.2	56	71	118	45	12	RDM05142-1	14.2	63	83	133	48	16
RDM05113-1	11.3	56	71	118	45	12	RDM05143-1	14.3	63	83	133	48	16
RDM05114-1	11.4	56	71	118	45	12	RDM05144-1	14.4	63	83	133	48	16
RDM05115-1	11.5	56	71	118	45	12	RDM05145-1	14.5	63	83	133	48	16
RDM05116-1	11.6	56	71	118	45	12	RDM05146-1	14.6	63	83	133	48	16
RDM05117-1	11.7	56	71	118	45	12	RDM05147-1	14.7	63	83	133	48	16
RDM05118-1	11.8	56	71	118	45	12	RDM05148-1	14.8	63	83	133	48	16
RDM05119-1	11.9	56	71	118	45	12	RDM05149-1	14.9	63	83	133	48	16

# RDM SERIES

With coolant supply



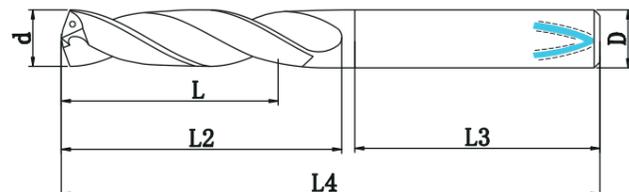
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



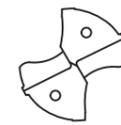
5D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDM05150-1	15.0	63	83	133	48	16	RDM05180-1	18	71	93	143	48	18
RDM05151-1	15.1	63	83	133	48	16	RDM05181-1	18.1	77	101	153	50	20
RDM05152-1	15.2	63	83	133	48	16	RDM05182-1	18.2	77	101	153	50	20
RDM05153-1	15.3	63	83	133	48	16	RDM05183-1	18.3	77	101	153	50	20
RDM05154-1	15.4	63	83	133	48	16	RDM05184-1	18.4	77	101	153	50	20
RDM05155-1	15.5	63	83	133	48	16	RDM05185-1	18.5	77	101	153	50	20
RDM05156-1	15.6	63	83	133	48	16	RDM05186-1	18.6	77	101	153	50	20
RDM05157-1	15.7	63	83	133	48	16	RDM05187-1	18.7	77	101	153	50	20
RDM05158-1	15.8	63	83	133	48	16	RDM05188-1	18.8	77	101	153	50	20
RDM05159-1	15.9	63	83	133	48	16	RDM05189-1	18.9	77	101	153	50	20
RDM05160-1	16	63	83	133	48	16	RDM05190-1	19.0	77	101	153	50	20
RDM05161-1	16.1	71	93	143	48	18	RDM05191-1	19.1	77	101	153	50	20
RDM05162-1	16.2	71	93	143	48	18	RDM05192-1	19.2	77	101	153	50	20
RDM05163-1	16.3	71	93	143	48	18	RDM05193-1	19.3	77	101	153	50	20
RDM05164-1	16.4	71	93	143	48	18	RDM05194-1	19.4	77	101	153	50	20
RDM05165-1	16.5	71	93	143	48	18	RDM05195-1	19.5	77	101	153	50	20
RDM05166-1	16.6	71	93	143	48	18	RDM05196-1	19.6	77	101	153	50	20
RDM05167-1	16.7	71	93	143	48	18	RDM05197-1	19.7	77	101	153	50	20
RDM05168-1	16.8	71	93	143	48	18	RDM05198-1	19.8	77	101	153	50	20
RDM05169-1	16.9	71	93	143	48	18	RDM05199-1	19.9	77	101	153	50	20
RDM05170-1	17.0	71	93	143	48	18	RDM05200-1	20.0	77	101	153	50	20
RDM05171-1	17.1	71	93	143	48	18	RDM05201-1	20.1	88	108	166	55	25
RDM05172-1	17.2	71	93	143	48	18	RDM05202-1	20.2	88	108	166	55	25
RDM05173-1	17.3	71	93	143	48	18	RDM05203-1	20.3	88	108	166	55	25
RDM05174-1	17.4	71	93	143	48	18	RDM05204-1	20.4	88	108	166	55	25
RDM05175-1	17.5	71	93	143	48	18	RDM05205-1	20.5	88	108	166	55	25
RDM05176-1	17.6	71	93	143	48	18	RDM05206-1	20.6	88	108	166	55	25
RDM05177-1	17.7	71	93	143	48	18	RDM05207-1	20.7	88	108	166	55	25
RDM05178-1	17.8	71	93	143	48	18	RDM05208-1	20.8	88	108	166	55	25
RDM05179-1	17.9	71	93	143	48	18	RDM05209-1	20.9	88	108	166	55	25

# RDM SERIES

With coolant supply



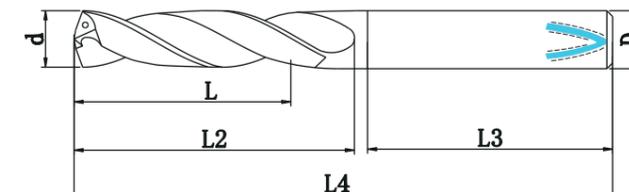
TOOL MATERIAL

SHANK DIA.  
TOLERANCE

POINT ANGLE



5D



Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDM05210-1	21.0	88	108	166	55	25	RDM05240-1	24.0	95	115	173	55	25
RDM05211-1	21.1	88	108	166	55	25	RDM05241-1	24.1	100	122	180	55	25
RDM05212-1	21.2	88	108	166	55	25	RDM05242-1	24.2	100	122	180	55	25
RDM05213-1	21.3	88	108	166	55	25	RDM05243-1	24.3	100	122	180	55	25
RDM05214-1	21.4	88	108	166	55	25	RDM05244-1	24.4	100	122	180	55	25
RDM05215-1	21.5	88	108	166	55	25	RDM05245-1	24.5	100	122	180	55	25
RDM05216-1	21.6	88	108	166	55	25	RDM05246-1	24.6	100	122	180	55	25
RDM05217-1	21.7	88	108	166	55	25	RDM05247-1	24.7	100	122	180	55	25
RDM05218-1	21.8	88	108	166	55	25	RDM05248-1	24.8	100	122	180	55	25
RDM05219-1	21.9	88	108	166	55	25	RDM05249-1	24.9	100	122	180	55	25
RDM05220-1	22.0	88	108	166	55	25	RDM05250-1	25.0	100	122	180	55	25
RDM05221-1	22.1	95	115	173	55	25							
RDM05222-1	22.2	95	115	173	55	25							
RDM05223-1	22.3	95	115	173	55	25							
RDM05224-1	22.4	95	115	173	55	25							
RDM05225-1	22.5	95	115	173	55	25							
RDM05226-1	22.6	95	115	173	55	25							
RDM05227-1	22.7	95	115	173	55	25							
RDM05228-1	22.8	95	115	173	55	25							
RDM05229-1	22.9	95	115	173	55	25							
RDM05230-1	23.0	95	115	173	55	25							
RDM05231-1	23.1	95	115	173	55	25							
RDM05232-1	23.2	95	115	173	55	25							
RDM05233-1	23.3	95	115	173	55	25							
RDM05234-1	23.4	95	115	173	55	25							
RDM05235-1	23.5	95	115	173	55	25							
RDM05236-1	23.6	95	115	173	55	25							
RDM05237-1	23.7	95	115	173	55	25							
RDM05238-1	23.8	95	115	173	55	25							
RDM05239-1	23.9	95	115	173	55	25							

# RNT SERIES



# RNT SERIES

CARBIDE  
TOOL MATERIAL

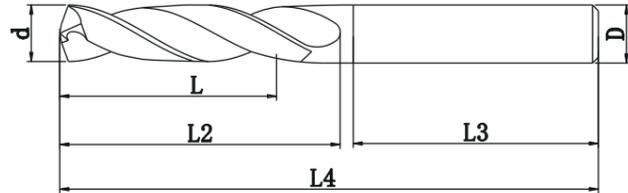
h7  
SHANK DIA. TOLERANCE

140°  
POINT ANGLE



5D

P	M	K	N	S	H	O
●	●	●	●	●	●	●



Order number	flute diameter d	flute length L2	overall length L4	Shank diameter D
RNT050010-0	0.10	4	38	3
RNT050020-0	0.20	4	38	3
RNT050030-0	0.30	4	38	3
RNT050040-0	0.40	4	38	3
RNT050050-0	0.50	5	38	3
RNT050060-0	0.60	5	38	3
RNT050070-0	0.70	5	38	3
RNT050080-0	0.80	5	38	3
RNT050090-0	0.90	5	38	3
RNT050100-0	1.00	6	38	3
RNT050110-0	1.10	6	38	3
RNT050120-0	1.20	6	38	3
RNT050130-0	1.30	8	38	3
RNT050140-0	1.40	8	38	3
RNT050150-0	1.50	8	38	3
RNT050160-0	1.60	8	38	3
RNT050170-0	1.70	8	38	3
RNT050180-0	1.80	8	38	3
RNT050190-0	1.90	8	38	3
RNT050200-0	2.00	8	38	3
RNT050210-0	2.10	10	38	3
RNT050220-0	2.20	10	38	3
RNT050230-0	2.30	10	38	3
RNT050240-0	2.40	10	38	3
RNT050250-0	2.50	10	38	3
RNT050260-0	2.60	10	38	3
RNT050270-0	2.70	10	38	3
RNT050280-0	2.80	10	38	3
RNT050290-0	2.90	10	38	3

## Advantages:

- ◆ D1 can be grinded up to 80 times diameter
- ◆ Minimum D0.6 for drills with coolant supply
- ◆ The accuracy can be guaranteed within 0.005

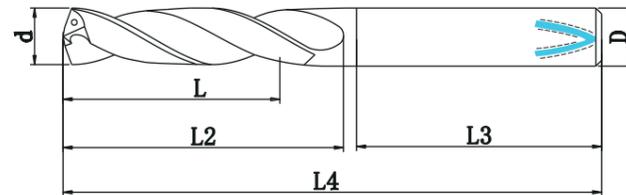
RNT SERIES

# RNT SERIES

With coolant supply



5D



Order number	flute diameter d	flute length L2	overall length L4	Shank diameter D
RNT050060-1	0.60	5	38	3
RNT050070-1	0.70	5	38	3
RNT050080-1	0.80	5	38	3
RNT050090-1	0.90	5	38	3
RNT050100-1	1.00	6	38	3
RNT050110-1	1.10	6	38	3
RNT050120-1	1.20	6	38	3
RNT050130-1	1.30	8	38	3
RNT050140-1	1.40	8	38	3
RNT050150-1	1.50	8	38	3
RNT050160-1	1.60	8	38	3
RNT050170-1	1.70	8	38	3
RNT050180-1	1.80	8	38	3
RNT050190-1	1.90	8	38	3
RNT050200-1	2.00	8	38	3
RNT050210-1	2.10	10	38	3
RNT050220-1	2.20	10	38	3
RNT050230-1	2.30	10	38	3
RNT050240-1	2.40	10	38	3
RNT050250-1	2.50	10	38	3
RNT050260-1	2.60	10	38	3
RNT050270-1	2.70	10	38	3
RNT050280-1	2.80	10	38	3
RNT050290-1	2.90	10	38	3

# RDS SERIES

With coolant supply

Max 50D

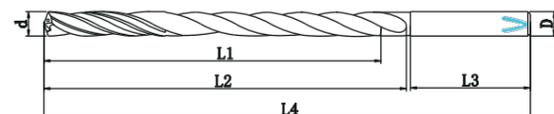


## Advantages:

- ◆ Double margin design, stability for deep hole drilling.
- ◆ Fine polishing chip flute, excellent in chip removal, sufficient cooling.
- ◆ Strong cutting edge, improve process reliability

# RDS SERIES

With coolant supply



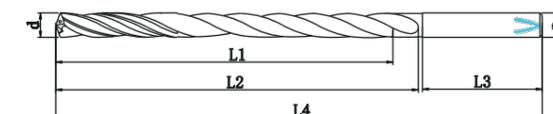
8D



Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDS08030-1	D3.0	28	34	80	36	6	RDS08060-1	D6.0	48	57	97	36	6
RDS08031-1	D3.1	28	34	80	36	6	RDS08061-1	D6.1	55	66	106	36	8
RDS08032-1	D3.2	28	34	80	36	6	RDS08062-1	D6.2	55	66	106	36	8
RDS08033-1	D3.3	28	34	80	36	6	RDS08063-1	D6.3	55	66	106	36	8
RDS08034-1	D3.4	28	34	80	36	6	RDS08064-1	D6.4	55	66	106	36	8
RDS08035-1	D3.5	28	34	80	36	6	RDS08065-1	D6.5	55	66	106	36	8
RDS08036-1	D3.6	28	34	80	36	6	RDS08066-1	D6.6	55	66	106	36	8
RDS08037-1	D3.7	28	34	80	36	6	RDS08067-1	D6.7	55	66	106	36	8
RDS08038-1	D3.8	37	45	85	36	6	RDS08068-1	D6.8	55	66	106	36	8
RDS08039-1	D3.9	37	45	85	36	6	RDS08069-1	D6.9	55	66	106	36	8
RDS08040-1	D4.0	37	45	85	36	6	RDS08070-1	D7.0	55	66	106	36	8
RDS08041-1	D4.1	37	45	85	36	6	RDS08071-1	D7.1	64	76	116	36	8
RDS08042-1	D4.2	37	45	85	36	6	RDS08072-1	D7.2	64	76	116	36	8
RDS08043-1	D4.3	37	45	85	36	6	RDS08073-1	D7.3	64	76	116	36	8
RDS08044-1	D4.4	37	45	85	36	6	RDS08074-1	D7.4	64	76	116	36	8
RDS08045-1	D4.5	37	45	85	36	6	RDS08075-1	D7.5	64	76	116	36	8
RDS08046-1	D4.6	37	45	85	36	6	RDS08076-1	D7.6	64	76	116	36	8
RDS08047-1	D4.7	37	45	85	36	6	RDS08077-1	D7.7	64	76	116	36	8
RDS08048-1	D4.8	48	57	97	36	6	RDS08078-1	D7.8	64	76	116	36	8
RDS08049-1	D4.9	48	57	97	36	6	RDS08079-1	D7.9	64	76	116	36	8
RDS08050-1	D5.0	48	57	97	36	6	RDS08080-1	D8.0	64	76	116	36	8
RDS08051-1	D5.1	48	57	97	36	6	RDS08081-1	D8.1	80	95	139	40	10
RDS08052-1	D5.2	48	57	97	36	6	RDS08082-1	D8.2	80	95	139	40	10
RDS08053-1	D5.3	48	57	97	36	6	RDS08083-1	D8.3	80	95	139	40	10
RDS08054-1	D5.4	48	57	97	36	6	RDS08084-1	D8.4	80	95	139	40	10
RDS08055-1	D5.5	48	57	97	36	6	RDS08085-1	D8.5	80	95	139	40	10
RDS08056-1	D5.6	48	57	97	36	6	RDS08086-1	D8.6	80	95	139	40	10
RDS08057-1	D5.7	48	57	97	36	6	RDS08087-1	D8.7	80	95	139	40	10
RDS08058-1	D5.8	48	57	97	36	6	RDS08088-1	D8.8	80	95	139	40	10
RDS08059-1	D5.9	48	57	97	36	6	RDS08089-1	D8.9	80	95	139	40	10

# RDS SERIES

With coolant supply



8D



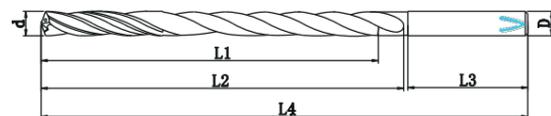
Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDS08090-1	D9.0	80	95	139	40	10	RDS08120-1	D12.0	96	114	163	45	12
RDS08091-1	D9.1	80	95	139	40	10	RDS08125-1	D12.5	119	133	182	45	14
RDS08092-1	D9.2	80	95	139	40	10	RDS08127-1	D12.7	119	133	182	45	14
RDS08093-1	D9.3	80	95	139	40	10	RDS08130-1	D13.0	119	133	182	45	14
RDS08094-1	D9.4	80	95	139	40	10	RDS08135-1	D13.5	119	133	182	45	14
RDS08095-1	D9.5	80	95	139	40	10	RDS08140-1	D14.0	119	133	182	45	14
RDS08096-1	D9.6	80	95	139	40	10	RDS08145-1	D14.5	136	152	204	48	16
RDS08097-1	D9.7	80	95	139	40	10	RDS08150-1	D15.0	136	152	204	48	16
RDS08098-1	D9.8	80	95	139	40	10	RDS08155-1	D15.5	136	152	204	48	16
RDS08099-1	D9.9	80	95	139	40	10	RDS08160-1	D16.0	136	152	204	48	16
RDS08100-1	D10.0	80	95	139	40	10	RDS08165-1	D16.5	153	171	223	48	18
RDS08101-1	D10.1	96	114	163	45	12	RDS08170-1	D17.0	153	171	223	48	18
RDS08102-1	D10.2	96	114	163	45	12	RDS08175-1	D17.5	153	171	223	48	18
RDS08103-1	D10.3	96	114	163	45	12	RDS08180-1	D18.0	153	171	223	48	18
RDS08104-1	D10.4	96	114	163	45	12	RDS08185-1	D18.5	170	190	244	50	20
RDS08105-1	D10.5	96	114	163	45	12	RDS08190-1	D19.0	170	190	244	50	20
RDS08106-1	D10.6	96	114	163	45	12	RDS08195-1	D19.5	170	190	244	50	20
RDS08107-1	D10.7	96	114	163	45	12	RDS08200-1	D20.0	170	190	244	50	20
RDS08108-1	D10.8	96	114	163	45	12							
RDS08109-1	D10.9	96	114	163	45	12							
RDS08110-1	D11.0	96	114	163	45	12							
RDS08111-1	D11.1	96	114	163	45	12							
RDS08112-1	D11.2	96	114	163	45	12							
RDS08113-1	D11.3	96	114	163	45	12							
RDS08114-1	D11.4	96	114	163	45	12							
RDS08115-1	D11.5	96	114	163	45	12							
RDS08116-1	D11.6	96	114	163	45	12							
RDS08117-1	D11.7	96	114	163	45	12							
RDS08118-1	D11.8	96	114	163	45	12							
RDS08119-1	D11.9	96	114	163	45	12							

# RNS SERIES

With coolant supply



8D



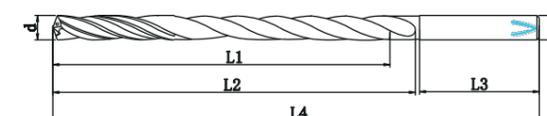
Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RNS080060-1	0.60	8	10	50	25	3	RNS080205-1	2.05	20	24	63	36	3
RNS080070-1	0.70	8	10	50	25	3	RNS080210-1	2.10	20	24	63	36	3
RNS080075-1	0.75	8.5	10	50	25	3	RNS080215-1	2.15	21	25	63	36	3
RNS080080-1	0.80	8.5	10	50	25	3	RNS080220-1	2.20	21	25	63	36	3
RNS080088-1	0.88	8.5	10	50	25	3	RNS080225-1	2.25	22	26	67	36	3
RNS080090-1	0.90	8.5	10	50	25	3	RNS080230-1	2.30	22	26	67	36	3
RNS080095-1	0.95	8.5	10	50	25	3	RNS080235-1	2.35	24	28	67	36	3
RNS080100-1	1.00	12	15	55	36	3	RNS080240-1	2.40	24	28	67	36	3
RNS080105-1	1.05	12	15	55	36	3	RNS080245-1	2.45	25	29	67	36	3
RNS080108-1	1.08	12	15	55	36	3	RNS080250-1	2.50	25	29	67	36	3
RNS080110-1	1.10	12	15	55	36	3	RNS080255-1	2.55	26	30	71	36	3
RNS080115-1	1.15	12	15	55	36	3	RNS080260-1	2.60	26	30	71	36	3
RNS080120-1	1.20	12	15	55	36	3	RNS080265-1	2.65	26	31	71	36	3
RNS080125-1	1.25	12	15	55	36	3	RNS080270-1	2.70	26	31	71	36	3
RNS080130-1	1.30	12	15	55	36	3	RNS080275-1	2.75	27	32	71	36	3
RNS080135-1	1.35	12	15	55	36	3	RNS080280-1	2.80	27	32	71	36	3
RNS080140-1	1.40	12	15	55	36	3	RNS080285-1	2.85	28	33	71	36	3
RNS080145-1	1.45	12	15	55	36	3	RNS080290-1	2.90	28	33	71	36	3
RNS080150-1	1.50	17	20	68	36	3	RNS080295-1	2.95	29	34	71	36	3
RNS080155-1	1.55	17	20	68	36	3							
RNS080160-1	1.60	17	20	68	36	3							
RNS080165-1	1.65	17	20	68	36	3							
RNS080170-1	1.70	17	20	68	36	3							
RNS080175-1	1.75	17	20	68	36	3							
RNS080180-1	1.80	17	20	68	36	3							
RNS080182-1	1.82	17	20	68	36	3							
RNS080185-1	1.85	17	20	68	36	3							
RNS080190-1	1.90	17	20	68	36	3							
RNS080195-1	1.95	17	20	68	36	3							
RNS080200-1	2.00	20	23	63	36	3							

# RDS SERIES

With coolant supply



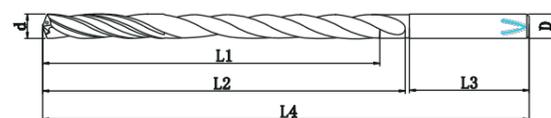
12D



Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDS12030-1	D3.0	48	54	92	36	6	RDS12060-1	D6.0	74	83	121	36	6
RDS12031-1	D3.1	48	54	92	36	6	RDS12061-1	D6.1	98	110	148	36	8
RDS12032-1	D3.2	48	54	92	36	6	RDS12062-1	D6.2	98	110	148	36	8
RDS12033-1	D3.3	48	54	92	36	6	RDS12063-1	D6.3	98	110	148	36	8
RDS12034-1	D3.4	48	54	92	36	6	RDS12064-1	D6.4	98	110	148	36	8
RDS12035-1	D3.5	48	54	92	36	6	RDS12065-1	D6.5	98	110	148	36	8
RDS12036-1	D3.6	48	54	92	36	6	RDS12066-1	D6.6	98	110	148	36	8
RDS12037-1	D3.7	48	54	92	36	6	RDS12067-1	D6.7	98	110	148	36	8
RDS12038-1	D3.8	56	64	102	36	6	RDS12068-1	D6.8	98	110	148	36	8
RDS12039-1	D3.9	56	64	102	36	6	RDS12069-1	D6.9	98	110	148	36	8
RDS12040-1	D4.0	56	64	102	36	6	RDS12070-1	D7.0	98	110	148	36	8
RDS12041-1	D4.1	56	64	102	36	6	RDS12071-1	D7.1	98	110	148	36	8
RDS12042-1	D4.2	56	64	102	36	6	RDS12072-1	D7.2	98	110	148	36	8
RDS12043-1	D4.3	56	64	102	36	6	RDS12073-1	D7.3	98	110	148	36	8
RDS12044-1	D4.4	56	64	102	36	6	RDS12074-1	D7.4	98	110	148	36	8
RDS12045-1	D4.5	56	64	102	36	6	RDS12075-1	D7.5	98	110	148	36	8
RDS12046-1	D4.6	56	64	102	36	6	RDS12076-1	D7.6	98	110	148	36	8
RDS12047-1	D4.7	56	64	102	36	6	RDS12077-1	D7.7	98	110	148	36	8
RDS12048-1	D4.8	74	83	121	36	6	RDS12078-1	D7.8	98	110	148	36	8
RDS12049-1	D4.9	74	83	121	36	6	RDS12079-1	D7.9	98	110	148	36	8
RDS12050-1	D5.0	74	83	121	36	6	RDS12080-1	D8.0	98	110	148	36	8
RDS12051-1	D5.1	74	83	121	36	6	RDS12081-1	D8.1	123	138	180	40	10
RDS12052-1	D5.2	74	83	121	36	6	RDS12082-1	D8.2	123	138	180	40	10
RDS12053-1	D5.3	74	83	121	36	6	RDS12083-1	D8.3	123	138	180	40	10
RDS12054-1	D5.4	74	83	121	36	6	RDS12084-1	D8.4	123	138	180	40	10
RDS12055-1	D5.5	74	83	121	36	6	RDS12085-1	D8.5	123	138	180	40	10
RDS12056-1	D5.6	74	83	121	36	6	RDS12086-1	D8.6	123	138	180	40	10
RDS12057-1	D5.7	74	83	121	36	6	RDS12087-1	D8.7	123	138	180	40	10
RDS12058-1	D5.8	74	83	121	36	6	RDS12088-1	D8.8	123	138	180	40	10
RDS12059-1	D5.9	74	83	121	36	6	RDS12089-1	D8.9	123	138	180	40	10

# RDS SERIES

With coolant supply



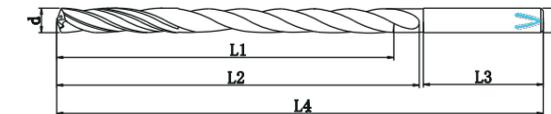
12D



Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDS12090-1	D9.0	123	138	180	40	10	RDS12120-1	D12.0	140	158	206	45	12
RDS12091-1	D9.1	123	138	180	40	10	RDS12121-1	D12.1	168	182	230	45	14
RDS12092-1	D9.2	123	138	180	40	10	RDS12122-1	D12.2	168	182	230	45	14
RDS12093-1	D9.3	123	138	180	40	10	RDS12123-1	D12.3	168	182	230	45	14
RDS12094-1	D9.4	123	138	180	40	10	RDS12124-1	D12.4	168	182	230	45	14
RDS12095-1	D9.5	123	138	180	40	10	RDS12125-1	D12.5	168	182	230	45	14
RDS12096-1	D9.6	123	138	180	40	10	RDS12126-1	D12.6	168	182	230	45	14
RDS12097-1	D9.7	123	138	180	40	10	RDS12127-1	D12.7	168	182	230	45	14
RDS12098-1	D9.8	123	138	180	40	10	RDS12128-1	D12.8	168	182	230	45	14
RDS12099-1	D9.9	123	138	180	40	10	RDS12129-1	D12.9	168	182	230	45	14
RDS12100-1	D10.0	123	138	180	40	10	RDS12130-1	D13.0	168	182	230	45	14
RDS12101-1	D10.1	140	158	206	45	12	RDS12135-1	D13.5	168	182	230	45	14
RDS12102-1	D10.2	140	158	206	45	12	RDS12140-1	D14.0	168	182	230	45	14
RDS12103-1	D10.3	140	158	206	45	12	RDS12145-1	D14.5	168	208	260	48	16
RDS12104-1	D10.4	140	158	206	45	12	RDS12150-1	D15.0	168	208	260	48	16
RDS12105-1	D10.5	140	158	206	45	12	RDS12155-1	D15.5	168	208	260	48	16
RDS12106-1	D10.6	140	158	206	45	12	RDS12160-1	D16.0	168	208	260	48	16
RDS12107-1	D10.7	140	158	206	45	12	RDS12165-1	D16.5	216	234	285	48	18
RDS12108-1	D10.8	140	158	206	45	12	RDS12170-1	D17.0	216	234	285	48	18
RDS12109-1	D10.9	140	158	206	45	12	RDS12175-1	D17.5	216	234	285	48	18
RDS12110-1	D11.0	140	158	206	45	12	RDS12180-1	D18.0	216	234	285	48	18
RDS12111-1	D11.1	140	158	206	45	12	RDS12185-1	D18.5	238	258	310	50	20
RDS12112-1	D11.2	140	158	206	45	12	RDS12190-1	D19.0	238	258	310	50	20
RDS12113-1	D11.3	140	158	206	45	12	RDS12195-1	D19.5	238	258	310	50	20
RDS12114-1	D11.4	140	158	206	45	12	RDS12200-1	D20.0	238	258	310	50	20
RDS12115-1	D11.5	140	158	206	45	12							
RDS12116-1	D11.6	140	158	206	45	12							
RDS12117-1	D11.7	140	158	206	45	12							
RDS12118-1	D11.8	140	158	206	45	12							
RDS12119-1	D11.9	140	158	206	45	12							

# RNS SERIES

With coolant supply



12D



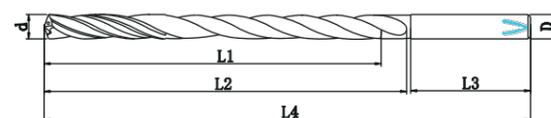
Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RNS1200060-1	0.60	10	13	50	25	3
RNS1200070-1	0.70	10	13	50	25	3
RNS1200080-1	0.80	13	16	50	25	3
RNS1200090-1	0.90	13	16	50	25	3
RNS1200100-1	1.00	15	18	50	25	3
RNS1200110-1	1.10	15	18	50	26	3
RNS1200120-1	1.20	18	21	55	26	3
RNS1200130-1	1.30	18	21	55	26	3
RNS1200140-1	1.40	18	21	55	26	3
RNS1200150-1	1.50	22	25	65	33	3
RNS1200160-1	1.60	22	25	65	33	3
RNS1200170-1	1.70	25	28	68	33	3
RNS1200180-1	1.80	25	28	68	36	3
RNS1200190-1	1.90	25	28	68	36	3
RNS1200200-1	2.00	28	31	72	36	3
RNS1200210-1	2.10	29	33	72	36	3
RNS1200220-1	2.20	30	34	72	36	3
RNS1200230-1	2.30	32	36	77	36	3
RNS1200240-1	2.40	33	37	77	36	3
RNS1200250-1	2.50	35	39	77	36	3
RNS1200260-1	2.60	36	40	83	36	3
RNS1200270-1	2.70	37	42	83	36	3
RNS1200280-1	2.80	38	43	83	36	3
RNS1200290-1	2.90	40	45	83	36	3

# RDS SERIES

With coolant supply



16D



20D

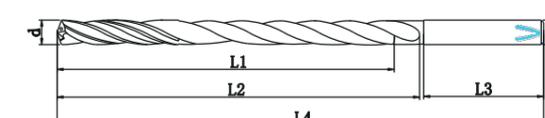
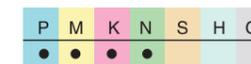
Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDS16030-1	D3.0	52	57	100	36	6	RDS20030-1	D3.0	60	65	110	36	6
RDS16035-1	D3.5	72	78	120	36	6	RDS20035-1	D3.5	86	92	135	36	6
RDS16040-1	D4.0	72	78	120	36	6	RDS20040-1	D4.0	86	92	135	36	6
RDS16045-1	D4.5	92	100	140	36	6	RDS20045-1	D4.5	110	118	160	36	6
RDS16048-1	D4.8	92	100	140	36	6	RDS20048-1	D4.8	110	118	160	36	6
RDS16050-1	D5.0	92	100	140	36	6	RDS20050-1	D5.0	110	118	160	36	6
RDS16055-1	D5.5	101	110	150	36	6	RDS20055-1	D5.5	123	132	175	36	6
RDS16058-1	D5.8	111	120	160	36	6	RDS20058-1	D5.8	135	144	185	36	6
RDS16060-1	D6.0	111	120	160	36	6	RDS20060-1	D6.0	135	144	185	36	6
RDS16061-1	D6.1	124	135	175	36	8	RDS20061-1	D6.1	151	162	200	36	8
RDS16065-1	D6.5	124	135	175	36	8	RDS20065-1	D6.5	151	162	200	36	8
RDS16068-1	D6.8	124	135	175	36	8	RDS20068-1	D6.8	151	162	200	36	8
RDS16070-1	D7.0	124	135	175	36	8	RDS20070-1	D7.0	151	162	200	36	8
RDS16074-1	D7.4	140	152	192	36	8	RDS20074-1	D7.4	172	184	222	36	8
RDS16075-1	D7.5	140	152	192	36	8	RDS20075-1	D7.5	172	184	222	36	8
RDS16080-1	D8.0	140	152	192	36	8	RDS20080-1	D8.0	172	184	222	36	8
RDS16083-1	D8.3	148	162	206	40	10	RDS20083-1	D8.3	184	198	240	40	10
RDS16085-1	D8.5	148	162	206	40	10	RDS20085-1	D8.5	184	198	240	40	10
RDS16090-1	D9.0	148	162	206	40	10	RDS20090-1	D9.0	184	198	240	40	10
RDS16098-1	D9.8	165	180	224	40	10	RDS20098-1	D9.8	205	220	262	40	10
RDS16100-1	D10.0	165	180	224	40	10	RDS20100-1	D10.0	205	220	262	40	10
RDS16102-1	D10.2	181	198	247	45	12	RDS20102-1	D10.2	225	242	289	45	12
RDS16110-1	D11.0	181	198	247	45	12	RDS20111-1	D11.0	225	242	289	45	12
RDS16115-1	D11.5	198	216	265	45	12	RDS20115-1	D11.5	246	264	311	45	12
RDS16118-1	D11.8	198	216	265	45	12	RDS20118-1	D11.8	246	264	311	45	12
RDS16120-1	D12.0	198	216	265	45	12	RDS20120-1	D12.0	246	264	311	45	12
RDS16127-1	D12.7	238	252	301	45	14	RDS20127-1	D12.7	294	308	357	45	14
RDS16130-1	D13.0	238	252	301	45	14	RDS20130-1	D13.0	294	308	357	45	14
RDS16140-1	D14.0	238	252	301	45	14	RDS20140-1	D14.0	294	308	357	45	14
RDS16150-1	D15.0	272	288	340	48	16	RDS20150-1	D15.0	336	352	404	48	16
RDS16160-1	D16.0	272	288	340	48	16	RDS20160-1	D16.0	336	352	404	48	16

# RNS SERIES

With coolant supply



16D

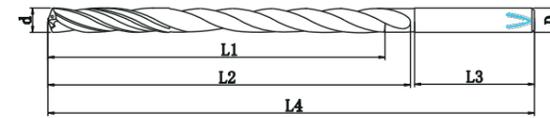


20D

Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RNS1600060-1	0.60	13	16	60	36	3	RNS2000060-1	0.60	16	19	60	36	3
RNS1600070-1	0.70	13	16	60	36	3	RNS2000070-1	0.70	16	19	60	36	3
RNS1600080-1	0.80	17	20	65	36	3	RNS2000080-1	0.80	20	23	65	36	3
RNS1600090-1	0.90	17	20	65	36	3	RNS2000090-1	0.90	20	23	65	36	3
RNS1600100-1	1.00	20	23	65	36	3	RNS2000100-1	1.00	24	27	70	36	3
RNS1600110-1	1.10	20	23	65	36	3	RNS2000110-1	1.10	24	27	70	36	3
RNS1600120-1	1.20	24	27	70	36	3	RNS2000120-1	1.20	28	30	70	36	3
RNS1600130-1	1.30	24	27	70	36	3	RNS2000130-1	1.30	28	30	70	36	3
RNS1600140-1	1.40	24	27	70	36	3	RNS2000140-1	1.40	28	30	70	36	3
RNS1600150-1	1.50	28	31	75	36	3	RNS2000150-1	1.50	34	37	80	36	3
RNS1600160-1	1.60	28	31	75	36	3	RNS2000160-1	1.60	34	37	80	36	3
RNS1600170-1	1.70	32	35	75	36	3	RNS2000170-1	1.70	40	43	85	36	3
RNS1600180-1	1.80	32	35	75	36	3	RNS2000180-1	1.80	40	43	85	36	3
RNS1600190-1	1.90	32	35	75	36	3	RNS2000190-1	1.90	40	43	85	36	3
RNS1600200-1	2.00	36	39	81	36	3	RNS2000200-1	2.00	44	47	90	36	3
RNS1600210-1	2.10	37	41	81	36	3	RNS2000210-1	2.10	45	49	90	36	3
RNS1600220-1	2.20	39	43	81	36	3	RNS2000220-1	2.20	48	52	90	36	3
RNS1600230-1	2.30	39	45	87	36	3	RNS2000230-1	2.30	50	54	97	36	3
RNS1600240-1	2.40	43	47	87	36	3	RNS2000240-1	2.40	52	56	97	36	3
RNS1600250-1	2.50	45	49	87	36	3	RNS2000250-1	2.50	55	59	97	36	3
RNS1600260-1	2.60	47	51	95	36	3	RNS2000260-1	2.60	57	61	107	36	3
RNS1600270-1	2.70	48	53	95	36	3	RNS2000270-1	2.70	58	63	107	36	3
RNS1600280-1	2.80	50	55	95	36	3	RNS2000280-1	2.80	61	66	107	36	3
RNS1600290-1	2.90	52	57	95	36	3	RNS2000290-1	2.90	63	68	107	36	3

# RDS SERIES

With coolant supply



25D

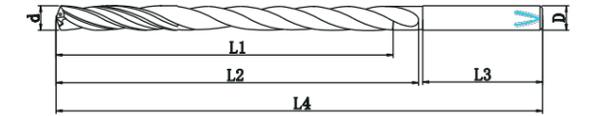


30D

Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDS25030-1	D3.0	79	84	125	36	6	RDS30030-1	D3.0	92	97	135	36	6
RDS25035-1	D3.5	108	114	155	36	6	RDS30035-1	D3.5	127	133	166	36	6
RDS25040-1	D4.0	108	114	155	36	6	RDS30040-1	D4.0	127	133	166	36	6
RDS25045-1	D4.5	137	145	185	36	6	RDS30045-1	D4.5	162	169	210	36	6
RDS25048-1	D4.8	137	145	185	36	6	RDS30048-1	D4.8	162	169	210	36	6
RDS25050-1	D5.0	137	145	185	36	6	RDS30050-1	D5.0	162	169	210	36	6
RDS25055-1	D5.5	151	160	200	36	6	RDS30055-1	D5.5	178	187	230	36	6
RDS25060-1	D6.0	165	174	214	36	6	RDS30060-1	D6.0	195	204	245	36	6
RDS25061-1	D6.1	183	194	234	36	8	RDS30065-1	D6.5	217	228	268	36	8
RDS25065-1	D6.5	183	194	234	36	8	RDS30068-1	D6.8	217	228	268	36	8
RDS25068-1	D6.8	183	194	234	36	8	RDS30070-1	D7.0	217	228	268	36	8
RDS25070-1	D7.0	183	194	234	36	8	RDS30074-1	D7.4	244	256	294	36	8
RDS25080-1	D8.0	209	220	260	36	8	RDS30080-1	D8.0	244	256	294	36	8
RDS25085-1	D8.5	229	243	289	40	10	RDS30085-1	D8.5	273	287	330	40	10
RDS25090-1	D9.0	229	243	289	40	10	RDS30090-1	D9.0	273	287	330	40	10
RDS25098-1	D9.8	255	270	314	40	10	RDS30100-1	D10.0	305	320	364	40	10
RDS25100-1	D10.0	255	270	314	40	12	RDS30102-1	D10.2	335	352	401	45	12
RDS25102-1	D10.2	280	297	346	45	12	RDS30110-1	D11.0	335	352	401	45	12
RDS25110-1	D11.0	280	297	346	45	12	RDS30120-1	D12.0	364	382	430	45	12
RDS25115-1	D11.5	306	324	373	45	12							
RDS25120-1	D12.0	306	324	373	45	12							

# RNS SERIES

With coolant supply



25D

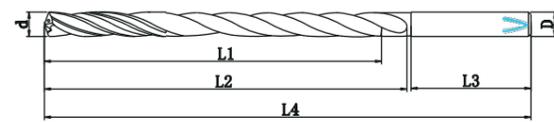


30D

Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RNS2500060-1	0.60	20	23	65	36	3	RNS3000060-1	0.60	23	26	65	36	3
RNS2500070-1	0.70	20	23	65	36	3	RNS3000070-1	0.70	23	26	65	36	3
RNS2500080-1	0.80	25	28	70	36	3	RNS3000080-1	0.80	30	33	75	36	3
RNS2500090-1	0.90	25	28	70	36	3	RNS3000090-1	0.90	30	33	75	36	3
RNS2500100-1	1.00	30	33	75	36	3	RNS3000100-1	1.00	35	38	85	36	3
RNS2500110-1	1.10	35	38	75	36	3	RNS3000110-1	1.10	35	38	85	36	3
RNS2500120-1	1.20	35	38	75	36	3	RNS3000120-1	1.20	40	43	85	36	3
RNS2500130-1	1.30	37	40	80	36	3	RNS3000130-1	1.30	40	43	85	36	3
RNS2500140-1	1.40	37	40	80	36	3	RNS3000140-1	1.40	47	50	90	36	3
RNS2500150-1	1.50	43	46	85	36	3	RNS3000150-1	1.50	47	50	90	36	3
RNS2500160-1	1.60	43	46	85	36	3	RNS3000160-1	1.60	55	58	100	36	3
RNS2500170-1	1.70	50	53	95	36	3	RNS3000170-1	1.70	55	58	100	36	3
RNS2500180-1	1.80	50	53	95	36	3	RNS3000180-1	1.80	60	63	105	36	3
RNS2500190-1	1.90	50	53	95	36	3	RNS3000190-1	1.90	60	63	105	36	3
RNS2500200-1	2.00	54	57	101	36	3	RNS3000200-1	2.00	64	67	112	36	3
RNS2500210-1	2.10	56	60	101	36	3	RNS3000210-1	2.10	66	70	112	36	3
RNS2500220-1	2.20	59	63	101	36	3	RNS3000220-1	2.20	70	74	112	36	3
RNS2500230-1	2.30	62	66	107	36	3	RNS3000230-1	2.30	73	77	122	36	3
RNS2500240-1	2.40	64	68	107	36	3	RNS3000240-1	2.40	76	80	122	36	3
RNS2500250-1	2.50	67	71	107	36	3	RNS3000250-1	2.50	80	84	122	36	3
RNS2500260-1	2.60	70	74	122	36	3	RNS3000260-1	2.60	83	87	136	36	3
RNS2500270-1	2.70	72	77	122	36	3	RNS3000270-1	2.70	85	90	136	36	3
RNS2500280-1	2.80	75	80	122	36	3	RNS3000280-1	2.80	89	94	136	36	3
RNS2500290-1	2.90	78	83	122	36	3	RNS3000290-1	2.90	92	97	136	36	3

# RDS SERIES

With coolant supply



40D



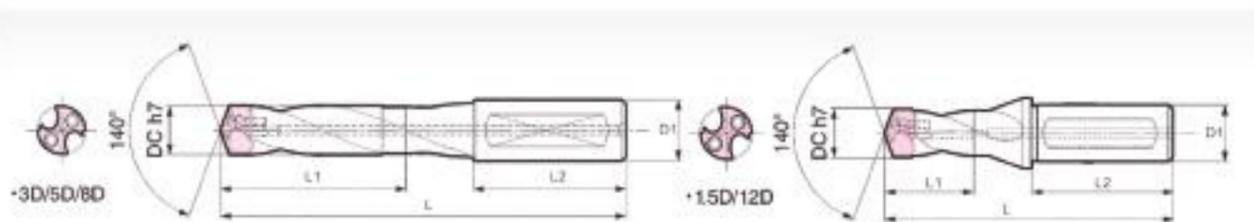
50D

Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D	Order number	flute diameter d	max. cutting depth L1	flute length L2	overall length L4	Shank length L3	Shank diameter D
RDS40030-1	3.00	134	139	180	36	6	RDS50030-1	3.00	166	171	215	36	6
RDS40035-1	3.50	150	156	198	36	6	RDS50035-1	3.50	186	192	235	36	6
RDS40040-1	4.00	168	174	215	36	6	RDS50040-1	4.00	208	214	255	36	6
RDS40045-1	4.50	188	195	236	36	6	RDS50045-1	4.50	233	240	283	36	6
RDS40048-1	4.80	209	217	258	36	6	RDS50048-1	4.80	259	267	310	36	6
RDS40050-1	5.00	209	217	258	36	6	RDS50050-1	5.00	259	267	310	36	6
RDS40055-1	5.50	248	257	300	36	6	RDS50055-1	5.50	308	317	358	36	6
RDS40058-1	5.80	248	257	300	36	6	RDS50060-1	6.00	308	317	358	36	6
RDS40060-1	6.00	248	257	300	36	6	RDS50061-1	6.10	337	347	389	36	8
RDS40061-1	6.10	272	282	324	36	8	RDS50065-1	6.50	337	347	389	36	8
RDS40065-1	6.50	272	282	324	36	8	RDS50068-1	6.80	357	368	409	36	8
RDS40068-1	6.80	287	298	339	36	8	RDS50070-1	7.00	357	368	409	36	8
RDS40070-1	7.00	287	298	339	36	8	RDS50074-1	7.40	388	400	441	36	8
RDS40075-1	7.50	313	325	366	36	8	RDS50075-1	7.50	388	400	441	36	8
RDS40080-1	8.00	330	342	382	36	8	RDS50080-1	8.00	410	422	462	36	8
RDS40085-1	8.50	356	369	415	40	10	RDS50083-1	8.30	441	454	500	40	10
RDS40090-1	9.00	371	385	430	40	10	RDS50085-1	8.50	441	454	500	40	10
RDS40095-1	9.50	418	433	477	40	10	RDS50090-1	9.00	466	480	525	40	10
RDS40100-1	10.00	418	433	477	40	10							
RDS40105-1	10.50	460	477	528	45	12							
RDS40110-1	11.00	460	477	528	45	12							

