

**NEW**

Member IMC Group  
**Ingersoll**  
Cutting Tools

**SPEEDUP**  
HIGH SPEED & FEED

**DIPOSDUO**

MNHU04, 09, 11 AND 14 INSERTS  
AND CUTTERS

## 90° SHOULDER MILLS WITH 4-EDGED INSERTS

- True 90° shoulder milling capability
- High positive geometry
- High ramp down angle
- High productivity due to fine pitch cutters



## Product Overview

Due to the high acclaim of the current **MNHU06** line of milling products, Ingersoll has introduced the **DiPosDuo MNHU04, 09, 11** and **14** line of inserts and cutters.

The **MNHU04, 09, 11** and **14** inserts and cutters have the same features as the **MNHU06** line-up but in a wider range of sizes to cover various applications.

The new **DiPosDuo** logo will be applied to the **MNHU06** inserts and cutters as well.

## Application Range

These inserts are designed in several types; **-M** for use in general purpose conditions, **-PH** for low power machines with unstable conditions and long overhangs, **-HF** for high feed applications, **-PNR-M** which has a wiper cutting edge for optimal surface finish, and the new line also includes an **MNCU** insert for aluminum machining.

The **DiPosDuo MNHU04, 06, 09, 11** and **14** lines cover a wide range of applications and machining conditions, making it not only suitable for general-purpose machining but also for facing, shouldering, slotting, and even ramping e.g. in mold and die industry, automotive industry and manufacturing of small components.

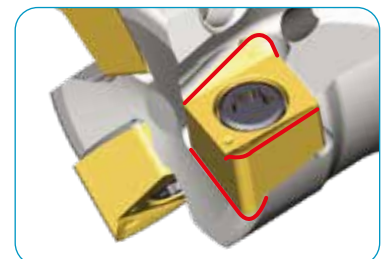
## Cutters - Technical Features

- Internal coolant
- Large insert seat for high stability and process-reliability
- Strong screws for stable clamping







## Inserts - Technical Features

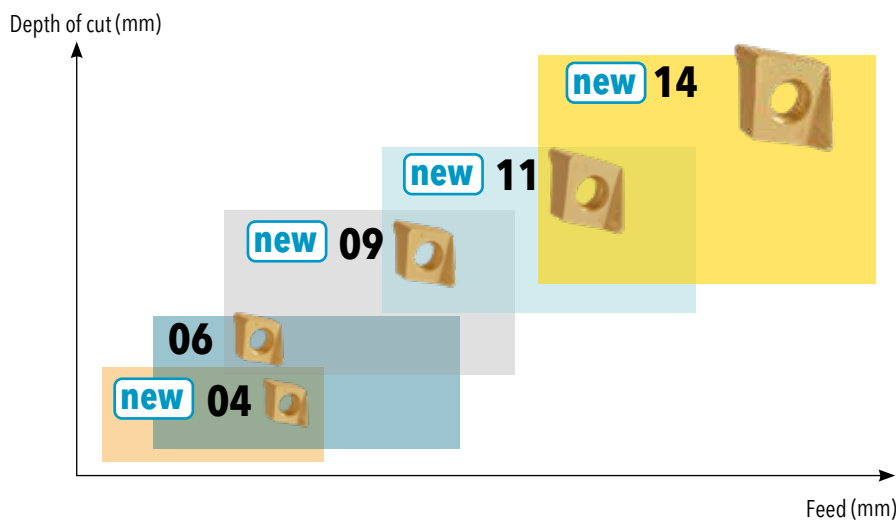
- Double-sided 4 corner insert
- High positive geometry for low cutting force
- Thick and strong insert
- Strong design due to rotated cutting edges (see picture)
- -HF High feed geometry means better productivity



**Cutter Diameter Range**

Diameter Range				
Cutter type				
MNHU04	-	Ø10 - Ø25	-	-
MNHU06	Ø16 - Ø32	Ø16 - Ø40	Ø32 - Ø63	Ø16 - Ø25
MNHU09	Ø20 - Ø32	Ø20 - Ø40	Ø40 - Ø80	-
MNHU11	Ø25 - Ø32	Ø25 - Ø40	Ø40 - Ø100	-
MNHU14	-	-	Ø50 - Ø125	-

**Insert Application Range**



**Advantages**

- True 90° shoulder milling capability
- Axially and radially high positive geometry
- Large ramp down angles
- High productivity due to fine pitch cutters

**MNHU04\_**



Insert:	MNHU0402_R-M
average chip thickness:	hm = 0,06 mm
max. cutting depth:	ap = 3,5 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 – 290	IN2530	200 – 240	0,06 – 0,10
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 – 250	IN2530	160 – 200	0,06 – 0,08
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 – 180	IN2530	110 – 130	0,06
M	stainless steel	IN2505	120 – 180	IN2530	80 – 130	0,06 – 0,08
K	gray cast iron	IN2510	180 – 250	IN2530	150 – 200	0,06 – 0,10
	nodular cast iron	IN2510	140 – 210	IN2530	110 – 160	0,06 – 0,08
N	aluminum	-	-	-	-	-
S	high temperature alloys	IN2505	110 – 125	IN2530	60 – 80	0,06
	titanium alloys	IN2505	40 – 50	IN2530	30 – 40	0,06
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

**Ramping data and circular interpolation:**

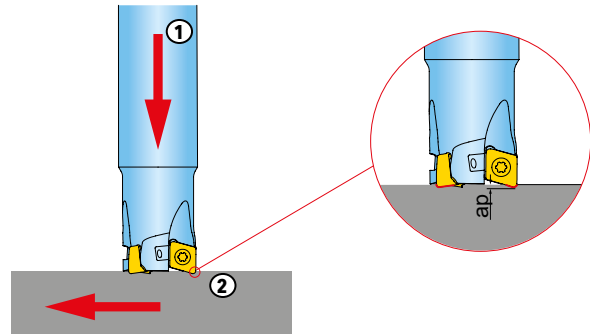
tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
10	4,2	15,4	1,2	19,2	2,1
11	4,1	17,1	1,3	21,2	2,2
12	4,0	18,8	1,4	23,2	2,4
13	3,9	20,5	1,6	25,2	2,6
16	4,6	25,1	2,3	31,3	3,5
20	3,1	33,0	2,2	39,2	3,2
25	2,4	42,9	2,3	49,2	3,1

The specified ramping data are maximum data that can only be achieved under optimal conditions - e.g. with smooth, short-chipping materials and the best possible chip evacuation. The data for inserts with corner radius R0.8 were determined. There will be deviations for other corner radii. Therefore, please always start with significantly lower ramping data (ramping angle or ap/rev.).

**Slot Milling:**

tool diameter [mm]	max. ap* [mm]
10	0,6
11	0,7
12	0,7
13	0,7
16	0,7
20	0,6
25	0,6

\*based on insert with R0,2



**General Information:**

Insert screw: **SM18-041-00** Torque: **0,5 Nm** Torque wrench: **DTN005S with bit DS-TP06TB**

**MNHU06\_ / MNCU06\_**



Insert:	MNHU0603_R	MNHU0603_R-PH	MNCU0603_FR-P
average chip thickness:	hm = 0,07 mm	hm = 0,05 mm	hm = 0,05 mm
max. cutting depth:	ap = 6 mm	ap = 6 mm	ap = 6 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0,07 - 0,15
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 - 250	IN2530	160 - 200	0,07 - 0,10
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 - 180	IN2530	110 - 130	0,07
M	stainless steel	IN2035	120 - 180	IN2035	80 - 130	0,05 - 0,10
K	gray cast iron	IN2505	180 - 250	IN2530	150 - 200	0,07 - 0,15
	nodular cast iron	IN2505	140 - 210	IN2530	110 - 160	0,07 - 0,10
N	aluminum	IN10K	800 - 1500	IN10K	500 - 800	0,05 - 0,15
S	high temperature alloys	IN2035	110 - 125	IN2530	60 - 80	0,05
	titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0,05
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

**Ramping data and circular interpolation:**

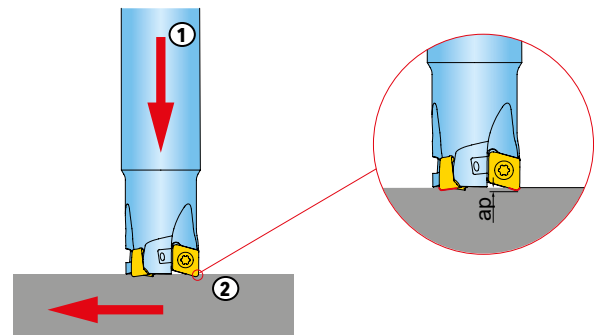
tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
16	3,5	21,5	0,8	32,0	2,5
20	4,2	29,5	1,8	40,0	3,7
25	4,9	39,5	3,1	50,0	5,4
32	3,5	53,5	3,3	64,0	4,9
40	2,6	69,5	3,4	80,0	4,6
50	2,0	89,5	3,5	100,0	4,4
63	1,5	115,5	3,5	126,0	4,1

The specified ramping data are maximum data that can only be achieved under optimal conditions - e.g. with smooth, short-chipping materials and the best possible chip evacuation. The data for inserts with corner radius R0.8 were determined. There will be deviations for other corner radii. Therefore, please always start with significantly lower ramping data (ramping angle or ap/rev.).

