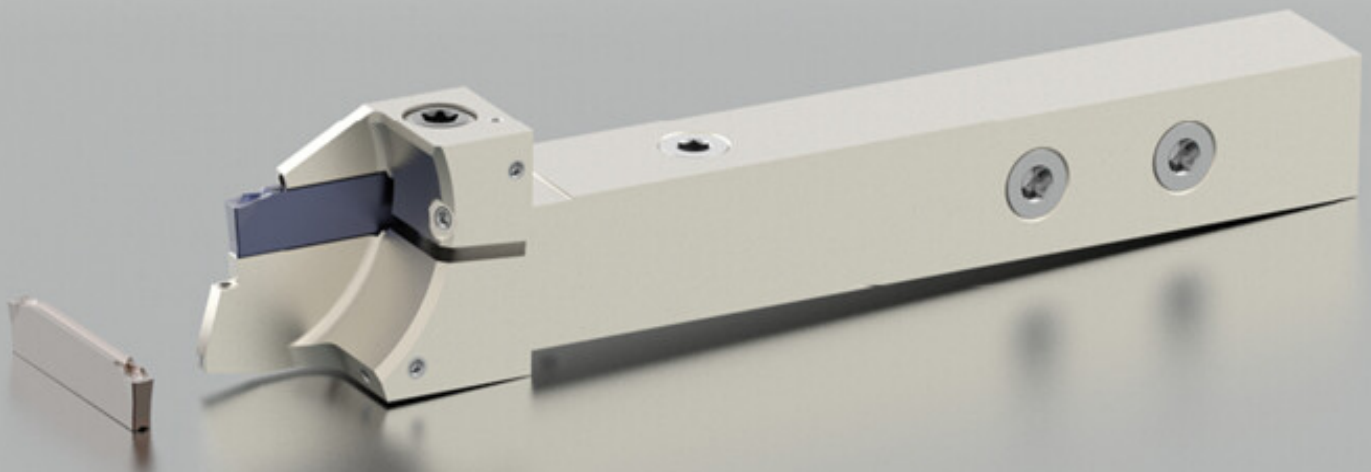




MULTIDEC® -5000

CUT-OFF INSERTS AND TOOL HOLDERS



multidec®-5000

With multidec®-5000, UTILIS offers a range of outstanding high-performance cut-off tools that are developed and optimized for sliding headstock lathes in Swiss-type CNC machines. The four available chip breakers are designed to meet the highest requirements for efficient production, even in difficult-to-machine materials.

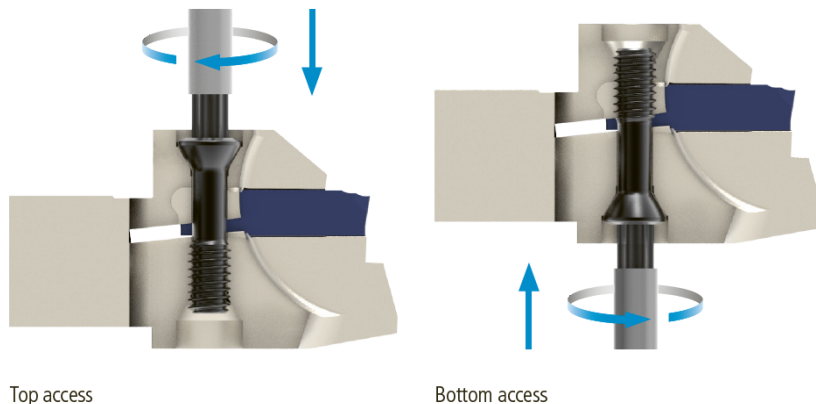
The multidec®-5000 tool holders are available without internal coolant or with internal coolant on insert chip breaker and front clearance. Thanks to the targeted coolant supply with high pressure, the chips are efficiently removed from the cutting edge. In addition, the cutting edge is efficiently cooled, considerably increasing insert life and enabling higher cutting parameters.

Advantages:

- 3 cutting widths (1.5, 2.0 and 3.0 mm)
- 4 chip breaker geometries
- Several carbide grades with modern coatings
- Large selection of tool holders from 8 to 20 mm shank size
- Tool holders with coolant on insert chip breaker & front clearance, starting in 10 mm shank size and 1.5 mm insert width
- Targeted coolant on insert front relief
- Clamping by TORX® screw from top or bottom, enabling insert replacement inside the machine
- Sophisticated design prevents vibrations
- High-quality manufacturing for a long service life with maximum performance

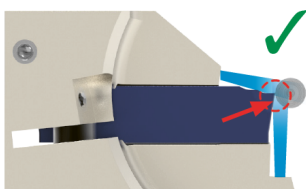
Mounting options

Depending on the machine configuration, the clamping screw can be mounted on the top or bottom side, allowing easy access for changing the inserts.