# SMD Multi purpose crown bit

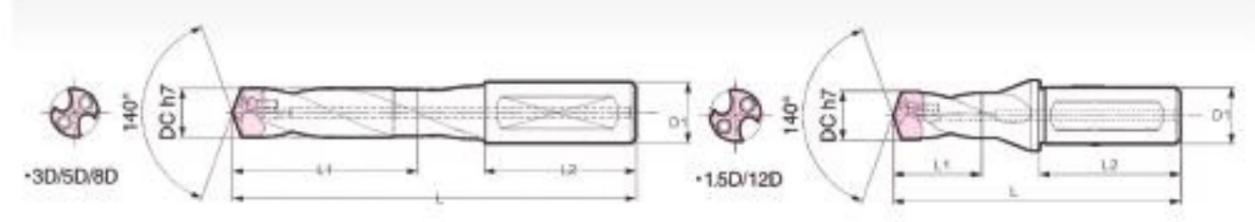


### SMD Multi purpose crown bit



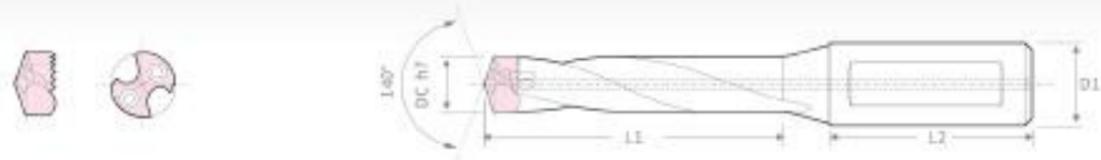
Inset dimension (DC h7)	Hole depth (LD)	dimension/flute diameter	Cutting depth L1	Overall length L	Shank length L2 Shank diameter D1	Assembly material	countersunk screw	Wrench type	Stock
D12.0-D12.4	1.5D	SMD-1.5D-028-C16(12.0)	28	91	48/16	MTL/MEL	BxD02208IP (M2.2x7.5xD3.5)	TRDR08IP (T8)	○
	3D	SMD-3D-046-C16(12.0)	46	107					●
	5D	SMD-5D-071-C16(12.0)	71	132					●
D12.5-D12.9	1.5D	SMD-1.5D-028-C16(13.0)	28	91					○
	3D	SMD-3D-046-C16(13.0)	46	107					●
	5D	SMD-5D-071-C16(13.0)	71	132					●
D13.0-D13.4	1.5D	SMD-1.5D-030-C16	30	92					○
	3D	SMD-3D-049-C16	49	112					●
	5D	SMD-5D-076-C16	76	142					●
D13.5-D14.5	1.5D	SMD-1.5D-034-C16	34	96					○
	3D	SMD-3D-055-C16	55	119					●
	5D	SMD-5D-084-C16	84	149					●
	8D	SMD-8D-127-C16	127	194	●				
D14.6-D15.5	1.5D	SMD-1.5D-035-C20	35	100	○				
	3D	SMD-3D-058-C20	58	129	●				
	5D	SMD-5D-089-C20	89	159	●				
	8D	SMD-8D-136-C20	136	204	●				
D15.6-D16.5	1.5D	SMD-1.5D-038-C20	38	103	○				
	3D	SMD-3D-062-C20	62	134	●				
	5D	SMD-5D-095-C20	95	169	●				
	8D	SMD-8D-144-C20	144	214	●				
D16.6-D17.5	1.5D	SMD-1.5D-039-C20	39	105	○				
	3D	SMD-3D-066-C20	66	140	●				
	5D	SMD-5D-101-C20	101	175	●				
	8D	SMD-8D-154-C20	154	225	●				
D17.6-D18.5	1.5D	SMD-1.5D-043-C20	43	107	○				
	3D	SMD-3D-070-C20	70	145	●				
	5D	SMD-5D-107-C20	107	180	●				
	8D	SMD-8D-162-C20	162	230	●				
12D	SMD-12D-219-C20	219	291	○					

### SMD Multi purpose crown bit



Inset dimension (DC h7)	Hole depth (LD)	dimension/flute diameter	Cutting depth L1	Overall length L	Shank length L2 Shank diameter D1	Assembly material	countersunk screw	Wrench type	Stock
D18.6-D19.5	1.5D	SMD-1.5D-044-C25	44	115	56/25	MTL/MEL	BxD022011P (M3.0x10.5xD4.8)	TRDR15IF (T18)	○
	3D	SMD-3D-073-C25	73	160					●
	5D	SMD-5D-112-C25	112	195					●
	8D	SMD-8D-171-C25	171	255					●
D19.6-D20.5	1.5D	SMD-1.5D-047-C25	47	118					○
	3D	SMD-3D-077-C25	77	160					●
	5D	SMD-5D-118-C25	118	200					●
	8D	SMD-8D-179-C25	179	270					●
D20.6-D21.5	1.5D	SMD-1.5D-048-C25	48	119					○
	3D	SMD-3D-080-C25	80	160					●
	5D	SMD-5D-123-C25	123	200					●
	8D	SMD-8D-188-C25	188	266					●
D21.6-D22.8	1.5D	SMD-1.5D-051-C25	51	121	○				
	3D	SMD-3D-084-C25	84	165	●				
	5D	SMD-5D-129-C25	129	205	●				
	8D	SMD-8D-196-C25	196	275	●				
D22.9-D23.8	1.5D	SMD-1.5D-051-C25	51	122	○				
	3D	SMD-3D-087-C25	87	165	●				
	5D	SMD-5D-134-C25	134	215	●				
	8D	SMD-8D-205-C25	205	285	●				
D23.9-D24.8	1.5D	SMD-1.5D-054-C32	54	129	60/32	MTL/MEL	BxD03512IP (M3.5x11.5xD6.5)	TRDR15IF (T15)	○
	3D	SMD-3D-091-C32	91	175					●
	5D	SMD-5D-140-C32	140	225					●
	8D	SMD-8D-213-C32	213	300					●
D24.9-D25.8	1.5D	SMD-1.5D-054-C32	54	129					○
	3D	SMD-3D-093-C32	93	175					●
	5D	SMD-5D-145-C32	145	230					●
	8D	SMD-8D-222-C32	222	305					●
12D	SMD-12D-305-C32	305	388	○					

### SMD Multi purpose crown bit



Inserts dimension (DC h7)	Hole depth (LD)	dimension(flute diameter)	Cutting depth L1	Overall length L	Shank length L2 Shank diameter D1	Assembly material	countersunk screw	Wrench type	Stock
D25.9-D26.8	1.5D	SMD-1.5D-057-C32	57	132	60/32	MTL/MEL	BXD04014P (M4.0X12.4XD6)	TRDR20IP (T15)	○
	3D	SMD-3D-097-C32	97	180					●
	5D	SMD-5D-151-C32	151	235					●
	8D	SMD-8D-230-C32	230	315					●
D26.9-D27.8	1.5D	SMD-1.5D-058-C32	58	133					○
	3D	SMD-3D-099-C32	99	180					●
	5D	SMD-5D-156-C32	156	240					●
	8D	SMD-8D-239-C32	239	325					●
D27.9-D28.8	1.5D	SMD-1.5D-060-C32	60	135					○
	3D	SMD-3D-102-C32	102	185					●
	5D	SMD-5D-162-C32	162	245					●
	8D	SMD-8D-247-C32	247	330					●
D28.9-D29.8	1.5D	SMD-1.5D-061-C32	61	136			○		
	3D	SMD-3D-105-C32	105	190			●		
	5D	SMD-5D-167-C32	167	250			●		
	8D	SMD-8D-256-C32	256	340			●		
D29.9-D30.8	1.5D	SMD-1.5D-064-C32	64	139			○		
	3D	SMD-3D-110-C32	110	191			●		
	5D	SMD-5D-173-C32	173	261			●		
	8D	SMD-8D-265-C32	265	351			●		
D31.0-D32.0	3D	SMD-3D-116-C32	116	201	●				
	5D	SMD-5D-181-C32	181	266	●				
	8D	SMD-8D-276-C32	276	361	○				

### SMD Multi purpose crown bit



Product code Model No.	MTL/MEL/NPS type drilling insert		Stock
	insert(model)	material ACK70/80	
D12.0-D12.5	SMDT1200/SMDT1250		● TCEA-1200/1250 ●
D13.0-D13.5	SMDT1300/SMDT1350		● TCEA-1300/1350 ●
D14.0-D14.5	SMDT1400/SMDT1450		● TCEA-1400/1450 ●
D15.0-D15.5	SMDT1500/SMDT1550		● TCEA-1500/1550 ●
D16.0-D16.5	SMDT1600/SMDT1650		● TCEA-1600/1650 ●
D17.0-D17.5	SMDT1700/SMDT1750		● TCEA-1700/1750 ●
D18.0-D18.5	SMDT1800/SMDT1850		● TCEA-1800/1850 ●
D19.0-D19.5	SMDT1900/SMDT1950		● TCEA-1900/1950 ●
D20.0-D20.5	SMDT2000/SMDT2050		● TCEA-2000/2050 ●
D21.0-D21.5	SMDT2100/SMDT2150		● TCEA-2100/2150 ●
D22.0-D22.5	SMDT2200/SMDT2250		● TCEA-2200/2250 ●
D23.0-D23.5	SMDT2300/SMDT2350		● TCEA-2300/2350 ●
D24.0-D24.5	SMDT2400/SMDT2450		● TCEA-2400/2450 ●
D25.0-D25.5	SMDT2500/SMDT2550		● TCEA-2500/2550 ●
D26.0-D26.5	SMDT2600/SMDT2650		● TCEA-2600/2650 ○
D27.0-D27.5	SMDT2700/SMDT2750		● TCEA-2700/2750 ○
D28.0-D28.5	SMDT2800/SMDT2850		● TCEA-2800/2850 ○
D29.0-D29.5	SMDT2900/SMDT2950		● TCEA-2900/2950 ○
D30.0-D30.5	SMDT3000/SMDT3050		● TCEA-3000/3050 ○
D31.0-D31.5	SMDT3100/SMDT3150		○ TCEA-3100/3150 ○
D32.0-D32.5	SMDT3200/SMDT3250		○ TCEA-3200/0000 ○
D33.0-D33.5	SMDT3300/SMDT3350		○
D34.0-D34.5	SMDT3400/SMDT3450		○
D35.0-D35.5	SMDT3500/SMDT3550		○
D36.0-D36.5	SMDT3600/SMDT3650		○
D37.0-D37.5	SMDT3700/SMDT3750		○
D38.0-D38.5	SMDT3800/SMDT3850		○
D39.0-D39.5	SMDT3900/SMDT3950		○
D40.0-D40.5	SMDT4000/SMDT4050		○
D41.0-D00.0	SMDT4100/SMDT0000		○
D42.0-D00.0	SMDT4200/SMDT0000		○

## Recommended cutting parameter

Work piece material		Cutting speed (m/min)		Feed rate (mm/rev)				
				Φ3	Φ4	Φ6	Φ8	Φ10
<b>P</b>	Mild steel, long chips (< 125HB)	100-80-50	140-100-60	0.09-0.13-0.16	0.11-0.15-0.19	0.14-0.23	0.19-0.23	0.13-0.23
	Mild steel, Short chips, Free cutting steel (< 125HB)	100-75-50	140-100-60	0.09-0.13-0.16	0.11-0.15-0.19	0.14-0.23	0.19-0.23	0.13-0.23
	High carbon steel and medium carbon steel (< 25HRC)	90-70-45	120-80-60	0.09-0.13-0.16	0.11-0.15-0.19	0.14-0.23	0.19-0.23	0.13-0.23
	Alloy steel, tool steel (< 35HRC)	90-70-45	110-80-50	0.09-0.13-0.16	0.11-0.15-0.19	0.14-0.23	0.19-0.23	0.13-0.23
	Alloy steel, tool steel (35-48HRC)	80-60-40	90-60-40	0.09-0.12-0.14	0.10-0.14-0.17	0.13-0.17-0.22	0.17-0.23	0.13-0.23
	PH and ferrite, martensitic steel (< 35HRC)	70-50-30	80-50-30	0.09-0.12-0.14	0.10-0.14-0.17	0.13-0.17-0.22	0.17-0.23	0.13-0.23
<b>M</b>	Austenitic stainless steel (130-200HB)	-	50-40-20	0.05-0.08-0.10	0.06-0.10-0.12	0.07-0.12-0.14	0.08-0.13-0.18	0.09-0.15-0.20
	High strength austenitic and cast stainless steels (< 25HRC)	-	55-40-30	0.03-0.06-0.08	0.04-0.08-0.10	0.05-0.08-0.10	0.06-0.10-0.12	0.07-0.11-0.14
	Duplex stainless steel (< 30HRC)	-	55-40-20	0.03-0.06-0.08	0.04-0.08-0.10	0.05-0.08-0.10	0.06-0.10-0.12	0.07-0.11-0.14
<b>K</b>	Grey cast iron (< 32HRC)	100-80-60	140-120-60	0.13-0.17-0.21	0.15-0.20-0.26	0.17-0.22	0.13-0.23	0.15-0.25
	Alloy cast iron and ductile iron with moderate processing difficulty (< 28HRC)	100-80-60	140-120-60	0.11-0.15-0.18	0.13-0.18-0.22	0.15-0.23	0.17-0.23	0.15-0.25
	Difficult to machine high alloy cast iron, nodular cast iron (< 45HRC)	90-70-60	100-90-60	0.06-0.09-0.11	0.08-0.10-0.13	0.10-0.13-0.16	0.13-0.17-0.21	0.15-0.20-0.25
<b>N</b>	Wrought aluminum alloy (Si < 12%)	-	315-230-90	0.06-0.09-0.11	0.13-0.20-0.23	0.16-0.22	0.18-0.23	0.20-0.30
	Cast aluminum alloy (Si < 12%)	-	315-230-90	0.06-0.09-0.11	0.13-0.20-0.23	0.16-0.22	0.18-0.23	0.20-0.30
	Cast aluminum alloy (Si < 12%)	-	270-180-90	0.06-0.09-0.11	0.13-0.20-0.23	0.16-0.22	0.18-0.23	0.20-0.30
	Copper, copper alloy (< 200HB)	-	180-135-90	0.06-0.09-0.11	0.13-0.20-0.23	0.16-0.22	0.18-0.23	0.20-0.30

1. Please use a machine with high rigidity. Recommended to use hydraulic tool holders, thermal expansion tool holders, and powerful tool holders with spring chucks;
2. When installing the tool, ensure that the radial runout of the drill tip is less than 0.02mm;
3. This table of standard cutting conditions is applicable to water-soluble cutting fluid;
4. For tools that diameter specifications not in the table, please refer to the closest blade diameter specification in the table to select cutting parameters, and at the same time, please adjust the cutting parameters according to the actual processing conditions during processing.

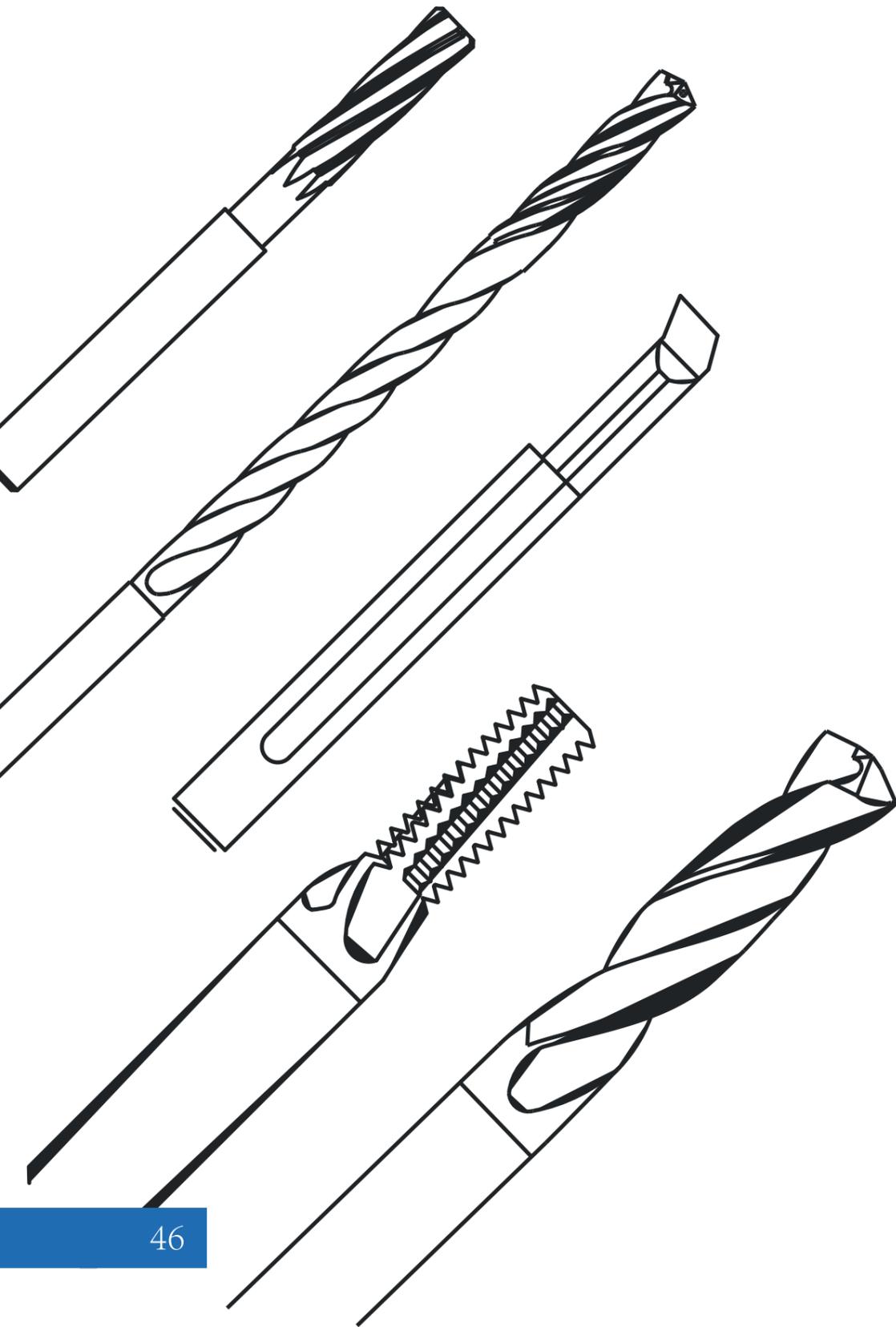
## Recommended cutting parameter

Work piece material		Cutting speed (m/min)		Feed rate (mm/rev)				
				Φ12	Φ14	Φ16	Φ18	Φ20
<b>P</b>	Mild steel, long chips (< 125HB)	100-80-50	140-100-60	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25
	Mild steel, Short chips, Free cutting steel (< 125HB)	100-75-50	140-100-60	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25
	High carbon steel and medium carbon steel (< 25HRC)	90-70-45	120-80-60	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25
	Alloy steel, tool steel (< 35HRC)	90-70-45	110-80-50	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25
	Alloy steel, tool steel (35-48HRC)	80-60-40	90-60-40	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25
	PH and ferrite, martensitic steel (< 35HRC)	70-50-30	80-50-30	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25	0.15-0.25
<b>M</b>	Austenitic stainless steel (130-200HB)	-	50-40-20	0.10-0.17-0.22	0.11-0.18-0.24	0.12-0.20	0.13-0.22	0.14-0.24
	High strength austenitic and cast stainless steels (< 25HRC)	-	55-40-30	0.08-0.13-0.16	0.09-0.13-0.18	0.10-0.14-0.18	0.10-0.14-0.20	0.12-0.16
	Duplex stainless steel (< 30HRC)	-	55-40-20	0.08-0.13-0.16	0.09-0.13-0.18	0.10-0.14-0.18	0.10-0.14-0.20	0.12-0.16
<b>K</b>	Grey cast iron (< 32HRC)	100-80-60	140-120-60	0.15-0.25	0.15-0.3	0.15-0.3	0.15-0.3	0.15-0.3
	Alloy cast iron and ductile iron with moderate processing difficulty (< 28HRC)	100-80-60	140-120-60	0.15-0.25	0.15-0.3	0.15-0.3	0.15-0.3	0.15-0.3
	Difficult to machine high alloy cast iron, nodular cast iron (< 45HRC)	90-70-60	100-90-60	0.17-0.22-0.28	0.15-0.3	0.15-0.3	0.15-0.3	0.15-0.3
<b>N</b>	Wrought aluminum alloy (Si < 12%)	-	315-230-90	0.22-0.34	0.24-0.36	0.28-0.38	0.32-0.40	0.34-0.42
	Cast aluminum alloy (Si < 12%)	-	315-230-90	0.22-0.34	0.24-0.36	0.28-0.38	0.32-0.40	0.34-0.42
	Cast aluminum alloy (Si < 12%)	-	270-180-90	0.22-0.34	0.24-0.36	0.28-0.38	0.32-0.40	0.34-0.42
	Copper, copper alloy (< 200HB)	-	180-135-90	0.22-0.34	0.24-0.36	0.28-0.38	0.32-0.40	0.34-0.42

1. Please use a machine with high rigidity. Recommended to use hydraulic tool holders, thermal expansion tool holders, and powerful tool holders with spring chucks;
2. When installing the tool, ensure that the radial runout of the drill tip is less than 0.02mm;
3. This table of standard cutting conditions is applicable to water-soluble cutting fluid;
4. For tools that diameter specifications not in the table, please refer to the closest blade diameter specification in the table to select cutting parameters, and at the same time, please adjust the cutting parameters according to the actual processing conditions during processing.

# High performance small diameter boring tool

Various specifications | Massive inventory | Non-standard customization



## Advantages:

- ◆ Solid carbide material, impact resistance
- ◆ Inclined cutting edge for smooth machining
- ◆ Special coating smooth and wear-resistant

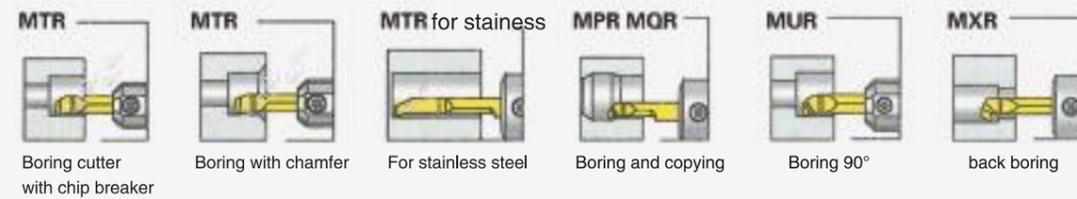
# Micro diameter cutting tools

With coolant/Without coolant

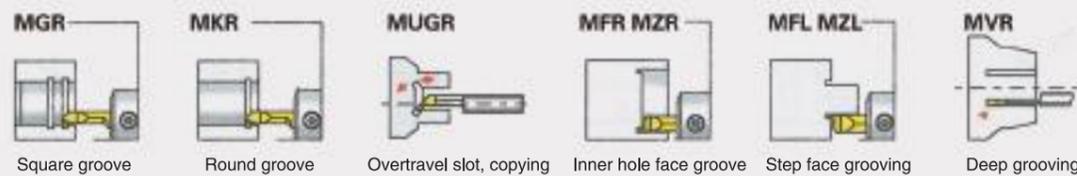


Min diameter boring:Φ1.0mm, Min diameter grooving:Φ2.0mm, Min diameter threading & chamfering :Φ2.0mm

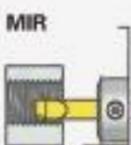
## Boring



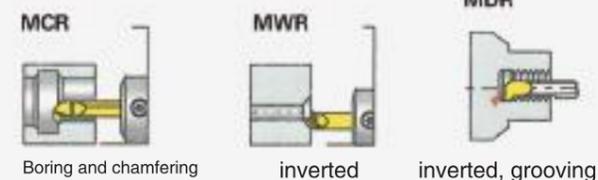
## Grooving



## Thread



## Chamfering

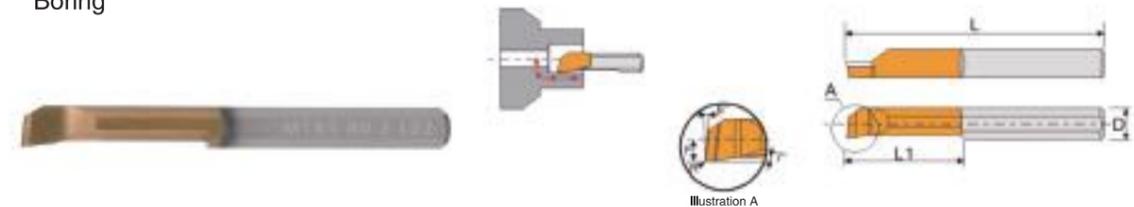


# Micro diameter boring cutter



## MTR

Boring



Order number	D	L	L1	R	F	Min. bore Diameter	Suitable Tool Holder	Inventory			
								HP130M	HD10	C801	
MTR	2R0.15 L10	3.0	39	10	0.15	0.8	2.1	NC1603-100	●	●	●
	2R0.15 L20	3.0	39	20	0.15	0.8	2.1	NC1603-100	○	○	○
	3R0.2L10	3.0	39	10	0.2	1.3	3.1	NC1603-100	●	○	○
	3R0.2L15	3.0	39	15	0.2	1.3	3.1	NC1603-100	●	●	●
	4R0.2L15	4.0	51	15	0.2	1.7	4.1	NC1604-100	●	●	●
	4R0.2L22	4.0	51	20	0.2	1.7	4.1	NC1604-100	●	○	○
	5R0.2L22	5.0	51	22	0.2	2.1	5.1	NC1605-100	●	●	●
	6R0.2L22	6.0	51	22	0.2	2.8	6.1	NC1606-100	●	●	●
MTR	7R0.2L30	7.0	62	30	0.2	3.3	7.1	NC1606-100	●	○	○
	8R0.2L40	8.0	76	40	0.2	3.8	8.1	NC2008-100	●	○	○
	3R0.2L15	3.0	39	15	0.2	1.3	3.1	NC1603-100	●	○	○
	4R0.2L22	4.0	51	20	0.2	1.7	4.1	NC1604-100	●	○	○
	5R0.2L22	5.0	51	22	0.2	2.1	5.1	NC1605-100	●	○	○
	6R0.2L22	6.0	51	22	0.2	2.8	6.1	NC1606-100	●	○	○

Order example: MTR 2R0.15L10 HP130M, non-standard orders accepted

● Standard inventory ○ Non-standard inventory

## Tool holder for replaceable inserts

Boring



Maximum elongation L/D=5

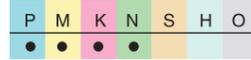
Order number	D	L	L1	R	F	Min. bore Diameter	Suitable Tool Holder	Suitable inserts	Inventory
C04X-SCLCR03-05-MINI	5.0	62	-	-	2.5	5.1	NC1604-100	CC□T0301*	●
C06X-SCLCR04-07-MINI	7.0	62	-	-	3.5	7.1	NC1607-100	CC□T0401*	●

Order example: C04X-SCLCR03-05, non-standard orders accepted

● Standard inventory ○ Non-standard inventory

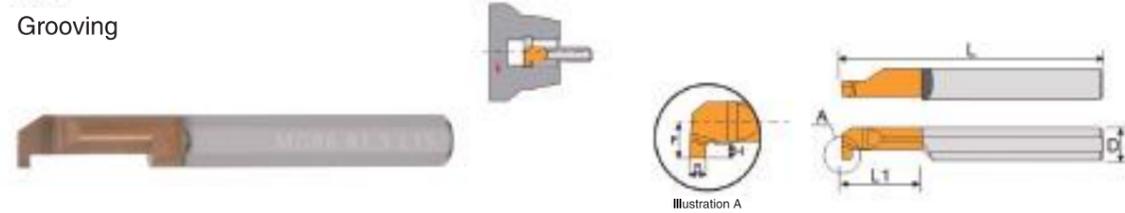
Remarks: inserts need to be purchased separately.

## Micro diameter boring cutter



### MGR

Grooving



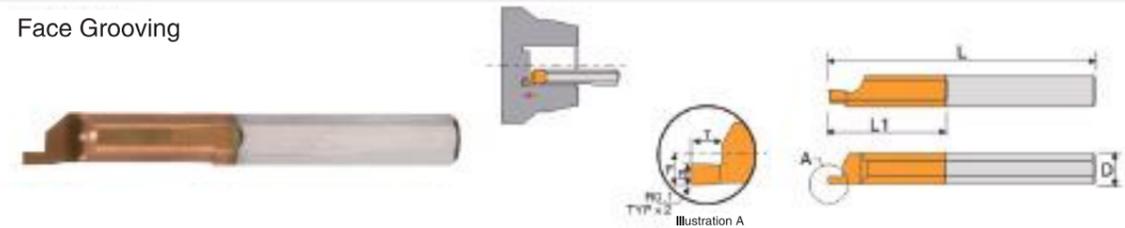
Order number	D	L	L1	B	H/T	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MGR</b> 4B1.0L10	4.0	51	10	1.0	1.0	1.7	4.1	NC1604-100	●
4B1.5L10	4.0	51	10	1.5	1.0	1.7	4.1	NC1604-100	●
5B1.0L15	5.0	51	15	1.0	1.2	2.3	5.1	NC1605-100	●
5B1.5L15	5.0	51	15	1.5	1.2	2.3	5.1	NC1605-100	●
5B2.0L15	5.0	51	15	2.0	1.2	2.3	5.1	NC1605-100	●
6B1.0L15	6.0	51	15	1.0	1.4	2.8	6.1	NC1606-100	●
6B1.5L15	6.0	51	15	1.5	1.4	2.8	6.1	NC1606-100	●
6B2.0L15	6.0	51	15	2.0	1.4	2.8	6.1	NC1606-100	●
8B1.0L22	8.0	64	22	1.0	2.6	3.8	8.1	NC2008-100	●
8B1.5L22	8.0	64	22	1.5	2.6	3.8	8.1	NC2008-100	●
8B2.0L22	8.0	64	22	2.0	2.6	3.8	8.1	NC2008-100	●

Order example: MTR 4B1.0L10 HP130M, non-standard orders accepted

● Standard inventory ○ Non-standard inventory

### MFR

Face Grooving



Order number	D	L	L1	B	H/T	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MFR</b> 4B1.0L15	4.0	51	15	1.0	1.5	1.75	5.0	NC1604-100	●
5B1.0L22	5.0	51	22	1.0	1.5	2.25	6.0	NC1605-100	●
5B1.5L22	5.0	51	22	1.5	2.5	2.25	6.0	NC1605-100	●
6B1.0L22	6.0	51	22	1.0	1.5	2.75	8.0	NC1606-100	●
6B1.5L22	6.0	51	22	1.5	2.5	2.75	8.0	NC1606-100	●
6B2.0L22	6.0	51	22	2.0	3.0	2.75	8.0	NC1606-100	●

Order example: MFR 4B1.0L15 HP130M, non-standard orders accepted

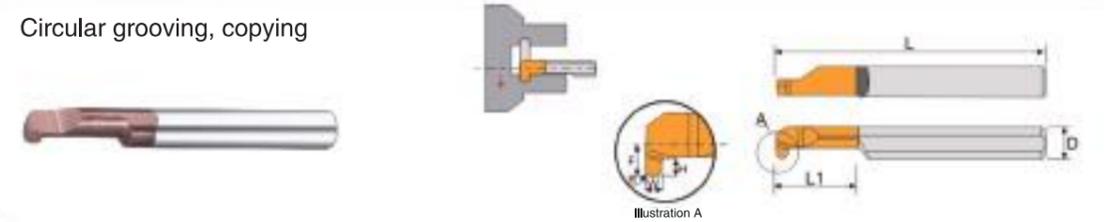
● Standard inventory ○ Non-standard inventory

## Micro diameter boring cutter



### MKR

Circular grooving, copying



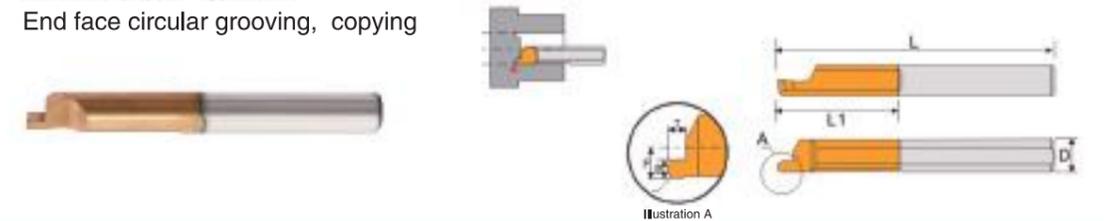
Order number	D	L	L1	R	W	H	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MKR</b> 4R0.5L10	4.0	51	10	0.50	1.0	1.0	1.7	4.1	NC1604-100	●
4R0.75L10	4.0	51	10	0.75	1.5	1.0	1.7	4.1	NC1604-100	●
5R0.5L15	5.0	51	15	0.50	1.0	1.2	2.3	5.1	NC1605-100	●
5R0.75L15	5.0	51	15	0.75	1.5	1.2	2.3	5.1	NC1605-100	●
5R1.0L15	5.0	51	15	1.0	2.0	1.2	2.3	5.1	NC1605-100	●
6R0.5L15	6.0	51	15	0.50	1.0	1.6	2.8	6.1	NC1606-100	●
6R0.75L15	6.0	51	15	0.75	1.5	1.6	2.8	6.1	NC1606-100	●
6R1.0L15	6.0	51	15	1.0	2.0	1.6	2.8	6.1	NC1606-100	●

Order example: MKR 4R1.0L10 HP130M, non-standard orders accepted

● Standard inventory ○ Non-standard inventory

### MZR

End face circular grooving, copying



Order number	D	L	L1	R	W	H	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MZR</b> 4R0.5L15	4.0	51	15	0.50	1.0	1.2	1.95	5.0	NC1604-100	●
4R0.75L15	4.0	51	15	0.75	1.5	1.5	1.95	5.0	NC1604-100	●
5R0.5L22	5.0	51	22	0.5	1.0	1.2	2.45	6.0	NC1605-100	●
5R0.75L22	5.0	51	22	0.75	1.5	1.5	2.45	6.0	NC1605-100	●
5R1.0L22	5.0	51	22	1.0	2.0	2.5	2.45	6.0	NC1605-100	●
6R0.5L22	6.0	51	22	0.5	1.0	1.2	2.95	8.0	NC1606-100	●
6R0.75L22	6.0	51	22	0.75	1.5	1.5	2.95	8.0	NC1606-100	●
6R1.0L22	6.0	51	22	1.0	2.0	2.5	2.95	8.0	NC1606-100	●

Order example: MZR 4R0.0L15 HP130M, non-standard orders accepted

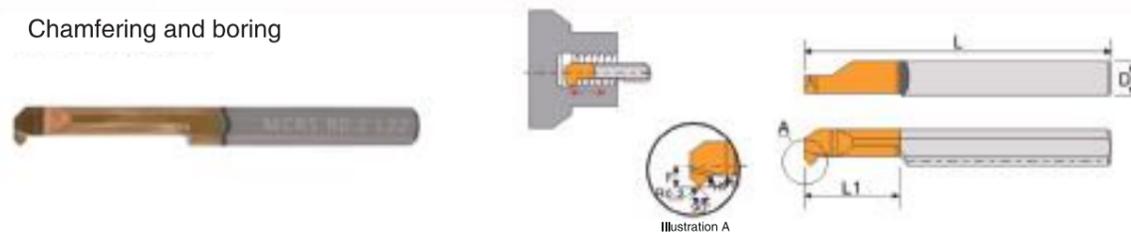
● Standard inventory ○ Non-standard inventory

## Micro diameter boring cutter



### MCR

Chamfering and boring



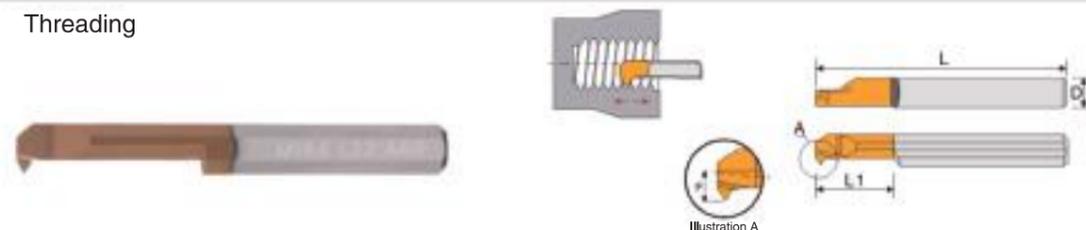
Order number	D	L	L1	R	H	H1	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MCR</b> 3R0.2L10	3.0	39	10	0.2	0.7	0.3	1.3	3.1	NC1603-100	●
4R0.2L15	4.0	50	15	0.2	0.8	0.4	1.7	4.1	NC1604-100	●
5R0.2L15	5.0	50	15	0.2	1.2	0.7	2.1	5.1	NC1605-100	●
6R0.2L15	6.0	50	15	0.2	1.4	0.7	2.8	6.1	NC1606-100	○

Order example: MCR 0.2L10 HP130M, non-standard orders accepted

● Standard inventory ○ Non-standard inventory

### MIR

Threading



Order number	D	L	L1	a	Range of application mm TPI	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MIR</b> 3L15A55	3.0	39	15	55	0.5-1.0 48-24	1.4	3.2	NC1603-100	●
3L15A60	3.0	39	15	60	0.7-1.0 32-24	1.4	3.2	NC1603-100	●
4L15A55	4.0	51	15	55	0.5-1.0 48-24	1.8	4.1	NC1604-100	●
4L15A60	4.0	51	15	60	0.8-1.0 32-24	1.8	4.1	NC1604-100	●
5L15A55	5.0	51	15	55	0.5-1.25 48-20	2.3	5.1	NC1605-100	●
5L15A60	5.0	51	15	60	1.0-1.25 24-20	2.3	5.1	NC1605-100	●
6L15A55	6.0	51	15	55	0.5-1.5 48-16	2.6	6.0	NC1606-100	●
6L15A60	6.0	51	15	60	1.0-1.5 24-16	2.6	6.0	NC1606-100	●
<b>MIL</b> 4L15A60	4.0	51	15	60	0.8-1.0 32-24	1.8	4.1	NC1604-100	●
5L15A60	5.0	51	15	60	1.0-1.25 24-20	2.3	5.1	NC1605-100	●
6L15A60	6.0	51	15	60	1.0-1.5 24-16	2.6	6.0	NC1606-100	●

Order example: MIR 3L15A55, non-standard orders accepted

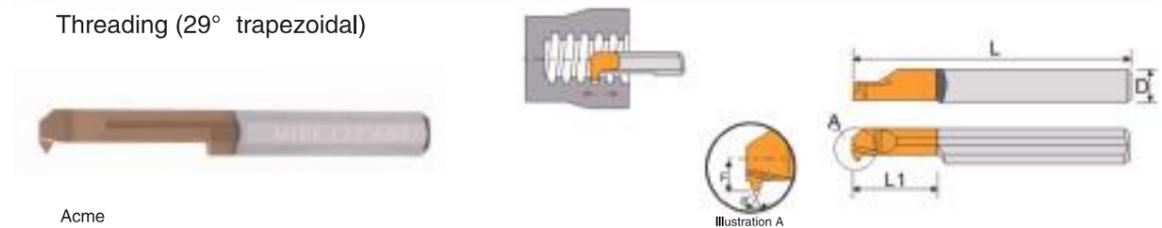
● Standard inventory ○ Non-standard inventory

## Micro diameter boring cutter



### MIR

Threading (29° trapezoidal)



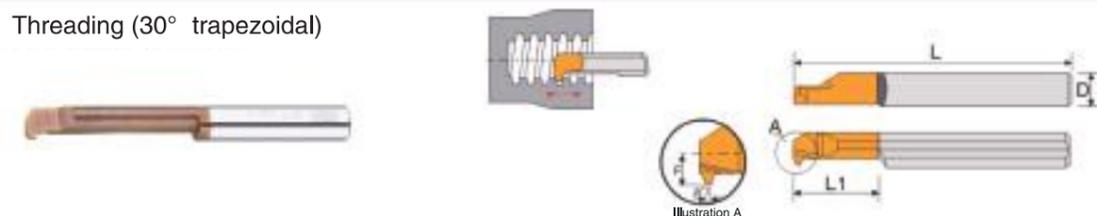
Order number	D	L	L1	a	Range of application mm TPI	F	Min. bore Diameter	Applicable thread	Suitable Tool Holder	Inventory
<b>MIR</b> 4L1516ACME	4.0	51	15	29	16	1.8	4.6	1/4 x 16	NC1604-100	●
6L2014ACME	6.0	51	20	29	14	2.6	6.0	5/16 x 14	NC1606-100	●
7L2212ACME	7.0	62	22	29	12	3.3	7.2	3/8 x 12	NC2007-100	●

Order example: MIR 4L1516ACME HP130M, non-standard orders accepted

● Standard inventory ○ Non-standard inventory

### MIR

Threading (30° trapezoidal)



Order number	D	L	L1	a	Range of application mm TPI	F	Min. bore Diameter	Applicable Thread	Suitable Tool Holder	Inventory
<b>MIR</b> 7L25 2TR	7.0	62	25	30	2	3.2	6.9	TR9 x 2 TR10 x 2 TR11 x 2 TR12 x 2	NC2007-100	●
10L35 2TR	10.0	73	35	30	2	4.8	11.0	TR14 x 2 TR16 x 2 TR18 x 2 TR20 x 2	NC2010-100	○
7L35 3TR	7.0	62	35	30	3	3.3	7.5	TR11 x 3 TR12 x 3	NC2007-100	●
10L35 3TR	10.0	73	35	30	3	4.8	10.5	TR14 x 3 TR22 x 3 TR24 x 3 TR26 x 3 TR28 x 3	NC2010-100	○
10L45 4TR	10.0	105	4	30	4	4.8	11.5	TR16 x 4 TR18 x 4 TR20 x 4	NC2010-100	○
10L55 5TR	10.0	105	55	30	5	4.8	11	TR22 x 5 TR24 x 5 TR28 x 5	NC2010-100	○

Order example: MIR 7L25 2TR HP130M, non-standard orders accepted

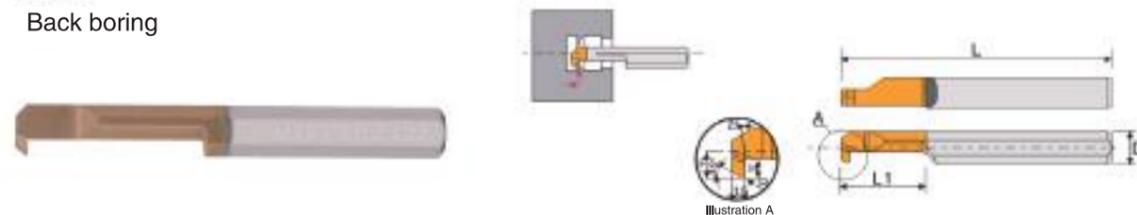
● Standard inventory ○ Non-standard inventory

## Micro diameter boring cutter



### MXR

Back boring



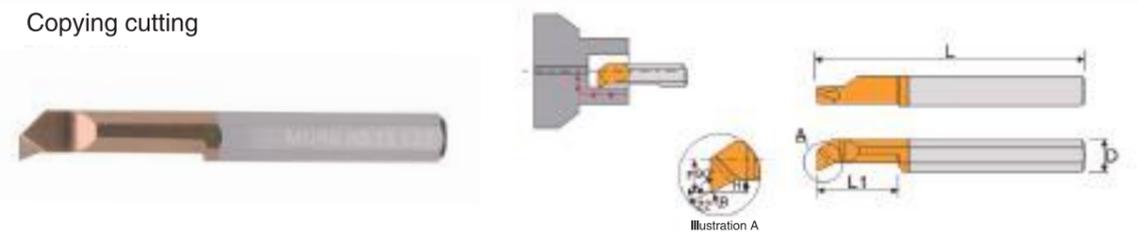
Order number	D	L	L1	R	H/T	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MXR</b> 4R0.1L10	4.0	50	10	0.1	0.5	1.3	3.1	NC1604-100	●
4R0.15L15	4.0	50	15	0.15	0.8	1.8	4.1	NC1604-100	●
5R0.2L22	5.0	50	22	0.2	1.0	2.2	5.1	NC1605-100	●
6R0.2L22	6.0	50	22	0.2	1.8	2.8	6.1	NC1606-100	●

Order example: MXR 4R0.1L10 HP130M, non-standard orders accepted

● Standard inventory ○ Non-standard inventory

### MUR

Copying cutting

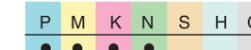


Order number	D	L	L1	R	H/T	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MUR</b> 3R0.05L15	3.0	38	15	0.05	0.4	1.3	3.1	NC1603-100	○
4R0.1L15	4.0	51	15	0.2	0.5	1.7	4.1	NC1604-100	○
5R0.15L22	5.0	51	22	0.15	0.7	2.1	5.1	NC1605-100	○
6R0.15L22	6.0	51	22	0.15	0.9	2.8	6.1	NC1606-100	○

Order example: MUR 3R0.05L15 HP130M, non-standard orders accepted

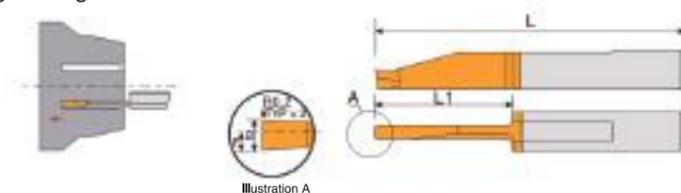
● Standard inventory ○ Non-standard inventory