**Slot Milling:**

tool diameter [mm]	max. ap* [mm]
16	0,7
20	1,0
25	1,5
32	1,5
40	1,5
50	1,5
63	1,5

\*based on insert with R0,8



**General Information:**

Insert screw: **SM30-068-30** Torque: **1,1 Nm** Torque wrench: **DTN020S with bit DS-T08TB**

**MNHU09\_**



Insert:	MNHU0904_R-M
average chip thickness:	hm = 0,10 mm
max. cutting depth:	ap = 8,0 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0,10 - 0,15
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 - 250	IN2530	160 - 200	0,10 - 0,12
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 - 180	IN2530	110 - 130	0,10
M	stainless steel	IN2505	120 - 180	IN2530	80 - 130	0,10 - 0,12
K	gray cast iron	IN2510	180 - 250	IN2530	150 - 200	0,10 - 0,15
	nodular cast iron	IN2510	140 - 210	IN2530	110 - 160	0,10 - 0,12
N	aluminum	-	-	-	-	-
S	high temperature alloys	IN2505	110 - 125	IN2530	60 - 80	0,10
	titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0,10
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

**Ramping data and circular interpolation:**

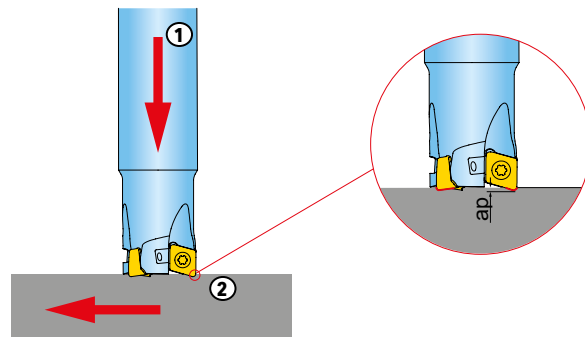
tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
20	3,5	32	2,3	38,5	3,5
25	4,7	38,1	3,3	48,4	6,0
32	4,9	48,4	4,4	62,4	8,0
40	3,7	64,1	4,8	78,4	7,8
50	2,8	83,9	5,2	98,4	7,4
63	2,1	109,7	5,3	124,4	7,0
80	1,6	143,5	5,5	158,4	6,8

The specified ramping data are maximum data that can only be achieved under optimal conditions - e.g. with smooth, short-chipping materials and the best possible chip evacuation. The data for inserts with corner radius R0.8 were determined. There will be deviations for other corner radii. Therefore, please always start with significantly lower ramping data (ramping angle or ap/rev.).

**Slot Milling:**

Tool diameter [mm]	max. ap* [mm]
20	0,9
25	0,9
32	0,9
40	0,9
50	0,9
63	0,9
80	0,9

\*based on insert with R0,8



**General Information:**

Insert screw: **SM35-088-00** Torque: **3,0 Nm** Torque wrench: **DTN020S with bit DS-T10TB**

**MNHU11\_**



Insert:	MNHU1106_R-M	MNHU1106_RPNR-M
average chip thickness:	hm = 0,10 mm	hm = 0,10 mm
max. cutting depth:	ap = 10,5 mm	ap = 10,5 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0,10 - 0,15
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 - 250	IN2530	160 - 200	0,10 - 0,12
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 - 180	IN2530	110 - 130	0,10
M	stainless steel	IN2505	120 - 180	IN2530	80 - 130	0,10 - 0,12
K	gray cast iron	IN2510	180 - 250	IN2530	150 - 200	0,10 - 0,15
	nodular cast iron	IN2510	140 - 210	IN2530	110 - 160	0,10 - 0,12
N	aluminum	-	-	-	-	-
S	high temperature alloys	IN2505	110 - 125	IN2530	60 - 80	0,10
	titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0,10
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

**Ramping data and circular interpolation:**

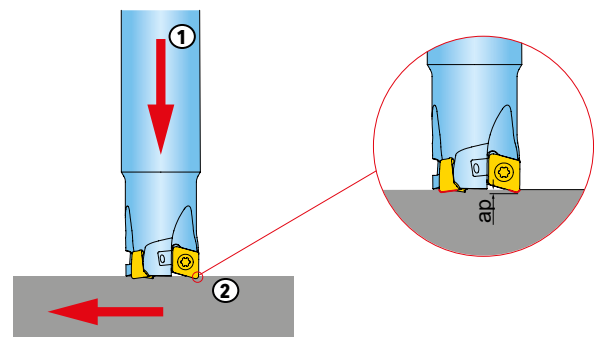
tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
25	5,0	37,7	3,4	48,5	6,4
32	5,3	47,8	4,6	62,5	8,8
40	5,0	60,3	5,5	78,5	10,5
50	3,8	80,2	6,3	98,5	10,1
63	2,9	105,8	6,8	124,5	9,7
80	2,2	139,6	7,1	158,4	9,4
100	1,7	179,4	7,4	198,4	9,1

The specified ramping data are maximum data that can only be achieved under optimal conditions - e.g. with smooth, short-chipping materials and the best possible chip evacuation. The data for inserts with corner radius R0.8 were determined. There will be deviations for other corner radii. Therefore, please always start with significantly lower ramping data (ramping angle or ap/rev.).

**Slot Milling:**

tool diameter [mm]	max. ap* [mm]
25	1,4
32	1,3
40	1,2
50	1,2
63	1,2
80	1,2
100	1,2

\*based on insert with R0,8



**General Information:**

Insert screw: **SM40-100-10** Torque: **4,5 Nm** Torque wrench: **DTN045F with bit DS-T15B1**

**MNHU14\_**



Insert:	MNHU1407_R-M	MNHU1407_RPNR-M
average chip thickness:	hm = 0,13 mm	hm = 0,13 mm
max. cutting depth:	ap = 13,5 mm	ap = 13,5 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0,13 - 0,18
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 - 250	IN2530	160 - 200	0,13 - 0,15
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 - 180	IN2530	110 - 130	0,13
M	stainless steel	IN2505	120 - 180	IN2530	80 - 130	0,13 - 0,15
K	gray cast iron	IN2510	180 - 250	IN2530	150 - 200	0,13 - 0,18
	nodular cast iron	IN2510	140 - 210	IN2530	110 - 160	0,13 - 0,15
N	aluminum	-	-	-	-	-
S	high temperature alloys	IN2505	110 - 125	IN2530	60 - 80	0,13
	titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0,13
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

**Ramping data and circular interpolation:**

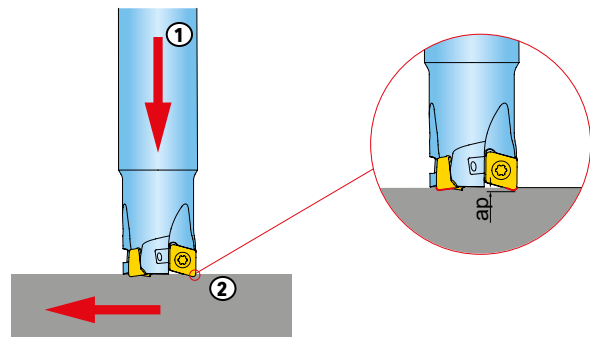
tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
50	5,4	74,5	7,2	98,5	13,5
63	3,9	100,3	7,9	124,5	13,1
80	2,9	134,3	8,6	158,5	12,4
100	2,2	174,2	8,9	198,4	11,8
125	1,7	224,2	9,2	248,4	11,5

The specified ramping data are maximum data that can only be achieved under optimal conditions - e.g. with smooth, short-chipping materials and the best possible chip evacuation. The data for inserts with corner radius R0.8 were determined. There will be deviations for other corner radii. Therefore, please always start with significantly lower ramping data (ramping angle or ap/rev.).