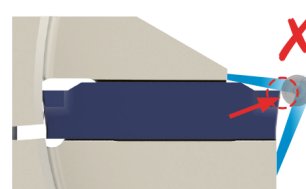
Targeted Coolant

Both coolant outlets on chip breaker and on front clearance are precisely targeting the cutting edge.



multidec®-5000

Even with very small diameters, the clearance coolant precisely hits the cutting edge. Coolant on front clearance allows tool life increase up to 150%.

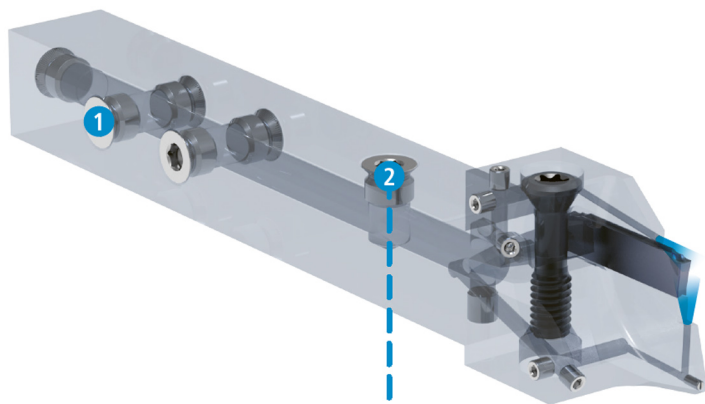


Competitors

The clearance coolant is ineffective, especially when machining small diameters.

Cut-off tool multidec®-5000 with internal coolant "IC+" (IC-Plus)

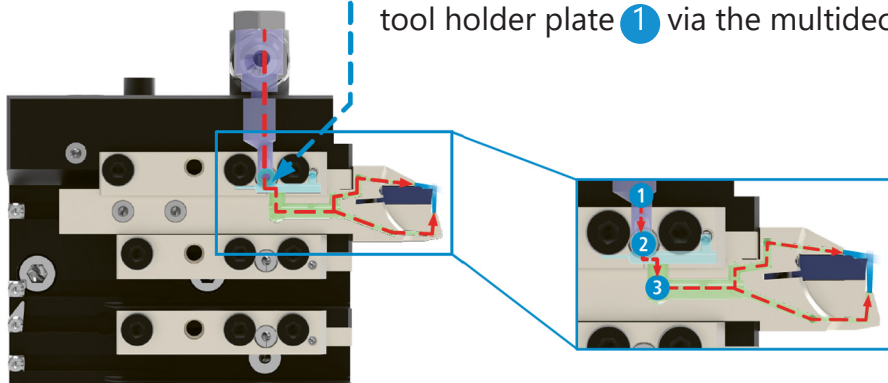
IC+ tool holders have 5 connection options ① for the coolant supply. An additional connection ② enables direct coolant supply, when combined with a multidec®-LUBE tool plate.



Tool holders with internal coolant "IC+"
cutting width from 1.5 mm

Eliminate Coolant Distributors and Hoses

When the multidec® 5000 tool is combined with the multidec®-LUBE tool holder plate, all coolant distributors and hoses are eliminated. Coolant is supplied directly to the tool ③ from the multidec®-LUBE tool holder plate ① via the multidec®-LUBE coolant-thru wedge ②.



Coolant duct of the multidec®-LUBE tool plate

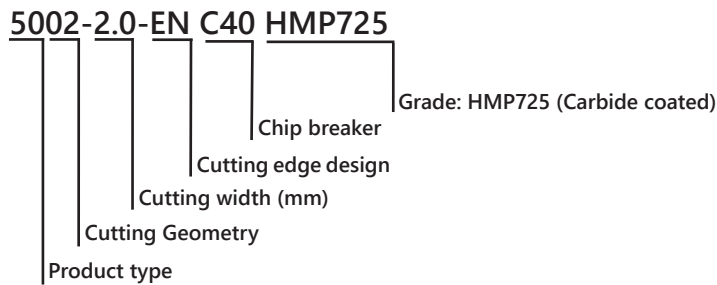


Coolant duct of the multidec®-LUBE wedge

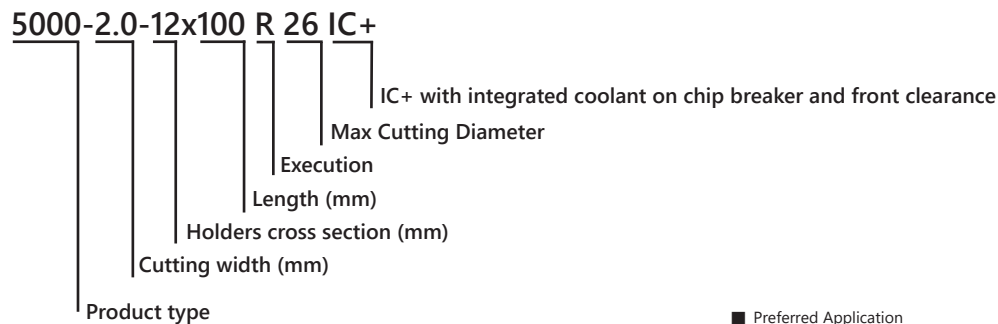


Coolant duct of the multidec®-5000 tool holder

DESIGNATION SYSTEM FOR INSERTS



DESIGNATION SYSTEM FOR HOLDERS



Tool Inserts Legend

The dimensions listed in the tool tables refer to the following tool parameters:

a	Width of Cut
α (alpha)	Clearance
l	Shank Length
r	Edge radius

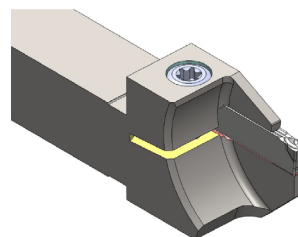
- Preferred Application
- Possible Application
- Application Not Recommended