## Micro diameter boring cutter



### MVR

Deep end face grooving



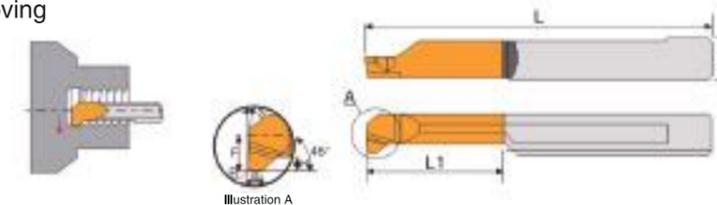
Order number	D	L	L1	B	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MVR</b> 6B2.0L15	6.0	64	15	2.0	1.1	12	NC1606-100	○
6B2.0L22	6.0	64	22	2.0	1.1	12	NC1606-100	○
6B2.5L22	6.0	64	22	2.5	1.4	12	NC1606-100	○
8B3.0L27	8.0	64	27	3.0	1.6	15	NC2008-100	○
8B3.0L43	8.0	80	43	3.0	1.6	15	NC2008-100	○
8B4.0L43	8.0	80	43	4.0	2.1	20	NC2008-100	○

Order example: MVR 6B2.0L15 HP130M, non-standard orders accepted

● Standard inventory ○ Non-standard inventory

### MDR

Chamfering, grooving



Order number	D	L	L1	B	R	H/T	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MDR</b> 4R0.5L18	4.0	51	18	1.5	0.5	0.8	1.8	4.1	NC1604-100	○
5R0.5L24	5.0	51	24	1.5	0.5	1.2	2.3	5.1	NC1605-100	○
6R0.5L27	6.0	58	27	1.5	0.5	1.4	2.8	6.1	NC1606-100	○

Order example: MDR 4R0.5L18 HP130M, non-standard orders accepted

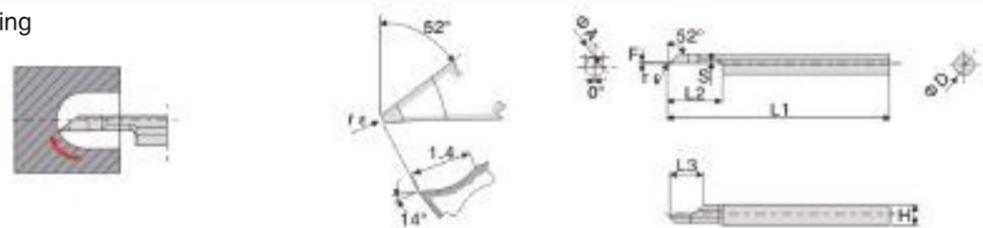
● Standard inventory ○ Non-standard inventory

# Micro diameter boring cutter



## MZVB

Copying



Order number	D	L	L1	R	S	F	Min. bore Diameter	Suitable Tool Holder	Inventory
<b>MZVB 35R0.1L10</b>	3.0	39	10	0.1	0.22	0.17	3.5	NC1603-100	○
<b>45R0.1L12</b>	4.0	50	12	0.1	0.26	0.17	4.5	NC1604-100	○
<b>55R0.1L15</b>	5.0	50	15	0.1	0.29	0.17	5.5	NC1605-100	○
<b>65R0.1L20</b>	6.0	50	20	0.1	0.32	0.17	6.5	NC1606-100	○

Order example: MZVB 35R0.1L10 HP130M, non-standard orders accepted

● Standard inventory ○ Non-standard inventory

Work piece material	Insert material (cutting speed Vc:m/min)	MZVB035 type		MZVB045 type		MZVB055/65 type		Remarks
		ap	f	ap	f	ap	f	
Carbon steel/Alloy steel	HP130M	-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	

# Tool holder

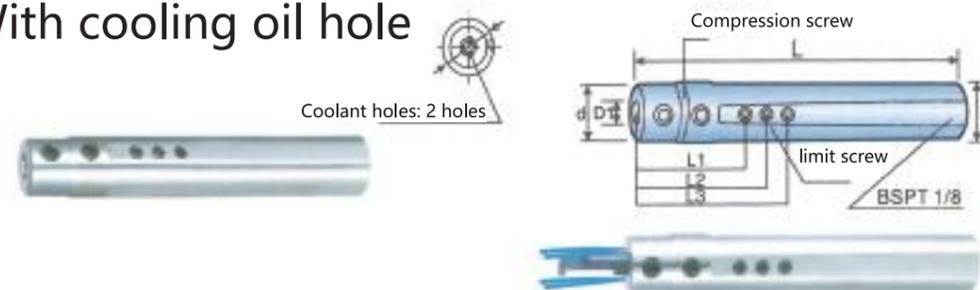
include the coolant hole



Order number	D1	L	D	d	Wrench	Compression screw	Inventory
NC1603-100-2N	3.0	100	16	12	L1.5	M3 x 4	●
NC1604-100-2N	4.0	100	16	13	L2.0	M4 x 4	●
NC1605-100-2N	5.0	100	16	14.7	L2.5	M4 x 4	●
NC1606-100-2N	6.0	100	16	15	L2.5	M5 x 4	●
NC1607-100-2N	7.0	100	16	15.7	L3.0	M6 x 6	●
NC1608-100-2N	8.0	100	16	15.7	L3.0	M6 x 6	●
NC2004-100-2N	4.0	100	20	13	L2.0	M4 x 4	●
NC2005-100-2N	5.0	100	20	16	L2.5	M4 x 4	●
NC2006-100-2N	6.0	100	20	17	L3.0	M5 x 5	●
NC2007-100-2N	7.0	100	20	17.5	L3.0	M6 x 6	●
NC2008-100-2N	8.0	100	20	19	L3.0	M6 x 6	●
NC2010-100-2N	10	100	20	19.7	L3.0	M6 x 6	●
NC2012-100-2N	12.0	100	20	19.7	L3.0	M6 x 6	●

● Standard inventory ○ Non-standard inventory

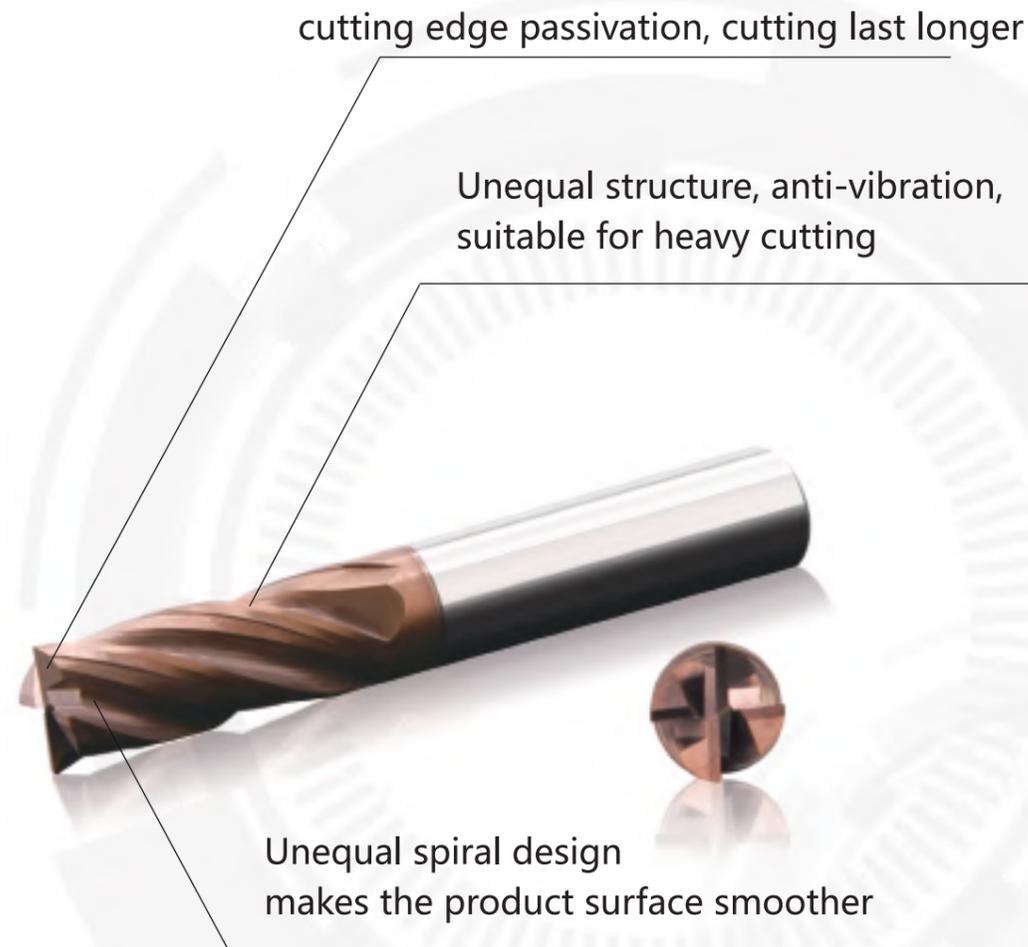
# With cooling oil hole



Order number	D1	L	L1	L2	L3	D	d	Wrench	Compression screw	Inventory
NC1603-100-2NX	3.0	100	26.5	31.5	-	16	12	L1.5	M3 x 4	●
NC1604-100-2NX	4.0	100	29.5	36.5	41.5	16	13	L2.0	M4 x 4	●
NC1605-100-2NX	5.0	100	30	37	-	16	14.7	L2.5	M4 x 4	●
NC1606-100-2NX	6.0	100	30.5	37.5	-	16	15	L2.5	M5 x 4	●

● Standard inventory ○ Non-standard inventory

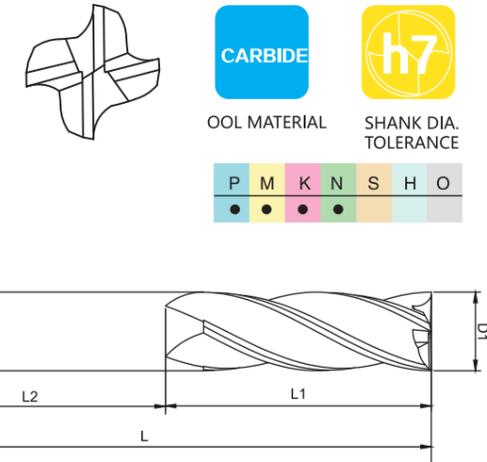
# Anti-vibration milling cutter



## Advantages:

- ◆ Unequal spiral design, anti-vibration, improve product surface quality
- ◆ Maximum metal removal rate increases productivity and reduces process time
- ◆ Take full advantage of the entire cutting length, uniform wear, ensuring maximum tool life
- ◆ One tool can process multiple cavities, keyway milling, side milling, face milling, roughing, finishing, etc.

## Anti-vibration milling cutter



Order number	flute diameter D1	flute length L1	Shank diameter D	overall length L	Order number	flute diameter D1	flute length L1	Shank diameter D	overall length L
RMT03040R04T	D4	12	5	60	RMT03125R04T	D12.5	38	14	100
RMT03045R04T	D4.5	14	5	65	RMT03130R04T	D13	39	14	100
RMT03050R04T	D5	15	5	65	RMT03135R04T	D13.5	41	14	105
RMT03055R04T	D5.5	17	6	70	RMT03140R04T	D14	42	14	100
RMT03060R04T	D6	18	6	70	RMT03145R04T	D14.5	44	16	110
RMT03065R04T	D6.5	19	8	75	RMT03150R04T	D15	45	16	110
RMT03070R04T	D7	21	8	75	RMT03155R04T	D15.5	47	16	115
RMT03075R04T	D7.5	23	8	80	RMT03160R04T	D16	48	16	115
RMT03080R04T	D8	24	8	80	RMT03165R04T	D16.5	50	18	120
RMT03085R04T	D8.5	26	10	90	RMT03170R04T	D17	51	18	120
RMT03090R04T	D9	27	10	90	RMT03175R04T	D17.5	53	18	120
RMT03095R04T	D9.5	29	10	90	RMT03180R04T	D18	54	18	120
RMT03100R04T	D10	30	10	90	RMT03185R04T	D18.5	56	20	125
RMT03105R04T	D10.5	32	12	95	RMT03190R04T	D19	57	20	125
RMT03110R04T	D11	33	12	95	RMT03195R04T	D19.5	59	20	130
RMT03115R04T	D11.5	35	12	95	RMT03200R04T	D20	60	20	130
RMT03120R04T	D12	36	12	100					

# Solid carbide thread milling cutter



## Order number

TM solid carbide end mill

RT	HC		10	082	L15	-	I	1.50	ISO	TM		VTH
ROYI	1	2	3	4	5		6	7	8	9	10	11

1 - Line	2 - No. of teeth	3 - tool holder shank diameter	4 - cutting diameter	5 - flute length	6 - tool type
HC - Helicool HCN - Helicool type with long neck HCR - Helicool R HCR - Helicool L H - Helical S - S-straight flute D - D-deep thread or MilliPro TDC - TDC- TMDR with coolant supply TD - TD - TMDR without coolant supply	1T - 1 tooth 3T - 3 teeth (MilliPro) 2L - 2 teeth with laevorotation (MilliPro)	03 - 3.0mm 04 - 4.0 06 - 6.0 08 - 8.0 10 - 10.0 12 - 12.0 14 - 14.0 16 - 16.0 18 - 18.0 20 - 20.0	07 - 19.9mm	up to 3xDo	E - external thread I - internal thread EI - external thread/internal thread

7 - pitch	8 - thread type	9 - Processing type	10 - No. of cutting flutes	11 - workpiece material																						
full teeth-Pitch range <table border="1"> <tr> <th>mm</th> <th>TPI</th> </tr> <tr> <td>0.25-6.0</td> <td>80-4.5</td> </tr> </table> 60 degree standard teeth-Pitch range <table border="1"> <tr> <th></th> <th>mm</th> <th>TPI</th> </tr> <tr> <td>TA</td> <td>0.5-0.8</td> <td>32-56</td> </tr> <tr> <td>TB</td> <td>0.5-1.0</td> <td>24-56</td> </tr> <tr> <td>TC</td> <td>1.0-1.50</td> <td>16-24</td> </tr> <tr> <td>TD</td> <td>1.0-1.75</td> <td>14-24</td> </tr> <tr> <td>TF</td> <td>0.5-1.25</td> <td>20-48</td> </tr> </table>	mm	TPI	0.25-6.0	80-4.5		mm	TPI	TA	0.5-0.8	32-56	TB	0.5-1.0	24-56	TC	1.0-1.50	16-24	TD	1.0-1.75	14-24	TF	0.5-1.25	20-48	60 - 60 degree standard teeth-Pitch range ISO - ISOMETRIC thread UN - American standard UN UNC - UN coarse thread UNF - UN fine thread NUNEF - UN fine thread UNJ - UNJ MJ - MJ BSW - Whitworth coarse thread BSP - BSP BSF - Whitworth fine thread BSPT - BSPT NPT - NPT ANPT - ANPT NPTF - NPTF NPS - NPS PG - PG TP60 - Taper TP55 - TP55°	TM TML - extra long type	3 - 3 flutes 5 - 3 flutes *for straight flute only	VTS VTH
mm	TPI																									
0.25-6.0	80-4.5																									
	mm	TPI																								
TA	0.5-0.8	32-56																								
TB	0.5-1.0	24-56																								
TC	1.0-1.50	16-24																								
TD	1.0-1.75	14-24																								
TF	0.5-1.25	20-48																								

## HTC Drilling and milling cutter

HTC	M6	1.0	2D	VTN
1	2	3	4	5

1 - Line	2 - thread diameter	3 - pitch	4 - thread length	5 - workpiece material
HC - Drilling and milling cutter	M6 - M12	1 - 1.75mm	2D 2.5D	VTN VTS

Solid carbide thread milling cutter solutions

**Micro diameter thread**

MilliPro & MilliPro EL  
Minimum M1.0x0.35 (1-72UNF)

MilliPro HD  
Up to 62 HRC

MilliPro Teeth  
Minimum M1.0x0.25 (0-80UNF)

TMDR  
Minimum M3x0.5 (4-40UNC)

**Long thread  
Deep hole threading**

Full teeth type

60 degree standard teeth

Maximum 3xDo

**General application  
Straight flute milling cutter**

Taper thread milling cutter

Bone thread processing  
Pitch range 0.3-0.6mm

Minimum M4.5x0.75 (No.8-36UNF)

**Heavy-duty cutting  
Helicool**

HC

HCN

Minimum M3x0.5 (No.10-32UNF)

**Radial cooling  
Helicool-R (HCR)**

Minimum M6x1.0

**Milling cutter with cooling and chamfered thread  
Helicool-C (HCC)**

Minimum M6x1.0

**Economical thread milling cutter  
Spiral mill-thread**

Taper thread milling cutter

Bone thread processing  
Pitch range 0.3-0.6mm

Minimum M3x0.5 (No.8-36UNF)

**Drilling, threading, chamfering  
HTC**

Minimum M6x1.0

Inserts material and application

**VTH**

Helicool

HCN

HCR

HCC

MilliPro

MilliPro teeth

MilliPro HD

MilliPro EL

Deep hole threading

Spiral thread milling cutter

- Universal thread material for heavy cutting
- TiCN coating with high wear resistance

**VTS**

Straight flute milling cutter

- Straight milling cutter with universal material
- TiCN coating with high wear resistance

**VTS**

HTC (Thread drilling and milling cutter)

- TiAlN coating
- First choice for cast iron and general purpose cutting

**VTN**

HTC (Thread drilling and milling cutter)

- Non-coated material
- First choice for aluminum and general purpose cutting

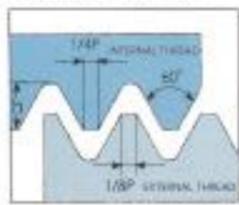
**VTS**

TMDR

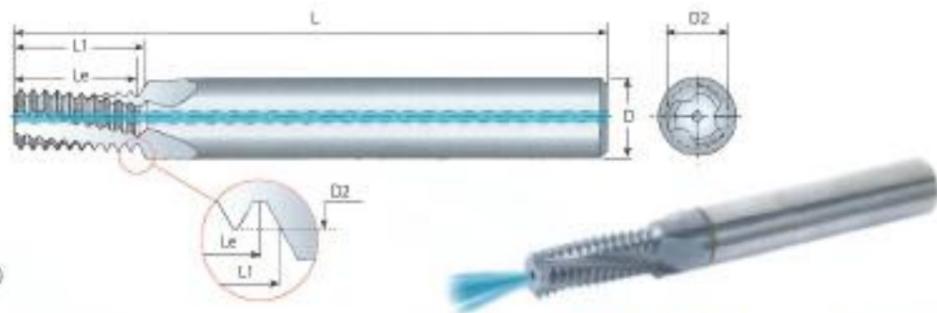
- Universal - Common material
- TiAlN coating

### ISO METRIC THREAD

#### INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6H



### Helicool

#### SPIRAL MILL CUTTER WITH CENTRAL COOLING

1.5 xDo (Le ≤ 1.5x screw diameter)

THREAD		PITCH	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
COARSE THREAD	FINE THREAD	MM	INTERNAL THREAD	D	D2	L	Le	Z	Zt	MM
M3x0.5	M3.5-M16x0.5	0.5	RT-HC04024L04-I0.50ISOTM...	4	2.40	45	4.7	3	9	2.5
M4x0.7		0.7	HC04031L06-I0.70ISOTM...	4	3.15	45	6.6	3	9	3.3
M5x0.8		0.8	HC04039L07-I0.80ISOTM...	4	3.90	45	7.6	3	9	4.2
M6x1.0	M8-M40x1.0	1.0	HC06048L09-I1.00ISOTM...	6	4.80	57	9.5	3	9	5.0
M8x1.25		1.25	HC08065L13-I1.25ISOTM...	8	6.50	61	13.1	3	10	6.8
M10x1.5	M12-M48x1.5	1.5	HC10082L15-I1.50ISOTM...	10	8.20	73	15.7	3	10	8.5
M12x1.75		1.75	HC10099L18-I1.75ISOTM...	10	9.90	73	18.4	4	10	10.2
M14x2.0	M17-M80x2.0	2.0	HC12116L21-I2.00ISOTM...	12	11.60	73	21.0	4	10	12.0
M16x2.0	M17-M80x2.0	2.0	HC14136L25-I2.00ISOTM...	14	13.60	92	25.0	4	12	14.0

#### SPIRAL MILL CUTTER WITH CENTRAL COOLING

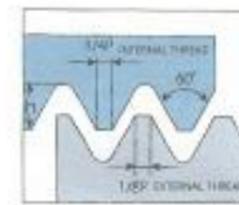
2 xDo (L1 ≤ 2x screw diameter)

THREAD		PITCH	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
COARSE THREAD	FINE THREAD	MM	INTERNAL THREAD	D	D2	L	Le	Z	Zt	MM
M3x0.5	M3.5-M16x0.5	0.5	RT-HC04024L06-I0.50ISOTM...	4	2.40	45	6.2	3	12	2.5
M4x0.5		0.5	HC04032L08-I0.50ISOTM...	4	3.20	45	8.2	3	16	3.5
M5x0.5		0.5	HC06042L10-I0.50ISOTM...	6	4.20	57	10.2	3	20	4.5
M4x0.7		0.7	HC04031L08-I0.70ISOTM...	4	3.15	45	8.7	3	12	3.3
M6x0.75		0.75	HC06050L12-I0.75ISOTM...	6	5.00	57	12.4	3	16	5.3
M5x0.8		0.8	HC04039L10-I0.80ISOTM...	4	3.90	45	10.8	3	13	4.2
M6x1.0	M8-M40x1.0	1.0	HC06048L12-I1.00ISOTM...	6	4.80	57	12.5	3	12	5.0
M8x1.0		1.0	HC08067L16-I1.00ISOTM...	8	6.70	61	16.5	3	16	7.0
M10x1.0		1.0	HC10087L20-I1.00ISOTM...	10	8.70	73	20.5	3	20	9.0
M12x1.0		1.0	HC12107L24-I1.00ISOTM...	12	10.70	73	24.5	4	24	11.0
M8x1.25		1.25	HC08065L16-I1.25ISOTM...	8	6.50	61	16.9	3	13	6.8
M10x1.25		1.25	HC10085L20-I1.25ISOTM...	10	8.50	73	20.6	3	16	8.8
M10x1.5	M12-M48x1.5	1.5	HC10082L20-I1.50ISOTM...	10	8.20	73	20.2	3	13	8.5
M12x1.5		1.5	HC10099L24-I1.50ISOTM...	10	9.90	73	24.7	4	16	10.5
M14x1.5		1.5	HC12119L29-I1.50ISOTM...	12	11.90	80	29.2	4	19	12.5
M16x1.5		1.5	HC14139L32-I1.50ISOTM...	14	13.90	92	32.2	4	21	14.5
M12x1.75		1.75	HC10099L25-I1.75ISOTM...	10	9.90	73	25.4	4	14	10.2
M14x2.0	M17-M80x2.0	2.0	HC12116L29-I2.00ISOTM...	12	11.60	80	29.0	4	14	12.0
M16x2.0	M17-M80x2.0	2.0	HC14136L33-I2.00ISOTM...	14	13.60	92	33.0	4	16	14.0
M18x2.5		2.5	HC16148L36-I2.50ISOTM...	16	14.80	92	36.2	4	14	15.5
M20x2.5		2.5	HC18171L41-I2.50ISOTM...	18	17.10	102	41.2	4	16	17.5
M24x3.0		3.0	HC20199L49-I3.00ISOTM...	20	19.90	102	49.5	4	16	21.0

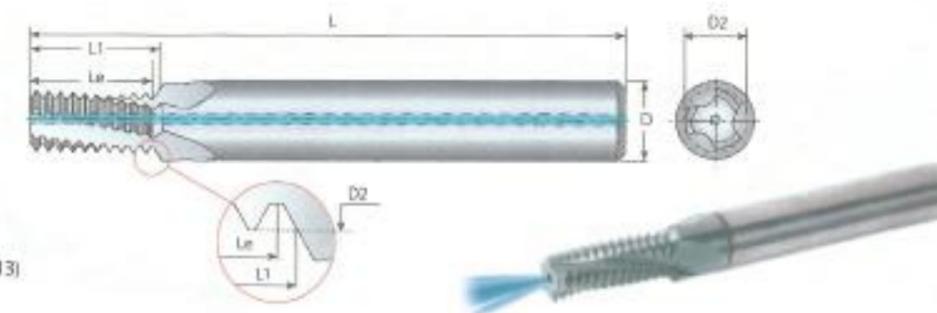
\*Minimum thread bore diameter

### ISO METRIC THREAD (CONTINUOUS)

#### INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6H



### Helicool

#### SPIRAL MILL CUTTER WITH CENTRAL COOLING

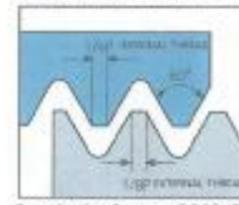
3xDo (L1 ≤ 3.0x screw diameter)

THREAD		PITCH	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
COARSE THREAD	FINE THREAD	MM	INTERNAL THREAD	D	D2	L	Le	Z	Zt	MM
M3x0.5	M3.5-M16x0.5	0.5	RT-HC04024L09-I0.50ISOTM...	4	2.40	45	9.25	3	18	2.5
M4x0.7		0.7	HC04031L12-I0.70ISOTM...	4	3.15	47	12.95	3	18	3.3
M5x0.8		0.8	HC04039L15-I0.80ISOTM...	4	3.90	50	15.60	3	19	4.2
M6x1.0	M8-M40x1.0	1.0	HC06048L18-I1.00ISOTM...	6	4.80	60	18.50	3	18	5.0
M8x1.25		1.25	HC08065L25-I1.25ISOTM...	8	6.50	66	25.63	3	20	6.8
M10x1.5	M12-M48x1.5	1.5	HC10082L30-I1.50ISOTM...	10	8.20	75	30.75	3	20	8.5
M12x1.75		1.75	HC10099L36-I1.75ISOTM...	10	9.90	86	37.63	4	21	10.2
M16x2.0	M17-M80x2.0	2.0	HC14136L48-I2.00ISOTM...	14	13.60	108	49.00	4	24	14.0

\*\*The above-mentioned solid carbide milling cutter (Le=3xDo) is only suitable for light-duty machining. Feed reduced by 30%.

### ISO METRIC THREAD

#### INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6H



### HCN

#### SPIRAL MILLING CUTTER WITH LONG NECK

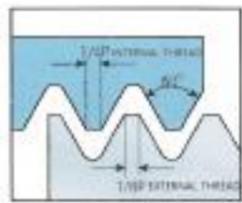
3 xDo (L1 ≤ 3.0x screw diameter)

THREAD		PITCH	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER	
COARSE THREAD	FINE THREAD	MM	INTERNAL THREAD	D	D2	L	Le	L1	Z	Zt	MM
M3x0.5	M3.5-M16x0.5	0.5	RT-HCN04024L09-I0.50ISOTM...	4	2.40	45	5.0	9	3	10	2.5
M4x0.7		0.7	HCN04031L12-I0.70ISOTM...	4	3.15	47	7.0	12	3	10	3.3
M5x0.8		0.8	HCN04039L15-I0.80ISOTM...	4	3.90	50	8.8	15	3	11	4.2
M6x1.0	M8-M40x1.0	1.0	HCN06048L18-I1.00ISOTM...	6	4.80	60	10.0	18	3	10	5.0
M8x1.0	M8-M40x1.0	1.0	HCN08067L24-I1.00ISOTM...	8	6.70	66	13.0	24	4	13	7.0
M10-M40x1.0		1.0	HCN10067L30-I1.00ISOTM...	10	8.70	75	17.0	30	4	17	9.0
M8x1.25		1.25	HCN08065L24-I1.25ISOTM...	8	6.50	66	13.75	24	3	11	6.8
M10x1.5	M12-M48x1.5	1.5	HCN10082L30-I1.50ISOTM...	10	8.20	75	16.5	30	3	11	8.5
M12-M48x1.5		1.5	HCN10099L36-I1.50ISOTM...	10	9.90	86	19.5	36	4	13	10.5
M14-M48x1.5		1.5	HCN12119L42-I1.50ISOTM...	12	11.90	92	22.5	42	4	15	12.5
M16-M48x1.5		1.5	HCN14139L48-I1.50ISOTM...	14	13.90	102	25.5	48	5	17	14.5
M12x1.75		1.75	HCN10099L36-I1.75ISOTM...	10	9.90	86	19.25	36	4	11	10.2
M14x2.0	M17-M80x2.0	2.0	HCN12116L42-I2.00ISOTM...	12	11.60	92	24.0	42	4	12	12.0
M16x2.0	M17-M80x2.0	2.0	HCN14136L48-I2.00ISOTM...	14	13.60	102	26.0	48	4	13	14.0

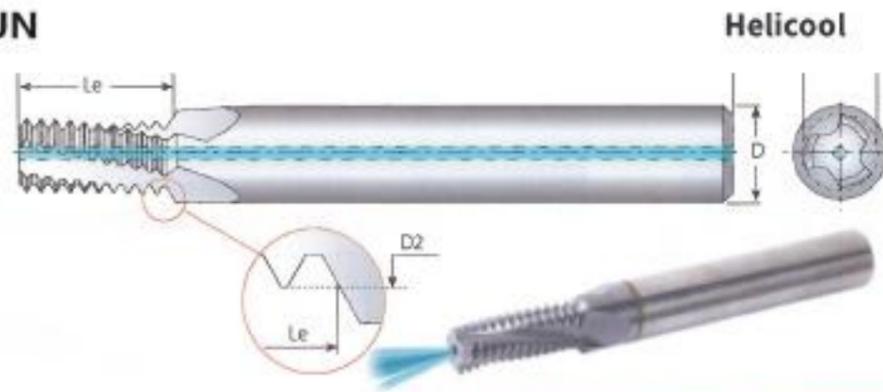
\*Minimum thread bore diameter

## American standard UN

### INTERNAL THREAD



Standard reference: ANSI B1.1:1968  
Tolerance class: 2B



## Helicool

### SPIRAL MILL CUTTER WITH CENTRAL COOLING

1.5 x Do (Le ≤ 1.5 x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSION	NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
UNC UNF UNEF	TPI	INTERNAL THREAD	D D2 L Le	Z	Zt	MM
No.10-24	5/16", 3/8"x24	9/16"-11/16"x24	24 RT-HC04035L07-I24UNCTM...	4	3.58 45 79	3 7 3.8
No.12-24	5/16", 3/8"x24	9/16"-11/16"x24	24 HC06041L08-I24UNCTM...	6	4.15 57 9.0	3 8 4.5
1/4"x20	7/16", 1/2"x20	3/4"-1"x20	20 HC06048L09-I20UNCTM...	6	4.88 57 9.5	3 7 5.2
5/16"x18	9/16", 5/8"x18	11/16"-1 11/16"x18	18 HC08061L11-I18UNCTM...	8	6.15 61 12.0	3 8 6.5
3/8"x16	3/4"x16		16 HC08076L15-I16UNCTM...	8	7.65 61 15.1	3 9 8.0
7/16"x14	7/8"x14		14 HC10090L17-I14UNCTM...	10	9.00 73 17.2	3 9 9.3
1/2"x13			13 HC12104L20-I13UNCTM...	12	10.35 73 20.5	4 10 10.8
9/16"x12	1"-1 1/2"x12		12 HC12118L22-I12UNCTM...	12	11.80 73 22.2	4 10 12.3

### SPIRAL MILL CUTTER WITH CENTRAL COOLING

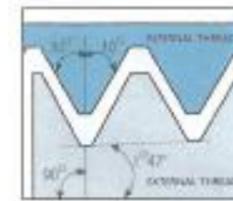
2 x Do (L1 ≤ 2 x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSION	NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
UNC UNF UNEF	TPI	INTERNAL THREAD	D D2 L Le	Z	Zt	MM
No.10-32	No.12-3/8"x32		32 RT-HC04038L09-I32UNFTM...	4	3.80 45 9.9	3 12 4.0
	No.12-3/8"x32		32 HC06044L11-I32UNFTM...	6	4.40 57 11.5	3 14 4.7
No.12, 1/4"x28	7/16", 1/2"x28		28 HC06043L11-I28UNFTM...	6	4.30 57 11.3	3 12 4.6
1/4"x28	7/16", 1/2"x28		28 HC06052L13-I28UNFTM...	6	5.15 57 13.1	3 14 5.5
	7/16", 1/2"x28		28 HC10099L22-I28UNFTM...	10	9.90 73 22.2	3 24 10.2
No.10-24	5/16", 3/8"x24	9/16"-11/16"x24	24 HC04035L10-I24UNCTM...	4	3.58 45 10.0	3 9 3.8
No.12-24	5/16", 3/8"x24	9/16"-11/16"x24	24 HC06041L11-I24UNCTM...	6	4.15 57 11.1	3 10 4.5
	5/16", 3/8"x24	9/16"-11/16"x24	24 HC08066L16-I24UNFTM...	8	6.68 61 16.4	3 15 6.8
	3/8"x24	9/16"-11/16"x24	24 HC10082L19-I24UNFTM...	10	8.20 73 19.6	3 18 8.5
		9/16"-11/16"x24	24 HC14129L29-I24UNFTM...	14	12.90 92 29.1	4 27 13.2
1/4"x20	7/16", 1/2"x20	3/4"-1"x20	20 HC06048L13-I20UNCTM...	6	4.88 57 13.3	3 10 5.2
	7/16", 1/2"x20	3/4"-1"x20	20 HC10096L22-I20UNFTM...	10	9.60 73 22.2	3 17 9.8
	1/2"x20	3/4"-1"x20	20 HC12111L26-I20UNFTM...	12	11.10 80 26.0	4 20 11.5
		3/4"-1"x20	20 HC18174L38-I20UNFTM...	18	17.40 102 38.7	4 30 17.8
5/16"x18	9/16", 5/8"x18	11/16"-1 11/16"x18	18 HC08061L16-I18UNCTM...	8	6.15 61 16.2	3 11 6.5
	9/16", 5/8"x18	11/16"-1 11/16"x18	18 HC14125L28-I18UNFTM...	14	12.50 92 28.9	4 20 12.8
	5/8"x18	11/16"-1 11/16"x18	18 HC16141L31-I18UNFTM...	16	14.10 92 31.7	4 22 14.5
3/8"x16	3/4"x16		16 HC08076L19-I16UNCTM...	8	7.65 61 19.8	3 12 8.0
	3/4"x16		16 HC18170L38-I16UNFTM...	18	17.00 102 38.8	4 24 17.5
7/16"x14	7/8"x14		14 HC10090L22-I14UNCTM...	10	9.00 73 22.7	3 12 9.3
	7/8"x14		14 HC20199L44-I14UNFTM...	20	19.90 102 44.4	4 24 20.5
1/2"x13			13 HC12104L26-I13UNCTM...	12	10.35 80 26.4	4 13 10.8
9/16"x12	1"-1 1/2"x12		12 HC12118L28-I12UNCTM...	12	11.80 80 28.6	4 13 12.3
	1"-1 1/2"x12		12 HC20199L51-I12UNFTM...	20	19.90 102 51.9	4 24 23.5
5/8"x11			11 HC14131L33-I11UNCTM...	14	13.10 92 33.5	4 14 13.5
3/4"x10			10 HC16159L39-I10UNCTM...	16	15.90 92 39.4	4 15 16.5
7/8"x9			9 HC20190L46-I9UNCTM...	20	19.00 102 46.6	4 16 19.5
1"x8			8 HC20199L52-I8UNCTM...	20	19.90 102 52.4	4 16 22.0

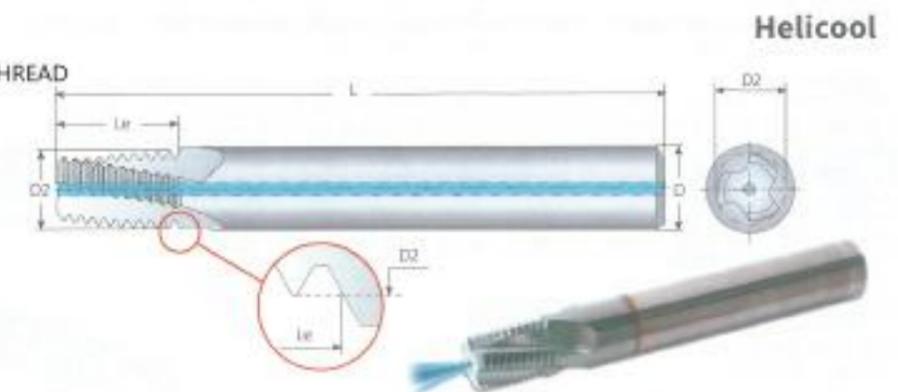
\*Minimum thread bore diameter

## NPT

### EXTERNAL THREAD/INTERNAL THREAD



Standard reference: USAS B2.1:1968  
Tolerance class: Standard NPT



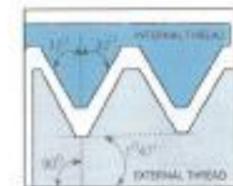
## Helicool

### SPIRAL MILL CUTTER WITH CENTRAL COOLING

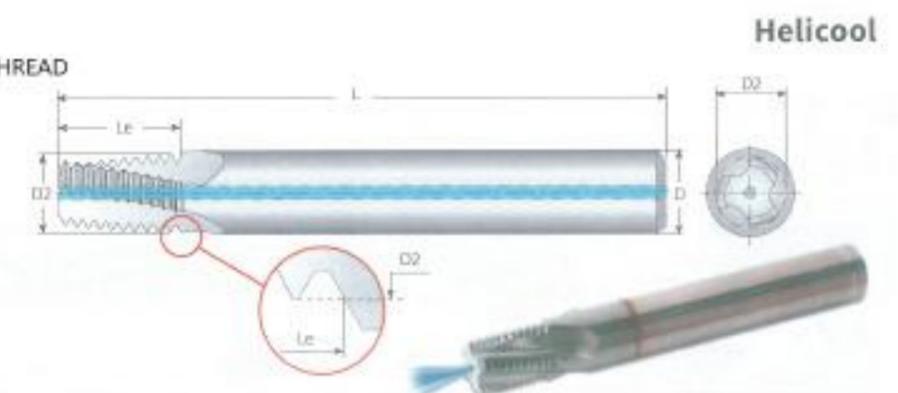
THREAD	PITCH	ORDER CODE	DIMENSIONMM	NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
STANDARD TYPE	TPI	EXTERNAL THREAD/INTERNAL THREAD	D D2 L Le	Z	Zt	MM
1/16"x27	27	RT-HC06059L09-EI27NPT-TM...	6 5.90 57 9.9	3	10	6.3
1/8"x27	27	HC08076L09-EI27NPT-TM...	8 7.65 61 9.9	3	10	8.5
1/4"x18	18	HC10099L14-EI18NPT-TM...	10 9.90 73 14.8	3	10	11.1
3/8"x18	18	HC12111L14-EI18NPT-TM...	12 11.15 73 14.8	4	10	14.5
1/2", 3/4"x14	14	HC16142L19-EI14NPT-TM...	16 14.25 92 19.0	4	10	17.7, 23.0
1", 1 1/4", 1 1/2", 2"x11.5	11.5	HC20196L23-EI11.5NPT-TM...	20 19.60 102 23.2	4	10	29.0, 37.7, 44.0, 56.0
2 1/2", 3"x8	8	HC20196L33-EI8NPT-TM...	20 19.60 102 33.3	4	10	66.5, 82.1

## ANPT

### EXTERNAL THREAD/INTERNAL THREAD



Standard reference: MIL-P-7105B  
Tolerance class: Standard ANPT



## Helicool

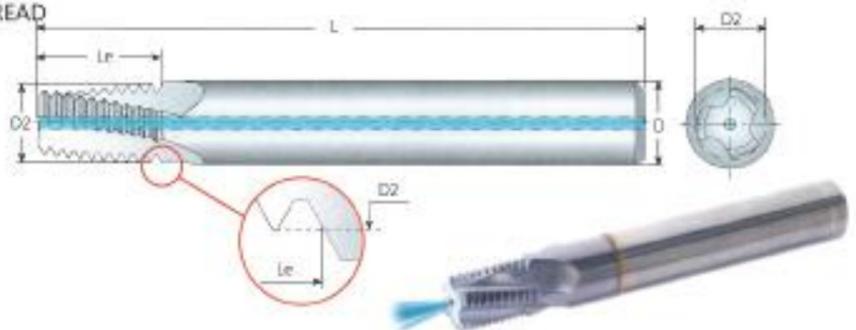
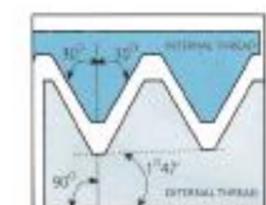
### SPIRAL MILL CUTTER WITH CENTRAL COOLING

THREAD	PITCH	ORDER CODE	DIMENSIONMM	NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
STANDARD TYPE	TPI	EXTERNAL THREAD/INTERNAL THREAD	D D2 L Le	Z	Zt	MM
1/4", 3/8"x18	18	RT-HC10099L14-EI18ANPT-TM...	10 9.90 73 14.8	3	10	11.1 / 14.5
1/2", 3/4"x14	14	HC14139L18-EI14ANPT-TM...	14 13.90 92 19.0	4	10	17.7 / 23.0

\*Minimum thread bore diameter

### NPTF

EXTERNAL THREAD/INTERNAL THREAD



### Helicool

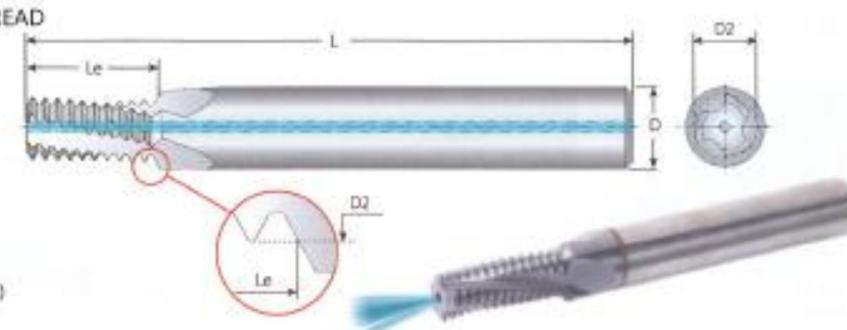
Standard reference: ANSI 1.20.3-1976  
Tolerance class: Standard type NPTF

#### SPIRAL MILL CUTTER WITH CENTRAL COOLING

STANDARD TYPE	THREAD	PITCH	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
				D	D2	L	Le			
	1/16"x27	27	RT-HC06059L09-EI27NPTFTM...	6	5.90	57	9.9	3	10	6.3
	1/8"x27	27	HC08076L09-EI27NPTFTM...	8	7.65	61	9.9	3	10	8.4
	1/4"x18	18	HC10099L14-EI18NPTFTM...	10	9.90	73	14.8	3	10	11.1
	3/8"x18	18	HC12111L14-EI18NPTFTM...	12	11.15	73	14.8	4	10	14.7
	1/2", 3/4"x14	14	HC16142L19-EI14NPTFTM...	16	14.25	92	19.0	4	10	17.9, 23.4
	1", 1 1/4", 1 1/2", 2"x11.5	11.5	HC20196L23-EI11.5NPTFTM...	20	19.60	102	23.2	4	10	29.0, 37.7, 43.7, 55.6
	2 1/2", 3"x8	8	HC20196L33-EI8NPTFTM...	20	19.60	102	33.3	4	10	66.3, 82.1

### NPS

EXTERNAL THREAD/INTERNAL THREAD



### Helicool

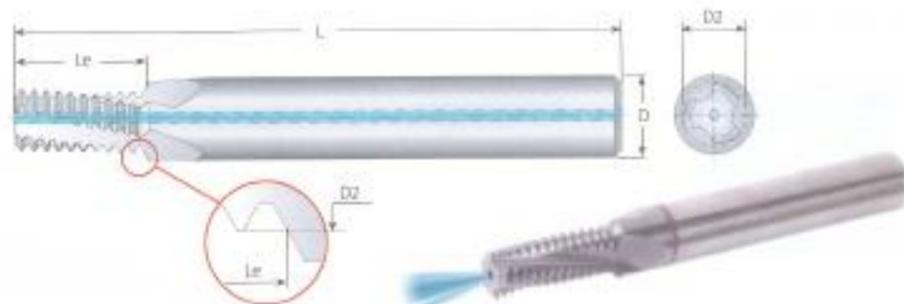
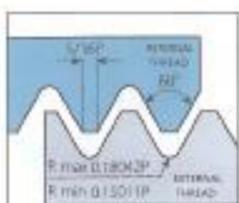
Standard reference: USA NBS H28(1957)  
Tolerance class: Standard NPS

#### SPIRAL MILL CUTTER WITH CENTRAL COOLING

STANDARD TYPE	THREAD	PITCH	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
				D	D2	L	Le			
	1/8"	27	RT-HC08076L09-EI27NPSM...	8	7.65	61	9.9	3	10	8.5
	1/4"	18	HC10099L14-EI18NPSM...	10	9.90	73	14.8	3	10	11.1
	3/8"	18	HC12111L14-EI18NPSM...	12	11.15	73	14.8	4	10	14.5
	1/2", 3/4"	14	HC16142L19-EI14NPSM...	16	14.25	92	19.0	4	10	17.7, 23.0
	1", 2"	11.5	HC20196L22-EI11.5NPSM...	20	19.60	102	23.2	4	10	29.0, 56.0

### UNJ

INTERNAL THREAD



### Helicool

Standard reference: MIL-S-8879C  
Tolerance class: 3B

#### SPIRAL MILL CUTTER WITH CENTRAL COOLING

2 x Do (L1 ≤ 2x screw diameter)