**Slot Milling:**

Tool diameter [mm]	max. ap* [mm]
50	1,5
63	1,3
80	1,3
100	1,3
125	1,3

\*based on insert with R0,8



**General Information:**

Insert screw: **SM50-127-10** Torque: **6,0 Nm** Torque wrench: **DTNV00S with bit DS-T20TB**



**UNHU040212R-HF**



Insert:	UNHU040212R-HF
average chip thickness:	hm = 0,2 mm
max. cutting depth:	ap = 0,5 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0,2 - 0,4
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 - 250	IN2530	160 - 200	0,2 - 0,3
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 - 180	IN2530	110 - 130	0,20
M	stainless steel	IN2505	120 - 180	IN2530	80 - 130	0,2 - 0,3
K	gray cast iron	IN2510	180 - 250	IN2530	150 - 200	0,2 - 0,4
	nodular cast iron	IN2510	140 - 210	IN2530	110 - 160	0,2 - 0,3
N	aluminum	-	-	-	-	-
S	high temperature alloys	IN2505	110 - 125	IN2530	60 - 80	0,20
	titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0,20
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

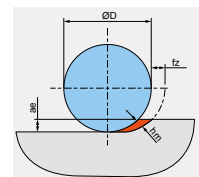
**Ramping data and circular interpolation:**

tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
10	0,8	13,9	0,2	20	0,4
11	1,6	15,9	0,4	22	0,5
12	1,6	17,9	0,4	24	0,5
13	2,0	19,9	0,5	26	0,5
16	1,9	25,9	0,5	32,0	0,5
20	2,3	33,9	0,5	40,0	0,5
25	1,7	43,9	0,5	50,0	0,5

**Tips:**

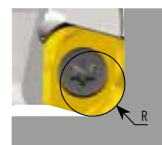
- The worse the material machinability, the smaller the tool engagement should be chosen.
- The smaller the cutting tool diameter, the higher the cutting speed can be.
- If tool engagement is less than 1/3 of cutting tool diameter, the feed per tooth should be calculated with the following formula:

$$fz = hm \times \sqrt{\frac{D}{ae}}$$



**Programming Tip:**

Please use a corner radius of 1.2 mm for machining 3D contours in the NC program. Due to the full radius of the cutting edge, no unprocessed material allowance remains.



**General information:**

Insert screw: **SM18-041-00** Torque: **0,5 Nm** Torque wrench: **DTN005S** with bit **DS-TP06TB**

**UNHU060320R-HF**



Insert:	UNHU060320R-HF
average chip thickness:	hm = 0,2 mm
max. cutting depth:	ap = 1,0 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0,2 - 0,8
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 - 250	IN2530	160 - 200	0,2 - 0,6
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 - 180	IN2530	110 - 130	0,20
M	stainless steel	IN2505	120 - 180	IN2530	80 - 130	0,2 - 0,6
K	gray cast iron	IN2510	180 - 250	IN2530	150 - 200	0,2 - 0,8
	nodular cast iron	IN2510	140 - 210	IN2530	110 - 160	0,2 - 0,6
N	aluminum	-	-	-	-	-
S	high temperature alloys	IN2505	110 - 125	IN2530	60 - 80	0,20
	titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0,20
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

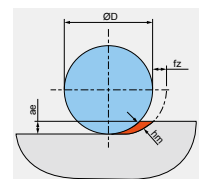
**Ramping data and circular interpolation:**

tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
16	0,6	21,4	0,2	32	0,5
20	1,7	29,4	0,7	40	1,0
25	2,3	39,4	0,9	50	1,0
32	2,4	53,4	1,0	64	1,0
40	1,8	69,4	1,0	80,0	1,0
50	1,4	89,4	1,0	100,0	1,0
63	1,1	115,4	1,0	126,0	1,0

**Tips:**

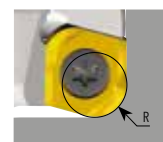
- The worse the material machinability, the smaller the tool engagement should be chosen.
- The smaller the cutting tool diameter, the higher the cutting speed can be.
- If tool engagement is less than 1/3 of cutting tool diameter, the feed per tooth should be calculated with the following formula:

$$fz = hm \times \sqrt{\frac{D}{ae}}$$



**Programming Tip:**

Please use a corner radius of 2.0 mm for machining 3D contours in the NC program. Due to the full radius of the cutting edge, no unprocessed material allowance remains.



**General information:**

Insert screw: **SM30-068-30** Torque: **1,1 Nm** Torque wrench: **DTN020S with bit DS-T08TB**

**UNHU090432R-HF**



Insert:	UNHU090432R-HF
average chip thickness:	hm = 0,2 mm
max. cutting depth:	ap = 1,5 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0,2 - 1,0
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 - 250	IN2530	160 - 200	0,2 - 0,8
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 - 180	IN2530	110 - 130	0,2 - 0,5
M	stainless steel	IN2505	120 - 180	IN2530	80 - 130	0,2 - 0,8
K	gray cast iron	IN2510	180 - 250	IN2530	150 - 200	0,2 - 1,0
	nodular cast iron	IN2510	140 - 210	IN2530	110 - 160	0,2 - 0,8
N	aluminum	-	-	-	-	-
S	high temperature alloys	IN2505	110 - 125	IN2530	60 - 80	0,2 - 0,5
	titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0,2 - 0,5
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

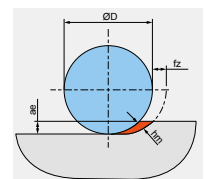
**Ramping data and circular interpolation:**

tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
20	0,3	25	0,1	40	0,3
25	1,2	35	0,6	50	1,5
32	2,4	49	1,5	64	1,5
40	2,3	65	1,5	80	1,5
50	1,7	85	1,5	100	1,5
63	1,3	111	1,5	126	1,5
80	1,0	145,0	1,5	160	1,5

**Tips:**

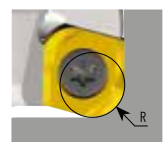
- The worse the material machinability, the smaller the tool engagement should be chosen.
- The smaller the cutting tool diameter, the higher the cutting speed can be.
- If tool engagement is less than 1/3 of cutting tool diameter, the feed per tooth should be calculated with the following formula:

$$fz = hm \times \sqrt{\frac{D}{ae}}$$



**Programming Tip:**

Please use a corner radius of 3.2 mm for machining 3D contours in the NC program. Due to the full radius of the cutting edge, no unprocessed material allowance remains.



**General information:**

Insert screw: **SM35-088-10** Torque: **3,0 Nm** Torque wrench: **DTN020S with bit DS-T10TB**

**UNHU110640R-HF**


Insert:	UNHU110640R-HF
average chip thickness:	hm = 0,3 mm
max. cutting depth:	ap = 2,0 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0,3 - 1,2
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 - 250	IN2530	160 - 200	0,3 - 1,0
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 - 180	IN2530	110 - 130	0,3 - 0,6
M	stainless steel	IN2505	120 - 180	IN2530	80 - 130	0,3 - 1,0
K	gray cast iron	IN2510	180 - 250	IN2530	150 - 200	0,3 - 1,2
	nodular cast iron	IN2510	140 - 210	IN2530	110 - 160	0,3 - 1,0
N	aluminum	-	-	-	-	-
S	high temperature alloys	IN2505	110 - 125	IN2530	60 - 80	0,3 - 0,6
	titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0,3 - 0,6
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

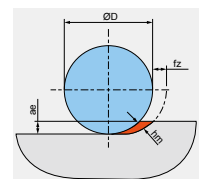
**Ramping data and circular interpolation:**

tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
25	0,3	31	0,2	50	0,9
32	1,2	45	1,2	64	2,0
40	2,4	61	2,0	80	2,0
50	2,3	81	2,0	100	2,0
63	1,7	107	2,0	126	2,0
80	1,3	141	2,0	160	2,0
100	1,0	181,0	2,0	200	2,0

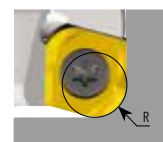
**Tips:**

- The worse the material machinability, the smaller the tool engagement should be chosen.
- The smaller the cutting tool diameter, the higher the cutting speed can be.
- If tool engagement is less than 1/3 of cutting tool diameter, the feed per tooth should be calculated with the following formula:

$$fz = hm \times \sqrt{\frac{D}{ae}}$$


**Programming Tip:**

Please use a corner radius of 4.0 mm for machining 3D contours in the NC program. Due to the full radius of the cutting edge, no unprocessed material allowance remains.