Chip Breaker	Execution	Steel	Stainless Steel	Cast Iron	Non Ferrous Metals	High Alloy Materials	Hard Materials
GT20	Neutral	■	■	□	□	■	-
C40	Neutral	■	■	■	□	■	-
C60	Neutral	■	□	■	-	-	-
C30	Right	■	■	-	□	■	-

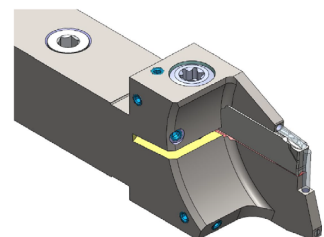
Tool Holders Legend

a	Width of Cut
α (alpha)	Clearance
b	Shank Height
c	Side Coolant Port Size
d	Rear Coolant Port Size
D_{max}	MAX Barstock Diameter
h	Shank Width
l	Shank Length
r	Edge Radius
x₁	Holder Geometry Dimensions
x₂	Holder Geometry Dimensions
z₁	Holder Geometry Dimensions

Without internal coolant,
right hand tool holder

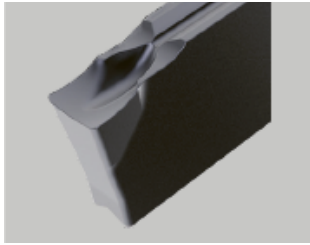


With internal coolant,
right hand tool holder "IC+"



multidec®-5000

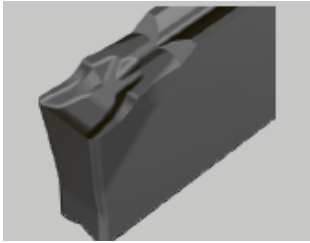
Inserts



GT20

Very smooth cut, low cutting forces
Machining of delicate applications.
For sticky and difficult to cut materials.

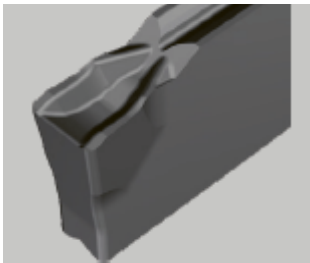
Neutral Cut



C40

Fine to medium cut.
Excellent surface finish quality and chip control.
Universal high performance

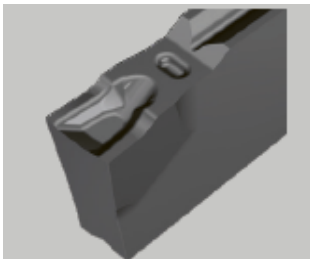
Neutral Cut



C60

Medium to rough cut conditions.
Excellent chip control for harder materials.
Very good resistance to interrupted cut.

Neutral Cut

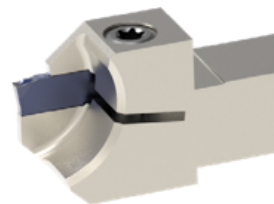


C30

Fine to medium cut.
Made for cutting off without counter spindle.
Good surface finish and chip control.

Right Hand Cut

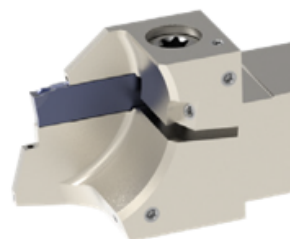
Tool Holders



Standard

Standard Tool Holders

Left Hand
and
Right Hand



"IC+"
IC Plus

Tool Holders with Internal Coolant
of Chip Breaker and Front Clearance

Left Hand
and
Right Hand

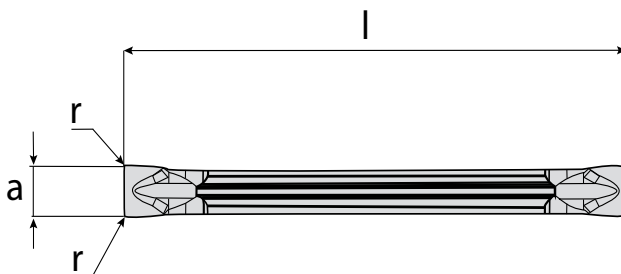
MULTIDEC®-5000

Inserts with Neutral Cut



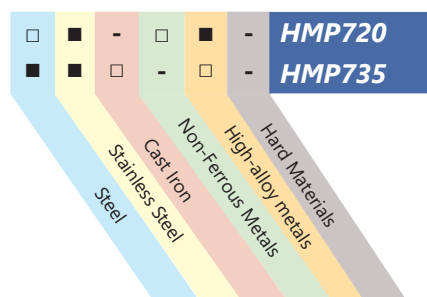
E: Insert with rounded cutting edge

Very smooth cut, low cutting forces
Machining of sensitive parts and tubes
For sticky and difficult to cut materials