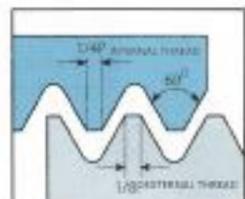
UNIC	THREAD			PITCH	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
	UNIF	UNJEF	UNJ			D	D2	L	Le			
0.138"(#5)	0.190"(#10)	0.216"(#12)	0.4375"(7/16")	32	RT-HC04027L07-I32UNJTM...	4	2.70	45	7.5	3	9	2.8
-	0.250"(1/4")	0.4375"(7/16")	0.5625"(9/16")	28	HC06054L13-I28UNJTM...	6	5.40	57	13.1	3	14	5.6
0.190"(#10)	0.3125"(5/16")	0.5625"(9/16")	-	24	HC04037L09-I24UNJTM...	4	3.70	45	10.0	3	9	4.0
-	0.3125"(5/16")	0.5625"(9/16")	-	24	HC08067L15-I24UNJTM...	8	6.70	61	16.4	3	15	7.0
0.250"(1/4")	0.4375"(7/16")	0.750"(3/4")	0.3125"(5/16")	20	HC06050L12-I20UNJTM...	6	5.00	57	13.3	3	10	5.3
-	0.4375"(7/16")	0.750"(3/4")	0.5625"(9/16")	20	HC10096L21-I20UNJTM...	10	9.60	73	22.2	4	17	10.0
0.3125"(5/16")	0.5625"(9/16")	1.0625"(1 1/16")	-	18	HC08064L15-I18UNJTM...	8	6.40	61	16.2	3	11	6.75
0.375"(3/8")	0.750"(3/4")	-	0.4375"(7/16")	16	HC08077L19-I16UNJTM...	8	7.70	61	19.8	3	12	8.1
0.4375"(7/16")	0.875"(7/8")	-	-	14	HC10092L21-I14UNJTM...	10	9.20	73	22.7	4	12	9.5
0.500"(1/2")	-	-	-	13	HC10099L25-I13UNJTM...	10	9.90	73	26.4	4	13	11.0

\*Minimum thread bore diameter

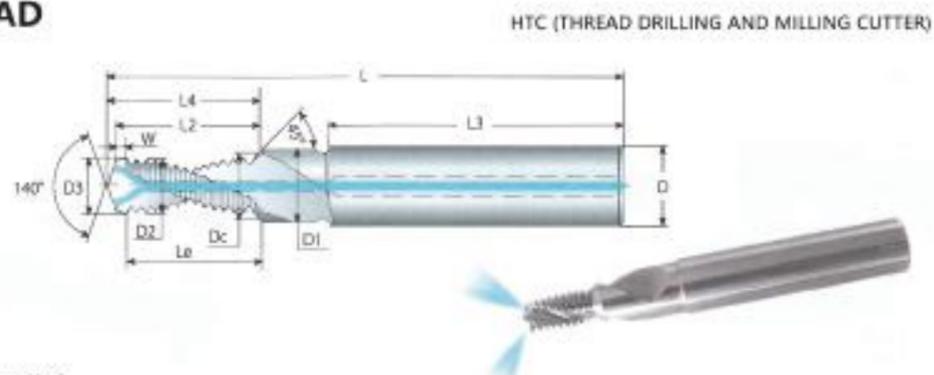
\*Minimum thread bore diameter

## ISO METRIC THREAD

### INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6H

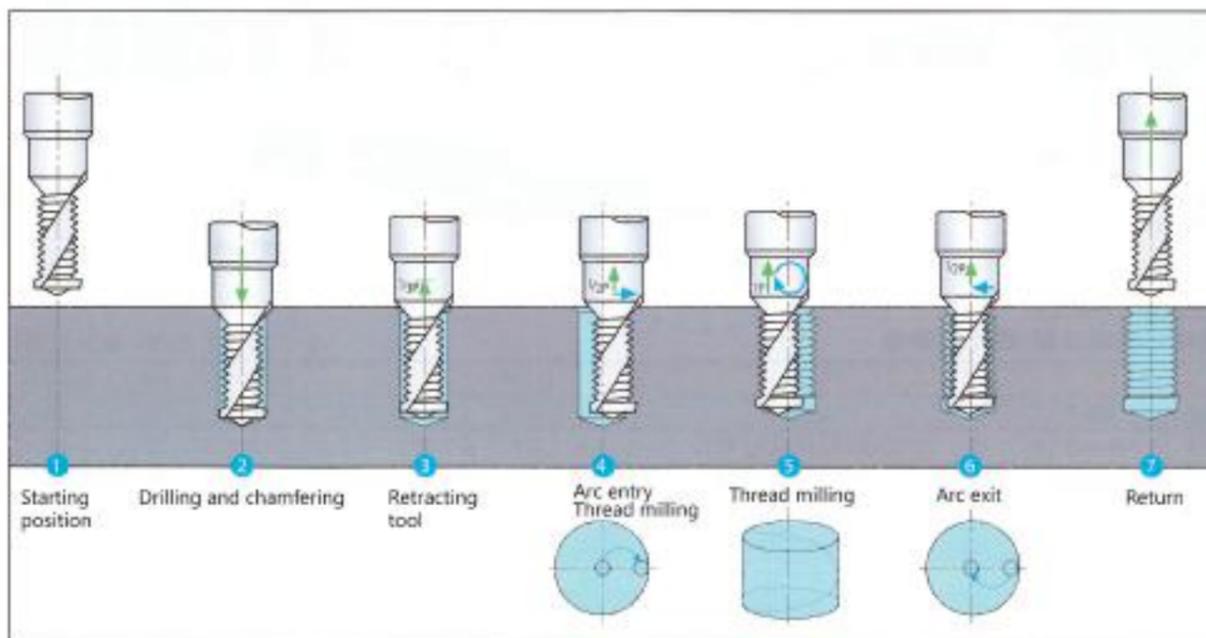


HTC (Thread drilling and milling cutter)

### TOOLS FOR DRILLING, CHAMFERING AND THREADING WITH CENTRAL COOLING

THREAD	ORDER CODE	PITCH	DIMENSIONMM										NO. OF CUTTING FLUTES	NO. OF TEETH	
ISO 2xD <sub>0</sub> COARSE THREAD	INTERNAL THREAD	mm	L	L4	L2	L3	W	Le	D3	D	D1	Dc	D2	Z	Zt
M6x1.0	RT-HTCM6x1.0x2D...	1.00	62.0	14.5	13.7	36	1.0	12.7	5.0	8	6.6	6.3	4.85	2	11
M8x1.25	HTCM8x1.25x2D...	1.25	74.0	18.2	17.1	40	1.3	15.8	6.8	10	9.0	8.3	6.45	2	11
M10x1.5	HTCM10x1.5x2D...	1.50	79.0	23.4	22.1	45	1.5	20.6	8.5	12	11.0	10.3	8.08	2	12
M12x1.75	HTCM12x1.75x2D...	1.75	89.0	27.1	25.5	45	1.5	24.0	10.3	14	13.5	12.3	9.74	2	12
ISO 2.5xD <sub>0</sub> COARSE THREAD															
M6x1.0	HTCM6x1.0x2.5D...	1.00	62.0	16.5	15.7	36	1.0	14.7	5.0	8	6.6	6.3	4.85	2	13
M8x1.25	HTCM8x1.25x2.5D...	1.25	74.0	23.2	22.1	40	1.3	20.8	6.8	10	9.0	8.3	6.45	2	15
M10x1.5	HTCM10x1.5x2.5D...	1.50	79.0	27.9	26.6	45	1.5	25.1	8.5	12	11.0	10.3	8.08	2	15

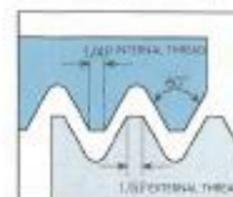
### HTC MACHINING PROCEDURE FOR THREADING, DRILLING AND MILLING



HTC products only for aluminum and cast iron cutting

## ISO METRIC THREAD

### EXTERNAL THREAD/INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6g/6H



### THREAD SLOT MILLING CUTTER - EXTERNAL THREAD

2 x D<sub>0</sub> (L<sub>1</sub> ≤ 2 x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH
COARSE THREAD	mm	EXTERNAL THREAD	D	D2	L	Le	Z	Zt
M3x0.5	0.5	RT-H04039L06-E0.5ISOTM...	4	3.9	45	6.0	3	12
M4.5x0.75	0.75	H04039L09-E0.75ISOTM...	4	3.9	45	9.0	3	12
M6x1.0	1.0	H04039L12-E1.0ISOTM...	4	3.9	45	12.0	3	12
M8x1.25	1.25	H06059L16-E1.25ISOTM...	6	5.9	57	16.25	3	13
M10x1.5	1.5	H08079L21-E1.5ISOTM...	8	7.9	63	21.0	3	14
M14x2.0	2.0	H10099L28-E2.0ISOTM...	10	9.9	73	28.0	4	14

### THREAD SLOT MILLING CUTTER - INTERNAL THREAD

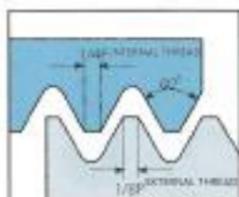
2 x D<sub>0</sub> (L<sub>1</sub> ≤ 2 x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER	
COARSE THREAD	FINE THREAD	mm	INTERNAL THREAD	D	D2	L	Le	Z	Zt	MM
M3x0.5	M3.5-M16x0.5	0.5	RT-H04022L06-I0.5ISOTM...	4	2.2	45	6.0	3	12	2.5
	M4x0.5	0.5	H04030L08-I0.5ISOTM...	4	3.0	45	8.0	3	16	3.5
	M5x0.5	0.5	H04039L10-I0.5ISOTM...	4	3.9	45	10.0	3	20	4.5
M4x0.7		0.7	H04028L08-I0.7ISOTM...	4	2.8	45	8.4	3	12	3.3
	M6x0.75	0.75	H04039L12-I0.75ISOTM...	4	3.9	45	12.0	3	16	5.3
M5x0.8		0.8	H04035L10-I0.8ISOTM...	4	3.5	45	10.4	3	13	4.2
M6x1.0	M8-M40x1.0	1.0	H04039L12-I1.0ISOTM...	4	3.9	45	12.0	3	12	5.0
	M8x1.0	1.0	H06059L16-I1.0ISOTM...	6	5.9	57	16.0	3	16	7.0
	M10x1.0	1.0	H08079L20-I1.0ISOTM...	8	7.9	63	20.0	3	20	9.0
	M12x1.0	1.0	H10099L24-I1.0ISOTM...	10	9.9	73	24.0	4	24	11.0
M8x1.25		1.25	H06058L16-I1.25ISOTM...	6	5.8	57	16.25	3	13	6.8
	M10x1.25	1.25	H08077L20-I1.25ISOTM...	8	7.7	63	20.0	3	16	8.8
M10x1.5	M12-M48x1.5	1.5	H08077L21-I1.5ISOTM...	8	7.7	63	21.0	3	14	8.5
	M12x1.5	1.5	H10094L24-I1.5ISOTM...	10	9.4	73	24.0	4	16	10.5
	M14x1.5	1.5	H12112L28-I1.5ISOTM...	12	11.2	83	28.5	4	19	12.5
	M16x1.5	1.5	H12119L33-I1.5ISOTM...	12	11.9	83	33.0	4	22	14.5
M12x1.75		1.75	H10087L24-I1.75ISOTM...	10	8.7	73	24.5	4	14	10.2
M14x2.0	M17-M80x2.0	2.0	H10099L28-I2.0ISOTM...	10	9.9	73	28.0	4	14	12.0
	M16x2.0	2.0	H12119L32-I2.0ISOTM...	12	11.9	83	32.0	4	16	14.0
M18-M22x2.5		2.5	H16139L40-I2.5ISOTM...	16	13.9	92	40.0	5	16	15.5
M24x3.0		3.0	H16159L42-I3.0ISOTM...	16	15.9	92	42.0	4	14	21.0

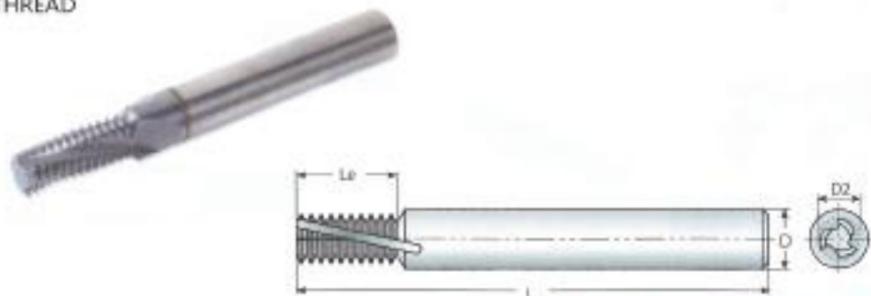
\*Minimum thread bore diameter

## American standard UN

EXTERNAL THREAD/INTERNAL THREAD



Standard reference: ANSI B1.174  
Tolerance class: 2A/2B



SPIRAL MILL-THREAD

### THREAD SLOT MILLING CUTTER - EXTERNAL THREAD

2 x Do (L1 ≤ 2 x screw diameter)

UNC	UNF	TPI	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH
			EXTERNAL THREAD	D	D2	L	Le	Z	Zt
No.8-32		32	RT-H04039L09-E32UNCTM...	4	3.9	45	8.7	3	11
	No.12-28	28	H04039L12-E28UNFTM...	4	3.9	45	11.8	3	13
No.12-24		24	H04039L12-E24UNCTM...	4	3.9	45	11.6	3	11
1/4"x20		20	H04039L13-E20UNCTM...	4	3.9	45	12.7	3	10
5/16"x18		18	H06059L17-E18UNCTM...	6	5.9	57	16.9	3	12
3/8"x16		16	H08079L19-E16UNCTM...	8	7.9	63	19.1	3	12
9/16"x12		12	H12119L30-E12UNCTM...	12	11.9	83	29.6	4	14

### THREAD SLOT MILLING CUTTER - INTERNAL THREAD

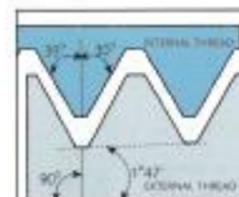
2 x Do (L1 ≤ 2 x screw diameter)

UNC	UNF	UNEF	TPI	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
				INTERNAL THREAD	D	D2	L	Le	Z	Zt	MM
No.8-36			36	RT-H04030L09-I36UNFTM...	4	3.0	45	8.5	3	12	3.5
No.10-32	No.12-3/8"x32		32	H04033L11-I32UNFTM...	4	3.3	45	11.1	3	14	4.0
No.12-28, 1/4"x28	7/16", 1/2"x28		28	H04038L12-I28UNFTM...	4	3.8	45	11.8	3	13	4.6
1/4"x28	7/16", 1/2"x28		28	H06046L13-I28UNFTM...	6	4.6	57	12.7	3	14	5.5
	7/16", 1/2"x28		28	H10092L23-I28UNFTM...	10	9.2	73	22.7	4	25	10.2
No.10-24	5/16", 3/8"x24	9/16"-11/16"x24	24	H04029L11-I24UNCTM...	4	2.9	45	10.6	3	10	3.8
No.12-24	5/16", 3/8"x24	9/16"-11/16"x24	24	H04035L12-I24UNCTM...	4	3.5	45	11.6	3	11	4.5
	5/16", 3/8"x24	9/16"-11/16"x24	24	H06057L16-I24UNFTM...	6	5.7	57	15.9	3	15	6.8
	3/8"x24	9/16"-11/16"x24	24	H08074L19-I24UNFTM...	8	7.4	63	19.1	3	18	8.5
		9/16"-11/16"x24	24	H12119L29-I24UNFTM...	12	11.9	83	28.6	4	27	13.2
1/4"x20	7/16", 1/2"x20	3/4"-1"x20	20	H04039L13-I20UNCTM...	4	3.9	45	12.7	3	10	5.2
	7/16", 1/2"x20	3/4"-1"x20	20	H10085L23-I20UNFTM...	10	8.5	73	22.9	4	18	9.8
	1/2"x20	3/4"-1"x20	20	H10099L26-I20UNFTM...	10	9.9	73	25.4	4	20	11.5
		3/4"-1"x20	20	H16159L38-I20UNFTM...	16	15.9	92	38.1	5	30	17.8
5/16"x18	9/16", 5/8"x18	11/16"-1 1/16"x18	18	H06052L17-I18UNCTM...	6	5.2	57	16.9	3	12	6.5
	9/16", 5/8"x18	11/16"-1 1/16"x18	18	H12113L30-I18UNFTM...	12	11.3	83	29.6	4	21	12.8
	5/8"x18	11/16"-1 1/16"x18	18	H12119L33-I18UNFTM...	12	11.9	83	32.5	4	23	14.5
3/8"x16	3/4"x16		16	H08067L19-I16UNCTM...	8	6.7	63	19.1	3	12	8.0
	3/4"x16		16	H16159L38-I16UNFTM...	16	15.9	92	38.1	4	24	17.5
7/16"x14	7/8"x14		14	H08076L24-I14UNCTM...	8	7.6	63	23.6	4	13	9.3
	7/8"x14		14	H20187L44-I14UNFTM...	20	18.7	104	44.4	4	24	20.5
1/2"x13			13	H10089L26-I13UNCTM...	10	8.9	73	25.4	4	13	10.8
9/16"x12	1"-1 1/2"x12		12	H12103L30-I12UNCTM...	12	10.3	83	29.6	4	14	12.3
	1"-1 1/2"x12		12	H20199L51-I12UNFTM...	20	19.9	104	50.8	5	24	23.5
5/8"x11			11	H12110L32-I11UNCTM...	12	11.0	83	32.3	4	14	13.5
3/4"x10			10	H16135L38-I10UNCTM...	16	13.5	92	38.1	5	15	16.5
7/8"x9			9	H16152L45-I9UNCTM...	16	15.2	92	45.2	4	16	19.5
1"x8			8	H20170L51-I8UNCTM...	20	17.0	104	50.8	4	16	22.0

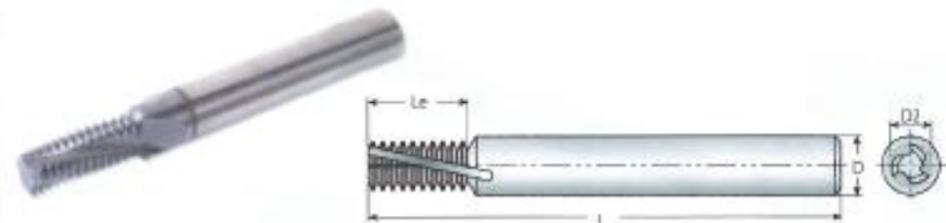
\*Minimum thread bore diameter

## NPT

EXTERNAL THREAD/INTERNAL THREAD



Standard reference: USAS B2.1:1968  
Tolerance class: Standard NPT



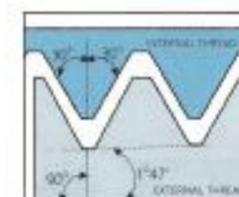
SPIRAL MILL-THREAD

### THREAD SLOT MILLING CUTTER

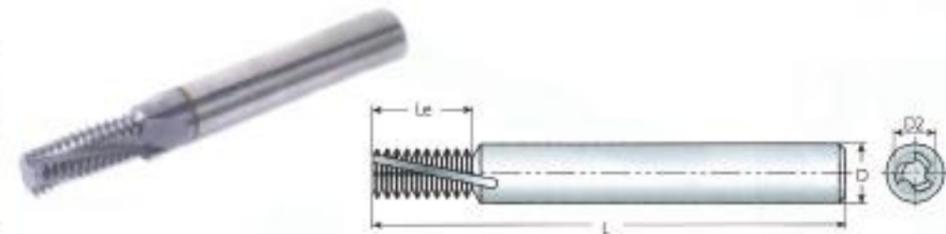
STANDARD TYPE	TPI	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
		EXTERNAL THREAD/INTERNAL THREAD	D	D2	L	Le	Z	Zt	MM
1/16"x27	27	RT-H06053L09-E127NPT-TM...	6	5.3	57	9.4	3	10	6.3
1/8"x27	27	H08075L09-E127NPT-TM...	8	7.5	63	9.4	4	10	8.5
1/4"x18	18	H10094L14-E118NPT-TM...	10	9.4	73	14.1	4	10	11.1
3/8"x18	18	H12119L14-E118NPT-TM...	12	11.9	83	14.1	4	10	14.5
1/2", 3/4"x14	14	H16155L25-E114NPT-TM...	16	15.5	92	25.4	5	14	17.7, 23.0
1"-2"x11.5	11.5	H20199L33-E11.5NPT-TM...	20	19.9	104	33.1	5	15	29.0-56.0
2 1/2", 3"x8	8	H20199L38-E8NPT-TM...	20	19.9	104	38.1	4	12	66.5

## NPTF

EXTERNAL THREAD/INTERNAL THREAD



Standard reference: ANSI 1.203-1976  
Tolerance class: Standard NPTF



SPIRAL MILL-THREAD

### THREAD SLOT MILLING CUTTER

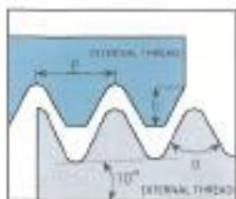
STANDARD TYPE	TPI	ORDER CODE	DIMENSIONMM				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
		EXTERNAL THREAD/INTERNAL THREAD	D	D2	L	Le	Z	Zt	MM
1/16"x27	27	RT-H06053L09-E127NPTFTM...	6	5.3	57	9.4	3	10	6.3
1/8"x27	27	H08075L09-E127NPTFTM...	8	7.5	63	9.4	4	10	8.4
1/4"x18	18	H10094L14-E118NPTFTM...	10	9.4	73	14.1	4	10	11.1
3/8"x18	18	H12119L14-E118NPTFTM...	12	11.9	83	14.1	4	10	14.7
1/2", 3/4"x14	14	H16155L25-E114NPTFTM...	16	15.5	92	25.4	5	14	17.9, 23.4
1"-2"x11.5	11.5	H20199L33-E11.5NPTFTM...	20	19.9	104	33.1	5	15	29.4-56.2
2 1/2", 3"x8	8	H20199L38-E8NPTFTM...	20	19.9	104	38.1	4	12	67.0

\*Minimum thread bore diameter

### BONE PLATE 60, 55° TAPER THREAD

### SPIRAL MILL-THREAD

#### INTERNAL THREAD



#### SPIRAL FLUTE - TAPER 60° SPIRAL FLUTE MILLING CUTTER FOR BONE PLATES PROCESSING

PITCH mm	ORDER CODE	TAPER	TOOTH ANGLE	TOOTH HEIGHT		DIMENSIONMM					NO. OF CUTTING FLUTES Z	NO. OF TEETH Zt
				H	D	D2	D1	L	Le	D		
0.4	RT-H06059L080-I0.4TAP60TM...	20°	60°	0.20	6	5.9	3.2	57	8.0	3	20	
0.5	H06059L090-I0.5TAP60TM...	20°	60°	0.25	6	5.9	2.9	57	9.0	3	18	

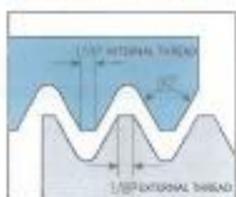
#### SPIRAL FLUTE - TAPER 55° SPIRAL FLUTE MILLING CUTTER FOR BONE PLATES PROCESSING

PITCH mm	ORDER CODE	TAPER	TOOTH ANGLE	TOOTH HEIGHT		DIMENSIONMM					NO. OF CUTTING FLUTES Z	NO. OF TEETH Zt
				H	D	D2	D1	L	Le	D		
0.3	RT-H03028L039-I0.3TAP55TM...	20°	55°	0.18	3	2.8	1.5	38	3.9	3	13	
0.35	H04039L063-I0.35TAP55TM...	20°	55°	0.20	4	3.9	1.8	45	6.3	3	18	
0.4	H06059L100-I0.4TAP55TM...	20°	55°	0.29	6	5.9	2.5	57	10.0	3	25	
0.5	H06059L090-I0.5TAP55TM...	20°	55°	0.33	6	5.9	2.9	57	9.0	3	18	
0.6	H06059L066-I0.6TAP55TM...	20°	55°	0.47	6	5.9	3.8	57	6.6	3	11	

### ISO METRIC THREAD

### DEEP HOLE THREADING

#### INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6H

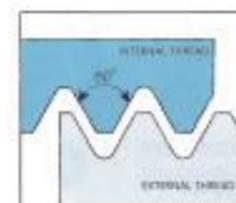
#### DEEP HOLE THREADING-DEEP HOLE EXTRA LONG TOOL 3 x Do (L1 ≤ 3x screw diameter)

THREAD	PITCH MM	ORDER CODE	DIMENSIONMM			NO. OF CUTTING FLUTES Z	NO. OF TEETH Zt	BORE DIAMETER MM	
			D	D2	L				
M6x1	1.0	RT-D1T08041-I1.0ISOTM...	8	4.1	63	19	3	1	5.0
M8x1.25	1.25	D1T10058-I1.25ISOTM...	10	5.8	73	26	3	1	6.8
M10x1.5	1.50	D1T10077-I1.50ISOTM...	10	7.7	73	32	3	1	8.5
M12x1.5	1.50	D1T12094-I1.50ISOTM...	12	9.4	83	38	4	1	10.5
M12x1.75	1.75	D1T12087-I1.75ISOTM...	12	8.7	83	38	4	1	10.2
M14x2	2.0	D1T16102-I2.0ISOTM...	16	10.2	92	44	4	1	12.0
M16x2	2.0	D1T16122-I2.0ISOTM...	16	12.2	100	50	4	1	14.0
M18x2.5	2.50	D1T16129-I2.5ISOTM...	16	12.9	108	57	5	1	15.5
M20x2.5	2.50	D1T16148-I2.5ISOTM...	16	14.8	114	63	5	1	17.5

### 60 DEGREE STANDARD TEETH-PITCH RANGE

### DEEP HOLE THREADING

#### INTERNAL THREAD

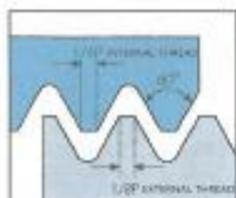


#### DEEP HOLE THREADING-DEEP HOLE EXTRA LONG TOOL

COARSE THREAD	FINE THREAD	MINIMUM THREAD DIAMETER	PITCH		ORDER CODE	DIMENSIONMM					
			MM	TPI		INTERNAL THREAD	D	D2	L	L1	Z
M5x0.8	M5x0.5, M5x0.75	No.10-56UNS, No.10-48UNS, No.10-40UNS, No.10-36UNS, No.10-32UNF	0.5-0.8	32-56	RT-D1T04390L160-ITA60TM...	4	3.90	45	16	4	1
M6x1.0	M6x0.5, M6x0.75	No.12-56UNS, No.12-48UNS, 1/4-40UNS, 1/4-36UNS, 1/4-32UNEF, 1/4-28UNF, 1/4-27UNS, 1/4-24UNS	0.5-1.0	24-56	D1T06485L200-ITB60TM...	6	4.85	51	20	5	1
M8x1.25	M7x0.5, M7x0.75, M7.5x1.0	1/4-48UNS, 1/4-40UNS, 1/4-36UNS, 1/4-32UNEF, 1/4-28UN, 1/4-27UNS, 1/4-24UNS, 1/4-20UN	0.5-1.25	20-48	D1T06590L250-ITF60TM...	6	5.90	64	25	5	1
	M10.5x0.5, M11x0.75, M11x1.0	1/4-32UN, 1/4-28UNEF, 1/4-27UNS, 1/4-24UNS	0.5-1.0	24-56	D1T10990L350-ITB60TM...	10	9.90	73	35	6	1
M10x1.5	M10x1.0, M10x1.25	1/4-24UNF, 1/4-20UN, 1/4-18UNS, 1/4-16UN	1.0-1.50	16-24	D1T08790L320-ITC60TM...	8	7.90	63	32	6	1
M12x1.75	M12x1.0, M12x1.25, M12x1.5	1/4-24UNS, 1/4-20UNS, 1/4-18UNS, 1/4-16UNS, 1/4-14UNS	1.0-1.75	14-24	D1T10990L380-ITD60TM...	10	9.90	73	38	6	1
	M13.5x1.0, M14x1.25, M14x1.5	9/16-24UNEF	1.0-1.75	14-24	D1T12119L450-ITD60TM...	12	11.90	83	45	6	1

## ISO METRIC THREAD

## INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6H



MiLLiPro

**MiLLiPro**  
**SMALL DIAMETER THREAD MILLING CUTTER**

2 xDo (L1 ≤ 2x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
			D	D2	L	L1			
M1.6x0.35	0.35	RT-D3T03012L034-I0.35SOTM...	3	1.20	30	3.4	3	3	1.25
M2x0.4	0.4	D3T06015L042-I0.4SOTM...	6	1.55	57	4.2	3	3	1.6
M2.2x0.45	0.45	D3T06016L046-I0.45SOTM...	6	1.65	57	4.6	3	3	1.75
M2.5x0.45	0.45	D3T06019L052-I0.45SOTM...	6	1.95	57	5.2	3	3	2.05
M3x0.5	0.5	D3T06024L062-I0.5SOTM...	6	2.40	57	6.2	3	3	2.5
M3.5x0.6	0.6	D3T06027L073-I0.6SOTM...	6	2.75	57	7.3	3	3	2.9
M4x0.7	0.7	D3T06031L083-I0.7SOTM...	6	3.15	57	8.3	3	3	3.3
M5x0.8	0.8	D3T06040L104-I0.8SOTM...	6	4.05	57	10.4	3	3	4.2
M6x1.0	1.0	D3T06048L125-I1.0SOTM...	6	4.80	57	12.5	3	3	5.0
M8x1.25	1.25	D3T08065L166-I1.25SOTM...	8	6.50	63	16.6	3	3	6.8
M10x1.5	1.50	D3T10082L208-I1.50SOTM...	10	8.20	73	20.8	3	3	8.5
M12x1.75	1.75	D3T10099L250-I1.75SOTM...	10	9.90	73	25.0	3	3	10.3
M16x2.0	2.0	D3T12119L330-I2.0SOTM...	12	11.90	83	33.0	3	3	14.0
M20x2.5	2.50	D3T16159L413-I2.5SOTM...	16	15.90	92	41.3	3	3	17.5

**MiLLiPro**  
**SMALL DIAMETER THREAD MILLING CUTTER**

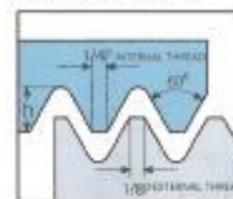
3 xDo (L1 ≤ 3x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
			D	D2	L	L1			
M1.6x0.35	0.35	RT-D3T03012L050-I0.35SOTM...	3	1.20	30	5.0	3	3	1.25
M2x0.4	0.4	D3T03015L062-I0.4SOTM...	3	1.55	30	6.2	3	3	1.6
M2x0.4	0.4	D3T06015L062-I0.4SOTM...	6	1.55	57	6.2	3	3	1.6
M2.5x0.45	0.45	D3T03019L077-I0.45SOTM...	3	1.95	30	7.7	3	3	2.05
M2.5x0.45	0.45	D3T06019L077-I0.45SOTM...	6	1.95	57	7.7	3	3	2.05
M3x0.5	0.5	D3T03024L092-I0.5SOTM...	3	2.40	30	9.2	3	3	2.5
M3x0.5	0.5	D3T06024L092-I0.5SOTM...	6	2.40	57	9.2	3	3	2.5
M4x0.7	0.7	D3T06031L123-I0.7SOTM...	6	3.15	57	12.3	3	3	3.3
M5x0.8	0.8	D3T06040L154-I0.8SOTM...	6	4.05	57	15.4	3	3	4.2
M6x1.0	1.00	D3T06048L185-I1.0SOTM...	6	4.80	57	18.5	3	3	5.0
M8x1.25	1.25	D3T08065L246-I1.25SOTM...	8	6.50	63	24.6	3	3	6.8

\*Minimum thread bore diameter

## American standard UN

## INTERNAL THREAD



Standard reference: ANSI B1.1:74  
Tolerance class: 2B



MiLLiPro

**MiLLiPro**  
**SMALL DIAMETER THREAD MILLING CUTTER**

2 xDo (L1 ≤ 2x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
			D	D2	L	L1			
UNC No.1-72	72	RT-D3T06014L039-I72UNT...	6	1.45	57	3.9	3	3	1.6
No.1-64	No.2-54	64	D3T06014L042-I64UNT...	6	1.40	57	4.2	3	1.5
No.2-56	No.3-56	56	D3T06016L050-I56UNT...	6	1.65	57	5.0	3	1.8
No.3-48	No.4-48	48	D3T06019L060-I48UNT...	6	1.90	57	6.0	3	2.1
No.4, No.5-40	No.6-40	40	D3T06021L060-I40UNT...	6	2.10	57	6.0	3	2.3
No.5-40	No.6-40	40	D3T06024L072-I40UNT...	6	2.45	57	7.2	3	2.6
No.8-32	No.8-32	32	D3T06033L087-I32UNT...	6	3.30	57	8.7	3	3.5
No.8-32	No.10-32	32	D3T06025L074-I32UNT...	6	2.55	57	7.4	3	2.8
No.10-32	No.10-32	32	D3T06032L100-I32UNT...	6	3.20	57	10.0	3	3.5
No.10-32	No.10-32	32	D3T06038L103-I32UNT...	6	3.80	57	10.3	3	4.0
1/4"x28	28	D3T06052L132-I28UNT...	6	5.25	57	13.2	3	3	5.5
No.10-24	5/16"x24	24	D3T06035L102-I24UNT...	6	3.58	57	10.2	3	3.9
5/16"x24	24	D3T08066L165-I24UNT...	8	6.68	63	16.5	3	3	6.9
1/4"x20	7/16"x20	20	D3T06048L134-I20UNT...	6	4.88	57	13.4	3	5.2
7/16"x20	20	D3T10095L230-I20UNT...	10	9.55	73	23.0	3	3	9.9
5/16"x18	18	D3T08061L169-I18UNT...	8	6.15	63	16.9	3	3	6.6
3/8"x16	16	D3T08067L191-I16UNT...	8	6.70	63	19.1	3	3	8.0
7/16"x14	14	D3T10090L233-I14UNT...	10	9.00	73	23.3	3	3	9.4

**MiLLiPro**  
**SMALL DIAMETER THREAD MILLING CUTTER**

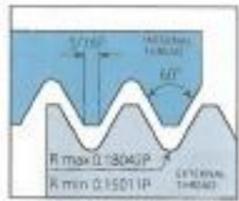
3 xDo (L1 ≤ 3x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
			D	D2	L	L1			
UNC No.1-72	72	RT-D3T03014L057-I72UNT...	3	1.45	30	5.75	3	3	1.6
No.1-72	72	D3T06014L057-I72UNT...	6	1.45	57	5.75	3	3	1.6
No.2-56	No.3-56	56	D3T03016L070-I56UNT...	3	1.65	30	7.0	3	1.8
No.4, No.5-40	No.6-40	40	D3T03021L090-I40UNT...	3	2.10	30	9.0	3	2.3
No.4, No.5-40	No.6-40	40	D3T06021L090-I40UNT...	6	2.10	57	9.0	3	2.3
No.5-40	No.6-40	40	D3T06024L100-I40UNT...	6	2.45	57	10.0	3	2.6
No.6, No.8-32	No.10-32	32	D3T03025L110-I32UNT...	3	2.55	30	11.0	3	2.8
No.6, No.8-32	No.10-32	32	D3T06025L110-I32UNT...	6	2.55	57	11.0	3	2.8
No.8-32	No.10-32	32	D3T06032L130-I32UNT...	6	3.20	57	13.0	3	3.4
No.10-32	No.10-32	32	D3T06038L150-I32UNT...	6	3.80	57	15.1	3	4.0
No.12-28	1/4"x28	28	D3T06044L170-I28UNT...	6	4.40	57	17.0	3	4.7
1/4"x28	28	D3T06052L196-I28UNT...	6	5.25	57	19.6	3	3	5.5
5/16"x24	24	D3T08066L245-I24UNT...	8	6.68	63	24.5	3	3	6.9
1/4"x20	7/16"x20	20	D3T06048L198-I20UNT...	6	4.88	57	19.8	3	5.1
5/16"x18	18	D3T08061L239-I18UNT...	8	6.15	63	24.0	3	3	6.6

\*Minimum thread bore diameter

## UNJ

### INTERNAL THREAD



Standard reference: MIL-5-8879C  
Tolerance class: 3B



UniPro



3 Flutes

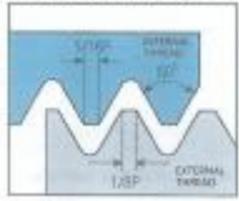
### UniPro-SMALL DIAMETER THREAD MILLING CUTTER

3 x Do (L1 ≤ 3x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
UNJ	UNJ	INTERNAL THREAD	D	D2	L	L1	Z	Zt	MM
0.138"(#6)	0.190"(#10)	RT-D3T06027L110-132UNJTM...	6	2.70	57	11.0	3	3	2.8
	0.250"(1/4")	D3T06054L195-128UNJTM...	6	5.40	57	19.5	3	3	5.6
0.190"(#10)		D3T06037L149-124UNJTM...	6	3.70	57	14.9	3	3	4.0
	0.3125(5/16")	D3T06067L241-124UNJTM...	8	6.70	63	24.1	3	3	7.0
0.250"(1/4")		D3T06050L195-120UNJTM...	6	5.00	57	19.5	3	3	5.3
	0.4375(7/16")	D3T10096L335-120UNJTM...	10	9.60	73	33.5	3	3	10.0
0.3125(5/16")	0.5625(9/16")	D3T06064L241-118UNJTM...	8	6.40	63	24.1	3	3	6.75
0.375(3/8")	0.750(3/4")	D3T06077L290-116UNJTM...	8	7.70	63	29.0	3	3	8.1
0.4375(7/16")	0.875(7/8")	D3T10092L335-114UNJTM...	10	9.20	73	33.5	3	3	9.5
0.500(1/2")		D3T10099L385-113UNJTM...	10	9.90	73	38.5	3	3	11.0

## MJ

### INTERNAL THREAD



Standard reference: ISO 5855  
Tolerance class: 4h/6h-4H/5H



MilliPro



3 Flutes

### MilliPro-SMALL DIAMETER THREAD MILLING CUTTER

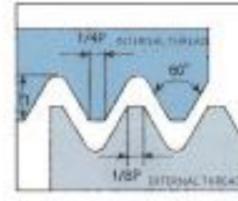
3 x Do (L1 ≤ 3x screw diameter)

THREAD	PITCH	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
STANDARD TYPE	TPI	INTERNAL THREAD	D	D2	L	L1	Z	Zt	MM
MJ3x0.5	0.5	RT-D3T06024L092-10.5MJTM...	6	2.40	57	9.2	3	3	2.6
MJ3.5x0.6	0.6	D3T06028L110-10.6MJTM...	6	2.85	57	11.0	3	3	3.0
MJ4x0.7	0.7	D3T06031L123-10.7MJTM...	6	3.15	57	12.3	3	3	3.4
MJ5x0.8	0.8	D3T06040L154-10.8MJTM...	6	4.05	57	15.4	3	3	4.3
MJ6x1.0	1.0	D3T06048L185-11.0MJTM...	6	4.80	57	18.5	3	3	5.1
MJ8x1.25	1.25	D3T08065L246-11.25MJTM...	8	6.50	63	24.6	3	3	6.9
MJ10x1.5	1.50	D3T10082L308-11.50MJTM...	10	8.20	73	30.8	3	3	8.7
MJ12x1.75	1.75	D3T10099L370-11.75MJTM...	10	9.90	73	37.0	3	3	10.4
MJ14x2	2.0	D3T12119L425-12.0MJTM...	12	11.90	83	42.5	3	3	12.25

\*Minimum thread bore diameter

## ISO METRIC THREAD

### INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6H



MilliPro dental tools



3 Flutes

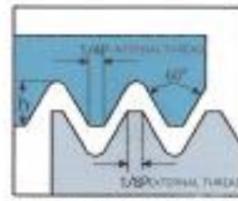
### MilliPro dental tools

### SMALL DIAMETER THREAD MILLING CUTTER FOR DENTAL IMPLANT 3 x Do (L1 ≤ 3x thread diameter)

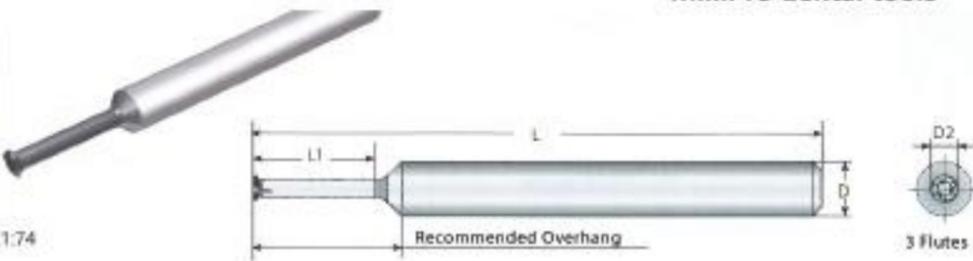
THREAD	PITCH	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER	
NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER	D	D2	L	L1	Z	Zt	MM	
M1.0x0.25	M1.4x0.25	0.25	RT-D1T03007L031-10.25ISOTM...	3	0.70	31	3.1	3	1	0.75
M1.2x0.25	M1.4x0.25	0.25	D1T03009L038-10.25ISOTM...	3	0.90	31	3.8	3	1	0.95
M1.4x0.3	-	0.30	D1T03011L044-10.30ISOTM...	3	1.05	31	4.4	3	1	1.15
M1.6x0.35	-	0.35	D1T03012L050-10.35ISOTM...	3	1.20	31	5.0	3	1	1.30
M1.8x0.35	M2.0x0.35	0.35	D1T03014L056-10.35ISOTM...	3	1.40	31	5.6	3	1	1.50
M2.0x0.4	-	0.40	D1T03015L062-10.40ISOTM...	3	1.50	31	6.2	3	1	1.65
M2.5x0.45	-	0.45	D1T03019L077-10.45ISOTM...	3	1.95	31	7.7	3	1	2.10

## American standard UN

### INTERNAL THREAD



Standard reference: ANSI B1.1.74  
Tolerance class: 2B



MilliPro dental tools



3 Flutes

### MilliPro dental tools

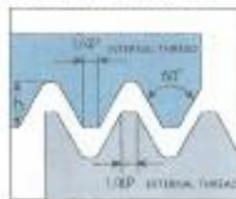
### SMALL DIAMETER THREAD MILLING CUTTER FOR DENTAL IMPLANT 3 x Do (L1 ≤ 3x thread diameter)

THREAD	PITCH	ORDER CODE	DIMENSION				NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER
UNF	TPI	INTERNAL THREAD	D	D2	L	L1	Z	Zt	mm
0-80	80	RT-D1T03011L046-180UNTM...	3	1.15	31	4.6	3	1	1.30
1-72	72	D1T03014L065-172UNTM...	3	1.45	31	6.5	3	1	1.60

MilliPro dental threading milling for titanium and stainless steel cutting  
MilliPro dental D1T milling cutter, also suitable for general cutting

ISO METRIC THREAD

INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6H



MilliPro EL

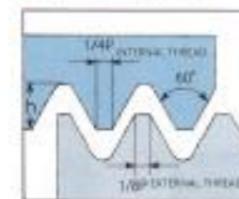
MilliPro EL  
EXTRA LONG SMALL DIAMETER THREAD MILLING CUTTER

2 x Do (L1 ≤ 2 x screw diameter)

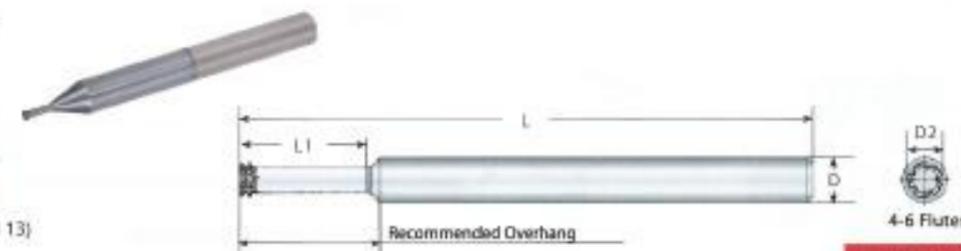
THREAD		PITCH	ORDER CODE	DIMENSION MM			NO. OF CUTTING FLUTES		D. OF TEETH BORE DIAMETER	
COARSE THREAD	FINE THREAD	MM	INTERNAL THREAD	D	D2	L	L1	Z	Zt	MM
M2x0.4		0.4	RT-03T06015L042-10.4ISOTM...	6	1.55	100	4.2	3	3	1.6
M2.5x0.45		0.45	03T06019L052-10.45ISOTM...	6	1.95	100	5.2	3	3	2.05
M3x0.5	M3.5-M16x0.5	0.5	03T06024L062-10.5ISOTM...	6	2.40	100	6.2	3	3	2.5

ISO METRIC THREAD

INTERNAL THREAD



Standard reference: R262 (DIN 13)  
Tolerance class: 6H



MilliPro HD

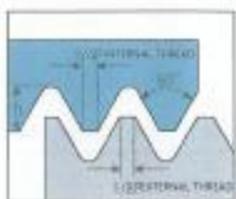
MilliPro HD  
SMALL DIAMETER THREAD MILLING CUTTER FOR HARDENED MATERIAL UP TO 62HRC