**General information:**

Insert screw: **SM40-100-10** Torque: **4,5 Nm** Torque wrench: **DTN045F with bit DS-T15B1**

**UNHU140750R-HF**



Insert:	UNHU140750R-HF
average chip thickness:	hm = 0,3 mm
max. cutting depth:	ap = 3,0 mm

**Recommended cutting data:**

ISO	material	cutting speed Vc [m/min]				feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. rough carbide		
P	unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0,3 - 1,5
	alloyed steel 800 N/mm <sup>2</sup>	IN2505	210 - 250	IN2530	160 - 200	0,3 - 1,0
	alloyed steel 1100 N/mm <sup>2</sup>	IN2505	160 - 180	IN2530	110 - 130	0,3 - 0,8
M	stainless steel	IN2505	120 - 180	IN2530	80 - 130	0,3 - 1,0
K	gray cast iron	IN2510	180 - 250	IN2530	150 - 200	0,3 - 1,5
	nodular cast iron	IN2510	140 - 210	IN2530	110 - 160	0,3 - 1,0
N	aluminum	-	-	-	-	-
S	high temperature alloys	IN2505	110 - 125	IN2530	60 - 80	0,3 - 0,8
	titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0,3 - 0,8
H	hard machining < 54 HRC	-	-	-	-	-
	hard machining < 63 HRC	-	-	-	-	-

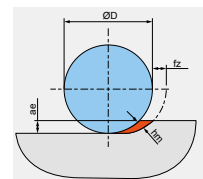
**Ramping data and circular interpolation:**

tool diameter [mm]	max. ramp. angle [°]	min. bore dia. uneven ground [mm]	max. ap/rev. [mm]	max. bore dia. even ground [mm]	max. ap/rev. [mm]
50	3,9	31	3,0	100	3,0
63	2,7	45	3,0	126	3,0
80	1,9	61	3,0	160	3,0
100	1,0	81	3,0	200	3,0
125	0,5	107	3,0	250	3,0

**Tips:**

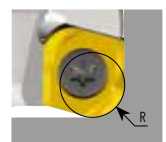
- The worse the material machinability, the smaller the tool engagement should be chosen.
- The smaller the cutting tool diameter, the higher the cutting speed can be.
- If tool engagement is less than 1/3 of cutting tool diameter, the feed per tooth should be calculated with the following formula:

$$fz = hm \times \sqrt{\frac{D}{ae}}$$



**Programming Tip:**

Please use a corner radius of 5.0 mm for machining 3D contours in the NC program. Due to the full radius of the cutting edge, no unprocessed material allowance remains.



**General information:**

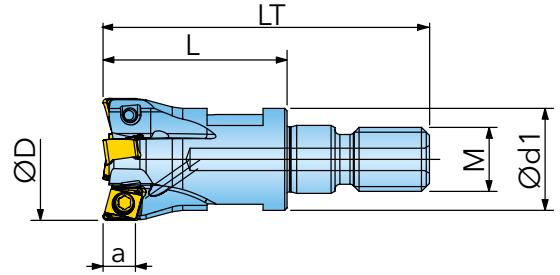
Insert screw: **SM50-127-10** Torque: **6,0 Nm** Torque wrench: **DTNV00S with bit DS-T20TB**

 **Notes**

Empty notes area for user input.

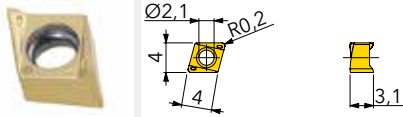
# DIPOS DUO END MILL 1TJ1B...X

SCREW-IN TYPE ADAPTION

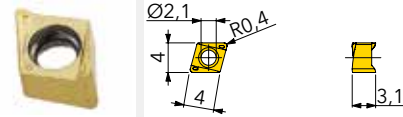


Designation	D	d1	LT	L	a	M	Z			
1TJ1B010017X4R00	10	9,8	31,5	17	3,5	M6	2	4,2	✓	0,01
1TJ1B011017X4R00	11	9,8	31,5	17	3,5	M6	2	4,1	✓	0,01
1TJ1B012017X4R00	12	11,8	31,5	17	3,5	M6	3	4,0	✓	0,01
1TJ1B013017X4R00	13	11,8	31,5	17	3,5	M6	3	3,9	✓	0,01
1TJ1B016023X5R00	16	13	40,8	23	3,5	M8	4	4,6	✓	0,03
1TJ1B020023X6R00	20	18	42,8	23	3,5	M10	5	3,1	✓	0,05
1TJ1B025027X7R00	25	21	49	27	3,5	M12	7	2,4	✓	0,08

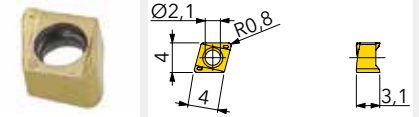
MNHU040202R-M



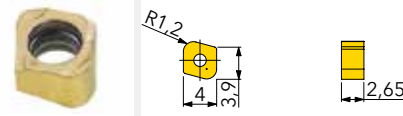
MNHU040204R-M



MNHU040208R-M



UNHU040212R-HF

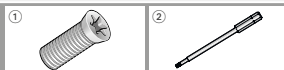


Designation	fz(min/max)	Design	Grade	IN2504	IN2505	IN2510	IN2530				
MNHU040202R-M	0,04/0,08	positive geometry R0,2									
MNHU040204R-M	0,06/0,12	positive geometry R0,4									
MNHU040208R-M	0,06/0,12	positive geometry R0,8									
UNHU040212R-HF <sup>1)</sup>	0,10/0,60	positive high feed geometry									