5002...-EN GT20

Item No.	Description	a Width of Cut ±0.04	r Edge Radius	l Shank Length
7005-553692	5002-1.5-EN GT20 HMP720	1.5 mm	0.15 mm	17.8 mm
7005-553693	5002-1.5-EN GT20 HMP735	1.5 mm	0.15 mm	17.8 mm
7005-553192	5002-2.0-EN GT20 HMP720	2.0 mm	0.20 mm	21.1 mm
7005-553194	5002-2.0-EN GT20 HMP735	2.0 mm	0.20 mm	21.1 mm



Ideal Cutting Materials

- Preferred Application
- Possible Application
- Application Not Recommended

Information on grades

HMP720: Universal high-performance grade with high wear resistance and stable cutting edge

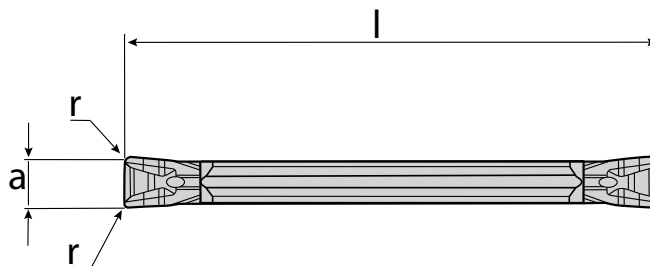
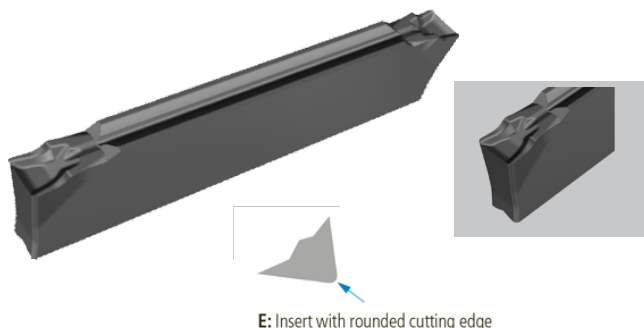
HMP735: Tough grade for difficult machining conditions, enables high feed rates

	Cutting speeds Vc (m/min)	Feeds f (mm/U) a =	
		1.5	2.0
Steel	80–160	0.02–0.10	0.02–0.12
Stainless Steel	70–140	0.02–0.08	0.02–0.10
Cast Iron	90–150	0.03–0.10	0.04–0.12
Non-Ferrous Metals	120–300	0.03–0.12	0.04–0.15
High-alloy Materials	50–90	0.02–0.08	0.02–0.10
Hard Materials	—	—	—

MULTIDEC®-5000

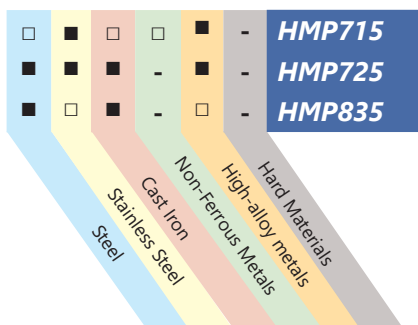
Inserts with Neutral Cut

Fine to medium cut
Excellent surface finish and chip control
High universal use



5002...-EN C40

Item No.	Description	a Width of Cut ±0.04	r Edge Radius	l Shank Length
7005-553674	5002-1.5-EN C40 HMP715	1.5 mm	0.05 mm	17.8 mm
7005-553675	5002-1.5-EN C40 HMP725	1.5 mm	0.05 mm	17.8 mm
7005-553676	5002-1.5-EN C40 HMP835	1.5 mm	0.05 mm	17.8 mm
7005-553677	5002-2.0-EN C40 HMP715	2.0 mm	0.2 mm	21.1 mm
7005-553681	5002-2.0-EN C40 HMP725	2.0 mm	0.2 mm	21.1 mm
7005-553683	5002-2.0-EN C40 HMP835	2.0 mm	0.2 mm	21.1 mm
7005-553688	5002-3.0-EN C40 HMP725	3.0 mm	0.2 mm	21.1 mm
7005-553689	5002-3.0-EN C40 HMP835	3.0 mm	0.2 mm	21.1 mm