2 x Do (L1 ≤ 2 x screw diameter)

THREAD		PITCH	ORDER CODE	DIMENSION MM			NO. OF CUTTING FLUTES		NO. OF TEETH		BORE DIAMETER
COARSE THREAD	FINE THREAD	MM	INTERNAL THREAD	D	D2	L	L1	Z	Zt	MM	
M2x0.4		0.4	RT-S2L06015L042-10.4ISOTM...	6	1.55	76	4.60	4	2	1.6	
M2.2x0.45		0.45	S2L06016L046-10.45ISOTM...	6	1.65	76	5.05	4	2	1.8	
M2.5x0.45		0.45	S2L06019L052-10.45ISOTM...	6	1.95	76	5.65	4	2	2.05	
M3x0.5	M3.5-M16x0.5	0.5	S2L06024L062-10.5ISOTM...	6	2.40	76	6.75	4	2	2.55	
M3.5x0.6		0.6	S2L06027L073-10.6ISOTM...	6	2.75	76	7.90	4	2	2.95	
M4x0.7		0.7	S2L06031L083-10.7ISOTM...	6	3.15	76	9.05	4	2	3.35	
M5x0.8		0.8	S2L06040L104-10.8ISOTM...	6	4.05	76	11.20	4	2	4.3	
M6x1.0	M8-M40x1.0	1.0	S2L06048L125-11.0ISOTM...	6	4.80	76	13.50	5	2	5.1	
M8x1.25		1.25	S2L08065L166-11.25ISOTM...	8	6.50	80	17.85	5	2	6.8	
M10x1.5	M12-M48x1.50	1.50	S2L08079L208-11.50ISOTM...	8	7.90	80	22.30	6	2	8.6	
M12x1.75		1.75	S2L10099L250-11.75ISOTM...	10	9.90	101	26.75	6	2	10.4	

American standard UN

INTERNAL THREAD



Standard reference: ANSI B1.1:74  
Tolerance class: 2B



MilliPro EL

MilliPro EL  
EXTRA LONG SMALL DIAMETER THREAD MILLING CUTTER

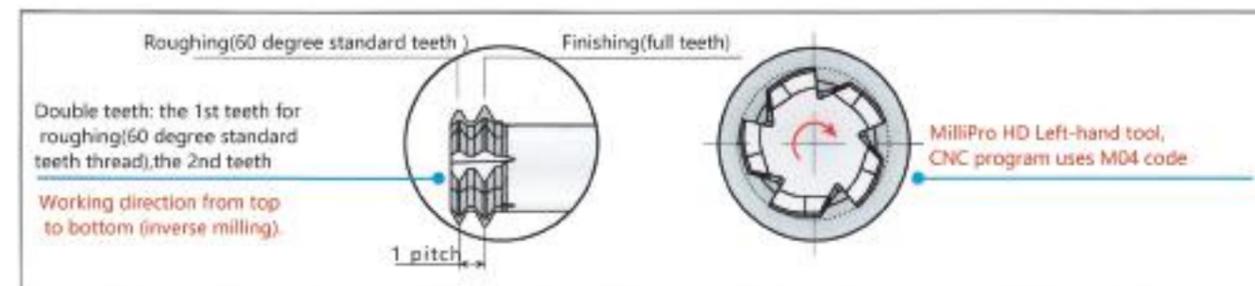
2 x Do (L1 ≤ 2 x screw diameter)

THREAD		PITCH	ORDER CODE	DIMENSION MM			NO. OF CUTTING FLUTES		D. OF TEETH BORE DIAMETER	
UNC	UNF	TPI	INTERNAL THREAD	D	D2	L	L1	Z	Zt	mm
No.2-56	No.3-56	56	RT-03T06016L050-156UNTML...	6	1.65	100	5.0	3	3	1.8
No.4, No.5-40	No.6-40	40	03T06021L060-148UNTML...	6	2.10	100	6.0	3	3	2.3
No.6, No.8-32	No.10-32	32	03T06025L074-132UNTML...	6	2.55	100	7.4	3	3	2.8
No.8-32	No.10-32	32	03T06032L100-132UNTML...	6	3.20	100	10.0	3	3	3.4

MilliPro HD  
SMALL DIAMETER THREAD MILLING CUTTER FOR HARDENED MATERIAL UP TO 62HRC

3 x Do (L1 ≤ 3 x screw diameter)

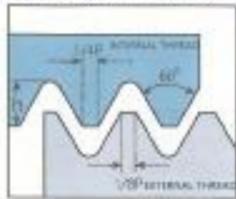
THREAD		PITCH	ORDER CODE	DIMENSION MM			NO. OF CUTTING FLUTES		NO. OF TEETH		BORE DIAMETER
COARSE THREAD	FINE THREAD	MM	INTERNAL THREAD	D	D2	L	L1	Z	Zt	MM	
M2x0.4		0.4	RT-S2L06015L062-10.4ISOTM...	6	1.55	76	6.60	4	2	1.6	
M2.5x0.45		0.45	S2L06019L077-10.45ISOTM...	6	1.95	76	8.15	4	2	2.05	
M3x0.5	M3.5-M16x0.5	0.5	S2L06024L092-10.5ISOTM...	6	2.40	76	9.75	4	2	2.55	
M4x0.7		0.7	S2L06031L123-10.7ISOTM...	6	3.15	76	13.05	4	2	3.35	
M5x0.8		0.8	S2L06040L154-10.8ISOTM...	6	4.05	76	16.20	4	2	4.3	
M6x1.0	M8-M40x1.0	1.0	S2L06048L185-11.0ISOTM...	6	4.80	76	19.50	5	2	5.1	
M8x1.25		1.25	S2L08065L246-11.25ISOTM...	8	6.50	80	25.85	5	2	6.8	



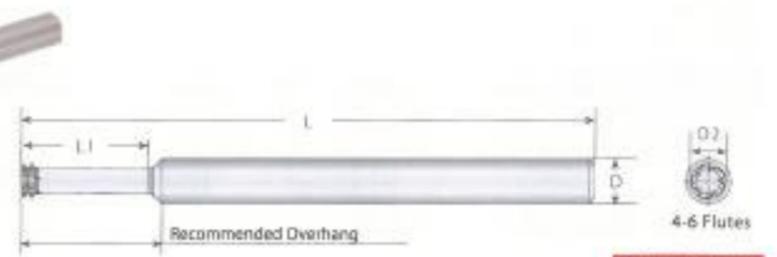
\*Minimum thread bore diameter

\*Minimum thread bore diameter

### American standard UN INTERNAL THREAD



Standard reference: ANSI B1.1:74  
Tolerance class: 2B



LEFT HAND CUTTER

### MILLiPro HD SMALL DIAMETER THREAD MILLING CUTTER FOR HARDENED MATERIAL UP TO 62HRC

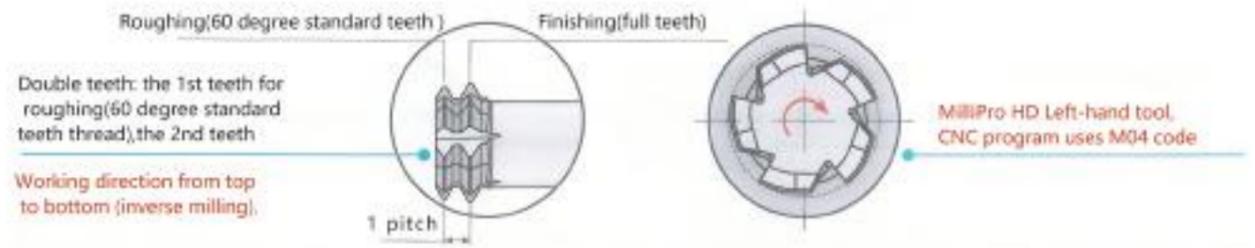
**2 x Do (L1 ≤ 2x screw diameter)**

THREAD		PITCH	ORDER CODE	DIMENSIONMM			NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER	
UNC	UNF	TPI	INTERNAL THREAD	D	D2	L	L1	Z	Zt	MM
No.2-56	No.3-56	56	RT-S2L06016L050-I56UNT...	6	1.65	76	5.45	4	2	1.80
No.3-48	No.4-48	48	S2L06019L060-I48UNT...	6	1.90	76	6.53	4	2	2.10
No.4-40, No.5-40	No.6-40	40	S2L06021L060-I40UNT...	6	2.10	76	6.64	4	2	2.35
No.5-40	No.6-40	40	S2L06024L072-I40UNT...	6	2.45	76	7.84	4	2	2.65
	No.8-36	36	S2L06033L087-I36UNT...	6	3.30	76	9.41	4	2	3.55
No.6-32, No.8-32	No.10-32	32	S2L06025L074-I32UNT...	6	2.55	76	8.20	4	2	2.85
No.8-32	No.10-32	32	S2L06032L100-I32UNT...	6	3.20	76	10.79	4	2	3.50
	No.10-32	32	S2L06037L100-I32UNT...	6	3.70	76	10.80	4	2	4.17
	1/4"x28	28	S2L06052L132-I28UNT...	6	5.25	76	14.11	5	2	5.55
No.10-24	5/16"x24	24	S2L06035L102-I24UNT...	6	3.58	76	11.26	4	2	3.90
	5/16"x24	24	S2L08066L165-I24UNT...	8	6.68	80	17.56	5	2	7.00
1/4"x20	7/16"x20	20	S2L06048L134-I20UNT...	6	4.88	76	14.67	5	2	5.20
	7/16"x20	20	S2L10095L230-I20UNT...	10	9.55	101	24.27	6	2	9.90
5/16"x18		18	S2L08061L160-I18UNT...	8	6.15	80	18.17	4	2	6.50
3/8"x16		16	S2L08076L197-I16UNT...	8	7.65	80	21.29	5	2	8.00
7/16"x14		14	S2L10090L233-I14UNT...	10	9.00	101	25.11	6	2	9.50
1/2"x13		13	S2L10099L256-I13UNT...	10	9.90	101	27.55	6	2	10.90

### MILLiPro HD SMALL DIAMETER THREAD MILLING CUTTER FOR HARDENED MATERIAL UP TO 62HRC

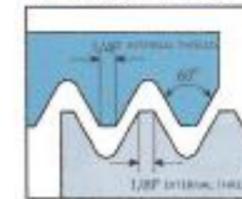
**3 x Do (L1 ≤ 3x screw diameter)**

THREAD		PITCH	ORDER CODE	DIMENSIONMM			NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER	
UNC	UNF	TPI	INTERNAL THREAD	D	D2	L	L1	Z	Zt	MM
No.4-40, No.5-40	No.6-40	40	RT-S2L06021L090-I40UNT...	6	2.10	76	9.64	4	2	2.35
No.5-40	No.6-40	40	S2L06024L100-I40UNT...	6	2.45	76	10.64	4	2	2.65
No.6-32, No.8-32	No.10-32	32	S2L06025L110-I32UNT...	6	2.55	76	11.79	4	2	2.85
No.8-32	No.10-32	32	S2L06032L130-I32UNT...	6	3.20	76	13.79	4	2	3.50
	1/4"x28	28	S2L06052L196-I28UNT...	6	5.25	76	20.51	5	2	5.55
	5/16"x24	24	S2L08066L245-I24UNT...	8	6.68	80	25.56	5	2	7.00
1/4"x20	7/16"x20	20	S2L06048L198-I20UNT...	6	4.88	76	21.07	5	2	5.20
5/16"x18		18	S2L08061L240-I18UNT...	8	6.15	80	26.17	4	2	6.50
7/16"x14		14	S2L10090L335-I14UNT...	10	9.00	101	35.31	6	2	9.50

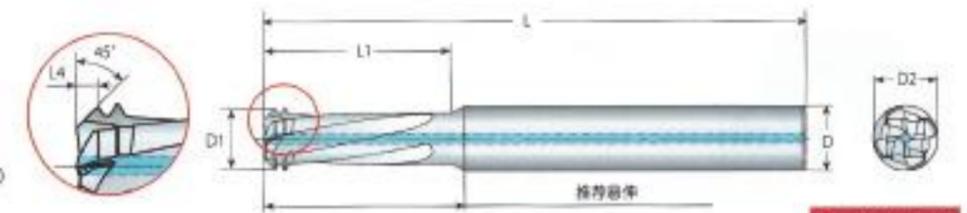


\*Minimum thread bore diameter

### ISO METRIC THREAD INTERNAL THREAD



Standard reference:R262 (DIN 13)  
Tolerance class: 6H  
Cooling only when required



LEFT HAND CUTTER

### TMDR-MILLING, THREADING AND CHAMFERING

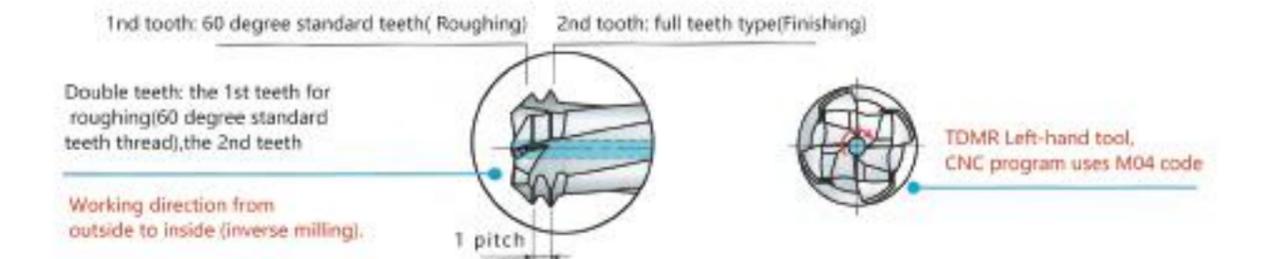
**2 x Do (L1 ≤ 2x screw diameter)**

THREAD		PITCH	ORDER CODE	DIMENSIONMM			NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER		
NO-COARSE THREAD	FINE THREAD	MM	INTERNAL THREAD	D	D2	L	L1	Z	Zt	L4*	D1
WITHOUT COOLANT SUPPLY											
M3x0.5	M4x0.5	0.50	RT-TD-2L06024L070-I0.50ISO...	6	2.40	58	7.0	3	2	0.40	2.08
M4x0.7		0.70	TD-2L06032L092-I0.70ISO...	6	3.20	58	9.2	3	2	0.57	2.88
M5x0.8		0.80	TD-2L06039L115-I0.80ISO...	6	3.90	58	11.5	3	2	0.70	3.51
M6-M7x1.0	M8-M9x1.0	1.00	TD-2L06047L140-I1.00ISO...	6	4.70	58	14.0	3	2	0.79	4.16
WITH COOLANT SUPPLY											
M6-M7x1.0	M8-M9x1.0	1.00	TDC2L08047L140-I1.00ISO...	8	4.70	64	14.0	3	2	0.79	4.16
M8x1.25	M9-M12x1.25	1.25	TDC2L08061L180-I1.25ISO...	8	6.10	64	18.0	4	2	0.90	5.57
M10x1.5	M11-M15x1.5	1.50	TDC2L08078L230-I1.50ISO...	8	7.80	64	23.0	4	2	1.12	7.24
M12x1.75		1.75	TDC2L10090L260-I1.75ISO...	10	9.00	80	26.0	4	2	1.20	8.35
M16x2.0	M17-M23x2.0	2.00	TDC2L12118L350-I2.00ISO...	12	11.80	100	35.0	4	2	2.00	11.13
M18-M22x2.50		2.50	TDC2L16150L446-I2.50ISO...	16	15.00	135	44.6	4	2	2.25	14.08

### TMDR-MILLING, THREADING AND CHAMFERING

**2 x Do (L1 ≤ 2xthread diameter)**

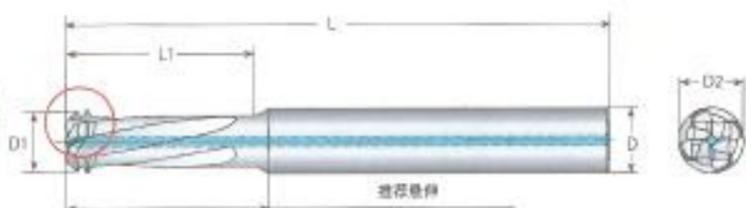
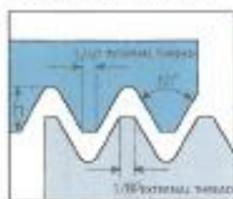
THREAD		PITCH	ORDER CODE	DIMENSIONMM			NO. OF CUTTING FLUTES	NO. OF TEETH	BORE DIAMETER		
NO-COARSE THREAD	FINE THREAD	MM	INTERNAL THREAD	D	D2	L	L1	Z	Zt	L4*	D1
WITHOUT COOLANT SUPPLY											
M3x0.5	M4x0.5	0.50	RT-TD-2L06024L085-I0.50ISO...	6	2.40	58	8.5	3	2	0.40	2.08
M4x0.7		0.70	TD-2L06032L112-I0.70ISO...	6	3.20	58	11.2	3	2	0.57	2.88
M5x0.8		0.80	TD-2L06039L144-I0.80ISO...	6	3.90	58	14.4	3	2	0.70	3.51
M6-M7x1.0	M8-M9x1.0	1.00	TD-2L06047L170-I1.00ISO...	6	4.70	58	17.0	3	2	0.79	4.16
WITH COOLANT SUPPLY											
M6-M7x1.0	M8-M9x1.0	1.00	TDC2L08047L170-I1.00ISO...	8	4.70	64	17.0	3	2	0.79	4.16
M8x1.25	M9-M12x1.25	1.25	TDC2L08061L220-I1.25ISO...	8	6.10	64	22.0	4	2	0.90	5.57
M18-M22x2.50		2.50	TDC2L16150L546-I2.50ISO...	16	15.00	135	54.6	4	2	2.25	14.08



## American standard UN

TMDR

### INTERNAL THREAD



LEFT HAND CUTTER

Standard reference: ANSI B1.1:74  
Tolerance class: 2B

Cooling only when required

### TMDR-milling, threading and chamfering

2 x Do (L1 ≤ 2 x screw diameter)

THREAD		PITCH	ORDER CODE	DIMENSIONMM		NO. OF CUTTING FLUTES NO. OF TEETH						
UNC	UNF	UN	TPI	INTERNAL THREAD	D	D2	L	L1	Z	Z1	L4*	D1
WITHOUT COOLANT SUPPLY												
No.4-40, No.5-40	No.6-40		40	RT-TD-2L06021L072-M0UNC...	6	2.10	58	7.2	3	2	0.38	1.76
No.6-32, No.8-32			32	TD-2L06026L086-132UNC...	6	2.60	58	8.6	3	2	0.45	2.21
No.8-32	No.10-32		32	TD-2L06030L100-132UNC...	6	3.00	58	10.0	3	2	0.60	2.62
	1/4"x28	5/16"x28	28	TD-2L06050L144-128UNF...	6	5.00	58	14.4	3	2	0.69	4.58
No.10-24, No.12-24			24	TD-2L06035L114-124UNC...	6	3.50	58	11.4	3	2	0.80	3.18
	1/4"x20	5/16"x20	20	TD-2L06048L145-120UNC...	6	4.80	58	14.5	3	2	0.80	4.29
WITH COOLANT SUPPLY												
	1/4"x28	5/16"x28	28	TDC2L08050L144-128UNF...	8	5.00	64	14.4	3	2	0.69	4.58
	5/16"x24, 3/8"x24		24	TDC2L08065L176-124UNF...	8	6.50	64	17.6	3	2	0.85	6.02
	1/4"x20	5/16"x20	20	TDC2L08048L145-120UNC...	8	4.80	64	14.5	3	2	0.80	4.29

### TMDR-milling, threading and chamfering

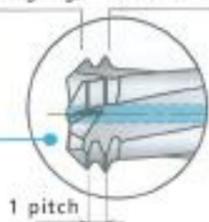
2 x Do (L1 ≤ 2 x thread diameter)

THREAD		PITCH	ORDER CODE	DIMENSIONMM		NO. OF CUTTING FLUTES NO. OF TEETH						
UNC	UNF	UN	TPI	INTERNAL THREAD	D	D2	L	L1	Z	Z1	L4*	D1
WITHOUT COOLANT SUPPLY												
No.4-40, No.5-40	No.6-40		40	RT-TD-2L06021L088-140UNC...	6	2.10	58	8.8	3	2	0.38	1.76
No.6-32, No.8-32			32	TD-2L06026L105-132UNC...	6	2.60	58	10.5	3	2	0.45	2.21
No.8-32	No.10-32		32	TD-2L06030L122-132UNC...	6	3.00	58	12.2	3	2	0.60	2.62
	1/4"x28	5/16"x28	28	TD-2L06050L178-128UNF...	6	5.00	58	17.8	3	2	0.69	4.58
	1/4"x20	5/16"x20	20	TD-2L06048L180-120UNC...	6	4.80	58	18.0	3	2	0.80	4.29
WITH COOLANT SUPPLY												
	1/4"x28	5/16"x28	28	TDC2L08050L178-128UNF...	8	5.00	64	17.8	3	2	0.69	4.58
	5/16"x24, 3/8"x24		24	TDC2L08065L218-124UNF...	8	6.50	64	21.8	3	2	0.85	6.02
	1/4"x20	5/16"x20	20	TDC2L08048L180-120UNC...	8	4.80	64	18.0	3	2	0.80	4.29
	3/8"x16	7/16"x16	16	TDC2L08067L260-116UNC...	8	6.70	64	26.0	4	2	1.10	6.18

1st tooth: 60 degree standard teeth (Roughing) 2nd tooth: full teeth type (Finishing)

Double teeth: the 1st teeth for roughing (60 degree standard teeth thread), the 2nd teeth

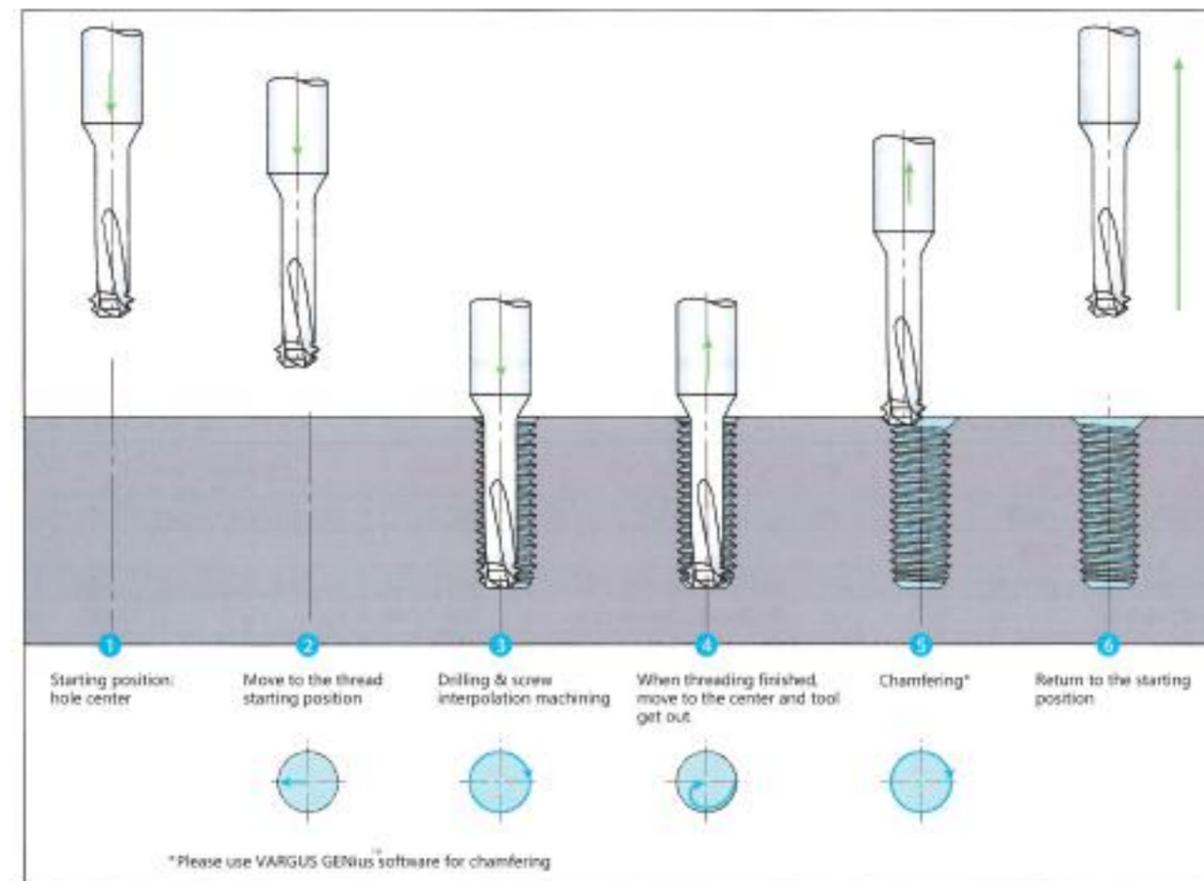
Working direction from top to bottom (inverse milling).



TMDR Left-hand tool, CNC program uses M04 code

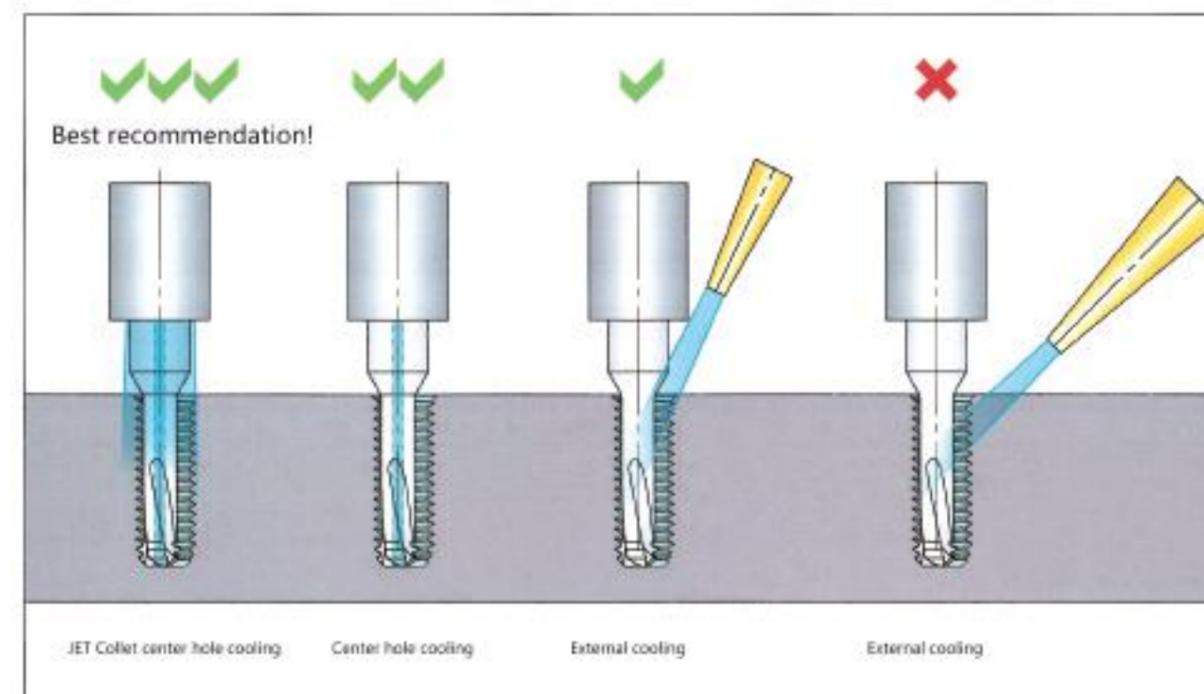
### TMDR-Processing procedure

TMDR



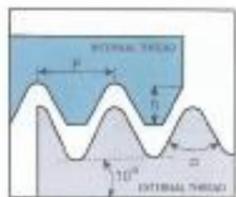
\*Please use VARGUS GENIUS software for chamfering

### TMDR -cooling has a great effect on chip removal



## BONE PLATE 60, 55° TAPER THREAD

INTERNAL THREAD



## STRAIGHT FLUTE MILLING CUTTER

STRAIGHT FLUTE - 60° TAPERED THREAD  
TM STRAIGHT FLUTE MILLING CUTTER FOR BONE PLATE PROCESSING

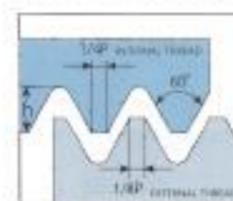
PITCH	ORDER CODE	TAPER THREAD MILLING CUTTER	TOOTH ANGLE	TOOTH HEIGHT	DIMENSION					NO. OF CUTTING FLUTES	NO. OF TEETH
mm	INTERNAL THREAD		$\alpha$	h	D	D2	D1	L	Le	Z	Zt
0.4	RT-S06059L080-10.4TAP60TM...	20°	60°	0.20	6	5.9	3.2	57	8.0	3	20
0.5	S06059L090-10.5TAP60TM...	20°	60°	0.25	6	5.9	2.9	57	9.0	3	18

STRAIGHT FLUTE - 60° TAPERED THREAD  
TM STRAIGHT FLUTE MILLING CUTTER FOR BONE PLATE PROCESSING

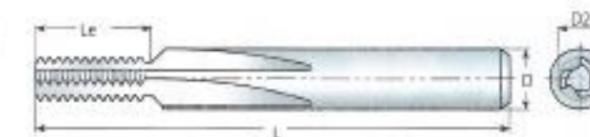
PITCH	ORDER CODE	TAPER THREAD MILLING CUTTER	TOOTH ANGLE	TOOTH HEIGHT	DIMENSION					NO. OF CUTTING FLUTES	NO. OF TEETH
mm	INTERNAL THREAD		$\alpha$	h	D	D2	D1	L	Le	Z	Zt
0.3	RT-S03028L039-10.3TAP55TM...	20°	55°	0.18	3	2.8	1.5	38	3.9	3	13
0.35	S04039L063-10.35TAP55TM...	20°	55°	0.20	4	3.9	1.8	45	6.3	3	18
0.4	S06059L100-10.4TAP55TM...	20°	55°	0.29	6	5.9	2.5	57	10.0	3	25
0.5	S06059L090-10.5TAP55TM...	20°	55°	0.33	6	5.9	2.9	57	9.0	3	18
0.6	S06059L066-10.6TAP55TM...	20°	55°	0.47	6	5.9	3.8	57	6.6	3	11

## ISO METRIC THREAD

EXTERNAL THREAD/INTERNAL THREAD



## STRAIGHT FLUTE MILLING CUTTER



Standard reference: R262(DIN 13)

Tolerance class: 6g/6H

## STRAIGHT FLUTE MILLING CUTTER - EXTERNAL THREAD

THREAD	PITCH	ORDER CODE	DIMENSIONMM			NO. OF CUTTING FLUTES		NO. OF TEETH	
MINIMUM DIMENSION	mm	EXTERNAL THREAD	D	D2	L	Le	Z	Zt	h mm
M3	0.50	RT-S06059-E0.5ISO TM...	6	5.90	57	15.0	3	30	0.31
M4.5	0.75	S08079-E0.75ISO TM...	8	7.90	63	19.5	3.5*	26	0.46
M6	1.00	S10099-E1.0ISO TM...	10	9.90	72	24.0	5	24	0.61
M10	1.50	S12119-E1.5ISO TM...	12	11.90	83	30.0	5	20	0.92
M14	2.00	S12119-E2.0ISO TM...	12	11.90	83	30.0	5	15	1.23
M24	3.00	S16159-E3.0ISO TM...	16	15.90	92	36.0	5	12	1.84
M36	4.00	S16159-E4.0ISO TM...	16	15.90	92	40.0	5	10	2.45
M54	6.00	S20199-E6.0ISO TM...	20	19.90	104	36.0	5	6	3.68

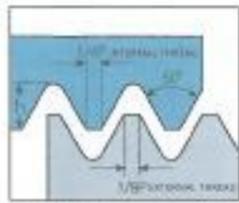
## STRAIGHT FLUTE MILLING CUTTER - INTERNAL THREAD

THREAD	PITCH	ORDER CODE	DIMENSIONMM			NO. OF CUTTING FLUTES		NO. OF TEETH	
MINIMUM DIMENSION	mm	INTERNAL THREAD	D	D2	L	Le	Z	Zt	h mm
M4.5	0.75	RT-S04030-I0.75ISO TM...	4	3.00	42	6.7	3	9	0.43
M8	0.75	S06059-I0.75ISO TM...	6	5.90	57	15.0	3	20	0.43
M5	0.80	S04036-I0.8ISO TM...	4	3.60	42	8.0	3	10	0.46
M6	1.00	S06040-I1.0ISO TM...	6	4.00	57	9.0	3	9	0.58
M12	1.00	S08079-I1.0ISO TM...	8	7.90	63	20.0	3.5*	20	0.58
M8	1.25	S06050-I1.25ISO TM...	6	5.00	57	12.5	3	10	0.72
M10	1.50	S06059-I1.5ISO TM...	6	5.90	57	15.0	3	10	0.87
M14	1.50	S10099-I1.5ISO TM...	10	9.90	72	24.0	5	16	0.87
M18	1.50	S12119-I1.5ISO TM...	12	11.90	83	30.0	5	20	0.87
M12	1.75	S08079-I1.75ISO TM...	8	7.90	63	19.2	3.5*	11	1.01
M16	2.00	S10099-I2.0ISO TM...	10	9.90	72	24.0	5	12	1.15
M18	2.00	S12119-I2.0ISO TM...	12	11.90	83	30.0	5	15	1.15
M20	2.50	S12119-I2.5ISO TM...	12	11.90	83	30.0	5	12	1.44
M24	3.00	S16159-I3.0ISO TM...	16	15.90	92	36.0	5	12	1.73
M30	3.50	S16159-I3.5ISO TM...	16	15.90	92	38.5	5	11	2.02
M36	4.00	S16159-I4.0ISO TM...	16	15.90	92	40.0	5	10	2.31
M48	5.00	S20199-I5.0ISO TM...	20	19.90	104	40.0	5	8	2.89
M54	6.00	S20199-I6.0ISO TM...	20	19.90	104	36.0	5	6	3.46

\*3 flutes and 5 flutes are available. Add 3 or 5 after the order code (TM3.../TM5...)

### AMERICAN STANDARD UN

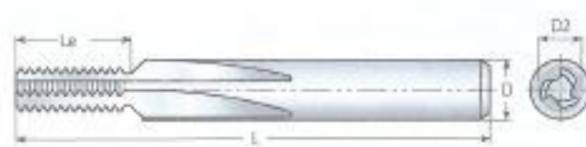
EXTERNAL THREAD/INTERNAL THREAD



Standard reference: ANSI B1.1:74  
Tolerance class: 2A/2B



### STRAIGHT FLUTE MILLING CUTTER



#### STRAIGHT FLUTE MILLING CUTTER - EXTERNAL THREAD

MINIMUM DIMENSION	THREAD	PITCH	ORDER CODE	DIMENSION			NO. OF CUTTING FLUTES	NO. OF TEETH	h mm
				D	D2	L			
No.6	32	RT-S06059-E32UNTM...	6	5.90	57	14.3	3	18	0.49
No.12	28	S08079-E28UNTM...	8	7.90	63	19.9	3, 5*	22	0.56
1/4"	20	S10099-E20UNTM...	10	9.90	72	22.9	5	18	0.78
5/16"	18	S10099-E18UNTM...	10	9.90	72	24.0	5	17	0.87
3/8"	16	S12119-E16UNTM...	12	11.90	83	28.6	5	18	0.97
9/16"	12	S12119-E12UNTM...	12	11.90	83	29.6	5	14	1.30
1"	8	S16159-E8UNTM...	16	15.90	92	38.1	5	12	1.95
1 3/8"	6	S20199-E6UNTM...	20	19.90	104	38.1	5	9	2.60

#### STRAIGHT FLUTE MILLING CUTTER - INTERNAL THREAD

MINIMUM DIMENSION	THREAD	PITCH	ORDER CODE	DIMENSION			NO. OF CUTTING FLUTES	NO. OF TEETH	h mm
				D	D2	L			
No.8	36	RT-S04030-I36UNTM...	4	3.00	42	6.3	3	9	0.41
No.8	32	S04030-I32UNTM...	4	3.00	42	6.3	3	8	0.46
5/16"	32	S06059-I32UNTM...	6	5.90	57	14.3	3	18	0.46
No.12	28	S04036-I28UNTM...	4	3.60	42	8.2	3	9	0.52
7/16"	28	S08079-I28UNTM...	8	7.90	63	19.9	3, 5*	22	0.52
No.12	24	S06040-I24UNTM...	6	4.00	57	8.5	3	8	0.61
1/4"	20	S06040-I20UNTM...	6	4.00	57	10.2	3	8	0.73
9/16"	20	S10099-I20UNTM...	10	9.90	72	22.9	5	18	0.73
5/16"	18	S06050-I18UNTM...	6	5.00	57	12.7	3	9	0.81
9/16"	18	S10099-I18UNTM...	10	9.90	72	24.0	5	17	0.81
3/8"	16	S06059-I16UNTM...	6	5.90	57	14.3	3	9	0.92
3/4"	16	S12119-I16UNTM...	12	11.90	83	28.6	5	18	0.92
7/16"	14	S08079-I14UNTM...	8	7.90	63	18.1	3, 5*	10	1.05
1/2"	13	S08079-I13UNTM...	8	7.90	63	19.5	3, 5*	10	1.13
9/16"	12	S10099-I12UNTM...	10	9.90	72	23.3	5	11	1.22
1"	12	S12119-I12UNTM...	12	11.90	83	29.6	5	14	1.22
5/8"	11	S10099-I11UNTM...	10	9.90	72	23.1	5	10	1.33
3/4"	10	S12119-I10UNTM...	12	11.90	83	27.9	5	11	1.47
7/8"	9	S16159-I9UNTM...	16	15.90	92	33.3	5	12	1.63
1"	8	S16159-I8UNTM...	16	15.90	92	38.1	5	12	1.83
1 1/8"	7	S16159-I7UNTM...	16	15.90	92	36.3	5	10	2.09
1 3/8"	6	S20199-I6UNTM...	20	19.90	104	38.1	5	9	2.44
1 3/4"	5	S20199-I5UNTM...	20	19.90	104	40.6	5	8	2.93
2"	4.5	S20199-I4.5UNTM...	20	19.90	104	39.5	5	7	3.26

\*3 flutes and 5 flutes are available, Add 3 or 5 after the order code (TM3... /TM5...)

### NPT

EXTERNAL THREAD/INTERNAL THREAD



Standard reference: USAS B2.1:1968  
Tolerance class: Standard NPT



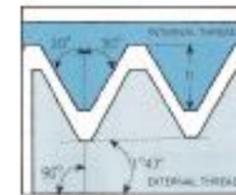
### STRAIGHT FLUTE MILLING CUTTER

#### STRAIGHT FLUTE MILLING CUTTER

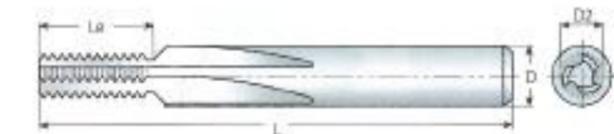
MINIMUM DIMENSION	THREAD	PITCH	ORDER CODE	DIMENSION			NO. OF CUTTING FLUTES	NO. OF TEETH	h mm
				D	D2	L			
1/16"	27	RT-S06059-E127NPT-TM...	6	5.90	57	9.41	3	10	0.66
1/4"	18	S08079-E18NPT-TM...	8	7.90	63	14.11	3, 5*	10	1.01
1/2"	14	S12119-E14NPT-TM...	12	11.90	83	19.96	5	11	1.33
1"	11.5	S16159-E11.5NPT-TM...	16	15.90	92	26.51	5	12	1.64
2 1/2"	8	S16159-E8NPT-TM...	16	15.90	92	38.10	5	12	2.42

### ANPT

EXTERNAL THREAD/INTERNAL THREAD



Standard reference: MIL-P-7105B  
Tolerance class: Standard ANPT



### STRAIGHT FLUTE MILLING CUTTER

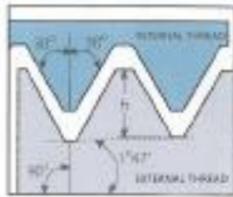
#### STRAIGHT FLUTE MILLING CUTTER

MINIMUM DIMENSION	THREAD	PITCH	ORDER CODE	DIMENSION			NO. OF CUTTING FLUTES	NO. OF TEETH	h mm
				D	D2	L			
1/4"	18	RT-S08079-E18ANPT-TM...	8	7.90	63	14.11	5	10	1.10
1/2"	14	S12119-E14ANPT-TM...	12	11.90	83	19.96	5	11	1.42

\*3 flutes and 5 flutes are available, Add 3 or 5 after the order code (TM3... /TM5...)

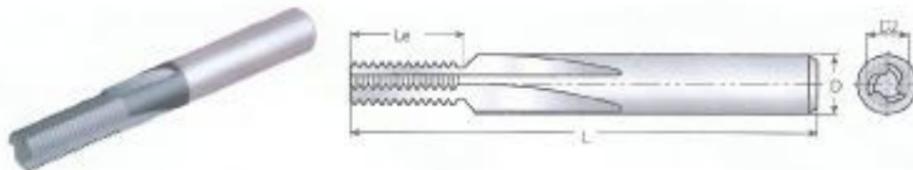
**NPTF**

EXTERNAL THREAD/INTERNAL THREAD



Standard reference: ANSI B1.1:74  
Tolerance class: 2A/2B

**STRAIGHT FLUTE MILLING CUTTER**



**STRAIGHT FLUTE MILLING CUTTER**

THREAD	PITCH	ORDER CODE	DIMENSION			NO. OF CUTTING FLUTES		NO. OF TEETH	
			D	D2	L	Le	Z	Zt	h mm
1/16"	27	RT-S06059-EQ27NPTFTM...	6	5.90	57	9.41	3	10	0.64
1/4"	18	S08079-E118NPTFTM...	8	7.90	63	14.11	3, 5*	10	1.0
1/2"	14	S12119-E114NPTFTM...	12	11.90	83	19.96	5	11	1.35
1"	11.5	S16159-E111SNPTFTM...	16	15.90	92	26.51	5	12	1.63
2 1/2"	8	S16159-E18NPTFTM...	16	15.90	92	38.10	5	12	2.38

Cutting speed Vc [m/min] and feed f [mm/tooth]

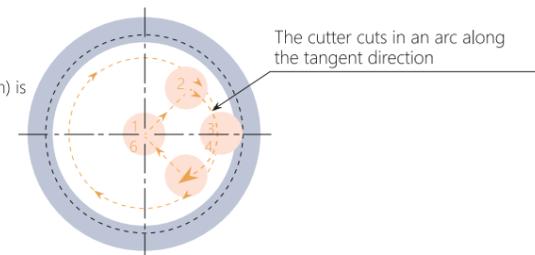
Material group	Material number	material	Brinell hardness	Vc [m/min]			feed f [mm/tooth]				
				VTH	VTS	MilliPro	Spiral thread milling cutter	Straight milling cutter	Deep hole threading	Helicool HCC HCR	MilliPro
<b>P</b> steel	1	Mild steel (C= 0.1-0.25%)	125	80-250	50-180	60-120	0.03-0.08	0.03-0.08	0.10-0.35	0.03-0.08	0.02-0.16
	2	Unalloyed steel	150	80-230	50-140	60-120	0.03-0.08	0.03-0.08	0.08-0.30	0.03-0.08	0.02-0.16
	3	High carbon steel (C= 0.55-0.85%)	170	80-200	50-120	60-90	0.03-0.08	0.03-0.06	0.08-0.30	0.03-0.08	0.02-0.16
	4	Unquenched	180	60-180	60-170	60-90	0.03-0.08	0.03-0.07	0.08-0.30	0.03-0.08	0.02-0.16
	5	Low alloy steel (alloy content ≤5%)	275	60-170	60-160	50-80	0.03-0.07	0.03-0.07	0.08-0.30	0.03-0.07	0.02-0.07
	6	hardening	350	60-160	60-150	50-80	0.02-0.05	0.02-0.04	0.05-0.15	0.03-0.06	0.02-0.03
	7	anneal	200	40-100	40-90	50-80	0.03-0.07	0.03-0.07	0.10-0.24	0.03-0.07	0.02-0.09
	8	High alloy steel (alloy content > 5%)	325	30-80	30-70	50-80	0.02-0.04	0.02-0.05	0.05-0.15	0.03-0.06	0.02-0.03
	9	Cast steel	200	80-250	70-200	70-90	0.03-0.08	0.03-0.06	0.08-0.30	0.03-0.07	0.02-0.16
	10	High alloy steel (alloy content > 5%)	225	60-170	60-150	60-80	0.03-0.05	0.03-0.06	0.05-0.15	0.03-0.07	0.02-0.03
<b>M</b> Stainless steel	11	Ferrite stainless steel	200	60-150	50-140	60-90	0.04-0.07	0.02-0.05	0.11-0.35	0.03-0.08	0.02-0.16
	12	hardening	330	60-120	50-110	50-80	0.02-0.06	0.01-0.03	0.05-0.24	0.03-0.06	0.02-0.03
	13	Austenitic stainless steel	180	60-140	60-130	60-90	0.03-0.08	0.02-0.05	0.11-0.35	0.03-0.08	0.02-0.16
	14	Super austenite	200	60-130	50-120	50-80	0.03-0.08	0.02-0.05	0.11-0.35	0.03-0.06	0.02-0.16
	15	Ferritic cast stainless steel	200	60-160	50-150	60-90	0.03-0.08	0.02-0.05	0.11-0.35	0.03-0.06	0.02-0.16
	16	hardening	330	60-110	50-100	50-80	0.02-0.05	0.02-0.03	0.10-0.24	0.02-0.05	0.02-0.03
	17	Austenitic cast stainless steel	200	60-150	50-140	60-90	0.03-0.08	0.02-0.06	0.11-0.35	0.02-0.05	0.02-0.16
	18	hardening	330	60-100	50-90	50-80	0.02-0.05	0.01-0.03	0.10-0.24	0.02-0.04	0.02-0.03
<b>K</b> Cast iron	28	Malleable cast iron	130	60-70	60-150	50-80	0.03-0.08	0.03-0.08	0.05-0.15	0.03-0.08	0.02-0.03
	29	Pearlite (long chip)	230	60-150	80-100	60-90	0.03-0.08	0.03-0.06	0.10-0.24	0.03-0.07	0.02-0.12
	30	Gray cast iron	180	70-160	50-140	70-100	0.03-0.08	0.03-0.06	0.09-0.25	0.03-0.07	0.02-0.16
	31	Low tensile strength	260	40-120	40-110	60-90	0.02-0.06	0.02-0.05	0.10-0.24	0.03-0.07	0.02-0.12
	32	High tensile strength	260	40-120	40-110	60-90	0.02-0.06	0.02-0.05	0.10-0.24	0.03-0.07	0.02-0.12
<b>N</b> Non-ferrous metal	33	ductile iron	160	40-110	40-100	70-100	0.03-0.08	0.03-0.07	0.09-0.25	0.03-0.08	0.02-0.16
	34	Aluminium alloy	60	200-300	150-250	60-250	0.05-0.12	0.05-0.15	0.12-0.40	0.04-0.1	0.03-0.15
	35	Forged parts	100	150-250	100-220	60-150	0.05-0.12	0.03-0.1	0.10-0.32	0.03-0.1	0.03-0.16
	36	Aluminium alloy	75	100-200	80-150	60-250	0.05-0.12	0.05-0.15	0.10-0.32	0.03-0.1	0.03-0.16
	37	casting	90	120-220	90-160	60-150	0.05-0.12	0.03-0.1	0.10-0.30	0.05-0.12	0.03-0.16
	38	Aluminium alloy	130	200-300	150-250	250	0.05-0.12	0.05-0.15	0.10-0.32	0.05-0.12	0.03-0.15
	39	The silicon content of castings is 13-22%	90	200-300	150-250	60-250	0.06-0.13	0.05-0.15	0.12-0.40	0.05-0.12	0.03-0.16
	40	Copper and copper alloys	100	150-250	100-220	60-150	0.05-0.12	0.03-0.1	0.10-0.32	0.05-0.12	0.03-0.15
<b>S</b> Heat-resistant material	19	brass	200	30-60	30-50	60	0.03-0.07	0.02-0.04	0.11-0.35	0.03-0.7	0.03-0.16
	20	Bronze and lead-free copper	280	20-50	20-40	50	0.02-0.04	0.01-0.03	0.05-0.15	0.03-0.06	0.02-0.16
	21	high temperature alloy	250	15-35	15-30	35	0.02-0.04	0.01-0.03	0.05-0.15	0.03-0.06	0.02-0.16
	22	Annealed (iron base)	350	15-30	15-25	30	0.02-0.04	0.01-0.03	0.05-0.15	0.02-0.05	0.02-0.16
	23	Annealed (nickel or cobalt base)	400Rm	40-80	30-70	30-50	0.02-0.04	0.01-0.03	0.10-0.24	0.02-0.05	0.02-0.07
<b>H</b> Hardened material	24	Titanium alloy	1050Rm	20-50	20-45	25-35	0.02-0.04	0.01-0.02	0.10-0.24	0.02-0.04	0.02-0.07
	25	99.5 pure titanium	45-50HRc	15-45	15-35	45	0.02-0.03	0.02	0.03-0.06	0.02-0.03	-
26	Hardening & tempering	51-55HRc	15-40	15-30	30	0.02-0.03	0.01	0.03-0.06	0.02-0.03	-	

Recommended:

When the tools cut in, the feed f(mm/ tooth) is reduced to 70% of the thread feed

Example:

Feed: 0.3[mm/tooth]  
Insert feed: 0.09 (mm/ tooth)



\*3 flutes and 5 flutes are available. Add 3 or 5 after the order code (TM3... /TM5...)