<sup>1)</sup> remachine cutter body

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

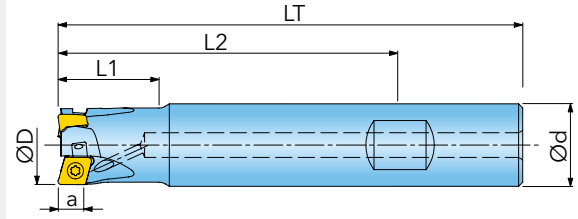


SM18-041-00 (0,5Nm) TXPLUS06x90-B

① = Insert screw ② = Torx-bit

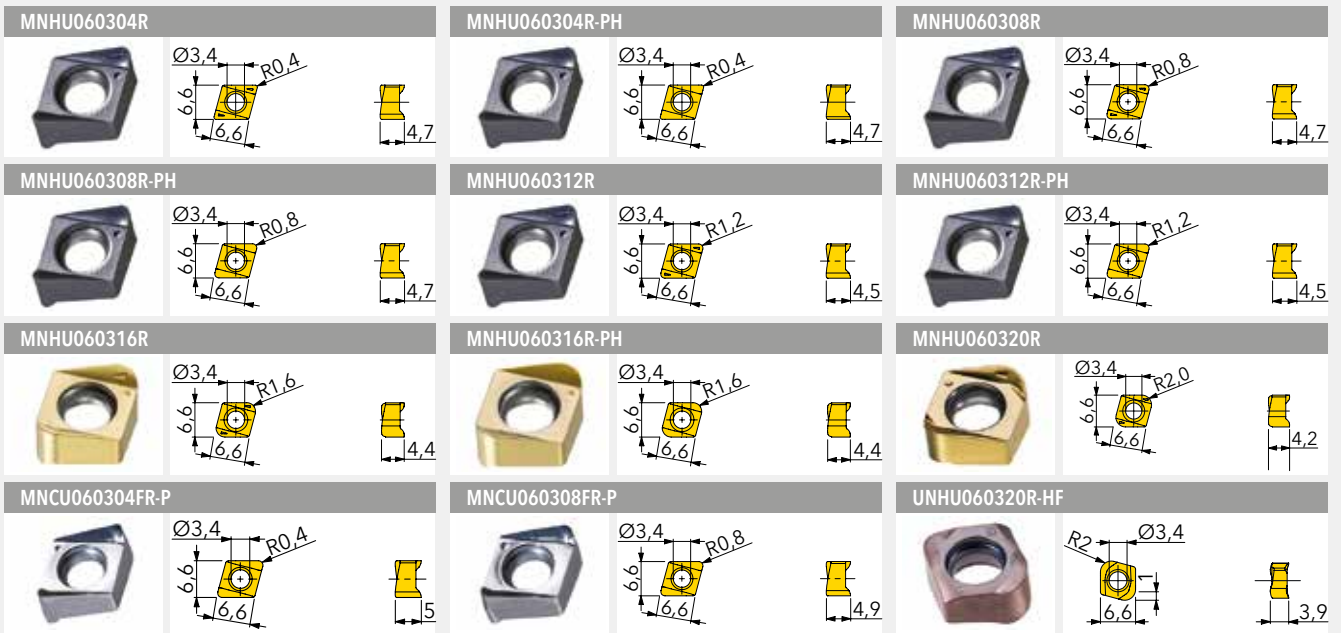
# DIPOSDUO END MILL 1TJ1D...W

ADAPTION ACC. TO DIN 1835 B



Designation	D	d	LT	L1	L2	a	Z			
1TJ1D016025W3R00	16	16	90	25	66,5	6	2	3,5	✓	0,11
1TJ1D020025W4R00	20	20	90	25	66,5	6	3	4,2	✓	0,18
1TJ1D025030W5R00	25	25	100	30	68,5	6	4	4,9	✓	0,31
1TJ1D032035W6R00	32	32	110	35	74,5	6	5	3,5	✓	0,59





Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2510	IN2530		
MNHU060304R	0,07/0,15	positive geometry R0,4					●		●		
MNHU060304R-PH	0,05/0,10	high positive geometry R0,4			●		●				
MNHU060308R	0,07/0,15	positive geometry R0,8					●	●	●		
MNHU060308R-PH	0,05/0,10	high positive geometry R0,8			●		●		●		
MNHU060312R	0,07/0,15	positive geometry R1,2					●		●		
MNHU060312R-PH	0,05/0,10	high positive geometry R1,2							●		
MNHU060316R <sup>1)</sup>	0,07/0,15	positive geometry R1,6					●		●		
MNHU060316R-PH <sup>1)</sup>	0,05/0,10	high positive geometry R1,6					●		●		
MNHU060320R <sup>1)</sup>	0,07/0,15	positive geometry R2					●		●		
MNCU060304FR-P	0,05/0,15	non ferrous geometry, polished R0,4		●							
MNCU060308FR-P	0,05/0,15	non ferrous geometry, polished R0,8		●							
UNHU060320R-HF <sup>1)</sup>	0,20/0,80	positive high feed geometry					●	●	●		

<sup>1)</sup> remachine cutter body

● = P ● = M ● = K ● = N ● = S ○ = H

**SPARE PARTS**

①



②

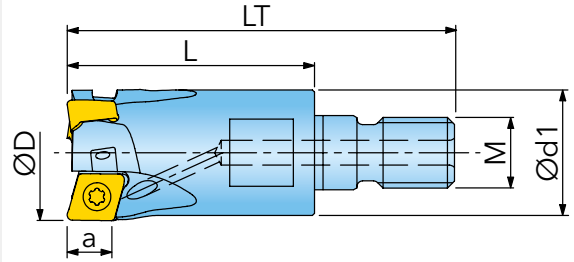


SM30-068-30 (1,1Nm) TX08x90-B

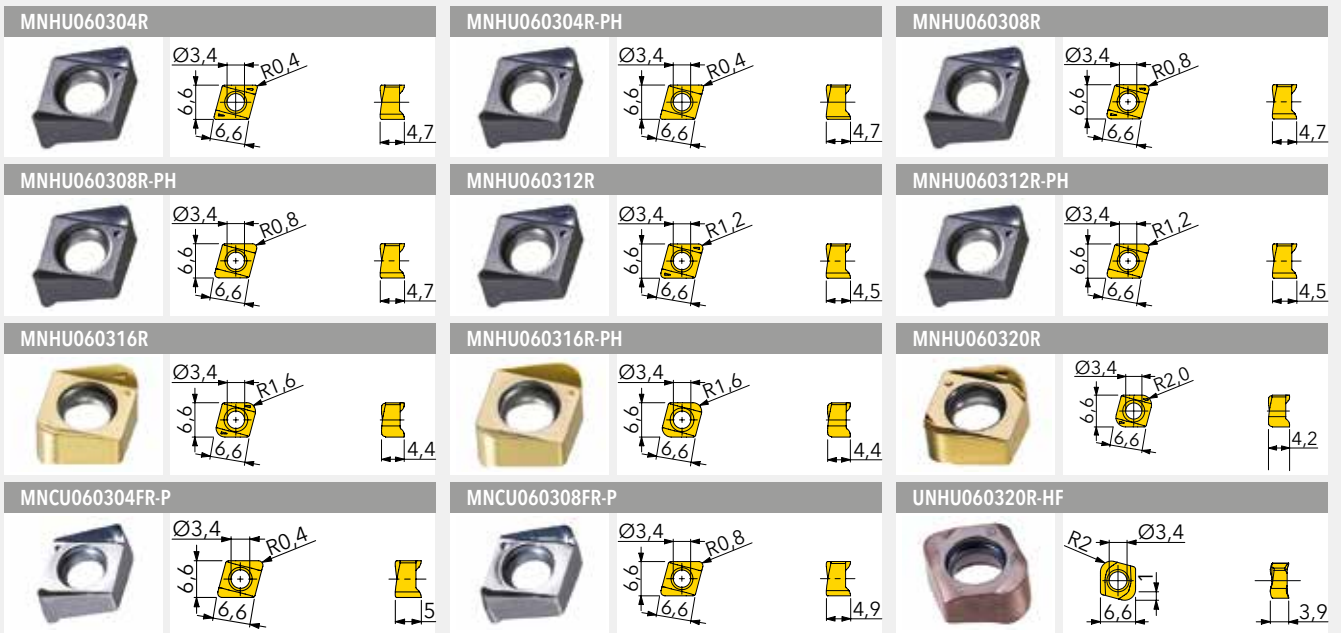
① = Insert screw ② = Torx-bit

# DIPOSDUO END MILL 1TJ1D...X

SCREW-IN TYPE ADAPTION



Designation	D	d1	LT	L	a	M	Z			
1TJ1D016023X5R00	16	13	40,8	23	6	M8	2	3,5	✓	0,02
1TJ1D020035X6R00	20	18	54,8	35	6	M10	3	4,2	✓	0,06
1TJ1D025035X7R00	25	21	57	35	6	M12	4	4,9	✓	0,09
1TJ1D032043X8R00	32	29	67	43	6	M16	5	3,5	✓	0,21
1TJ1D040043X8R00	40	29	67	43	6	M16	6	2,6	✓	0,25



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2510	IN2530		
MNHU060304R	0,07/0,15	positive geometry R0,4					●		●		
MNHU060304R-PH	0,05/0,10	high positive geometry R0,4			●		●		●		
MNHU060308R	0,07/0,15	positive geometry R0,8					●	●	●		
MNHU060308R-PH	0,05/0,10	high positive geometry R0,8			●		●		●		
MNHU060312R	0,07/0,15	positive geometry R1,2					●		●		
MNHU060312R-PH	0,05/0,10	high positive geometry R1,2					●		●		
MNHU060316R <sup>1)</sup>	0,07/0,15	positive geometry R1,6					●		●		
MNHU060316R-PH <sup>1)</sup>	0,05/0,10	high positive geometry R1,6					●		●		
MNHU060320R <sup>1)</sup>	0,07/0,15	positive geometry R2					●		●		
MNCU060304FR-P	0,05/0,15	non ferrous geometry, polished R0,4		●							
MNCU060308FR-P	0,05/0,15	non ferrous geometry, polished R0,8		●							
UNHU060320R-HF <sup>1)</sup>	0,20/0,80	positive high feed geometry					●	●	●		