Ideal Cutting Materials

- Preferred Application
- Possible Application
- Application Not Recommended

Information on grades

HMP715: Very high wear resistance under stable machining conditions

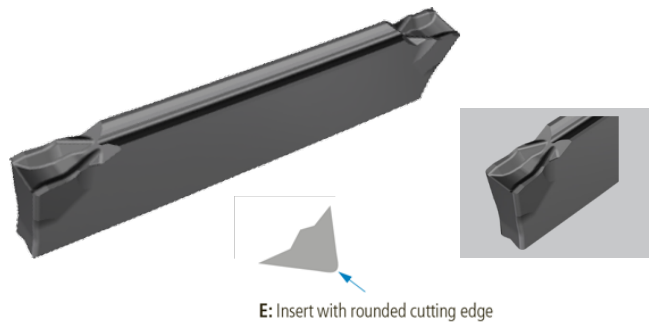
HMP725: Universal high-performance grade with high wear resistance and stable cutting edge

HMP835: Tough grade for difficult machining conditions, enables high feed rates

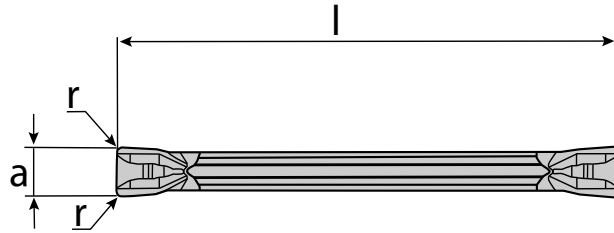
	Cutting speeds Vc (m/min)	Feeds f (mm/U) a =		
		1.5	2.0	3.0
Steel	80–160	0.02–0.12	0.03–0.15	0.04–0.18
Stainless Steel	70–140	0.02–0.10	0.03–0.12	0.04–0.15
Cast Iron	90–150	0.03–0.10	0.04–0.12	0.04–0.15
Non-Ferrous Metals	120–300	0.03–0.12	0.04–0.15	–
High-alloy Materials	50–90	0.02–0.08	0.03–0.10	0.03–0.12
Hard Materials	–	–	–	–

MULTIDEC®-5000

Inserts with Neutral Cut

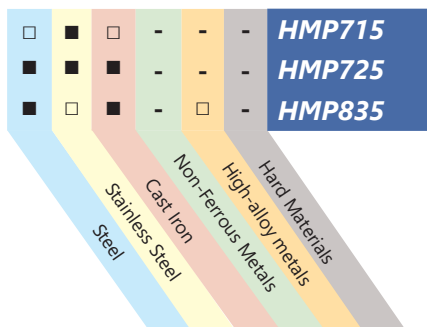


Medium to heavy cut
Excellent chip control
Very good resistance to interrupted cut



5002...-EN C60

Item No.	Description	a Width of Cut ±0.04	r Edge Radius	l Shank Length
7005-553685	5002-2.0-EN C60 HMP715	2.0 mm	0.2 mm	21.1 mm
7005-553686	5002-2.0-EN C60 HMP725	2.0 mm	0.2 mm	21.1 mm
7005-553687	5002-2.0-EN C60 HMP835	2.0 mm	0.2 mm	21.1 mm
7005-553690	5002-3.0-EN C60 HMP725	3.0 mm	0.2 mm	21.1 mm
7005-553691	5002-3.0-EN C60 HMP835	3.0 mm	0.2 mm	21.1 mm



Ideal Cutting Materials

- Preferred Application
- Possible Application
- Application Not Recommended

Information on grades

HMP715: Very high wear resistance under stable machining conditions

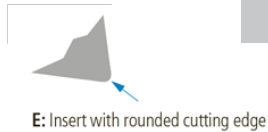
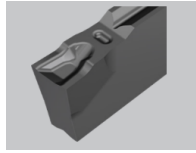
HMP725: Universal high-performance grade with high wear resistance and stable cutting edge

HMP835: Tough grade for difficult machining conditions, enables high feed rates

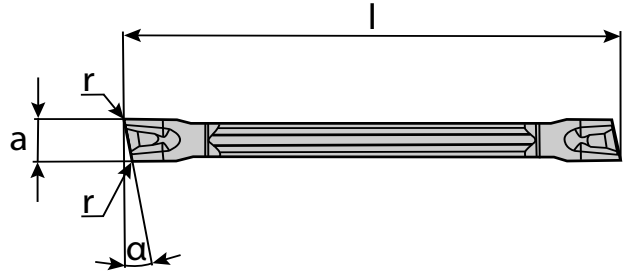
	Cutting speeds Vc (m/min)	Feeds f (mm/U) a =	
		2.0	3.0
Steel	80–160	0.03–0.15	0.04–0.20
Stainless Steel	70–140	0.03–0.12	0.04–0.18
Cast Iron	90–150	0.03–0.15	0.04–0.20
Non-Ferrous Metals	–	–	–
High-alloy Materials	–	–	–
Hard Materials	–	–	–