Cutting speed Vc [m/min] and feed f [mm/tooth]

TMDR

Material group	Material number	material	Hardness Brinell hardness	Vc [m/min]		feed f [mm/tooth]
				TMDR		
				VTS		
P steel	1	Unalloyed steel	Mild steel (C= 0.1-0.25%)	125	60-120	0.02-0.12
	2		Medium carbon steel (C= 0.25-0.55%)	150	60-120	0.02-0.12
	3		High carbon steel (C= 0.55-0.85%)	170	60-90	0.02-0.12
	4	Low alloy steel (alloy content ≤5%)	Unquenched	180	60-90	0.02-0.12
	5		hardening	275	50-80	0.02-0.05
	6		hardening	350	50-80	0.02-0.03
	7	High alloy steel (alloy content > 5%)	anneal	200	50-80	0.02-0.07
	8		hardening	325	50-80	0.02-0.03
	9	Cast steel	Low alloy steel (alloy content ≤5%)	200	70-90	0.02-0.12
	10		High alloy steel (alloy content > 5%)	225	60-80	0.02-0.03
M Stainless steel	11	Ferrite stainless steel	Unquenched	200	60-90	0.02-0.12
	12		hardening	330	50-80	0.02-0.03
	13	Austenitic stainless steel	austenite	180	60-90	0.02-0.12
	14		Super austenite	200	50-80	0.02-0.12
	15	Stainless steel cast iron	Unquenched	200	60-90	0.02-0.12
	16		hardening	330	50-80	0.02-0.03
	17	Stainless steel austenitic	austenite	200	60-90	0.02-0.12
	18		hardening	330	50-80	0.02-0.03
K Cast iron	28	Malleable cast iron	Ferrite (short chip)	130	50-80	0.02-0.03
	29		Pearlite (long chip)	230	60-90	0.02-0.09
	30	Gray cast iron	Low tensile strength	180	70-100	0.02-0.12
	31		High tensile strength	260	60-90	0.02-0.09
	32	ductile iron	ferrite	160	70-100	0.02-0.12
33	pearlite		260	60-90	0.02-0.09	
N Non-ferrous metal	34	Aluminium alloy Forged parts	Non-aging treatment	60	60-250	0.03-0.11
	35		Aging treatment	100	60-150	0.03-0.12
	36	Aluminium alloy	casting	75	60-250	0.03-0.12
	37		Casting & Aging treatment	90	60-150	0.02-0.12
	38	Aluminium alloy	The silicon content of castings is 13-22%	130	250	0.03-0.11
	39	Copper and copper alloys	brass	90	60-250	0.03-0.12
	40		Bronze and lead-free copper	100	60-150	0.03-0.11
S Heat-resistant material	19	high temperature alloy	Annealed (iron base)	200	60	0.02-0.12
	20		Aging (iron base)	280	50	0.02-0.03
	21		Annealed (nickel or cobalt base)	250	35	0.02-0.03
	22		Aging (nickel base or cobalt base)	350	30	0.02-0.03
	23	Titanium alloy	99.5 pure titanium	400Rm	30-50	0.02-0.05
	24		a+β phase titanium alloy	1050Rm	25-35	0.02-0.05
H Hardened material	25	Super hard steel	Hardening & tempering	45-50HRc	-	-
	26			51-55HRc	-	-

Cutting speed Vc [m/min] and feed f [mm/tooth]

TMDR

Material group	Material number	material	Hardness Brinell hardness	Vc [m/min]		feed f [mm/tooth]
				HCR		
				VTH		
P steel	1	Unalloyed steel	Mild steel (C= 0.1-0.25%)	125	50-180	0.03-0.08
	2		Medium carbon steel (C= 0.25-0.55%)	150	50-140	0.03-0.08
	3		High carbon steel (C= 0.55-0.85%)	170	50-120	0.03-0.06
	4	Low alloy steel (alloy content ≤5%)	Unquenched	180	60-170	0.03-0.07
	5		hardening	275	60-160	0.03-0.07
	6		hardening	350	60-150	0.02-0.04
	7	High alloy steel (alloy content > 5%)	anneal	200	40-90	0.03-0.07
	8		hardening	325	30-70	0.02-0.05
	9	Cast steel	Low alloy steel (alloy content ≤5%)	200	70-200	0.03-0.06
	10		High alloy steel (alloy content > 5%)	225	60-150	0.03-0.06
M Stainless steel	11	Ferrite stainless steel	Unquenched	200	50-140	0.02-0.05
	12		hardening	330	50-110	0.01-0.03
	13	Austenitic stainless steel	austenite	180	60-130	0.02-0.05
	14		Super austenite	200	50-120	0.02-0.05
	15	Ferritic cast stainless steel	Unquenched	200	50-150	0.02-0.05
	16		hardening	330	50-100	0.02-0.03
	17	Austenitic cast stainless steel	austenite	200	50-140	0.02-0.06
	18		hardening	330	50-90	0.01-0.03
K Cast iron	28	Malleable cast iron	Ferrite (short chip)	130	60-150	0.03-0.08
	29		Pearlite (long chip)	230	80-100	0.03-0.06
	30	Gray cast iron	Low tensile strength	180	50-140	0.03-0.06
	31		High tensile strength	260	40-110	0.02-0.05
	32	ductile iron	ferrite	160	40-100	0.03-0.07
33	pearlite		260	40-90	0.02-0.05	
N Non-ferrous metal	34	Aluminium alloy Forged parts	Non-aging treatment	60	150-250	0.05-0.15
	35		Aging treatment	100	100-220	0.03-0.1
	36	Aluminium alloy	casting	75	80-150	0.05-0.15
	37		Casting & Aging treatment	90	90-160	0.03-0.1
	38	Aluminium alloy	The silicon content of castings is 13-22%	130	150-250	0.05-0.15
	39	Copper and copper alloys	brass	90	150-250	0.05-0.15
	40		Bronze and lead-free copper	100	100-220	0.03-0.1
S Heat-resistant material	19	high temperature alloy	Annealed (iron base)	200	30-50	0.02-0.04
	20		Aging (iron base)	280	20-40	0.01-0.03
	21		Annealed (nickel or cobalt base)	250	15-30	0.01-0.03
	22		Aging (nickel base or cobalt base)	350	15-25	0.01-0.03
	23	Titanium alloy	99.5 pure titanium	400Rm	30-70	0.01-0.03
	24		a+β phase titanium alloy	1050Rm	25-45	0.01-0.02
H Hardened material	25	Super hard steel	Hardening & tempering	45-50HRc	-	-
	26			51-55HRc	-	-

### MilliPro HD

Cutting speed Vc [m/min] and feed f [mm/tooth]

Material group	Material number	material	Brinell hardness	Vc [m/min]	Feed f[mm/tooth] at different cutting diameters D2					
					VTH	1.5-2.5	2.5-5	5-7	7-9	9-11
<b>P</b> steel	5	Low alloy steel (alloy content ≤5%)	hardening	350	25-160	0.04	0.05	0.06	0.07	0.08
	8	High alloy steel (alloy content > 5%)	hardening	325	25-180					
<b>M</b> Stainless steel	12	Ferrite stainless steel	hardening	330	25-120	0.04	0.05	0.06	0.07	0.08
	16	Ferritic cast stainless steel	hardening	330	25-110					
	18	Austenitic cast stainless steel	hardening	330	25-100					
<b>K</b> Cast iron	28	Malleable cast iron	Ferrite (short chip)	130	25-160	0.05	0.06	0.07	0.08	0.1
	29		Pearlite (long chip)	230	25-150	0.04	0.05	0.06	0.07	0.08
	30	Gray cast iron	Low tensile strength	180	25-130	0.05	0.06	0.07	0.08	0.1
	31		High tensile strength	260	25-100	0.04	0.05	0.06	0.07	0.08
	32	ductile iron	Ferrite	160	25-125	0.04	0.05	0.06	0.07	0.09
33	Pearlite		260	25-90	0.03	0.04	0.05	0.06	0.07	
<b>S</b> Heat-resistant material	21	high temperature alloy	Annealed (nickel or cobalt base)	250	15-35	0.03	0.04	0.05	0.06	0.07
	22		Aging (nickel base or cobalt base)	350	15-30					
	23	Titanium alloy	99.5 pure titanium	400Rm	25-70					
	24		a+β phase titanium alloy	1050Rm	25-50					
<b>H</b> Hardened material	25	Super hard steel	Hardening & tempering	45-50HRc	25-70	0.04	0.05	0.06	0.07	0.08
	26			51-55HRc	25-60	0.03	0.04	0.05	0.06	0.07
	27			56-62HRc	25-50	0.02	0.03	0.04	0.05	0.06

### HTC recommends material, cutting speed and feed

Material group	material	Brinell hardness	Tensile strength (N-mm <sup>2</sup> )	Vc [m/min]		fb[ 1 mm 2 /rev]		fz[ 1 mm 2 /tooth]	
				VTH	VTS	≤6mm	≤12mm	≤6mm	≤12mm
<b>K</b> Cast iron	Gray cast iron	≤150	≤550	50-80	80-120	0.10-0.15	0.15-0.22	0.02-0.05	0.05-0.10
	Grey Cast Iron, Heat Treated	150-300	500-1000	50-80	80-120	0.10-0.15	0.15-0.22	0.02-0.05	0.05-0.10
	Spher.Graph.cast iron	≤200	≤700	50-80	80-120	0.10-0.15	0.15-0.22	0.02-0.05	0.05-0.10
Copper	Short chip,Brass,Bronze,Red Brass	≤200	≤700	100-300	-	0.06-0.10	0.10-0.30	0.03-0.06	0.06-0.10
<b>N</b> Non-ferrous metal	Aluminium, Magnesium Non-Alloy	≤100	≤350	100-400	100-400	0.10-0.25	0.25-0.30	0.03-0.06	0.06-0.10
	Aluminium, Wrought Alloy, Breaking Strain (A5) <14%	≤180	≤600	100-400	100-400	0.10-0.25	0.25-0.30	0.03-0.06	0.06-0.10
	Aluminium, Wrought Alloy, Breaking Strain (A5) ≥14%	≤180	≤600	100-400	100-400	0.03-0.06	0.06-0.12	0.03-0.06	0.06-0.10
	Aluminium,Cast Alloy,Silicon content <10%	≤180	≤600	100-300	100-400	0.10-0.25	0.25-0.30	0.03-0.06	0.06-0.10
	Aluminium,Cast Alloy,Si≥10%	≤180	≤600	-	100-300	0.10-0.25	0.25-0.30	0.03-0.06	0.06-0.10
<b>K</b> Plastic	Thermo Plastics	-	-	60-120	60-120	0.10-0.25	0.25-0.30	0.03-0.06	0.06-0.10
	Thermosetting Plastic	-	-	60-100	60-100	0.10-0.25	0.25-0.30	0.03-0.06	0.06-0.10
	Fibre Reinforced Plastic	-	-	40-60	60-80	0.10-0.15	0.15-0.22	0.02-0.05	0.05-0.10

Vc - Cutting speed [m/min]

fb (drilling)- Feed per turn (mm/ turn)

fz (Threading) - Feed per tooth [mm/ tooth]



**Modular micro diameter milling cutter**

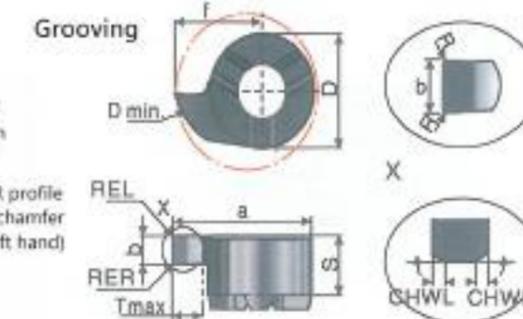
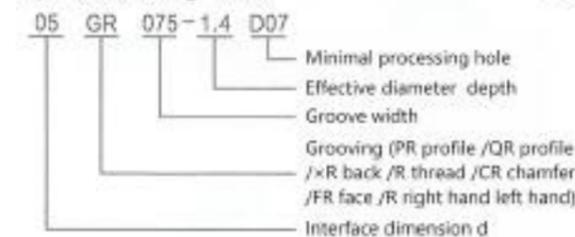
**NEW!**  
The world's smallest modular groove cutter!

### Features and uses

- ◆ Tooth link design, strong holding force, very suitable for small hole product processing.
- ◆ Precision grade grinding blade to achieve the best chip rolling effect.
- ◆ The same tool holder can realize the interchangeability of various processing methods.
- ◆ Minimum groove diameter up to 5.5mm.
- ◆ The eccentric design of the neck of the cutter body greatly improves the strength of the cutter body. The same cutter body can use both left-type and right-type blades.
- ◆ The non-eccentric design tool holder can realize both turning processing and milling processing.
- ◆ The alloy anti-vibration series tool holder is added to meet different processing requirements.



Specification writing method

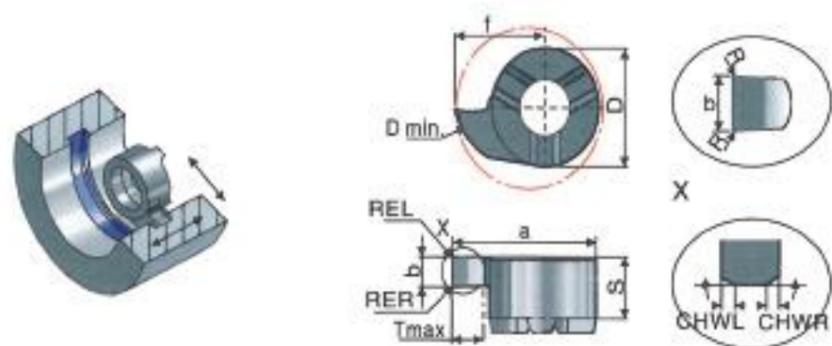


Unit: mm

Order number	D	Ring width	WbyD	Tmax	REL/RER	CHWL/CHWR	S	f	a	D min	HP630M		HD10		
											R	L			
RBMB-04GR050-1.0D055	4		0.5	1.0	-	0.03	2.6	3.2	5.2	5.5	●	/	○		
04GR070-1.0D055			0.7	1.0	-	0.03	2.6	3.2	5.2	5.5	●	/	○		
04GR100-1.0D055			1.0	1.0	-	0.04	2.6	3.2	5.2	5.5	●	/	○		
04GR150-1.0D055			1.5	1.0	-	0.04	2.6	3.2	5.2	5.5	●	/	○		
04GR200-1.0D055			2.0	1.0	-	0.04	2.6	3.2	5.2	5.5	●	/	○		
04GR100-1.4D06			1.0	1.4	-	0.04	2.6	3.7	5.7	6.0	●	/	○		
04GR120-1.4D06			1.1	1.2	1.4	-	0.04	2.6	3.7	5.7	6.0	●	/	○	
04GR150-1.4D06			1.5	1.4	-	0.04	2.6	3.7	5.7	6.0	●	/	○		
04GR200-1.4D06			2.0	1.4	-	0.04	2.6	3.7	5.7	6.0	●	/	○		
04GR100-2.3D07			1.0	2.3	-	0.04	2.6	4.7	6.7	7.0	●	/	○		
04GR150-2.3D07			1.5	2.3	-	0.04	2.6	4.7	6.7	7.0	●	/	○		
04GR200-2.3D07			2.0	2.3	-	0.04	2.6	4.7	6.7	7.0	●	/	○		
05GR/L050-1.4D07		5		0.5	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○	
05GR/L075-1.4D07				0.7	0.75	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○
05GR/L083-1.4D07				0.8	0.83	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○
05GR/L093-1.4D07				0.9	0.93	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○
05GR/L100-1.4D07			1.0	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○		
05GR/L120-1.4D07			1.1	1.2	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○	
05GR/L140-1.4D07			1.3	1.4	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○	
05GR/L150-1.4D07			1.5	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○		
05GR/L170-1.4D07			1.6	1.7	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○	
05GR/L200-1.4D07			2.0	1.4	-	0.04	3.3	4.3	6.8	7.0	●	○	○		
05GR/L100-2.3D08			1.0	2.3	-	0.04	3.3	5.2	7.7	8.0	●	○	○		
05GR/L150-2.3D08			1.5	2.3	-	0.04	3.3	5.2	7.7	8.0	●	○	○		
05GR/L200-2.3D08			2.0	2.3	-	0.04	3.3	5.2	7.7	8.0	●	○	○		
05GR/L100-2.8D09			1.0	2.8	-	0.04	3.3	5.8	8.3	8.8	●	○	○		
05GR/L150-2.8D09			1.5	2.8	-	0.04	3.3	5.8	8.3	8.8	●	○	○		
05GR/L200-2.8D09			2.0	2.8	-	0.04	3.3	5.8	8.3	8.8	●	○	○		
05GR/L250-2.8D09		2.5	2.8	-	0.04	3.3	5.8	8.3	8.8	●	○	○			
05GR/L300-2.8D09		3.0	2.8	-	0.04	3.3	5.8	8.3	8.8	●	○	○			
07GR/L075-2.0D10	7	0.7	0.75	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○		

Order example: RBMB-05GR200-2.3D08 HP6300M Backhand RBMB-05GL ● Standard inventory ○ Non-standard inventory

- For tools that are not in standard stock and have deeper grooves and smaller limit sizes, please contact the supplier to see if they can meet the requirements by repairing and sharpening the tool inserts and tool bar.
- RBMB-05/07/09/11\*\* full system can be customized backhand and non-standard size inserts.
- If you have special requirements for R value of tool tip, please contact the supplier.
- during processing, please use the thicker tool holder, a tool holder with internal cooling function is recommended.

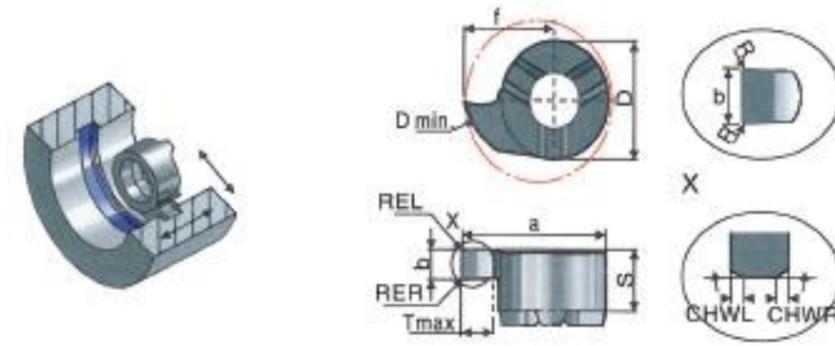


Unit: mm

Order number	D	Ring width	WB(%) <sup>0.02</sup>	Tmax	REL/ RER	CHWL/ CHWR	S	f	a	Dmin	HP630M		HD10
											R	L	
RBMB- 07GR/L083-2.0D10	7	0.8	0.83	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○
07GR/L093-2.0D10		0.9	0.93	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○
07GR/L100-2.0D10		1.00	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○	
07GR/L120-2.0D10		1.20	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○	
07GR/L140-2.0D10		1.40	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○	
07GR/L150-2.0D10		1.50	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○	
07GR/L170-2.0D10		1.70	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○	
07GR/L200-2.0D10		2.00	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○	
07GR/L250-2.0D10		2.50	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○	
07GR/L300-2.0D10		3.00	2.0	-	0.04	3.5	6.0	9.5	10.0	●	○	○	
07GR/L100-3.0D11		1.00	3.0	-	0.04	3.5	7.0	10.5	11.0	●	○	○	
07GR/L150-3.0D11		1.50	3.0	-	0.04	3.5	7.0	10.5	11.0	●	○	○	
07GR/L200-3.0D11		2.00	3.0	-	0.04	3.5	7.0	10.5	11.0	●	○	○	
07GR/L250-3.0D11		2.50	3.0	-	0.04	3.5	7.0	10.5	11.0	●	○	○	
07GR/L300-3.0D11		3.00	3.0	-	0.04	3.5	7.0	10.5	11.0	●	○	○	
07GR/L100-3.5D12		1.00	3.5	-	0.04	3.5	7.5	11.0	12.0	●	○	○	
07GR/L150-3.5D12		1.50	3.5	-	0.04	3.5	7.5	11.0	12.0	●	○	○	
07GR/L200-3.5D12		2.00	3.5	-	0.04	3.5	7.5	11.0	12.0	●	○	○	
07GR/L250-3.5D12		2.50	3.5	-	0.04	3.5	7.5	11.0	12.0	●	○	○	
07GR/L300-3.5D12		3.00	3.5	-	0.04	3.5	7.5	11.0	12.0	●	○	○	
09GR/L100-4.0D14		1.00	4.0	-	0.04	4.7	9.0	13.5	14.0	●	○	○	
09GR/L120-4.0D14		1.20	4.0	-	0.04	4.7	9.0	13.5	14.0	●	●	○	
09GR/L140-4.0D14		1.40	4.0	-	0.04	4.7	9.0	13.5	14.0	●	●	○	
09GR/L150-4.0D14		1.50	4.0	-	0.04	4.7	9.0	13.5	14.0	●	●	○	
09GR/L170-4.0D14		1.70	4.0	-	0.04	4.7	9.0	13.5	14.0	●	●	○	
09GR/L200-4.0D14		2.00	4.0	-	0.04	4.7	9.0	13.5	14.0	●	●	○	
09GR/L250-4.0D14		2.50	4.0	-	0.04	4.7	9.0	13.5	14.0	●	○	○	
09GR/L300-4.0D14		3.00	4.0	-	0.04	4.7	9.0	13.5	14.0	●	●	○	
09GR/L200-R0.2D14		2.00	4.0	0.2	-	4.7	9.0	13.5	14.0	●	●	○	
09GR/L100-5.5D16		1.00	5.5	-	0.04	4.7	10.5	15.0	16.0	●	○	○	
09GR/L150-5.5D16		1.50	5.5	-	0.04	4.7	10.5	15.0	16.0	●	○	○	

Same as B064

● Standard inventory ○ Non-standard inventory

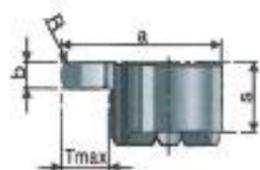
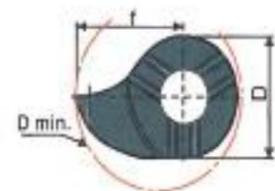


Unit: mm

Order number	D	Ring width	WB(%) <sup>0.02</sup>	Tmax	REL/ RER	CHWL/ CHWR	S	f	a	Dmin	HP630M		HD10
											R	L	
RBMB- 09GR/L200-5.5D16	9	2.0	5.5	-	0.04	4.7	10.5	15.0	16.0	●	●	○	
09GR/L250-5.5D16		2.5	5.5	-	0.04	4.7	10.5	15.0	16.0	●	○	○	
09GR/L300-5.5D16		3.0	5.5	-	0.04	4.7	10.5	15.0	16.0	●	●	○	
09GR/L150-R0.2D16		1.5	5.5	0.2	-	4.7	10.5	15.0	16.0	●	○	○	
09GR/L200-R0.2D16		2.0	5.5	0.2	-	4.7	10.5	15.0	16.0	●	○	○	
09GR/L250-R0.2D16		2.5	5.5	0.2	-	4.7	10.5	15.0	16.0	●	○	○	
09GR/L300-R0.2D16		3.0	5.5	0.2	-	4.7	10.5	15.0	16.0	●	○	○	
09GR/L100-6.5D17		1.0	6.5	-	0.04	4.7	11.5	16.0	17.0	●	○	○	
09GR/L150-6.5D17		1.5	6.5	-	0.04	4.7	11.5	16.0	17.0	●	○	○	
09GR/L200-6.5D17		2.0	6.5	-	0.04	4.7	11.5	16.0	17.0	●	●	○	
09GR/L250-6.5D17		2.5	6.5	-	0.04	4.7	11.5	16.0	17.0	●	○	○	
09GR/L300-6.5D17		3.0	6.5	-	0.04	4.7	11.5	16.0	17.0	●	●	○	
11GR/L100-4.3D18		1.0	4.3	-	0.04	5.3	10.2	15.7	16.0	○	○	○	
11GR/L120-4.3D18		1.1	4.3	-	0.04	5.3	10.2	15.7	16.0	○	○	○	
11GR/L140-4.3D18		1.3	4.3	-	0.04	5.3	10.2	15.7	16.0	○	○	○	
11GR/L150-4.3D18		1.5	4.3	0.2	-	5.3	10.2	15.7	16.0	●	○	○	
11GR/L170-4.3D18		1.6	4.3	0.2	-	5.3	10.2	15.7	16.0	●	○	○	
11GR/L200-4.3D18		2.0	4.3	0.2	-	5.3	10.2	15.7	16.0	●	○	○	
11GR/L250-4.3D18		2.5	4.3	0.2	-	5.3	10.2	15.7	16.0	●	○	○	
11GR/L300-4.3D18		3.0	4.3	0.2	-	5.3	10.2	15.7	16.0	●	○	○	
11GR/L400-4.3D18		4.0	4.3	0.2	-	5.3	10.2	15.7	16.0	●	○	○	
11GR/L150-6.0D18		1.5	6.0	0.2	-	5.3	12.0	17.5	18.0	●	○	○	
11GR/L200-6.0D18		2.0	6.0	0.2	-	5.3	12.0	17.5	18.0	●	○	○	
11GR/L250-6.0D18		2.5	6.0	0.2	-	5.3	12.0	17.5	18.0	●	○	○	
11GR/L300-6.0D18		3.0	6.0	0.2	-	5.3	12.0	17.5	18.0	●	○	○	
11GR/L400-6.0D18		4.0	6.0	0.2	-	5.3	12.0	17.5	18.0	●	○	○	
11GR/L150-8.0D20		1.5	8.0	0.2	-	5.3	14.0	19.5	20.0	●	○	○	
11GR/L200-8.0D20		2.0	8.0	0.2	-	5.3	14.0	19.5	20.0	●	○	○	
11GR/L250-8.0D20		2.5	8.0	0.2	-	5.3	14.0	19.5	20.0	●	○	○	
11GR/L300-8.0D20		3.0	8.0	0.2	-	5.3	14.0	19.5	20.0	●	○	○	
11GR/L400-8.0D20		4.0	8.0	0.2	-	5.3	14.0	19.5	20.0	●	○	○	

Same as B064

● Standard inventory ○ Non-standard inventory

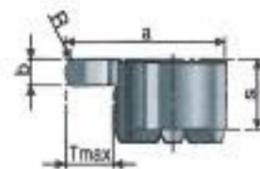
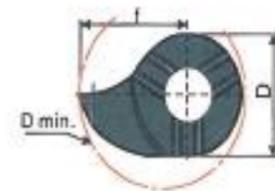


Copying and grooving

Unit: mm

Order number	D	Wby/φce	Tmax	R	S	f	a	Dmin	HP630M		HD10
									R	L	
RBMB-04GR100-R0.50D06 <b>NEW</b>	4	1.0	1.4	0.50	2.6	3.70	5.7	6.0	●	/	○
04GR150-R0.75D06 <b>NEW</b>		1.5	1.4	0.75	2.6	3.70	5.7	6.0	●	/	○
04GR200-R1.00D06 <b>NEW</b>		2.0	1.4	1.00	2.6	3.70	5.7	6.0	●	/	○
04GR100-R0.50D07 <b>NEW</b>		1.0	2.3	0.50	2.6	4.70	6.7	7.0	●	/	○
04GR150-R0.75D07 <b>NEW</b>		1.5	2.3	0.75	2.6	4.70	6.7	7.0	●	/	○
04GR200-R1.00D07 <b>NEW</b>		2.0	2.3	1.00	2.6	4.70	6.7	7.0	●	/	○
05GR/L100-R0.50D07	5	1.0	1.4	0.50	3.3	4.30	6.8	7.0	●	○	○
05GR/L150-R0.75D07		1.5	1.4	0.75	3.3	4.30	6.8	7.0	●	○	○
05GR/L200-R1.00D07		2.0	1.4	1.00	3.3	4.30	6.8	7.0	●	○	○
05GR/L100-R0.50D08		1.0	2.3	0.50	3.3	5.30	7.7	8.0	●	○	○
05GR/L150-R0.75D08		1.5	2.3	0.75	3.3	5.30	7.7	8.0	●	○	○
05GR/L200-R1.00D08		2.0	2.3	1.00	3.3	5.30	7.7	8.0	●	○	○
05GR/L100-R0.50D09	7	1.0	2.8	0.50	3.3	5.80	8.3	9.0	●	○	○
05GR/L150-R0.75D09		1.5	2.8	0.75	3.3	5.80	8.3	9.0	●	○	○
05GR/L200-R1.00D09		2.0	2.8	1.00	3.3	5.80	8.3	9.0	●	○	○
07GR/L100-R0.50D10		1.0	2.0	0.50	3.5	6.00	9.5	10.0	●	○	○
07GR/L150-R0.75D10		1.5	2.0	0.75	3.5	6.00	9.5	10.0	●	○	○
07GR/L200-R1.00D10		2.0	2.0	1.00	3.5	6.00	9.5	10.0	●	○	○
07GR/L300-R1.50D10	7	3.0	2.0	1.50	3.5	6.00	9.5	10.0	●	○	○
07GR/L100-R0.50D11		1.0	3.0	0.50	3.5	7.00	10.5	11.0	●	○	○
07GR/L150-R0.75D11		1.5	3.0	0.75	3.5	7.00	10.5	11.0	●	○	○
07GR/L200-R1.00D11		2.0	3.0	1.00	3.5	7.00	10.5	11.0	●	○	○
07GR/L300-R1.50D11		3.0	3.0	1.50	3.5	7.00	10.5	11.0	●	○	○
07GR/L100-R0.50D12		1.0	3.5	0.50	3.5	7.50	11.0	12.0	●	○	○
07GR/L150-R0.75D12	7	1.5	3.5	0.75	3.5	7.50	11.0	12.0	●	○	○
07GR/L200-R1.00D12		2.0	3.5	1.00	3.5	7.50	11.0	12.0	●	○	○

Example order: rbMB-04GR100-R0.50D06 HP630M Left hand L non - standard accepted ● Standard inventory ○ Non-standard inventory



Copying and grooving

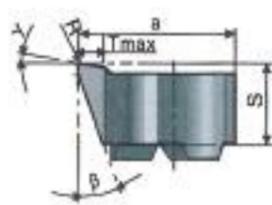
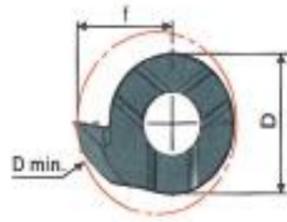
Unit: mm

Order number	D	Wby/φce	Tmax	R	S	f	a	Dmin	HP630M		HD10
									R	L	
RBMB-07GR/L300-R1.50D12	7	3.0	3.5	1.50	3.5	7.50	11.0	12.0	●	○	○
09GR/L100-R0.50D14		1.0	4.0	0.50	4.7	9.00	13.5	14.0	●	○	○
09GR/L150-R0.75D14	9	1.5	4.0	0.75	4.7	9.00	13.5	14.0	●	○	○
09GR/L200-R1.00D14		2.0	4.0	1.00	4.7	9.00	13.5	14.0	●	○	○
09GR/L300-R1.50D14		3.0	4.0	1.50	4.7	9.00	13.5	14.0	●	○	○
09GR/L150-R0.75D16		1.5	5.5	0.75	4.7	10.5	15.0	16.0	●	○	○
09GR/L200-R1.00D16		2.0	5.5	1.00	4.7	10.5	15.0	16.0	●	○	○
09GR/L300-R1.50D16		3.0	5.5	1.50	4.7	10.5	15.0	16.0	●	○	○
09GR/L150-R0.75D17		1.5	6.5	0.75	4.7	11.5	16.0	17.0	●	○	○
09GR/L200-R1.00D17		2.0	6.5	1.00	4.7	11.5	16.0	17.0	●	○	○
09GR/L300-R1.50D17		3.0	6.5	1.50	4.7	11.5	16.0	17.0	●	○	○
11GR/L150-R0.75D16		11	1.5	4.3	0.75	5.3	10.2	15.7	16.0	●	○
11GR/L200-R1.00D16	2.0		4.3	1.00	5.3	10.2	15.7	16.0	●	○	○
11GR/L250-R1.25D16	2.5		4.3	1.25	5.3	10.2	15.7	16.0	●	○	○
11GR/L300-R1.50D16	3.0		4.3	1.50	5.3	10.2	15.7	16.0	●	○	○
11GR/L400-R2.00D16	4.0		4.3	2.00	5.3	10.2	15.7	16.0	●	○	○
11GR/L150-R0.75D18	1.5		6.0	0.75	5.3	12.0	17.5	18.0	●	○	○
11GR/L200-R1.00D18	2.0		6.0	1.00	5.3	12.0	17.5	18.0	●	○	○
11GR/L250-R1.25D18	2.5		6.0	1.25	5.3	12.0	17.5	18.0	●	○	○
11GR/L300-R1.50D18	3.0		6.0	1.50	5.3	12.0	17.5	18.0	●	○	○
11GR/L400-R2.00D18	4.0		6.0	2.00	5.3	12.0	17.5	18.0	●	○	○
11GR/L150-R0.75D20	11	1.5	8.0	0.75	5.3	14.0	19.5	20.0	○	○	○
11GR/L200-R1.00D20		2.0	8.0	1.00	5.3	14.0	19.5	20.0	●	○	○
11GR/L250-R1.25D20		2.5	8.0	1.25	5.3	14.0	19.5	20.0	●	○	○
11GR/L300-R1.50D20		3.0	8.0	1.50	5.3	14.0	19.5	20.0	●	○	○
11GR/L400-R2.00D20		4.0	8.0	2.00	5.3	14.0	19.5	20.0	●	○	○

Example order: RBMB-04GR100-R0.50D06 HP630M Left hand L non - standard accepted ● Standard inventory ○ Non-standard inventory

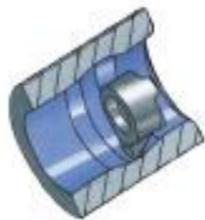


Boring

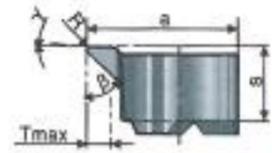
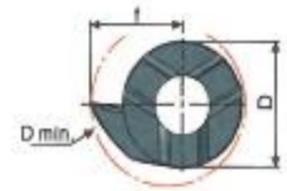


Order number	D	Tmax	gamma	beta	R	S	f	a	Dmin (mm)	HP630M	
										R	L
RBMB-04PR-R0.2-D055	4	0.8	8	18	0.2	2.6	3.0	5.0	5.5	●	/
05PR/L-R0.2-D065	5	1.0	8	18	0.2	3.3	3.6	6.1	6.5	●	○
07PR/L-R0.2-D10	7	2.0	8	18	0.2	3.5	6.0	9.5	10.0	●	○
09PR/L-R0.2-D14	9	4.0	8	18	0.2	4.7	8.7	13.2	13.8	●	○

Example of order :RBMB-05PR-R0.2-D065 HP630M Left hand L non - standard accepted ● Standard inventory ○ Non-standard inventory



Copying and boring



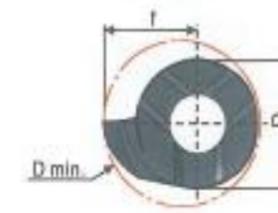
Order number	D	Tmax	gamma	beta	R	S	f	a	Dmin (mm)	HP630M	
										R	L
RBMB-04QR-R0.2-1.4D06	4	1.4	3	47	0.2	2.6	3.7	5.7	6.0	●	/
05QR/L-R0.2-1.5D07	5	1.5	3	47	0.2	3.3	4.3	6.8	7.0	●	○
05QR/L-R0.2-2.5D09		2.5	3	47	0.2	3.3	5.5	8.5	9.0	●	○
07QR/L-R0.2-2.0D10	7	2.0	3	47	0.2	3.5	6.0	9.5	10.0	●	○
07QR/L-R0.2-3.5D12		3.5	3	47	0.2	3.5	7.5	11.0	12.0	●	○
09QR/L-R0.2-4.0D14	9	4.0	3	47	0.2	4.7	9.0	13.5	14.0	●	○
09QR/L-R0.2-6.0D16		6.0	3	47	0.2	4.7	11.0	15.5	16.0	●	○
11QR/L-R0.2-4.0D16	11	4.0	3	47	0.2	5.3	10.0	15.5	16.0	○	○
11QR/L-R0.2-8.0D20		8.0	3	47	0.2	5.3	14.0	19.5	20.0	○	○

Example of order :RBMB-05QR-R0.2-1.5D07 HP630M Left hand L non - standard accepted ● Standard inventory ○ Non-standard inventory

Note: Other beta/R inserts can be customized according to actual machining requirements in order to meet different copying requirements.