<sup>1)</sup> remachine cutter body

● = P ● = M ● = K ● = N ● = S ○ = H

**SPARE PARTS**

①



②

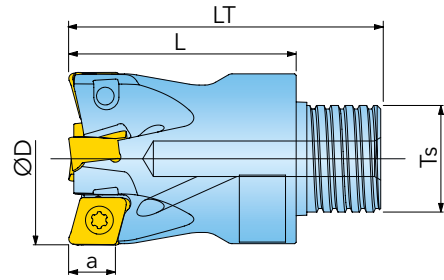


SM30-068-30 (1,1Nm) TX08x90-B

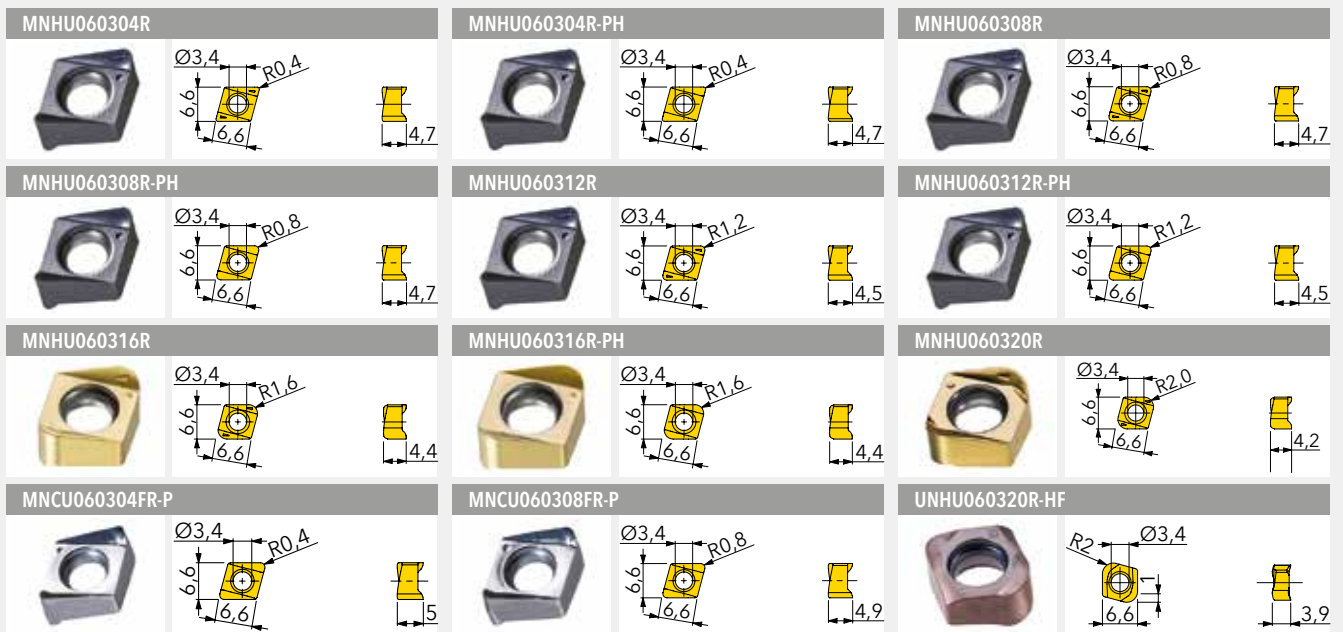
① = Insert screw ② = Torx-bit

# DIPOSDUO END MILL 1TJ1D...

EXCHANGEABLE HEAD SYSTEM



Designation	D	LT	L	a	Ts	Z			
1TJ1D016026TRR00	16	37,9	26	6	T10	2	3,5	✓	0,03
1TJ1D020026TSR00	20	40	26	6	T12	3	4,2	✓	0,05
1TJ1D025032TUR00	25	49,1	32	6	T15	4	4,9	✓	0,09



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2510	IN2530		
MNHU060304R	0,07/0,15	positive geometry R0,4					●		●		
MNHU060304R-PH	0,05/0,10	high positive geometry R0,4			●		●		●		
MNHU060308R	0,07/0,15	positive geometry R0,8					●	●	●		
MNHU060308R-PH	0,05/0,10	high positive geometry R0,8			●		●		●		
MNHU060312R	0,07/0,15	positive geometry R1,2					●		●		
MNHU060312R-PH	0,05/0,10	high positive geometry R1,2					●		●		
MNHU060316R <sup>1)</sup>	0,07/0,15	positive geometry R1,6					●		●		
MNHU060316R-PH <sup>1)</sup>	0,05/0,10	high positive geometry R1,6					●		●		
MNHU060320R <sup>1)</sup>	0,07/0,15	positive geometry R2					●		●		
MNCU060304FR-P	0,05/0,15	non ferrous geometry, polished R0,4		●							
MNCU060308FR-P	0,05/0,15	non ferrous geometry, polished R0,8		●							
UNHU060320R-HF <sup>1)</sup>	0,20/0,80	positive high feed geometry					●	●	●		

<sup>1)</sup> remachine cutter body

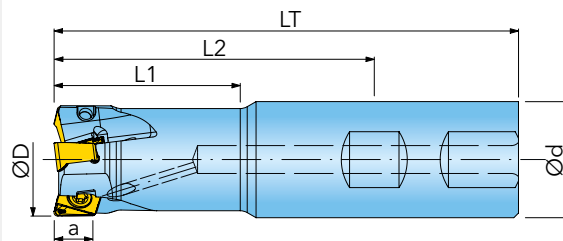
● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS			
	①	②	③
Diameter range			
16	SM30-068-30 (1,1Nm)	TX08x90-B	WS-0044 (28,0Nm)
20	SM30-068-30 (1,1Nm)	TX08x90-B	WS-0059 (28,0Nm)
25	SM30-068-30 (1,1Nm)	TX08x90-B	WS-0061 (28,0Nm)

① = Insert screw ② = Torx-bit ③ = Wrench

# DIPOS<sup>DUO</sup> END MILL 1TJ1F...W

ADAPTION ACC. TO DIN 1835 B



Designation	D	d	LT	L1	L2	a	Z			
1TJ1F020030W4R00	20	20	100	30	75	8	2	3,5	✓	0,21
1TJ1F025040W5R00	25	25	100	40	68	8	3	4,7	✓	0,32
1TJ1F032040W5R00	32	25	100	40	68	8	4	4,9	✓	0,36

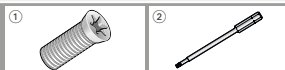
<b>MNHU090408R-M</b> 	<b>MNHU090408R-PH</b> 	<b>MNHU090416R-M</b> 
<b>MNCU090404FR-P</b> 	<b>MNCU090408FR-P</b> 	<b>UNHU090432R-HF</b> 

Designation	fz(min/max)	Design	Grade	IN10K	IN2504	IN2505	IN2510	IN2530		
MNHU090408R-M	0,07/0,15	positive geometry R0,8								
MNHU090408R-PH	0,07/0,15	high positive geometry R0,8								
MNHU090416R-M	0,07/0,15	positive geometry R1,6								
MNCU090404FR-P	0,05/0,35	non ferrous geometry, polished R0,4								
MNCU090408FR-P	0,05/0,35	non ferrous geometry, polished R0,8								
UNHU090432R-HF <sup>1)</sup>	0,20/1,00	positive high feed geometry								