MULTIDEC®-5000

Inserts with Right-hand Cut

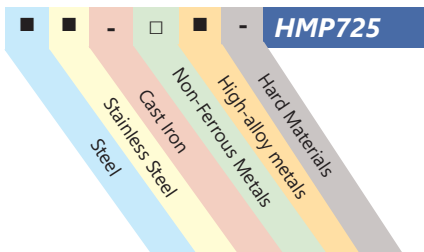


Fine to medium cut
Excellent surface finish and chip control
High universal use



5002...-ER C30

Item No.	Description	a Width of Cut ±0.04	r Edge Radius	l Shank Length
7005-556838	5002-2.0-ER-10 C30 HMP725	2.0 mm	0.03 mm	22.4 mm
7005-556840	5002-3.0-ER-10 C30 HMP725	2.0 mm	0.03 mm	22.4 mm
7005-556839	5002-2.0-ER-15 C30 HMP725	3.0 mm	0.03 mm	22.4 mm
7005-556841	5002-3.0-ER-15 C30 HMP725	3.0 mm	0.03 mm	22.4 mm



Ideal Cutting Materials

- Preferred Application
- Possible Application
- Application Not Recommended

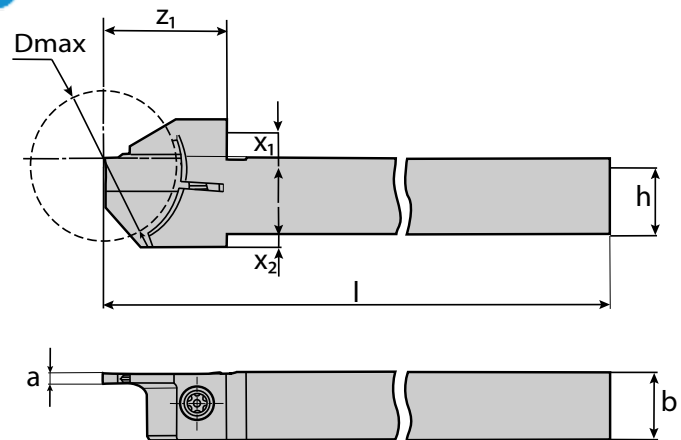
Information on grades

HMP725: Universal high-performance grade with high wear resistance and stable cutting edge

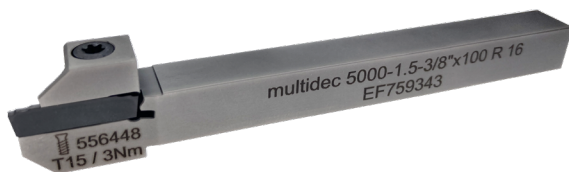
	Cutting speeds Vc (m/min)	Feeds f (mm/U) a =	
		2.0	3.0
Steel	80–160	0.02–0.08	0.03–0.10
Stainless Steel	70–140	0.02–0.08	0.03–0.10
Cast Iron	–	–	–
Non-Ferrous Metals	100–250	0.06–0.15	0.06–0.15
High-alloy Materials	50–90	0.02–0.08	0.03–0.10
Hard Materials	–	–	–



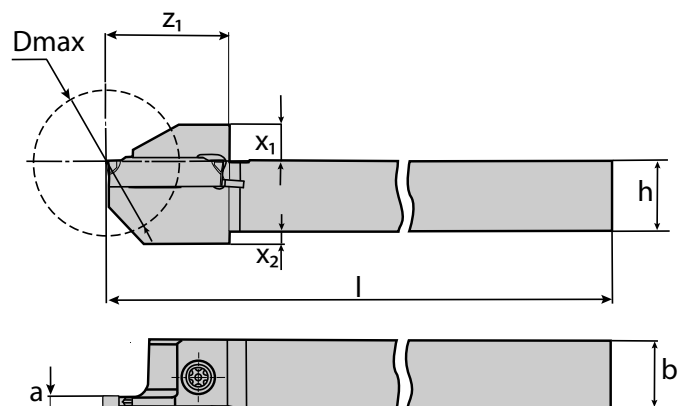
Left-hand standard tool holder
5000...L...



Item No.	Description	a	h	b	l	Dmax	z1	x1	x2
7005-556590	5000-1.5-3/8"x100 L 16	1.5 mm	3/8 in	3/8 in	100 mm	16 mm	18 mm	6 mm	2 mm
7005-556596	5000-1.5-1/2"x100 L 22	1.5 mm	1/2 in	1/2 in	100 mm	22 mm	20 mm	6 mm	2 mm
7005-556801	5000-1.5-5/8"x125 L 24	1.5 mm	5/8 in	5/8 in	125 mm	24 mm	22 mm	6.5 mm	0 mm
7005-556649	5000-2.0-3/8"x100 L 22	2.0 mm	3/8 in	3/8 in	100 mm	22 mm	22 mm	6 mm	2 mm
7005-556651	5000-2.0-1/2"x100 L 26	2.0 mm	1/2 in	1/2 in	100 mm	26 mm	22 mm	6 mm	2 mm
7005-556817	5000-2.0-5/8"x125 L 32	2.0 mm	5/8 in	5/8 in	125 mm	32 mm	27 mm	6.5 mm	0 mm
7005-556819	5000-2.0-3/4"x125 L 40	2.0 mm	3/4 in	3/4 in	125 mm	40 mm	31 mm	6.5 mm	0 mm
7005-556659	5000-3.0-1/2"x100 L 26	3.0 mm	1/2 in	1/2 in	100 mm	26 mm	22 mm	6 mm	2 mm
7005-556879	5000-3.0-5/8"x125 L 32	3.0 mm	5/8 in	5/8 in	125 mm	32 mm	27 mm	6.5 mm	0 mm
7005-556881	5000-3.0-5/8"x125 L 40	3.0 mm	5/8 in	5/8 in	125 mm	40 mm	31 mm	6.5 mm	0 mm
7005-556883	5000-3.0-3/4"x125 L 40	3.0 mm	3/4 in	3/4 in	125 mm	40 mm	31 mm	6.5 mm	0 mm