Boring and copying

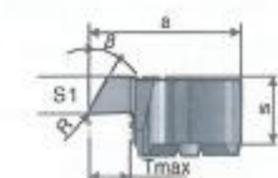
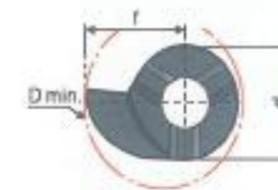


Order number	D	Tmax	gamma	beta	R	S	f	a	Dmin (mm)	HP630M	
										R	L
RBMB-04PR-R0.2-D06-CBN	4	0.8	8	18	0.2	2.6	3.0	5.0	5.5	○	/
05PR/L-R0.2-D07-CBN	5	1.0	8	18	0.2	3.3	3.6	6.1	6.5	○	○
07PR/L-R0.2-D10-CBN	7	2.0	8	18	0.2	3.5	6.0	9.5	10.0	○	○
09PR/L-R0.2-D14-CBN	9	4.0	8	18	0.2	4.7	8.7	13.2	13.8	○	○

Order example :RBMB-05PR-R0.2-D07-CBN HP630M Left hand L non-standard accepted ● Standard inventory ○ Non-standard inventory

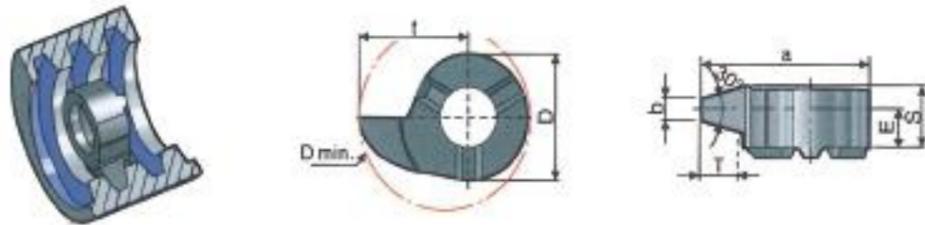


Back boring



Order number	D	Tmax	beta	R	S1	S	f	a	Dmin (mm)	HP630M	
										R	L
RBMB-04XR-R0.2-1.4D06	4	1.4	30	0.2	2.3	2.6	3.7	5.7	6.0	●	/
05XR/L-R0.2-1.5D07	5	1.5	30	0.2	2.3	3.3	4.3	6.8	7.0	○	○
05XR/L-R0.2-2.5D09		2.5	30	0.2	2.3	3.3	5.5	8.5	9.0	●	○
07XR/L-R0.2-2.0D10	7	2.0	30	0.2	2.6	3.5	6.0	9.5	10.0	○	○
07XR/L-R0.2-3.5D12		3.5	30	0.2	2.6	3.5	7.5	11.0	12.0	●	○
09XR/L-R0.2-4.0D14	9	4.0	30	0.2	3.0	4.7	9.0	13.5	14.0	●	○
09XR/L-R0.2-6.0D16		6.0	30	0.2	3.0	4.7	11.0	15.5	16.0	○	○
11XR/L-R0.2-4.0D16	11	4.0	30	0.2	3.5	5.3	10.0	15.5	16.0	○	○
11XR/L-R0.2-8.0D20		8.0	30	0.2	3.5	5.3	14.0	19.5	20.0	○	○

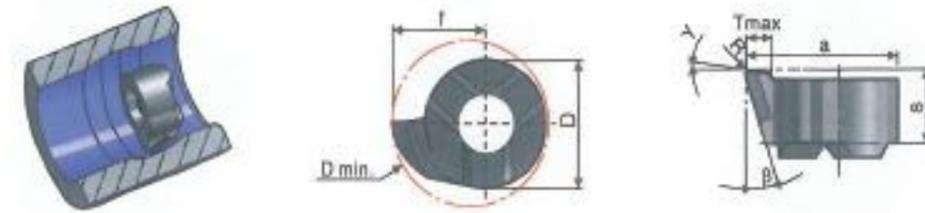
Order example :RBMB-05XR-R0.2-1.5D07 HP630M Left hand L non-standard accepted ● Standard inventory ○ Non-standard inventory



Threading

Order number	D	Pitch	E	T	b	Helix angle	S	f	a	Dmin (mm)	HP630M	
											R	L
RBMB- 05IR/L15TR-07R	5	TR10X1.5	2.9	0.90	0.47	3.0	3.3	4.3	6.8	7.0	○	○
05IR/L20TR-08R		TR10X2 TR11X2 TR12X2	2.7	1.25	0.60	3.5	3.3	4.7	7.2	8.0	●	○
05IR/L30TR-08R		TR11X3 TR12X3	2.4	1.75	0.96	5.0	3.3	5.0	7.5	8.0	●	○
07IR/L30TR-10R	7	TR14X3 TR22X3 TR25X3 TR28X3	2.7	1.75	0.96	5.0	3.5	6.2	9.7	10.0	●	○
07IR/L40TR-11R		TR15X4 TR18X4 TR20X4	2.2	2.25	1.33	4.5	3.5	6.7	10.2	11.0	●	○
09IR/L40TR-14R	9	TR18X4 TR20X4	2.2	2.25	1.33	4.5	4.7	8.0	12.5	14.0	●	○
09IR/L50TR-14R		TR22X5 TR24X5 TR25X5 TR28X5	3.55	2.75	1.69	4.5	4.7	9.0	13.5	14.0	●	○
11IR/L40TR-15R	11	TR18X4 TR20X4	4.0	2.25	1.33	4.5	5.3	9.0	14.5	15.0	●	○
11IR/L50TR-16R		TR22X5 TR24X5 TR25X5 TR28X5	3.6	2.75	1.69	4.5	5.3	10.0	15.5	16.0	●	○
11IR/L60TR-16R		TR30X6 TR35X6	3.3	3.50	1.92	4.5	5.3	10.2	15.7	16.0	●	○

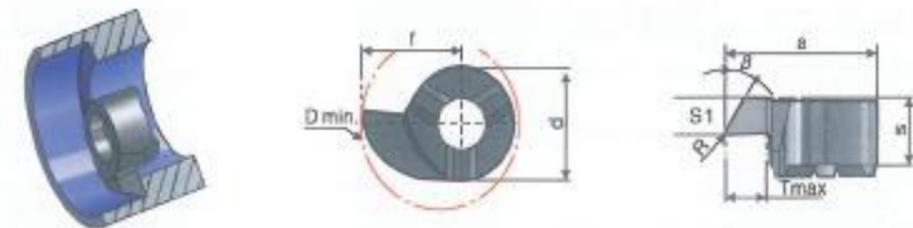
Example of order :RBMB-05IR15TR-07R HP630M Left Hand L, non-standard accepted ● Standard inventory ○ Non-standard inventory



Boring and copying

Order number	D	Tmax	gamma	beta	R	S	f	a	Dmin (mm)	HP630M	
										R	L
RBMB- 04PR-R0.2-D06-CBN	4	0.8	8	18	0.2	2.6	3.0	5.0	5.5	○	/
05PR/L-R0.2-D07-CBN	5	1.0	8	18	0.2	3.3	3.6	6.1	6.5	○	○
07PR/L-R0.2-D10-CBN	7	2.0	8	18	0.2	3.5	6.0	9.5	10.0	○	○
09PR/L-R0.2-D14-CBN	9	4.0	8	18	0.2	4.7	8.7	13.2	13.8	○	○

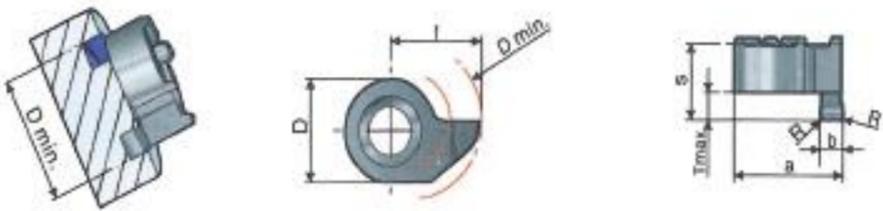
Order example :RBMB-05PR-R0.2-DO7-CBN HP630M Left hand L non-standard accepted ● Standard inventory ○ Non-standard inventory



Back boring

Order number	D	Tmax	beta	R	S1	S	f	a	Dmin (mm)	HP630M	
										R	L
RBMB- 04XR-R0.2-1.4D06	4	1.4	30	0.2	2.3	2.6	3.7	5.7	6.0	●	/
05XR/L-R0.2-1.5D07	5	1.5	30	0.2	2.3	3.3	4.3	6.8	7.0	○	○
05XR/L-R0.2-2.5D09		2.5	30	0.2	2.3	3.3	5.5	8.5	9.0	●	○
07XR/L-R0.2-2.0D10	7	2.0	30	0.2	2.6	3.5	6.0	9.5	10.0	○	○
07XR/L-R0.2-3.5D12		3.5	30	0.2	2.6	3.5	7.5	11.0	12.0	●	○
09XR/L-R0.2-4.0D14	9	4.0	30	0.2	3.0	4.7	9.0	13.5	14.0	●	○
09XR/L-R0.2-6.0D16		6.0	30	0.2	3.0	4.7	11.0	15.5	16.0	○	○
11XR/L-R0.2-4.0D16	11	4.0	30	0.2	3.5	5.3	10.0	15.5	16.0	○	○
11XR/L-R0.2-8.0D20		8.0	30	0.2	3.5	5.3	14.0	19.5	20.0	○	○

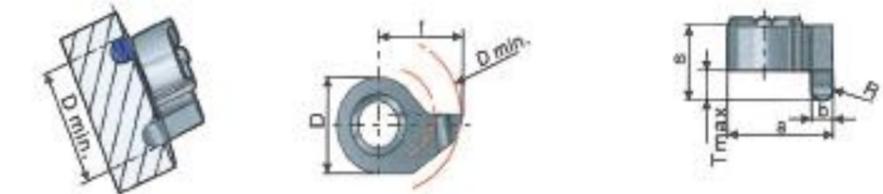
Order example :RBMB-05XR-R0.2-1.5D07 HP630M Left hand L non-standard accepted ● Standard inventory ○ Non-standard inventory



Face groove

Order number	D	Tmax	b	R	S	f	a	Dmin (mm)	HP630M
RBMB-09FNRB1.0-1.5D14	9	1.5	1.0	-	8.2	9.0	13.5	14.0	●
09FNRB1.0-3.0D14		3.0	1.0	-	8.2	9.0	13.5	14.0	●
09FNRB1.5-3.0D14		3.0	1.5	0.2	8.2	9.0	13.5	14.0	●
09FNRB2.0-3.0D14		3.0	2.0	0.2	8.2	9.0	13.5	14.0	●
09FNRB3.0-3.0D14		3.0	3.0	0.2	8.2	9.0	13.5	14.0	●
09FNRB2.0-5.0D14		5.0	2.0	0.2	10.2	9.0	13.5	14.0	●
09FNRB3.0-5.0D14		5.0	3.0	0.2	10.2	9.0	13.5	14.0	●
09FNRB3.0-6.0D14		6.0	3.0	0.2	11.2	9.0	13.5	14.0	●

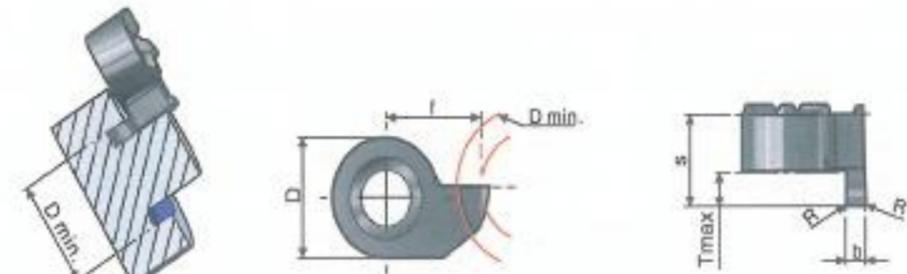
Example of order :RBMB-09FNRB1.0-3.0D14 HP630M, non-standard is accepted ● Standard inventory ○ Non-standard inventory



End face, circular groove

Order number	D	Tmax	b	R	S	f	a	Dmin (mm)	HP630M
RBMB-09ZNR-R0.50-1.5D14	9	1.5	1.0	0.50	8.2	9.0	13.5	14.0	●
09ZNR-R0.75-3.0D14		3.0	1.5	0.75	8.2	9.0	13.5	14.0	●
09ZNR-R1.00-3.0D14		3.0	2.0	1.00	8.2	9.0	13.5	14.0	●
09ZNR-R1.50-3.0D14		3.0	3.0	1.50	8.2	9.0	13.5	14.0	●
09ZNR-R1.00-5.0D14		5.0	2.0	1.00	10.2	9.0	13.5	14.0	●
09ZNR-R1.50-5.0D14		5.0	3.0	1.50	10.2	9.0	13.5	14.0	●
09ZNR-R1.50-6.0D14		6.0	3.0	1.50	11.2	9.0	13.5	14.0	●

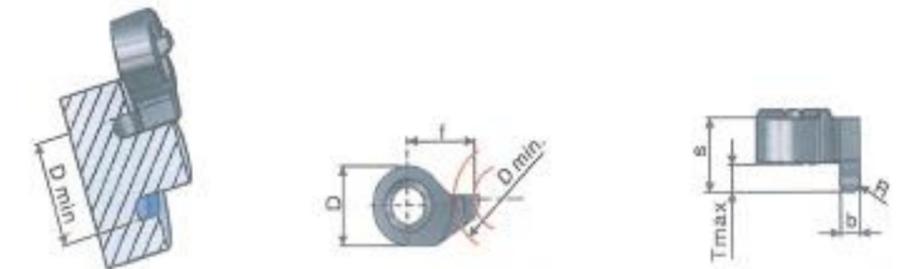
Example of order :RBMB-09ZNR-R0.50-1.5D14 HP630M, non-standard is accepted ● Standard inventory ○ Non-standard inventory



Face groove

Order number	D	Tmax	b	R	S	f	Dmin (mm)	HP630M
RBMB-09FERB1.0-1.5D12	9	1.5	1.0	-	8.2	7.0	12.0	●
09FERB1.0-3.0D12		3.0	1.0	-	8.2	7.0	12.0	○
09FERB1.5-3.0D12		3.0	1.5	0.2	8.2	7.5	12.0	●
09FERB2.0-3.0D12		3.0	2.0	0.2	8.2	8.0	12.0	●
09FERB3.0-3.0D12		3.0	3.0	0.2	8.2	9.0	12.0	●
09FERB2.0-5.0D12		5.0	2.0	0.2	10.2	8.0	12.0	●
09FERB3.0-5.0D12		5.0	3.0	0.2	10.2	9.0	12.0	●
09FERB3.0-6.0D12		6.0	3.0	0.2	11.2	9.0	12.0	●

Example of order :RBMB-09FERB2.0-3.0D12 HP630M, non-standard is accepted ● Standard inventory ○ Non-standard inventory



End face, circular groove

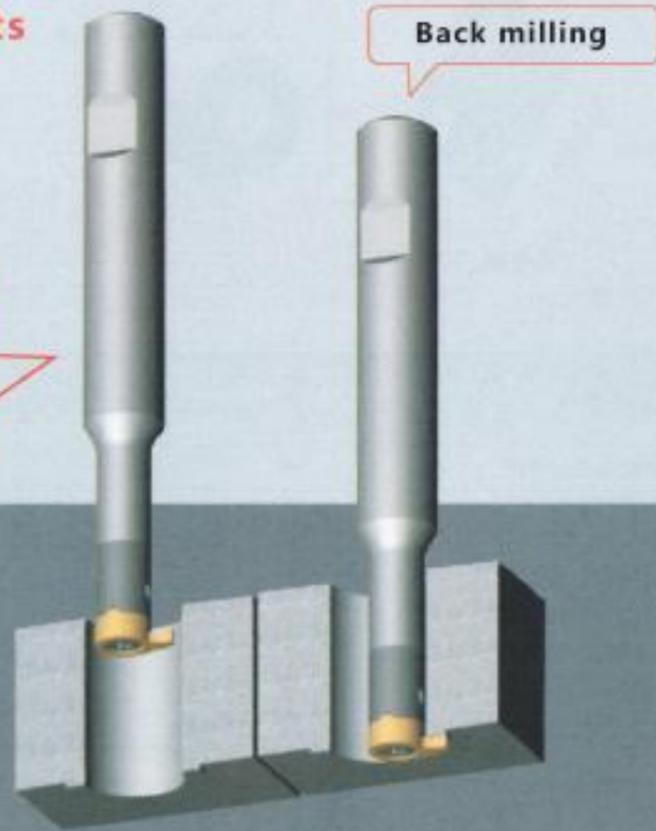
Order number	D	Tmax	b	R	S	f	Dmin (mm)	HP630M
RBMB-09ZER-R0.50-1.5D14	9	1.5	1.0	0.50	8.2	7.0	12.0	○
09ZER-R0.75-3.0D14		3.0	1.5	0.75	8.2	7.5	12.0	○
09ZER-R1.00-3.0D12		3.0	2.0	1.00	8.2	8.0	12.0	○
09ZER-R1.50-3.0D12		3.0	3.0	1.50	8.2	9.0	12.0	○
09ZER-R1.00-5.0D12		5.0	2.0	1.00	10.2	8.0	12.0	○
09ZER-R1.50-5.0D12		5.0	3.0	1.50	10.2	9.0	12.0	○
09ZER-R1.50-6.0D12		6.0	3.0	1.50	11.2	9.0	12.0	○

Example of order :RBMB-09ZER-R1.00-3.0D12 HP630M, non-standard is accepted ● Standard inventory ○ Non-standard inventory

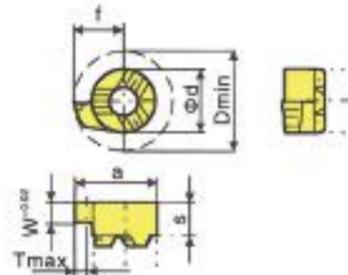
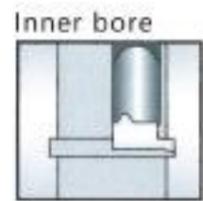
### Milling applications of modular inserts

- Groove milling
- Back boring
- Chamfer
- Boring

Advance the tool through the hole in case the tool is off-center when the spindle is stopped.



### Size switching example



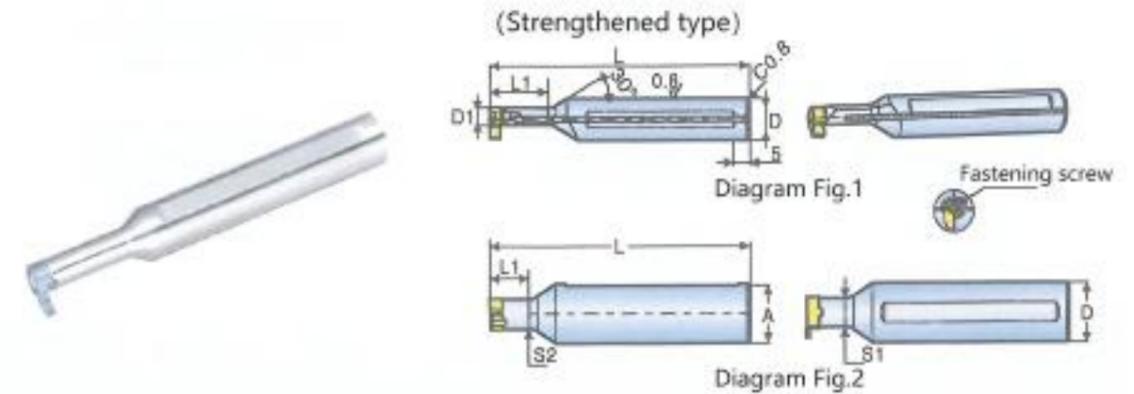
Order number	d	W+0.02	ar(Tmax)	a	f	S	Z	Dmin	HP630M
RBMB- 04GR050-1.0D055	4	0.5	1.0	5.2	3.2	2.6	1	6.6	●
04GR070-1.0D055	4	0.7	1.0	5.2	3.2	2.6	1	6.6	●
04GR100-1.0D055	4	1.0	1.0	5.2	3.2	2.6	1	6.6	●
04GR150-1.0D055	4	1.5	1.0	5.2	3.2	2.6	1	6.6	●
04GR200-1.0D055	4	2.0	1.0	5.2	3.2	2.6	1	6.6	●

Milling groove processing: minimum theoretical diameter of hole entry =  $f \cdot 2 + 0.2$ . For other insert sizes, please see the parameters of keyhole module inserts for details.

● Standard inventory ○ Non-standard inventory

Note: When machining with modular single-edge blade, do not use the enhanced tool holder

### MG steel tool holder



Order number	D	S1	S2	L1	L	A	Suitable inserts	Key	Hammer	Type/ internal cooling	Inventory
RBMB- H16-20-07R	16	7.0	7.0	20	120	15	RBMB-07	CSTB3.0	T10	Fig.2/无	●
H16-30-09R	16	9.0	9.0	30	120	15	RBMB-09	CSTB4.0	T15	Fig.2/无	●
H20-40-11R	20	11.0	11.0	40	130	19	RBMB-11	CSTB5.0	T20	Fig.2/无	●
H12-18-05ST	12	5.0	6.7	18	80	11	RBMB-05	CSTB2.2	T6	Fig.1/无	●
H16-20-07ST	16	7.0	8.5	20	120	15	RBMB-07	CSTB3.0	T10	Fig.1/无	●
H16-30-09ST	16	9.0	11.0	30	120	15	RBMB-09	CSTB4.0	T15	Fig.1/无	●
H20-40-11ST	20	11.0	13.5	40	130	19	RBMB-11	CSTB5.0	T20	Fig.1/无	●
H12-16-04ST-N	12	4.0	5.2	16	80	11	RBMB-04	CSTB1.8	T6	Fig.1/有	●
H12-18-05ST-N	12	5.0	6.7	18	80	11	RBMB-05	CSTB2.2	T6	Fig.1/有	●
H16-20-07ST-N	16	7.0	8.5	20	120	15	RBMB-07	CSTB3.0	T10	Fig.1/有	●
H16-30-09ST-N	16	9.0	11.0	30	120	15	RBMB-09	CSTB4.0	T15	Fig.1/有	●
H20-40-11ST-N	20	11.0	13.5	40	130	19	RBMB-11	CSTB5.0	T20	Fig.1/有	●

Order example :MG-H16-18-05ST-N

● Standard inventory ○ Non-standard inventory

Note :ST-N is the reinforced internal cooling type, ST is the ordinary reinforced type, both eccentric design can not be used for milling.

Recommended for internal cooling, tip cooling significantly improves chip removal and tool life.

## Solid carbide tool holder

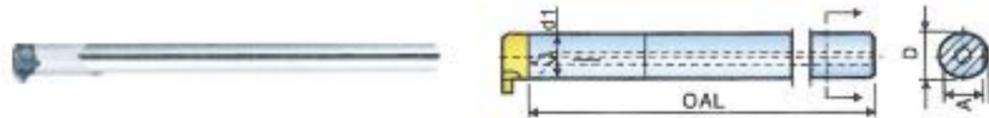


Diagram Fig.2

Order number	D	d1	L1	L	A	Suitable inserts			Type/internal cooling	Inventory
RBMB- E12-28-05	12	5	28	90	11	RBMB-05	CSTB2.2	T6	Fig.2/in stock	●
E12-36-05	12	5	36	100	11	RBMB-05	CSTB2.2	T6	Fig.2/in stock	○
E12-33-07	12	7	33	90	11	RBMB-07	CSTB3.0	T10	Fig.2/in stock	●
E12-49-07	12	7	49	110	11	RBMB-07	CSTB3.0	T10	Fig.2/in stock	○
E12-45-09	12	9	45	110	11	RBMB-09	CSTB4.0	T15	Fig.2/in stock	●
E12-56-09	12	9	56	120	11	RBMB-09	CSTB4.0	T15	Fig.2/in stock	○
E12-45-11	12	11	45	110	11	RBMB-11	CSTB5.0	T20	Fig.2/in stock	●
E12-80-11	12	11	80	150	11	RBMB-11	CSTB5.0	T20	Fig.2/in stock	●

- Fig.1 The eccentrically reinforced design of the tool bar cannot be used as a rotary tool. ● Standard inventory ○ Non-standard inventory  
Fig.2 When the tool bar is used as a rotary tool, pay attention to the change of the minimum hole diameter of the blade, the theoretical minimum hole diameter =  $\varphi^2 + 0.2$
- When using ST-enhanced tool holders for non-standard inserts, please pay attention to the S2 size, whether there is interference with the required processing size

## Solid carbide shank type



Order number	φD	φd1	L1	OAL	A	Suitable inserts			Internal cooling	Inventory
RBMB- E04-00-04	4	4	/	95	3.8	RBMB-05	CSTB1.8	T6	In stock	●
E05-00-05	5	5	/	95	4.7	RBMB-05	CSTB2.2	T6	In stock	●
E07-00-07	7	7	/	95	6.6	RBMB-07	CSTB3.0	T10	In stock	●
E09-00-09	9	9	/	125	8.5	RBMB-09	CSTB4.0	T15	In stock	●
E11-00-11	11	11	/	125	11.5	RBMB-11	CSTB5.0	T20	In stock	●

Note: The L length of the new product of individual models has an appropriate increase compared with the old product, which can be used as a milling tool holder ● Standard inventory ○ Non-standard inventory

## Modular Small Hole tool Parameters

Recommended material, cutting speed Vc (m/min), feed f (mm/rev) and maximum depth of cut.

Material	Material	Brinell hardness	HP630M		Maximum depth of cut in radial direction (mm)		
			Vc[M/min]				
			Thread Boring	Grooving	Boring		
P Steel	Unalloyed steel	Low Carbon (C=0.1-0.25%)	125	40-210	40-180	0.30-0.50	
		Medium carbon (C=0.25-0.55%)	150	40-180	40-170	0.30-0.50	
		High carbon (C=0.55-0.85%)	170	40-170	40-160	0.25-0.35	
	low alloy steel (Alloying elements ≤ 5%)	Non-hardening	180	40-90	40-155	0.28-0.45	
		Hardening	275	40-150	40-160	0.25-0.45	
		Hardening	350	40-140	40-190	0.25-0.40	
		High alloy steel (Alloying elements > 5%)	Anneal	200	40-130	40-115	0.20-0.30
Cast steel	Hardening	325	40-110	40-100	0.18-0.30		
	Low-alloy steel (alloying elements ≤ 5%)	200	40-170	40-170	0.20-0.30		
M Stainless steel	Stainless steel ferrite	High alloy steel Alloying elements > 5%	225	40-120	40-130	0.17-0.30	
		Non-hardening	200	40-170	40-180	0.22-0.34	
	Stainless steel austenitic	Hardening	330	40-170	40-180	0.21-0.32	
		Austenite	180	140-40	40-140	0.25-0.40	
	Stainless steel ferritic casting	Super austenite	200	40-140	40-140	0.17-0.26	
		Non-hardening	200	40-140	40-140	0.25-0.37	
	Stainless steel austenitic	Hardening	330	40-140	40-140	0.17-0.26	
		Austenite	200	40-120	40-120	0.20-0.30	
	K Iron casting	Malleable cast iron	Hardening	330	40-120	40-120	0.17-0.26
			Ferrite (short chips)	130	40-130	40-120	0.25-0.37
Gray cast iron		Pearlite (long chips)	230	40-120	40-100	0.20-0.30	
		Low tensile strength	180	40-130	40-100	0.22-0.34	
Nodular cast iron		High tensile strength	260	40-100	40-100	0.20-0.30	
	Ferrite	160	40-125	40-100	0.15-0.25		
N(K) Non-iron metal	Aluminum alloy - forging	Pearlite	260	40-90	40-90	0.20-0.30	
		Untimely	60	40-250	40-400	0.60-1.00	
	Aluminium alloy	Aging	100	40-180	40-400	0.50-0.90	
		Casting	75	40-400	40-400	0.50-0.90	
	Copper and Copper alloys	Cast and aged	90	40-280	40-200	0.40-0.60	
		Casting silicon content 13-22%	130	40-150	40-200	0.50-0.90	
S(M) Heat resistance Heat resistant materials	High temperature alloy	Brass	90	40-210	40-200	0.60-1.00	
		Bronze and lead-free copper	100	40-210	40-200	0.50-0.90	
		Annealed (iron-based)	200	20-45	20-40	0.12-0.22	
	Titanium alloy	Aging (iron-based)	280	20-30	20-30	0.10-0.20	
		Annealed (nickel or cobalt based)	250	15-20	15-20	0.08-0.20	
		Aging (nickel or cobalt based)	350	10-15	10-15	0.08-0.20	
Titanium alloy	Purity 99.5 titanium 99.5 Ti	400Rm	40-140	70-120	0.10-0.20		
	α+β alloy	1050Rm	20-50	20-50	0.10-0.20		



## Modular milling cutter

### Features and uses of modular milling cutters

- Tooth connection locking, reliable locking; screw locking, easy replacement
- The same tool holder can be applied to square grooves, snap ring grooves, arc grooves, chamfering, and thread processing. High precision, runout of peripheral edge and end edge within 0.02mm
- Inserts replacement is easy, different material blades can be selected for different processing materials
- 6-edge design is adopted for 12mm or more, which greatly improves cutting efficiency and wear resistance
- Lock module tools are in stock, can choose different structure of the tool holder, to meet various suspension length requirements
- The whole series provides internal cooling supply, excellent chip removal performance, and prolongs tool life

### Traditional tools

**Welding tool**

1. High temperature welding will destroy the hardness of the tool holder, and sometimes the welding will not be firm
2. The strength of the tool body is not high, the size is fixed, and it cannot meet the requirements of different processing conditions



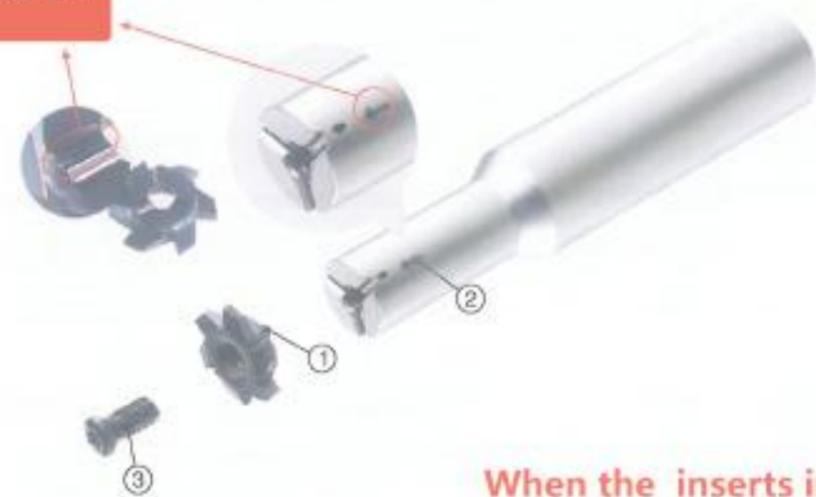
**High speed steel**

1. Does not support high-speed processing, low efficiency
2. Short life, one-time use



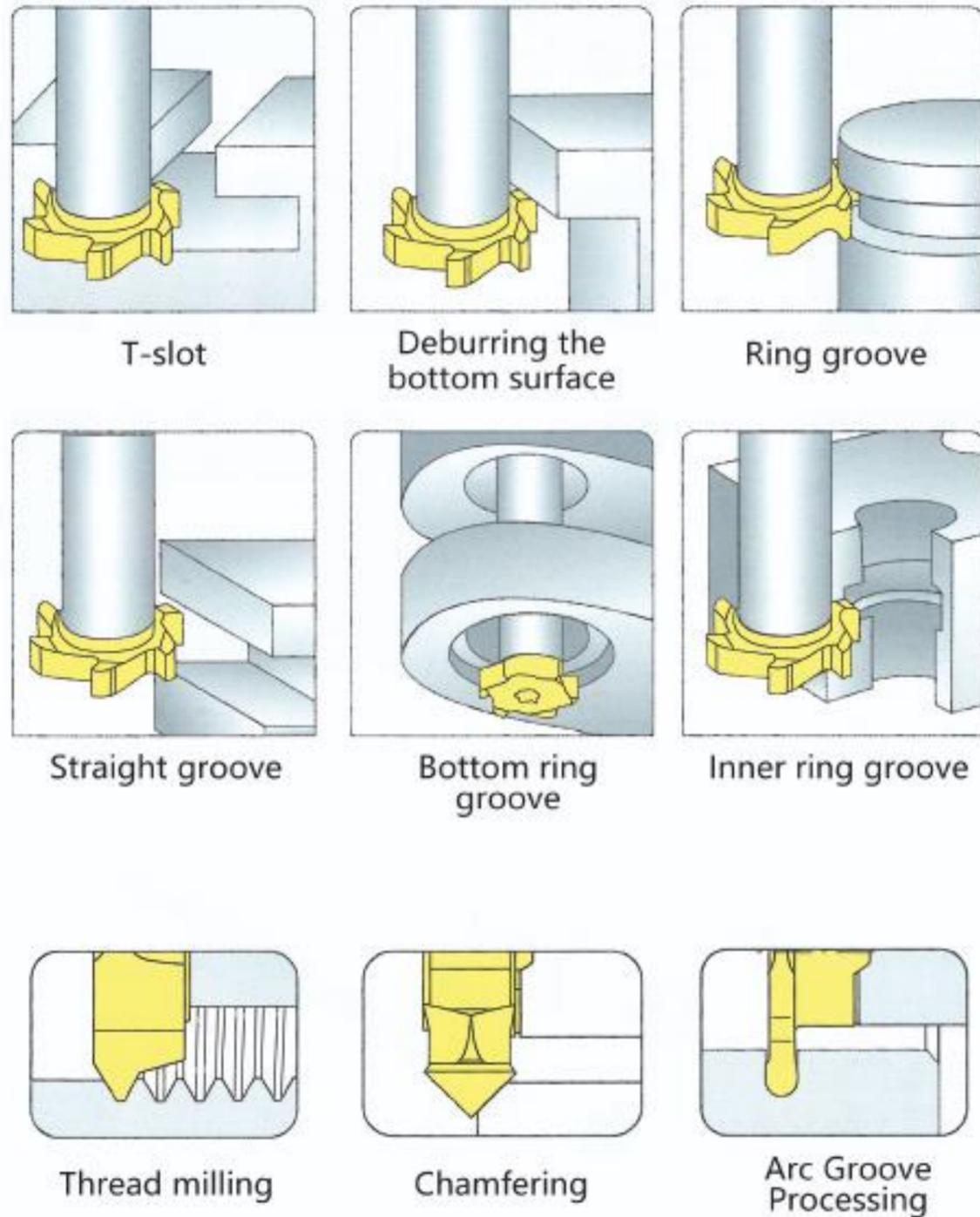
High-efficiency, long-life module tool

The markings at the location details need to match



### When the inserts installed

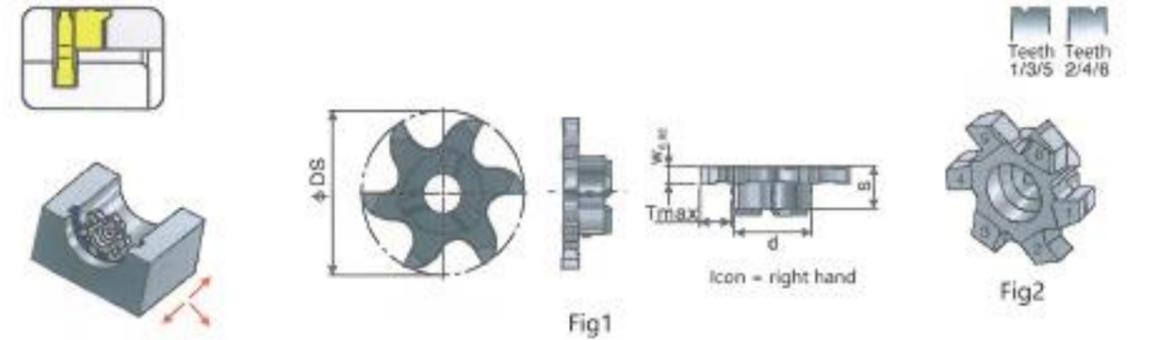
Please install the marking symbol ① of the positioning tooth of the inserts corresponding to the marking symbol ② on the tool holder. Carefully check the insert cycle slip and ase.



## Modular grooving

M	G/C/I	10	06	W050	T08
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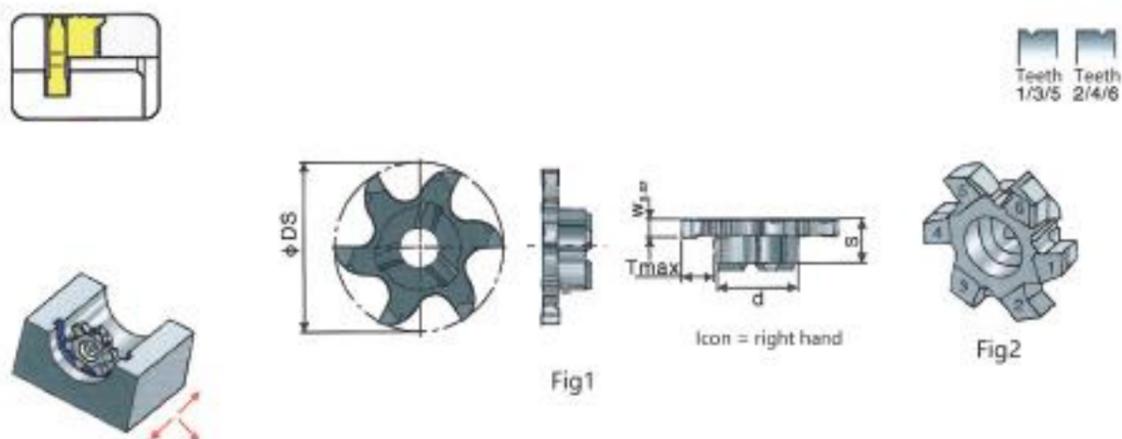
	Unit mm														
Groove depth	0.7	1.5	1.5	2.5	2.5	3.5	4.0	5.0	4.5	5.5	5.0	5.5	7.5	8.5	10.0
Groove width	2.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	6.0	6.0	6.0	6.0	6.0	4.0	4.0
Cutting flute diameter	Φ5.8	Φ7.7	Φ9.7	Φ11.7	Φ13.7	Φ15.7	Φ17.7	Φ19.7	Φ21.7	Φ23.7	Φ24.7	Φ25.7	Φ27.7	Φ31.7	Φ34.7



Order number	Ds	d	W (+0.02)	Tmax	S	Z	Icon	HP630M	HD10
RTMG-0604-W050T07	5.8	4.0	0.5	0.70	3.0	3	Fig1	●	○
0604-W100T07	5.8	4.0	1.0	0.70	3.0	3	Fig1	●	○
0604-W150T07	5.8	4.0	1.5	0.70	3.0	3	Fig1	●	○
0604-W200T07	5.8	4.0	2.0	0.70	3.0	3	Fig1	●	○
0804-W050T15	7.7	4.0	0.5	1.50	3.0	3	Fig1	●	○
0804-W100T15	7.7	4.0	1.0	1.50	3.0	3	Fig1	●	○
0804-W150T15	7.7	4.0	1.5	1.50	3.0	3	Fig1	●	○
0804-W200T15	7.7	4.0	2.0	1.50	3.0	3	Fig1	●	○
1006-W050T15	9.7	6.0	0.5	1.50	3.5	3	Fig1	●	○
1006-W070T15	9.7	6.0	0.7	1.50	3.5	3	Fig1	●	○
1006-W100T15	9.7	6.0	1.0	1.50	3.5	3	Fig1	●	○
1006-W150T15	9.7	6.0	1.5	1.50	3.5	3	Fig1	●	○
1006-W200T15	9.7	6.0	2.0	1.50	3.5	3	Fig1	●	○
1006-W250T15	9.7	6.0	2.5	1.50	3.5	3	Fig1	●	○
1006-W300T15	9.7	6.0	3.0	1.50	3.5	3	Fig1	●	○
1206-W100T25	11.7	6.0	1.0	2.50	3.5	3	Fig1	●	○
1206-W150T25	11.7	6.0	1.5	2.50	3.5	3	Fig1	●	○
1206-W200T25	11.7	6.0	2.0	2.50	3.5	3	Fig1	●	○
1206-W250T25	11.7	6.0	2.5	2.50	3.5	3	Fig1	●	○
1206-W300T25	11.7	6.0	3.0	2.50	3.5	3	Fig1	●	○

Ordering example: MG0604-W050T07 HP630M provides non-standard order ● Standard inventory ○ Non-standard inventory  
 Remarks: For products with special R value requirements, please contact the supplier  
 The product with "\*" has a toothed belt splitting groove. Note that the inserts will be reduced by about 1.5mm compared with the Fig1 type inserts after the inserts is installed on the blade.

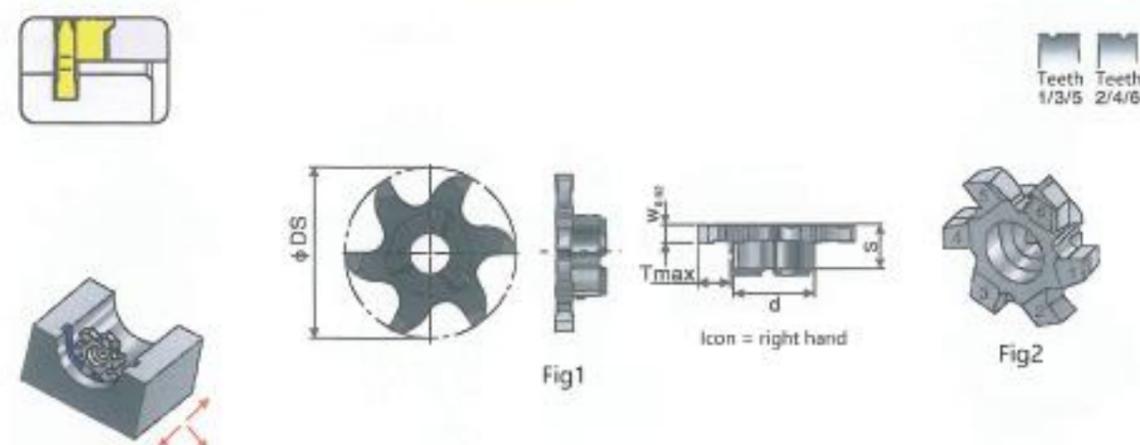
## Modular grooving



Order number	Ds	d	W (+0.02)	Tmax	S	Z	Icon	HP630M	HD10
RTMG- 1408-W100T25	13.7	8.0	1.0	2.50	4.0	6	Fig1	●	○
1408-W150T25	13.7	8.0	1.5	2.50	4.0	6	Fig1	●	○
1408-W200T25	13.7	8.0	2.0	2.50	4.0	6	Fig1	●	○
1408-W250T25	13.7	8.0	2.5	2.50	4.0	6	Fig1	●	○
1408-W300T25	13.7	8.0	3.0	2.50	4.0	6	Fig1	●	○
1408-W400T25	13.7	8.0	4.0	2.50	4.0	6	Fig1	●	○
1608-W100T35	15.7	8.0	1.0	3.50	4.0	6	Fig1	●	○
1608-W150T35	15.7	8.0	1.5	3.50	4.0	6	Fig1	●	○
1608-W200T35	15.7	8.0	2.0	3.50	4.0	6	Fig1	●	○
1608-W250T35	15.7	8.0	2.5	3.50	4.0	6	Fig1	●	○
1608-W300T35	15.7	8.0	3.0	3.50	4.0	6	Fig1	●	○
1608-W350T35	15.7	8.0	3.5	3.50	4.0	6	Fig1	○	○
1608-W400T35	15.7	8.0	4.0	3.50	4.0	6	Fig1	●	○
1809-W100T40	17.7	9.0	1.0	4.00	5.5	6	Fig1	●	○
1809-W150T40	17.7	9.0	1.5	4.00	5.5	6	Fig1	●	○
1809-W200T40	17.7	9.0	2.0	4.00	5.5	6	Fig1	●	○
1809-W250T40	17.7	9.0	2.5	4.00	5.5	6	Fig1	●	○
1809-W300T40	17.7	9.0	3.0	4.00	5.5	6	Fig1	●	○
1809-W350T40	17.7	9.0	3.5	4.00	5.5	6	Fig1	○	○
1809-W400T40	17.7	9.0	4.0	4.00	5.5	6	Fig1	●	○
2009-W100T50	19.7	9.0	1.0	5.00	4.0	6	Fig1	●	○
2009-W150T50	19.7	9.0	1.5	5.00	4.0	6	Fig1	●	○
2009-W200T50	19.7	9.0	2.0	5.00	4.0	6	Fig1	●	○
2009-W250T50	19.7	9.0	2.5	5.00	4.0	6	Fig1	●	○

Same as E160 ● Standard inventory ○ Non-standard inventory  
 (3)The S value of the old product is 5.5, and the S value of the new product is 4.0. Any product must confirm the effective depth of cut when updating the blade.