<sup>1)</sup> remachine cutter body

= P = M = K = N = S = H

## SPARE PARTS

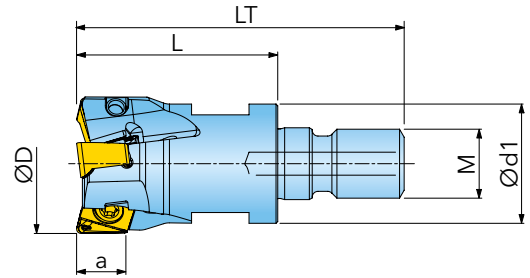


SM35-088-10 (3,0Nm) TX10x90-B

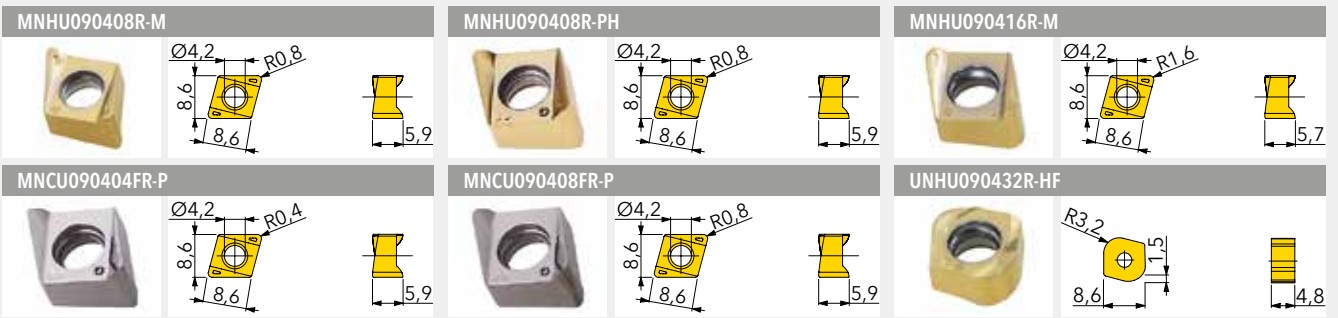
① = Insert screw ② = Torx-bit

# DIPOS<sup>DUO</sup> END MILL 1TJ1F...X

SCREW-IN TYPE ADAPTION



Designation	D	d1	LT	L	a	M	Z			
1TJ1F020035X6R00	20	18	54,8	35	8	M10	2	3,5	✓	0,07
1TJ1F025035X7R00	25	21	57	35	8	M12	3	4,7	✓	0,10
1TJ1F032043X8R00	32	29	67	43	8	M16	4	4,9	✓	0,22
1TJ1F040043X8R00	40	29	67	43	8	M16	5	3,7	✓	0,26

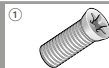


Designation	fz(min/max)	Design	Grade	IN10K	IN2504	IN2505	IN2510	IN2530		
MNHU090408R-M	0,07/0,15	positive geometry R0,8								
MNHU090408R-PH	0,07/0,15	high positive geometry R0,8								
MNHU090416R-M	0,07/0,15	positive geometry R1,6								
MNCU090404FR-P	0,05/0,35	non ferrous geometry, polished R0,4								
MNCU090408FR-P	0,05/0,35	non ferrous geometry, polished R0,8								
UNHU090432R-HF <sup>1)</sup>	0,20/1,00	positive high feed geometry								

<sup>1)</sup> remachine cutter body

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

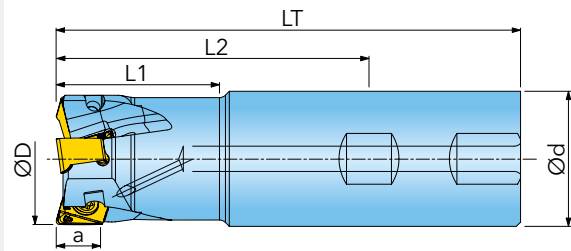
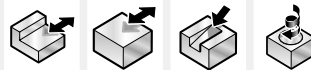


SM35-088-10 (3,0Nm) TX10x90-B

① = Insert screw ② = Torx-bit

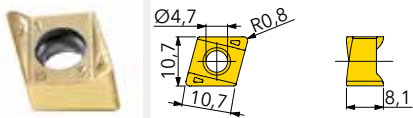
# DIPOSDUO END MILL 1TJ1G...W

ADAPTION ACC. TO DIN 1835 B

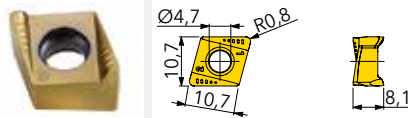


Designation	D	d	LT	L1	L2	a	Z			
1TJ1G025030W5R00	25	25	100	40	68	10,5	2	5,0	✓	0,32
1TJ1G032040W6R00	32	32	110	38	64	10,5	3	5,3	✓	0,60

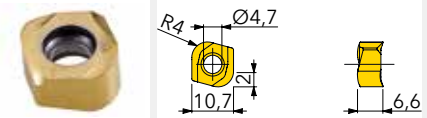
### MNHU110608R-M



### MNHU110608PNR-M



### UNHU110640R-HF

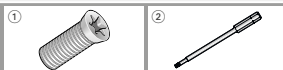


Designation	fz(min/max)	Design	Grade	IN2505	IN2510	IN2530					
MNHU110608R-M	0,09/0,18	positive geometry R0,8									
MNHU110608PNR-M	0,09/0,18	positive Wiper-geometry R0,8									
UNHU110640R-HF <sup>1)</sup>	0,30/1,20	positive high feed geometry									

<sup>1)</sup>remachine cutter body

● = P ● = M ● = K ● = N ● = S ○ = H

### SPARE PARTS



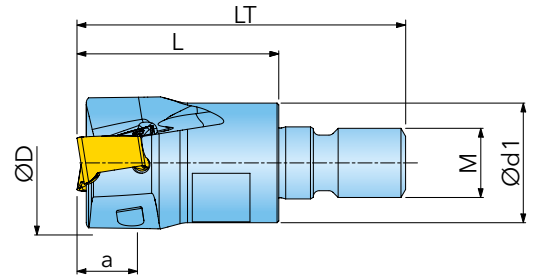
SM40-100-10 (4,5Nm) TX15x90-B

① = Insert screw ② = Torx-bit



# DIPOS<sup>DUO</sup> END MILL 1TJ1G...X

SCREW-IN TYPE ADAPTION



Designation	D	d1	LT	L	a	M	Z			
1TJ1G025035X7R00	25	21	57	35	10,5	M12	2	5,0	✓	0,10
1TJ1G032043X8R00	32	29	67	43	10,5	M16	3	5,3	✓	0,22
1TJ1G040043X8R00	40	29	67	43	10,5	M16	4	5,0	✓	0,26

Designation	fz(min/max)	Design	Grade	IN2505	IN2510	IN2530					
MNHU110608R-M	0,09/0,18	positive geometry R0,8									
MNHU110608PNR-M	0,09/0,18	positive Wiper-geometry R0,8									
UNHU110640R-HF <sup>1)</sup>	0,30/1,20	positive high feed geometry									

<sup>1)</sup> remachine cutter body

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



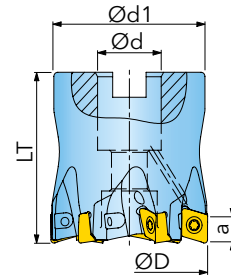
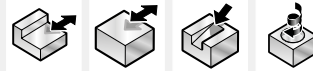
SM40-100-10 (4,5Nm)