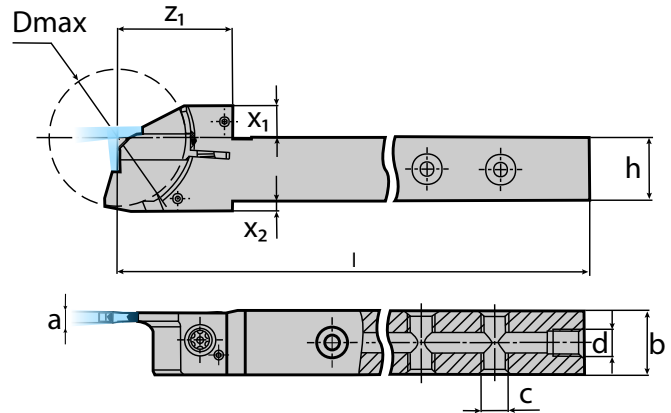
Right-hand standard tool holder
5000...R...



Item No.	Description	a	h	b	l	Dmax	z1	x1	x2
7005-556579	5000-1.5-3/8"x100 R 16	1.5 mm	3/8 in	3/8 in	100 mm	16 mm	18 mm	6 mm	2 mm
7005-556584	5000-1.5-1/2"x100 R 22	1.5 mm	1/2 in	1/2 in	100 mm	22 mm	20 mm	6 mm	2 mm
7005-556800	5000-1.5-5/8"x125 R 24	1.5 mm	5/8 in	5/8 in	125 mm	24 mm	22 mm	6.5 mm	0 mm
7005-556646	5000-2.0-3/8"x100 R 22	2.0 mm	3/8 in	3/8 in	100 mm	22 mm	22 mm	6 mm	2 mm
7005-556648	5000-2.0-1/2"x100 R 26	2.0 mm	1/2 in	1/2 in	100 mm	26 mm	22 mm	6 mm	2 mm
7005-556814	5000-2.0-5/8"x125 R 32	2.0 mm	5/8 in	5/8 in	125 mm	32 mm	27 mm	6.5 mm	0 mm
7005-556816	5000-2.0-3/4"x125 R 40	2.0 mm	3/4 in	3/4 in	125 mm	40 mm	31 mm	6.5 mm	0 mm
7005-556658	5000-3.0-1/2"x100 R 26	3.0 mm	1/2 in	1/2 in	100 mm	26 mm	22 mm	6 mm	2 mm
7005-556873	5000-3.0-5/8"x125 R 32	3.0 mm	5/8 in	5/8 in	125 mm	32 mm	27 mm	6.5 mm	0 mm
7005-556876	5000-3.0-5/8"x125 R 40	3.0 mm	5/8 in	5/8 in	125 mm	40 mm	31 mm	6.5 mm	0 mm
7005-556878	5000-3.0-3/4"x125 R 40	3.0 mm	3/4 in	3/4 in	125 mm	40 mm	31 mm	6.5 mm	0 mm

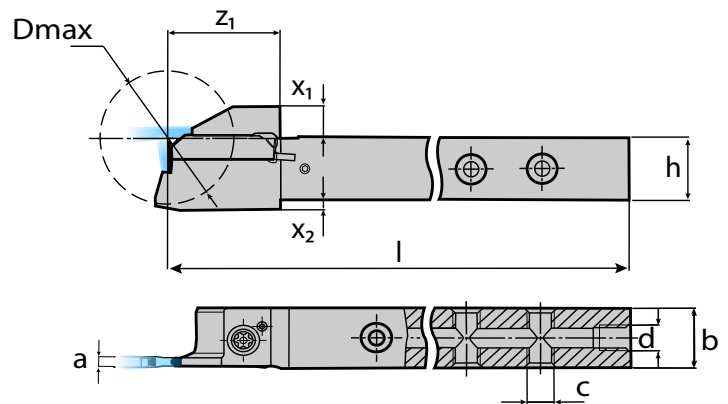
Tool Holders with coolant IC+ (IC-Plus)