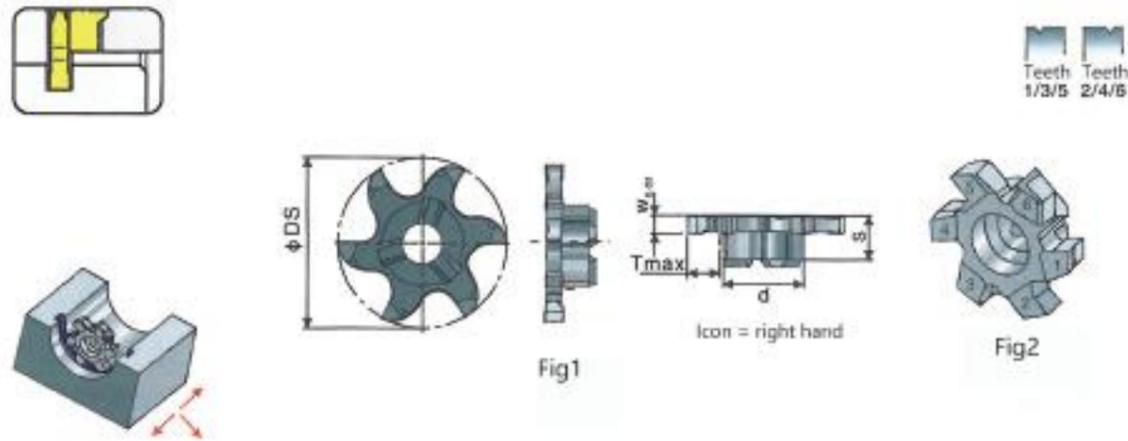
## Modular grooving



Order number	Ds	d	W (+0.02)	Tmax	S	Z	Icon	HP630M	HD10
RTMG- 2009-W300T50	19.7	9.0	3.0	5.00	4.0	6	Fig1	●	○
2009-W350T50	19.7	9.0	3.5	5.00	4.0	6	Fig1	○	○
2009-W400T50	19.7	9.0	4.0	5.00	4.0	6	Fig1	●	○
2212-W100T45	21.7	12.0	1.0	4.50	5.9	6	Fig1	●	○
2212-W150T45	21.7	12.0	1.5	4.50	5.9	6	Fig1	●	○
2212-W200T45	21.7	12.0	2.0	4.50	5.9	6	Fig1	●	○
2212-W250T45	21.7	12.0	2.5	4.50	5.9	6	Fig1	●	○
2212-W300T45	21.7	12.0	3.0	4.50	5.9	6	Fig1	●	○
2212-W350T45	21.7	12.0	3.5	4.50	5.9	6	Fig1	●	○
2212-W400T45	21.7	12.0	4.0	4.50	5.9	6	Fig1	●	○
2212-W500T45*	21.7	12.0	5.0	4.50	5.2	6	Fig2	●	○
2212-W600T45*	21.7	12.0	6.0	4.50	5.2	6	Fig2	●	○
2412-W100T55	23.7	12.0	1.0	5.50	5.9	6	Fig1	●	○
2412-W150T55	23.7	12.0	1.5	5.50	5.9	6	Fig1	●	○
2412-W200T55	23.7	12.0	2.0	5.50	5.9	6	Fig1	●	○
2412-W250T55	23.7	12.0	2.5	5.50	5.9	6	Fig1	●	○
2412-W300T55	23.7	12.0	3.0	5.50	5.9	6	Fig1	●	○
2412-W350T55	23.7	12.0	3.5	5.50	5.9	6	Fig1	○	○
2412-W400T55	23.7	12.0	4.0	5.50	5.9	6	Fig1	●	○
2412-W500T55*	23.7	12.0	5.0	5.50	5.2	6	Fig2	●	○
2412-W600T55*	23.7	12.0	6.0	5.50	5.2	6	Fig2	●	○
2514-W100T50	24.7	14.0	1.0	5.00	5.9	6	Fig1	●	○
2514-W150T50	24.7	14.0	1.5	5.00	5.9	6	Fig1	●	○
2514-W200T50	24.7	14.0	2.0	5.00	5.9	6	Fig1	●	○

Same as E160 ● Standard inventory ○ Non-standard inventory

## Modular grooving

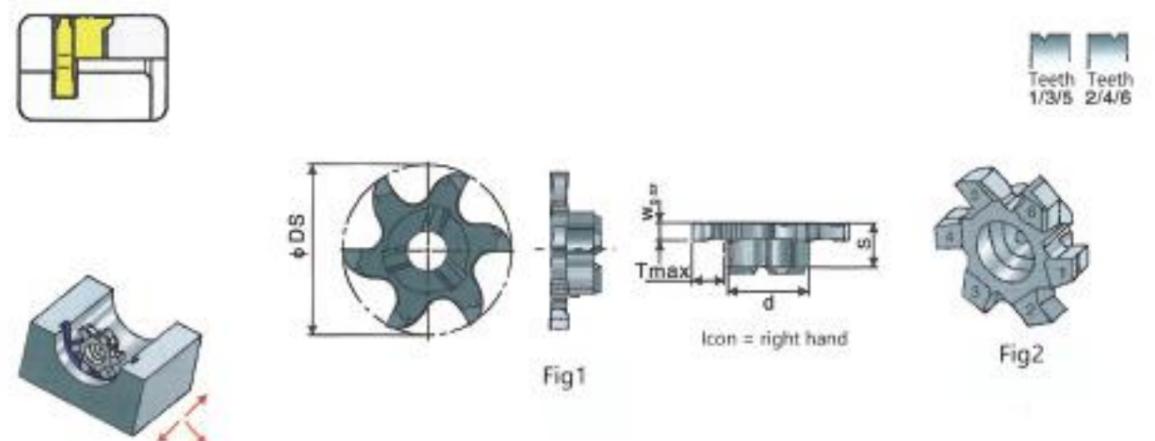


Order number	Ds	d	W (+0.02)	Tmax	S	Z	Icon	HP630M	HD10
RTMG- 2514-W250T50	24.7	14.0	2.5	5.00	5.9	6	Fig1	●	○
2514-W300T50	24.7	14.0	3.0	5.00	5.9	6	Fig1	●	○
2514-W350T50	24.7	14.0	3.5	5.00	5.9	6	Fig1	○	○
2514-W400T50	24.7	14.0	4.0	5.00	5.9	6	Fig1	●	○
2514-W500T50*	24.7	14.0	5.0	5.00	5.2	6	Fig2	●	○
2514-W600T50*	24.7	14.0	6.0	5.00	5.2	6	Fig2	●	○
2512-W100T60	24.7	12.0	1.0	6.00	5.9	6	Fig1	○	○
2512-W150T60	24.7	12.0	1.5	6.00	5.9	6	Fig1	○	○
2512-W200T60	24.7	12.0	2.0	6.00	5.9	6	Fig1	○	○
2512-W250T60	24.7	12.0	2.5	6.00	5.9	6	Fig1	○	○
2512-W300T60	24.7	12.0	3.0	6.00	5.9	6	Fig1	○	○
2512-W400T60	24.7	12.0	4.0	6.00	5.9	6	Fig1	○	○
2512-W500T60*	24.7	12.0	5.0	6.00	5.2	6	Fig2	○	○
2512-W600T60*	24.7	12.0	6.0	6.00	5.2	6	Fig2	○	○
2614-W200T55	25.7	14.0	2.0	5.50	5.9	6	Fig1	○	○
2614-W250T55	25.7	14.0	2.5	5.50	5.9	6	Fig1	○	○
2614-W300T55	25.7	14.0	3.0	5.50	5.9	6	Fig1	○	○
2614-W350T55	25.7	14.0	3.5	5.50	5.9	6	Fig1	○	○
2614-W400T55	25.7	14.0	4.0	5.50	5.9	6	Fig1	○	○
2614-W500T55*	25.7	14.0	5.0	5.50	5.2	6	Fig2	○	○
2614-W600T55*	25.7	14.0	6.0	5.50	5.2	6	Fig2	○	○
2814-W100T65	27.7	14.0	1.0	6.50	5.9	6	Fig1	●	○
2814-W150T65	27.7	14.0	1.5	6.50	5.9	6	Fig1	●	○
2814-W200T65	27.7	14.0	2.0	6.50	5.9	6	Fig1	●	○

Same as E160

● Standard inventory ○ Non-standard inventory

## Modular grooving

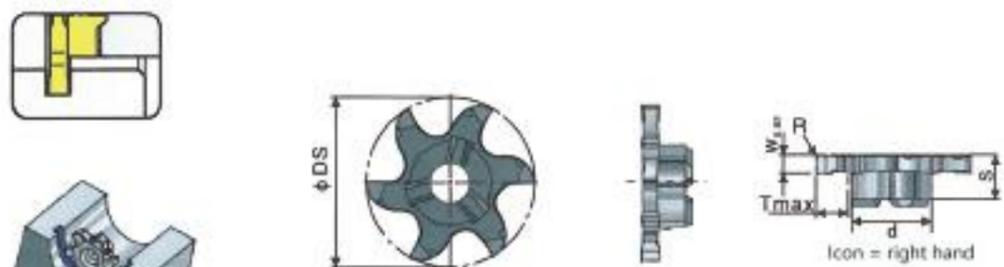


Order number	Ds	d	W (+0.02)	Tmax	S	Z	Icon	HP630M	HD10
RTMG- 2814-W250T65	27.7	14.0	2.5	6.50	5.9	6	Fig1	●	○
2814-W300T65	27.7	14.0	3.0	6.50	5.9	6	Fig1	●	○
2814-W350T65	27.7	14.0	3.5	6.50	5.9	6	Fig1	●	○
2814-W400T65	27.7	14.0	4.0	6.50	5.9	6	Fig1	●	○
2814-W500T65*	27.7	14.0	5.0	6.50	5.2	6	Fig2	●	○
2814-W600T65*	27.7	14.0	6.0	6.50	5.2	6	Fig2	●	○
2812-W200T75	27.7	12.0	2.0	7.50	5.9	6	Fig1	○	○
2812-W250T75	27.7	12.0	2.5	7.50	5.9	6	Fig1	○	○
2812-W300T75	27.7	12.0	3.0	7.50	5.9	6	Fig1	○	○
2812-W350T75	27.7	12.0	3.5	7.50	5.9	6	Fig1	○	○
2812-W400T75	27.7	12.0	4.0	7.50	5.9	6	Fig1	○	○
2812-W500T75*	27.7	12.0	5.0	7.50	5.2	6	Fig2	○	○
2812-W600T75*	27.7	12.0	6.0	7.50	5.2	6	Fig2	○	○
3214-W150T85	31.7	14.0	1.5	8.50	5.9	6	Fig1	●	○
3214-W200T85	31.7	14.0	2.0	8.50	5.9	6	Fig1	●	○
3214-W250T85	31.7	14.0	2.5	8.50	5.9	6	Fig1	●	○
3214-W300T85	31.7	14.0	3.0	8.50	5.9	6	Fig1	●	○
3214-W400T85	31.7	14.0	4.0	8.50	5.9	6	Fig1	●	○
3514-W150T100	34.7	14.0	1.5	10.00	5.9	6	Fig1	●	○
3514-W200T100	34.7	14.0	2.0	10.00	5.9	6	Fig1	●	○
3514-W250T100	34.7	14.0	2.5	10.00	5.9	6	Fig1	●	○
3514-W300T100	34.7	14.0	3.0	10.00	5.9	6	Fig1	●	○
3514-W350T100	34.7	14.0	3.5	10.00	5.9	6	Fig1	○	○
3514-W400T100	34.7	14.0	4.0	10.00	5.9	6	Fig1	●	○

Same as E160

● Standard inventory ○ Non-standard inventory

## Modular grooving

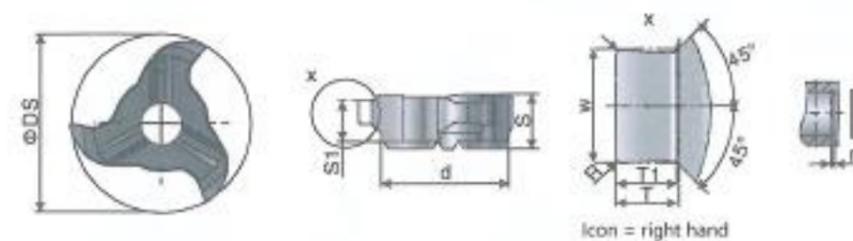


DIN 471/472

Order number	Ds	d	Ring size	W (-0.02)	Tmax	R	S	Z	HP630M	HD10
RTMG- 1006-W050T15-471/472	9.7	6.0	0.50	0.57	1.50	-	3.5	3	○	○
1006-W070T15-471/472	9.7	6.0	0.70	0.77	1.50	-	3.5	3	○	○
1006-W090T15-471/472	9.7	6.0	0.90	0.97	1.50	-	3.5	3	○	○
1006-W110T15-471/472	9.7	6.0	1.10	1.21	1.50	-	3.5	3	○	○
1006-W130T15-471/472	9.7	6.0	1.30	1.41	1.50	0.1	3.5	3	○	○
1006-W160T15-471/472	9.7	6.0	1.60	1.71	1.50	0.1	3.5	3	○	○
1206-W110T25-471/472	11.7	6.0	1.10	1.21	2.50	-	3.5	3	○	○
1206-W130T25-471/472	11.7	6.0	1.30	1.41	2.50	0.1	3.5	3	○	○
1206-W160T25-471/472	11.7	6.0	1.60	1.71	2.50	0.1	3.5	3	○	○
1608-W110T35-471/472	15.7	8.0	1.10	1.21	3.50	-	4.0	6	○	○
1608-W130T35-471/472	15.7	8.0	1.30	1.41	3.50	0.1	4.0	6	○	○
1608-W160T35-471/472	15.7	8.0	1.60	1.71	3.50	0.1	4.0	6	○	○
1809-W110T35-471/472	17.7	9.0	1.10	1.21	3.50	-	5.5	6	○	○
1809-W130T35-471/472	17.7	9.0	1.30	1.41	3.50	0.1	5.5	6	○	○
1809-W160T35-471/472	17.7	9.0	1.60	1.71	3.50	0.1	5.5	6	○	○
2212-W130T45-471/472	21.7	12.0	1.30	1.41	4.50	0.1	5.9	6	○	○
2212-W160T45-471/472	21.7	12.0	1.60	1.71	4.50	0.1	5.9	6	○	○
2212-W185T45-471/472	21.7	12.0	1.85	1.96	4.50	0.2	5.9	6	○	○
2212-W215T45-471/472	21.7	12.0	2.15	2.26	4.50	0.2	5.9	6	○	○
2212-W265T45-471/472	21.7	12.0	2.65	2.76	4.50	0.2	5.9	6	○	○
2212-W315T45-471/472	21.7	12.0	3.15	3.26	4.50	0.2	5.9	6	○	○
2212-W415T45-471/472*	21.7	12.0	4.15	4.26	4.50	0.2	5.2	6	○	○
2212-W515T45-471/472*	21.7	12.0	5.15	5.26	4.50	0.2	5.2	6	○	○
2814-W130T65-471/472	27.7	14.0	1.30	1.41	6.50	0.1	5.9	6	○	○
2814-W160T65-471/472	27.7	14.0	1.60	1.71	6.50	0.1	5.9	6	○	○
2814-W185T65-471/472	27.7	14.0	1.85	1.96	6.50	0.2	5.9	6	○	○
2814-W215T65-471/472	27.7	14.0	2.15	2.26	6.50	0.2	5.9	6	○	○
2814-W265T65-471/472	27.7	14.0	2.65	2.76	6.50	0.2	5.9	6	○	○

Ordering example: RTMG1006-W050T15-471/472 HP630M provides non-standard order ● Standard inventory ○ Non-standard inventory

## Modular grooving

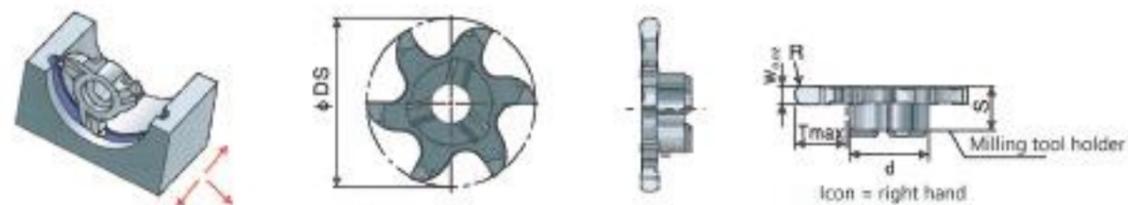
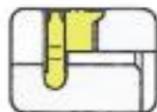


Order number	Ds	d	Ring size	W (-0.02)	T	T1	R	S	Z	HP630M	HD10
RTMG- 2212-W110T050-45°	21.7	12.0	1.10	1.21	0.50	0.49	-	5.9	6	○	○
2212-W130T070-45°	21.7	12.0	1.30	1.41	0.70	0.67	-	5.9	6	○	○
2212-W130T085-45°	21.7	12.0	1.30	1.41	0.85	0.86	-	5.9	6	○	○
2212-W160T085-45°	21.7	12.0	1.60	1.71	0.85	0.83	-	5.9	6	○	○
2212-W160T100-45°	21.7	12.0	1.60	1.71	1.00	0.97	-	5.9	6	○	○
2212-W185T125-45°	21.7	12.0	1.85	1.96	1.25	1.23	0.15	5.9	6	○	○
2212-W215T150-45°	21.7	12.0	2.15	2.26	1.50	1.47	0.15	5.9	6	○	○
2212-W265T175-45°	21.7	12.0	2.65	2.76	1.75	1.72	0.15	5.9	6	○	○
2212-W265T150-45°	21.7	12.0	2.65	2.76	1.50	1.47	0.15	5.9	6	○	○
2212-W315T175-45°	21.7	12.0	3.15	3.26	1.75	1.72	0.20	5.9	6	○	○
2212-W415T250-45°*	21.7	12.0	4.15	4.26	2.50	2.47	0.20	5.2	6	○	○
2212-W415T200-45°*	21.7	12.0	4.15	4.26	2.00	1.97	0.20	5.2	6	○	○

Remarks: These products are ordered according to customer requirements, and the lead time is 7-10 working days ● Standard inventory ○ Non-standard inventory

## Modular grooving

Grooving depths up to 0.7-10.0mm  
 Spring Width 1.0-6.0mm  
 Cutting edge  $\Phi$  5.8-34.7mm

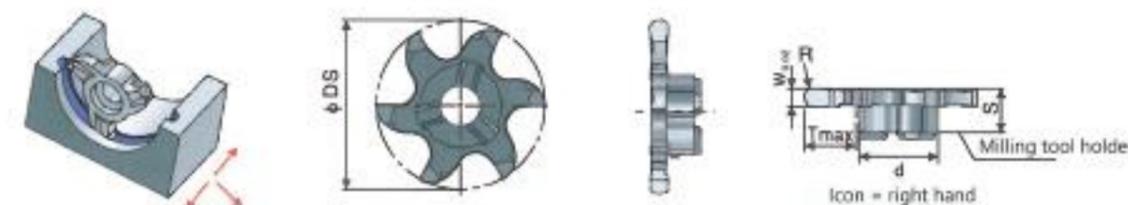
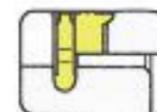


Order number	Ds	d	W (+0.02)	Tmax	R	S	Z	HP630M	HD10
RTMG- 0604-R050T07	5.8	4.0	1.00	0.7	0.50	3.0	3	○	○
0604-R075T07	5.8	4.0	1.50	0.7	0.75	3.0	3	○	○
0604-R100T07	5.8	4.0	2.00	0.7	1.00	3.0	3	○	○
0804-R050T15	7.7	4.0	1.00	1.5	0.50	3.0	3	○	○
0804-R075T15	7.7	4.0	1.50	1.5	0.75	3.0	3	○	○
0804-R100T15	7.7	4.0	2.00	1.5	1.00	3.0	3	○	○
1006-R050T15	9.7	6.0	1.00	1.5	0.50	3.5	3	○	○
1006-R075T15	9.7	6.0	1.50	1.5	0.75	3.5	3	○	○
1006-R100T15	9.7	6.0	2.00	1.5	1.00	3.5	3	○	○
1206-R050T25	11.7	6.0	1.00	2.5	0.50	3.5	3	○	○
1206-R075T25	11.7	6.0	1.50	2.5	0.75	3.5	3	○	○
1206-R100T25	11.7	6.0	2.00	2.5	1.00	3.5	3	○	○
1608-R075T35	15.7	8.0	1.50	3.5	0.75	4.0	6	○	○
1608-R100T35	15.7	8.0	2.00	3.5	1.00	4.0	6	○	○
1608-R125T35	15.7	8.0	2.50	3.5	1.25	4.0	6	○	○
1608-R150T35	15.7	8.0	3.00	3.5	1.50	4.0	6	○	○
1608-R200T35	15.7	8.0	4.00	3.5	2.00	4.0	6	○	○
1809-R075T40	17.7	9.0	1.50	4.0	0.75	5.5	6	○	○
1809-R100T40	17.7	9.0	2.00	4.0	1.00	5.5	6	○	○
1809-R125T40	17.7	9.0	2.50	4.0	1.25	5.5	6	○	○
1809-R150T40	17.7	9.0	3.00	4.0	1.50	5.5	6	○	○
1809-R200T40	17.7	9.0	4.00	4.0	2.00	5.5	6	○	○

Ordering example: RTMG0604-R050T07 HP630M provides non-standard order

● Standard inventory ○ Non-standard inventory

## Modular grooving

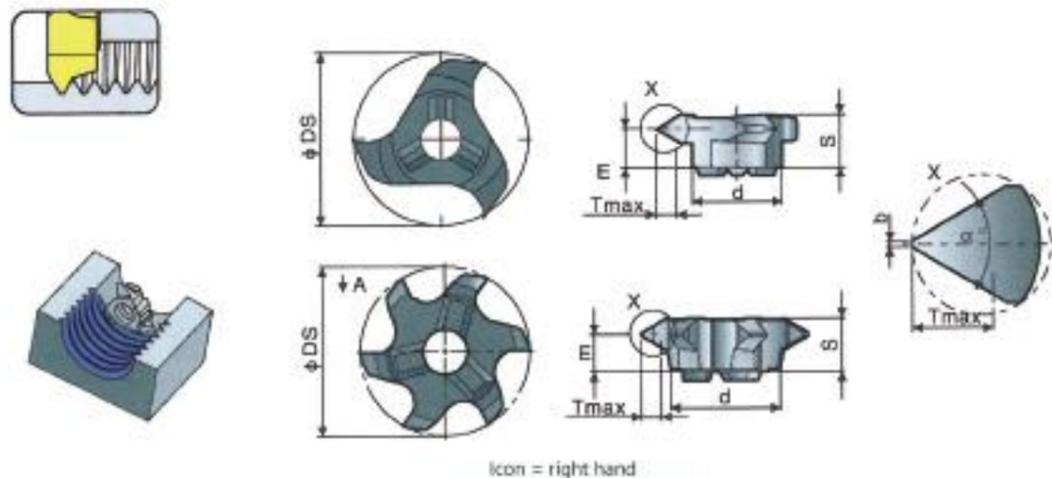


Order number	Ds	d	W (+0.02)	Tmax	r	S	Z	HP630M	HD10
RTMG- 2009-R050T50	19.7	9.0	1.00	5.0	0.50	4.0	6	○	○
2009-R075T50	19.7	9.0	1.50	5.0	0.75	4.0	6	○	○
2009-R100T50	19.7	9.0	2.00	5.0	1.00	4.0	6	○	○
2009-R125T50	19.7	9.0	2.50	5.0	1.25	4.0	6	○	○
2009-R150T50	19.7	9.0	3.00	5.0	1.50	4.0	6	○	○
2009-R200T50	19.7	9.0	4.00	5.0	2.00	4.0	6	○	○
2412-R100T55	23.7	12.0	2.00	5.5	1.00	5.9	6	○	○
2412-R125T55	23.7	12.0	2.50	5.5	1.25	5.9	6	○	○
2412-R150T55	23.7	12.0	3.00	5.5	1.50	5.9	6	○	○
2412-R200T55	23.7	12.0	4.00	5.5	2.00	5.9	6	○	○
2412-R250T55*	23.7	12.0	5.00	5.5	2.50	5.2	6	○	○
2412-R300T55*	23.7	12.0	6.00	5.5	3.00	5.2	6	○	○
2814-R125T65	27.7	14.0	2.50	6.5	1.25	5.9	6	○	○
2814-R150T65	27.7	14.0	3.00	6.5	1.50	5.9	6	○	○
2814-R200T65	27.7	14.0	4.00	6.5	2.00	5.9	6	○	○
2814-R250T65*	27.7	14.0	5.00	6.5	2.50	5.2	6	○	○
2814-R300T65*	27.7	14.0	6.00	6.5	3.00	5.2	6	○	○
3514-R075T100	34.7	14.0	1.50	10.0	0.75	5.9	6	○	○
3514-R100T100	34.7	14.0	2.00	10.0	1.00	5.9	6	○	○
3514-R125T100	34.7	14.0	2.50	10.0	1.25	5.9	6	○	○
3514-R150T100	34.7	14.0	3.00	10.0	1.50	5.9	6	○	○
3514-R200T100	34.7	14.0	4.00	10.0	2.00	5.9	6	○	○

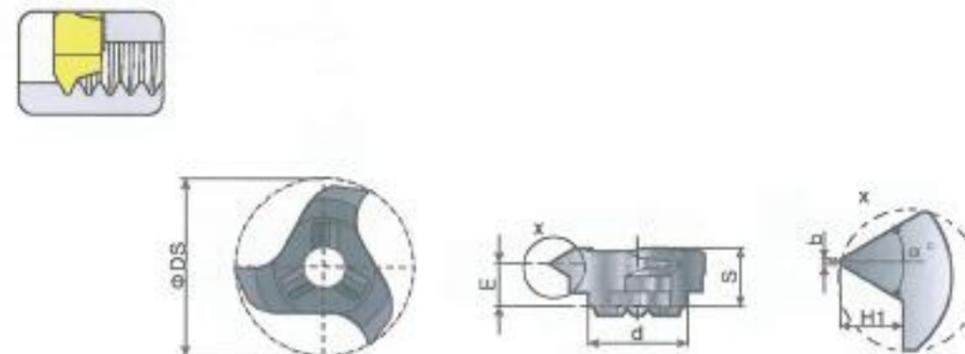
Ordering example: RTMG2412-R100T55 HP630M provides non-standard order

● Standard inventory ○ Non-standard inventory

## Pan thread



## Metric full thread



Order number	Ds	d	Dmax	Pitch mm	American pitch	R	b	E	Tmax	$\alpha^\circ$	S	Z	HP630M	HD10
RTMI- 1006-1017560	9.7	6.0	7.0	1.0-1.75	24-15	/	0.13	3.5	1.08	60	3.4	3	○	○
1006-102560	10.1	6.0	6.0	1.0-2.5	24-12	/	0.13	3.4	1.53	60	3.4	3	●	○
1106-152560	11.0	6.0	7.0	1.5-2.5	16-12	/	0.19	3.4	1.47	60	3.4	3	○	○
1206-102560	11.7	6.0	8.0	1.0-2.5	24-12	/	0.13	3.4	1.53	60	3.4	3	●	○
1206-203060	11.7	6.0	8.0	2.0-3.0	12-8	0.12	/	3.2	1.85	60	3.4	3	○	○
1208-102060	12.3	8.0	9.0	1.0-2.0	24-12	/	0.13	3.4	1.25	60	4.5	6	○	○
1308-152560	13.2	8.0	10.0	1.5-2.5	16-12	/	0.19	2.4	1.53	60	4.0	6	●	○
1308-203060	13.3	8.0	9.0	2.0-3.0	12-8	0.12	/	2.4	1.85	60	4.0	6	○	○
1509-102560	14.7	9.0	11.0	1.0-2.5	24-12	/	0.13	2.5	1.53	60	3.4	6	●	○
1609-103060	15.7	9.0	11.0	1.0-3.0	24-8	/	0.13	2.4	1.84	60	4.2	6	●	○
1709-102560	17.2	9.0	14.0	1.0-2.5	24-12	/	0.13	4.9	1.53	60	4.0	6	○	○
1809-204060	17.7	9.0	14.0	2.0-4.0	12-6	0.19	/	4.0	2.53	60	5.2	6	●	○
2012-103060	19.7	12.0	16.0	1.0-3.0	24-8	/	0.13	2.4	1.84	60	4.0	6	○	○
2012-203060	19.7	12.0	16.0	2.0-3.0	12-8	0.12	/	4.8	1.85	60	4.0	6	●	○
2212-102560	21.7	12.0	16.0	1.0-2.5	24-12	/	0.13	4.9	1.53	60	5.9	6	○	○
2212-254060	21.7	12.0	16.0	2.5-4.0	10-6	0.19	/	4.0	2.53	60	5.2	6	●	○
2614-102560	25.7	14.0	20.0	1.0-2.5	24-12	/	0.13	4.9	1.53	60	5.9	6	○	○
2614-254060	25.7	14.0	20.0	2.5-4.0	10-6	0.19	/	4.0	2.53	60	5.2	6	●	○
2814-255060*	27.7	14.0	20.0	2.5-5.0	10-5	0.19	/	1.8	3.18	60	5.2	6	●	○

Note: Dmax is the maximum diameter of the tool holder

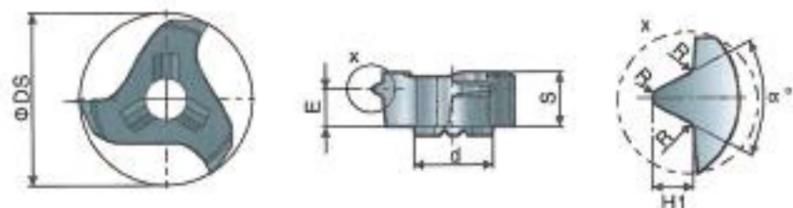
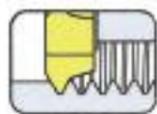
● Standard inventory ○ Non-standard inventory

Order number	Ds	d	Minimum thread diameter	Pitch	b	E	H1	$\alpha^\circ$	S	Z	HP630M	HD10
RTMI- 1006-1.00ISO	9.7	6.0	M12	1.00	0.13	3.0	0.54	60	3.5	3	○	○
1006-1.50ISO	9.7	6.0	M12	1.50	0.19	2.8	0.81	60	3.5	3	○	○
1006-2.00ISO	9.7	6.0	M14	2.00	0.25	2.6	1.08	60	3.5	3	○	○
1408-1.00ISO	13.7	8.0	M16	1.00	0.13	3.6	0.54	60	4.0	6	○	○
1408-1.50ISO	13.7	8.0	M18	1.50	0.19	3.5	0.81	60	4.0	6	○	○
1408-2.00ISO	13.7	8.0	M18	2.00	0.25	3.3	1.08	60	4.0	6	○	○
1809-1.50ISO	17.7	9.0	M22	1.50	0.19	4.8	0.81	60	5.5	6	○	○
1809-2.00ISO	17.7	9.0	M22	2.00	0.25	4.6	1.08	60	5.5	6	○	○
1809-3.00ISO	17.7	9.0	M27	3.00	0.37	4.3	1.62	60	5.5	6	○	○
2212-1.50ISO	21.7	12.0	M24	1.50	0.19	4.8	0.81	60	5.5	6	○	○
2212-2.00ISO	21.7	12.0	M27	2.00	0.25	4.6	1.08	60	5.5	6	○	○
2212-3.00ISO	21.7	12.0	M30	3.00	0.37	4.4	1.62	60	5.5	6	○	○
2212-3.50ISO	21.7	12.0	M30	3.50	0.43	4.3	1.89	60	5.5	6	○	○
2212-4.00ISO	21.7	12.0	M33	4.00	0.50	2.5	2.16	60	5.2	6	○	○

Remarks: below R0.1 is b value

● Standard inventory ○ Non-standard inventory

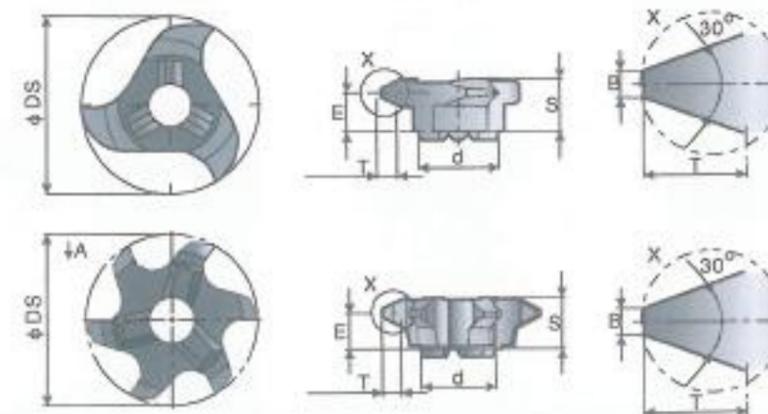
## British full tooth Whitworth thread



Order number	Ds	d	Minimum thread diameter	Pitch	R	E	H1	$\alpha^\circ$	S	Z	HP630M	HD10
RTMI- 1006-19W	9.7	6.0	G1/4"	19	0.18	2.5	0.856	55	3.5	3	○	○
1408-19W	13.7	8.0	G3/8"	19	0.18	2.5	0.856	55	4.0	6	○	○
1809-14W	17.7	9.0	G3/4"	14	0.24	4.3	1.160	55	5.5	6	○	○
2814-11W	27.7	14.0	G1"	11	0.31	1.6	1.480	55	5.2	6	○	○
2814-8W	27.7	14.0	-	8	0.43	2.0	2.030	55	5.2	6	○	○
2814-6W	27.7	14.0	G1 1/2"	6	0.58	2.5	2.710	55	5.2	6	○	○

● Standard inventory ○ Non-standard inventory

## American trapezoidal thread

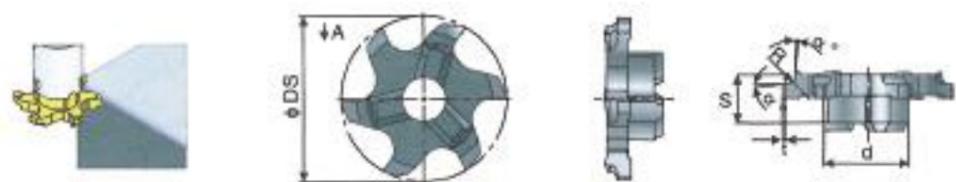


Order number	Ds	d	Pitch	T	B	Helix angle	S	Z	HP630M	HD10
RTMG- 1006-2TR	9.7	6	TR14X2	1.25	0.60	3.5	3.5	3	○	○
1206-2TR	11.7	6	TR16X2 TR18X2 TR20X2	1.25	0.60	3.5	3.5	3	●	○
1609-3TR	15.7	9	TR20X3 TR22X3 TR24X3 TR26X3 TR28X3 TR32X3	1.75	0.96	5.0	5.5	6	●	○
1509-4TR	14.7	9	TR20X4	2.25	1.33	4.5	5.5	6	●	○
1609-5TR	15.7	9	TR22X5 TR24X5 TR26X5 TR28X5	2.75	1.69	4.5	5.5	6	●	○
2012-5TR	19.7	12	TR26X5 TR28X5	2.75	1.69	4.5	5.9	6	●	○
2212-6TR	21.7	12	TR30X6 TR36X6	3.50	1.92	4.5	5.9	6	●	○
2814-6TR	27.7	14	TR36X6	3.50	1.92	4.5	5.2	6	●	○

Order example: RTMG-2212-6TR HP630M

● Standard inventory ○ Non-standard inventory

## Outer R chamfer

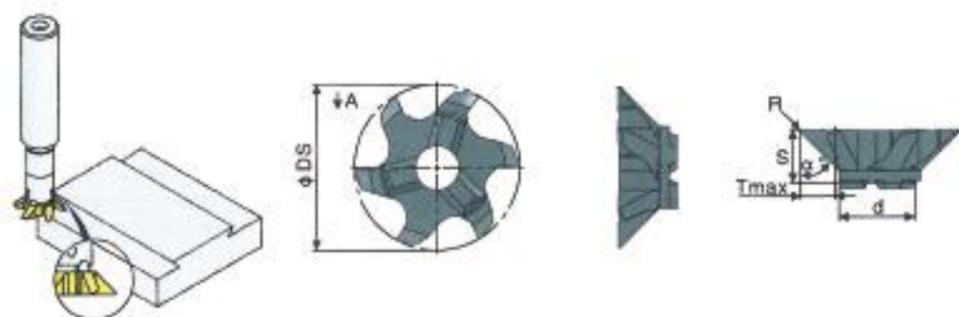


Order number	Ds	d	R	$\alpha^\circ$	t	S	Z	HP630M	HD10
RTMG- 2212-NR050	21.7	12.0	0.50	5	0.5	5.2	6	○	○
2212-NR100	21.7	12.0	1.00	5	0.5	5.2	6	○	○
2212-NR150	21.7	12.0	1.50	5	0.5	5.2	6	○	○
2212-NR200	21.7	12.0	2.00	5	0.5	5.2	6	○	○
2212-NR250	21.7	12.0	2.50	5	0.5	5.2	6	○	○
2212-NR300	21.7	12.0	3.00	5	0.5	5.2	6	○	○
2212-NR400	21.7	12.0	4.00	5	0.5	5.2	6	○	○

Ordering example: MG2212-NR400 can be customized for other chamfering angle tools

● Standard inventory ○ Non-standard inventory

## Dovetail groove

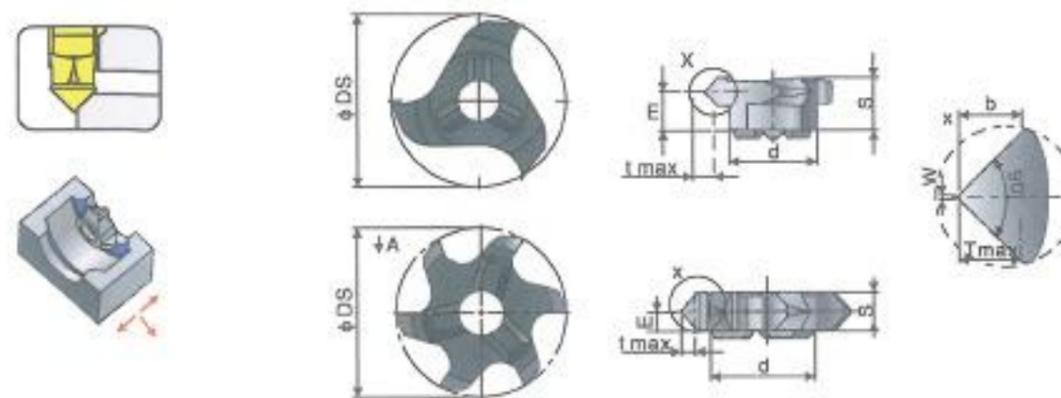


Order number	Ds	d	R	$\alpha^\circ$	Tmax	S	Z	HP630M	HD10
RTMG- 0804-YW45T15	8.0	4.0	0.2	45	1.5	3.1	3	○	○
1206-YW45T20	12.0	6.0	0.2	45	2.0	3.5	3	○	○
1608-YW45T25	16.0	8.0	0.2	45	2.5	5.5	6	○	○
2212-YW45T40	22.0	12.0	0.2	45	4.0	5.9	6	○	○
2614-YW45T55	26.0	14.0	0.2	45	5.5	5.2	6	○	○

Order example: MG2212-YW45T40 HP630M

● Standard inventory ○ Non-standard inventory

## Slot Milling/Chamfering

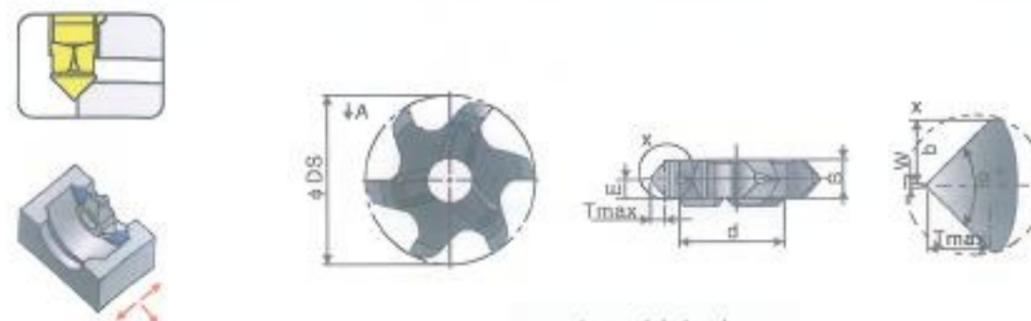


Order number	Ds	d	W	b	E	Tmax	S	Z	HP630M	HD10
RTMC- 0604-A90	6.0	4.0	0.2	0.7	12	0.7	3.0	3	●	○
0804-A90	7.7	4.0	0.2	1.0	12	1.0	3.0	3	●	○
1006-A90	9.7	6.0	0.2	1.2	20	1.2	3.5	3	●	○
1609-A90	15.7	9.0	0.2	1.6	34	1.6	4.0	6	●	○
2212-A90	21.7	12.0	0.2	2.6	24	2.6	5.2	6	●	○
2614-A90	25.7	14.0	0.2	2.6	24	2.6	5.2	6	●	○

Ordering example: RTMC-2614A90 can be customized for other chamfering angle tools

● Standard inventory ○ Non-standard inventory

## Slot Milling/Chamfering



Icon = right hand

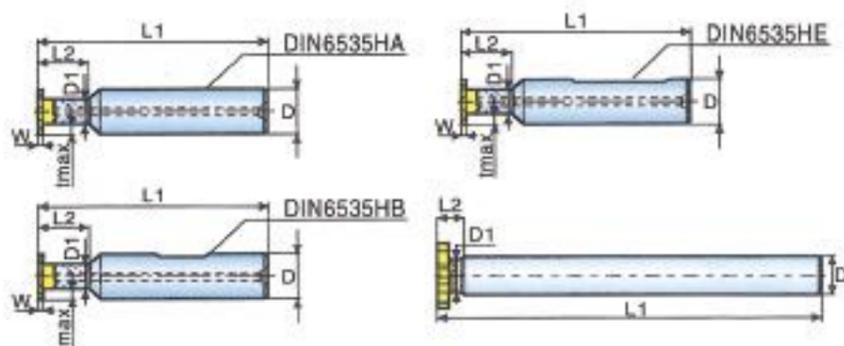
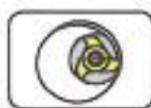
Order number	Ds	d	W	b	E	Tmax	$\alpha^\circ$	S	Z	HP630M	HD10
RTMC- 1609A30	15.7	9.0	0.2	1.9	34	0.52	15	4.0	6	○	○
1609A40	15.7	9.0	0.2	1.9	34	0.69	20	4.0	6	○	○
1609A60	15.7	9.0	0.2	1.9	34	1.12	30	4.0	6	○	○

Ordering example: RTMC-1609A60 can be customized for other chamfering angle tools

● Standard inventory ○ Non-standard inventory

# Modular Groove Milling Cutter Holder

(H: Steel E: Carbide)



Order number	D	D1	L1	L2	Type	Suitable inserts			Internal cooling hole	Inventory
RTMC-H08-13-04-N	8.0	4.0	60	13	DIN6535HB	M*-**04	CSTB1.8	T6	In stock	●
H12-15-06-N	12.0	6.0	70	15	DIN6535HB	M*-**06	CSTB2.5	T6	In stock	●
H16-18-08-N	16.0	8.0	80	18	DIN6535HB	M*-**08/09	CSTB4.0	T15	In stock	●
H16-20-09-N	16.0	9.0	80	20	DIN6535HB	M*-**08/09	CSTB4.0	T15	In stock	●
H16-25-12-N	16.0	12.0	90	25	DIN6535HB	M*-**12/14	CSTB5.0	T20	In stock	●
H20-35-14-N	20.0	14.0	100	35	DIN6535HB	M*-**12/14	CSTB5.0	T20	In stock	●
H08-00-06*	8.0	8.0	100	6	DIN6535HA	MG-**06	CSTB2.5	T6	out of stock	●
H12-00-09*	12.0	12.0	120	7	DIN6535HA	MG-**08/09	CSTB4.0	T15	out of stock	●
H16-00-14*	16.0	16.0	150	8	DIN6535HA	MG-**12/14	CSTB5.0	T20	out of stock	●
H20-00-14*	20.0	20.0	160	8	DIN6535HA	MG-**12/14	CSTB5.0	T20	out of stock	●
H25-00-14*	25.0	25.0	180	8	DIN6535HA	MG-**12/14	CSTB5.0	T20	out of stock	●
E08-13-04-N	8.0	4.0	60	13	DIN6535HA	M*-**04	CSTB1.8	T6	In stock	○
E08-17-04-N	8.0	4.0	64	17	DIN6535HA	M*-**04	CSTB1.8	T6	In stock	○
E08-21-04-N	8.0	4.0	68	21	DIN6535HA	M*-**04	CSTB1.8	T6	In stock	●
E12-21-06-N	12.0	6.0	80	21	DIN6535HA	M*-**06	CSTB2.5	T6	In stock	○
E12-30-06-N	12.0	6.0	90	30	DIN6535HA	M*-**06	CSTB2.5	T6	In stock	○
E12-42-06-N	12.0	6.0	100	42	DIN6535HA	M*-**06	CSTB2.5	T6	In stock	●
E12-29-08-N	12.0	8.0	95	29	DIN6535HA	M*-**08/09	CSTB4.0	T15	In stock	○
E12-42-08-N	12.0	8.0	100	42	DIN6535HA	M*-**08/09	CSTB4.0	T15	In stock	○
E12-56-08-N	12.0	8.0	120	56	DIN6535HA	M*-**08/09	CSTB4.0	T15	In stock	●
E16-32-09-N	16.0	9.0	100	32	DIN6535HA	M*-**08/09	CSTB4.0	T15	In stock	●
E16-45-09-N	16.0	9.0	110	45	DIN6535HA	M*-**08/09	CSTB4.0	T15	In stock	●
E16-64-09-N	16.0	9.0	130	64	DIN6535HA	M*-**08/09	CSTB4.0	T15	In stock	●
E16-42-12-N	16.0	12.0	100	42	DIN6535HA	M*-**12/14	CSTB5.0	T20	In stock	○
E16-60-12-N	16.0	12.0	130	60	DIN6535HA	M*-**12/14	CSTB5.0	T20	In stock	●
E16-85-12-N	16.0	12.0	160	85	DIN6535HA	M*-**12/14	CSTB5.0	T20	In stock	●
E16-42-14-N	16.0	14.0	100	42	DIN6535HA	M*-**12/14	CSTB5.0	T20	In stock	○
E16-60-14-N	16.0	14.0	130	60	DIN6535HA	M*-**12/14	CSTB5.0	T20	In stock	●
E16-85-14-N	16.0	14.0	160	85	DIN6535HA	M*-**12/14	CSTB5.0	T20	In stock	●

Order example: RTMC-H16-18-08-N non-internal cooling type without \*-N\*, ● Standard inventory ○ Non-standard inventory

non-internal cooling type will stop production

Note: When the RTMC-H16-20-09-N tool holder uses MG\*\*08 inserts, the effective depth of cut will change, please carefully calculate the clearance diameter in addition to marking the stock, the fixing method needs to be DIN6535HB, and the DIN6535HE type should be specified separately

\* The straight shank type is an economical tool holder, reserved for customers to modify the size of the tool holder (reformed neck squeeze or length truncated).

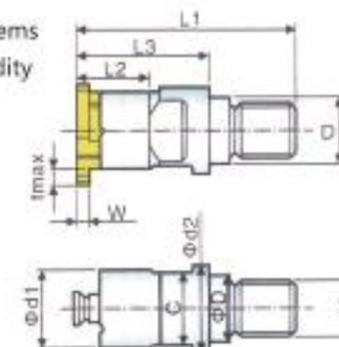
deep hole cutting is not recommended, deep hole processing, it is recommended to use with internal cooling function Connectors link solid carbide holders or solid carbide holders without connectors

Important note: The series of modular blades have different effective cutting depths according to the needs. The tool holder and blade of the 08/09/12/14 interface can communicate with each other through the interchangeable connector and the screw. When the /09 interface tool holder is installed, the screw must be replaced, and a larger depth of cut can also be customized by non-standard



## Connector: equal diameter/variable diameter

1. Solve the problem of small holes and deep holes processing problems
2. Can be connected to the standard alloy holder to improve the rigidity



Order number	L1	L2	L3	d1	d2	C	D	M	Suitable inserts			Internal cooling hole	Inventory
RTMC-0606-M3	23	13	13	6	6	5	3.5	M3	M*-**06	CSTB2.5	T6	In stock	●
0808-M4	28	16	16	8	8	7	4.5	M4	M*-**08/09	CSTB4.0	T15	In stock	●
0909-M5	30	16	16	9	9	8	5.5	M5	M*-**08/09	CSTB4.0	T15	In stock	●
1212-M6	34	19	19	12	12	11	6.5	M6	M*-**12/14	CSTB5.0	T20	In stock	●
1414-M8	36	19	19	14	14	13	8.5	M8	M*-**12/14	CSTB5.0	T20	In stock	●
1816-12/M8	36	3	19	12	16	14	8.5	M8	M*-**12/14	CSTB5.0	T20	In stock	●
2020-14/M10	41	3	19	14	20	18	10.5	M10	M*-**12/14	CSTB5.0	T20	In stock	●
2020-14/M12	41	3	19	14	20	18	12.5	M12	M*-**12/14	CSTB5.0	T20	In stock	●
1606-M8	42	11	25	6	16	13	8.5	M8	M*-**06	CSTB2.5	T6	In stock	●
1608-M8	42	14	25	8	16	13	8.5	M8	M*-**08/09	CSTB4.0	T15	In stock	●
1609-M8	42	14	25	9	16	13	8.5	M8	M*-**08/09	CSTB4.0	T15	In stock	●
1612-M8	42	15	25	12	16	13	8.5	M8	M*-**12/14	CSTB5.0	T20	In stock	●
1614-M8	42	15	25	14	16	13	8.5	M8	M*-**12/14	CSTB5.0	T20	In stock	●

Note :RTMC-1614-M8 can be converted to RTMC-1612-M8 by grinding d1 size and RTMC-1609-M8 can be converted to RTMC-1608-M8 by grinding d1 size

● Standard inventory ○ Non-standard inventory