MULTIDEC®-5000



Left-hand with internal coolant "IC+" 5000...L...IC+

Item No.	Description	a	h	b	l	Dmax	z1	x1	x2
7005-556594	5000-1.5-3/8"x100 L 16 IC+	1.5 mm	3/8 in	0.433 in	100 mm	16 mm	18 mm	6 mm	2 mm
7005-556597	5000-1.5-1/2"x100 L 22 IC+	1.5 mm	1/2 in	1/2 in	100 mm	22 mm	20 mm	6 mm	2 mm
7005-556802	5000-1.5-5/8"x125 L 24 IC+	1.5 mm	5/8 in	5/8 in	125 mm	24 mm	22 mm	6.5 mm	0 mm
7005-556650	5000-2.0-3/8"x100 L 22 IC+	2.0 mm	3/8 in	0.433 in	100 mm	22 mm	22 mm	6 mm	2 mm
7005-556652	5000-2.0-1/2"x100 L 26 IC+	2.0 mm	1/2 in	1/2 in	100 mm	26 mm	22 mm	6 mm	2 mm
7005-556818	5000-2.0-5/8"x125 L 32 IC+	2.0 mm	5/8 in	5/8 in	125 mm	32 mm	27 mm	6.5 mm	0 mm
7005-556820	5000-2.0-3/4"x125 L 40 IC+	2.0 mm	3/4 in	3/4 in	125 mm	40 mm	31 mm	6.5 mm	0 mm
7005-556661	5000-3.0-1/2"x100 L 26 IC+	3.0 mm	1/2 in	1/2 in	100 mm	26 mm	22 mm	6 mm	2 mm
7005-556880	5000-3.0-5/8"x125 L 32 IC+	3.0 mm	5/8 in	5/8 in	125 mm	32 mm	27 mm	6.5 mm	0 mm
7005-556882	5000-3.0-5/8"x125 L 40 IC+	3.0 mm	5/8 in	5/8 in	125 mm	40 mm	31 mm	6.5 mm	0 mm
7005-556884	5000-3.0-3/4"x125 L 40 IC+	3.0 mm	3/4 in	3/4 in	125 mm	40 mm	31 mm	6.5 mm	0 mm



Right-hand with internal coolant "IC+" 5000...R...IC+

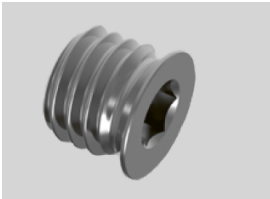
Item No.	Description	a	h	b	l	Dmax	z1	x1	x2
7005-556579	5000-1.5-3/8"x100 R 16 IC+	1.5 mm	3/8 in	0.433 in	100 mm	16 mm	18 mm	6 mm	2 mm
7005-556584	5000-1.5-1/2"x100 R 22 IC+	1.5 mm	1/2 in	1/2 in	100 mm	22 mm	20 mm	6 mm	2 mm
7005-556800	5000-1.5-5/8"x125 R 24 IC+	1.5 mm	5/8 in	5/8 in	125 mm	24 mm	22 mm	6.5 mm	0 mm
7005-556646	5000-2.0-3/8"x100 R 22 IC+	2.0 mm	3/8 in	0.433 in	100 mm	22 mm	22 mm	6 mm	2 mm
7005-556648	5000-2.0-1/2"x100 R 26 IC+	2.0 mm	1/2 in	1/2 in	100 mm	26 mm	22 mm	6 mm	2 mm
7005-556814	5000-2.0-5/8"x125 R 32 IC+	2.0 mm	5/8 in	5/8 in	125 mm	32 mm	27 mm	6.5 mm	0 mm
7005-556816	5000-2.0-3/4"x125 R 40 IC+	2.0 mm	3/4 in	3/4 in	125 mm	40 mm	31 mm	6.5 mm	0 mm
7005-556658	5000-3.0-1/2"x100 R 26 IC+	3.0 mm	1/2 in	1/2 in	100 mm	26 mm	22 mm	6 mm	2 mm
7005-556873	5000-3.0-5/8"x125 R 32 IC+	3.0 mm	5/8 in	5/8 in	125 mm	32 mm	27 mm	6.5 mm	0 mm
7005-556876	5000-3.0-5/8"x125 R 40 IC+	3.0 mm	5/8 in	5/8 in	125 mm	40 mm	31 mm	6.5 mm	0 mm
7005-556878	5000-3.0-3/4"x125 R 40 IC+	3.0 mm	3/4 in	3/4 in	125 mm	40 mm	31 mm	6.5 mm	0 mm

TORX® Screw



Item No.	Description	Dimensions	Tool Holders
7005-556448	MSP 40160 T15 WN-093	M4 × 16 T15	5000... (H ≤ 12 mm) 5000... (H ≤ 12 mm)
7005-556447	MSP 50190 T20 WN-115	M5 × 19 T20	5000... (H ≥ 16 mm) 5000... (H ≥ 5/8")

Screw Plug



Item No.	Description	Dimensions	Tool Holders
7005-150262	MSP VSR M5 IB2.5	M5	
7005-153989	MSP VSR G1/8 IB5	G1/8	5000... IC+

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