TX15x90-B

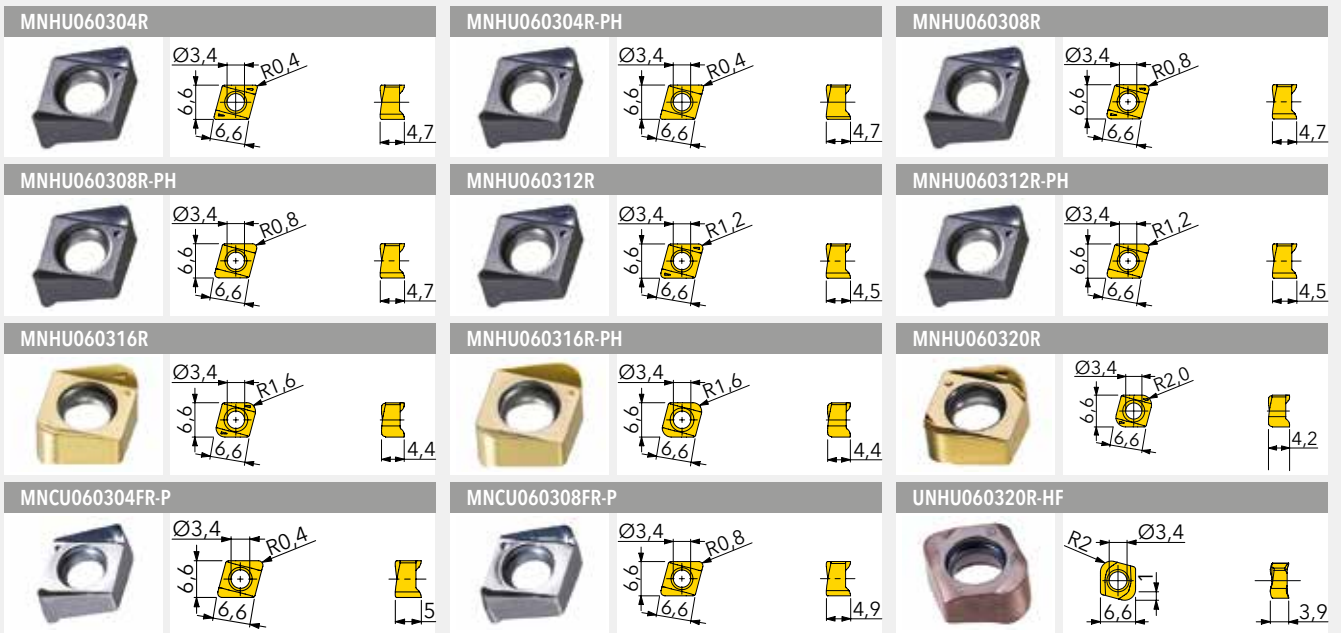
① = Insert screw ② = Torx-bit

# DIPOSDUO SHOULDER MILL TJ1D

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	LT	a	Z			
TJ1D032R00	32	16	30	32	6	5	3,5	✓	0,12
TJ1D032R01	32	16	30	32	6	4	3,5	✓	0,09
TJ1D040R00	40	16	38	40	6	6	2,6	✓	0,24
TJ1D040R01	40	16	38	40	6	5	2,6	✓	0,24
TJ1D050R00	50	22	45	40	6	7	2,0	✓	0,33
TJ1D050R01	50	22	45	40	6	6	2,0	✓	0,33
TJ1D063R00	63	22	47	40	6	8	1,5	✓	0,47
TJ1D063R01	63	22	47	40	6	7	1,5	✓	0,48



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2510	IN2530		
MNHU060304R	0,07/0,15	positive geometry R0,4					●		●		
MNHU060304R-PH	0,05/0,10	high positive geometry R0,4			●		●				
MNHU060308R	0,07/0,15	positive geometry R0,8					●	●	●		
MNHU060308R-PH	0,05/0,10	high positive geometry R0,8			●		●				
MNHU060312R	0,07/0,15	positive geometry R1,2					●				
MNHU060312R-PH	0,05/0,10	high positive geometry R1,2									
MNHU060316R <sup>1)</sup>	0,07/0,15	positive geometry R1,6					●				
MNHU060316R-PH <sup>1)</sup>	0,05/0,10	high positive geometry R1,6					●				
MNHU060320R <sup>1)</sup>	0,07/0,15	positive geometry R2					●				
MNCU060304FR-P	0,05/0,15	non ferrous geometry, polished R0,4		●							
MNCU060308FR-P	0,05/0,15	non ferrous geometry, polished R0,8		●							
UNHU060320R-HF <sup>1)</sup>	0,20/0,80	positive high feed geometry				●	●		●		

<sup>1)</sup> remachine cutter body

● = P ● = M ● = K ● = N ● = S ○ = H

**SPARE PARTS**

①



②

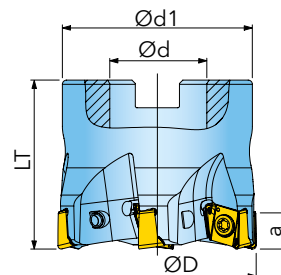
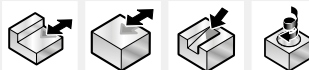


SM30-068-30 (1,1Nm) TX08x90-B

① = Insert screw ② = Torx-bit

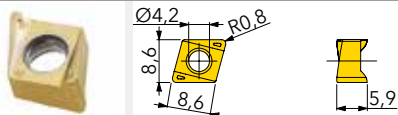
# DIPOSDUO SHOULDER MILL TJ5F

ADAPTION ACC. TO DIN 8030

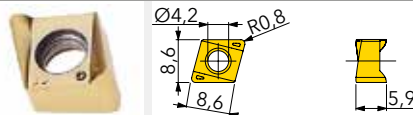


Designation	D	d	d1	LT	a	Z			
TJ5F040R00	40	16	38	40	8	5	3,7	✓	0,26
TJ5F050R00	50	22	45	40	8	6	2,8	✓	0,37
TJ5F063R00	63	22	55	40	8	7	2,1	✓	0,62
TJ5F080R00	80	27	70	50	8	9	1,6	✓	1,30

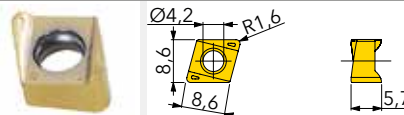
### MNHU090408R-M



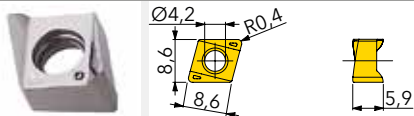
### MNHU090408R-PH



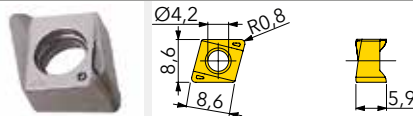
### MNHU090416R-M



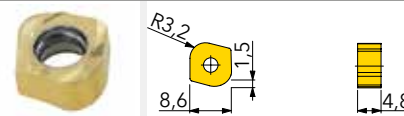
### MNCU090404FR-P



### MNCU090408FR-P



### UNHU090432R-HF



Designation	fz(min/max)	Design	Grade	IN10K	IN2504	IN2505	IN2510	IN2530		
MNHU090408R-M	0,07/0,15	positive geometry R0,8								
MNHU090408R-PH	0,07/0,15	high positive geometry R0,8								
MNHU090416R-M	0,07/0,15	positive geometry R1,6								
MNCU090404FR-P	0,05/0,35	non ferrous geometry, polished R0,4								
MNCU090408FR-P	0,05/0,35	non ferrous geometry, polished R0,8								
UNHU090432R-HF <sup>1)</sup>	0,20/1,00	positive high feed geometry								

<sup>1)</sup>remachine cutter body

= P = M = K = N = S = H

### SPARE PARTS

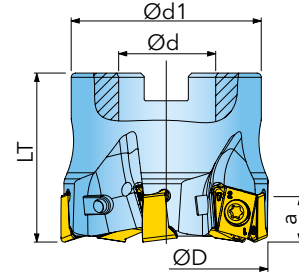


SM35-088-10 (3,0Nm) TX10x90-B

① = Insert screw ② = Torx-bit

# DIPOSDUO SHOULDER MILL TJ\_G

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	LT	a	Z			
TJ5G040R00 <sup>1)</sup>	40	16	38	40	10,5	4	5,0	✓	0,26
TJ6G050R00	50	22	45	40	10,5	4	3,8	✓	0,35
TJ5G050R00 <sup>1)</sup>	50	22	45	40	10,5	5	3,8	✓	0,37
TJ6G063R00	63	22	55	40	10,5	4	2,9	✓	0,57
TJ5G063R00 <sup>1)</sup>	63	22	55	40	10,5	6	2,9	✓	0,62
TJ6G080R00	80	27	70	50	10,5	4	2,2	✓	1,17
TJ5G080R00 <sup>1)</sup>	80	27	70	50	10,5	8	2,2	✓	1,25
TJ6G100R00	100	32	85	50	10,5	6	1,7	✓	1,99
TJ5G100R00 <sup>1)</sup>	100	32	85	50	10,5	10	1,7	✓	2,12

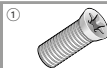
<sup>1)</sup>arrow pitch (only for short chips producing materials)

MNHU110608R-M			MNHU110608PNR-M			UNHU110640R-HF				
Designation	fz(min/max)	Design	Grade	IN2505	IN2510	IN2530				
MNHU110608R-M	0,09/0,18	positive geometry R0,8								
MNHU110608PNR-M	0,09/0,18	positive Wiper-geometry R0,8								
UNHU110640R-HF <sup>1)</sup>	0,30/1,20	positive high feed geometry								

<sup>1)</sup>remachine cutter body

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



SM40-100-10 (4,5Nm)

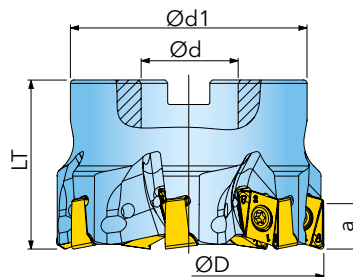


TX15x90-B

① = Insert screw ② = Torx-bit

# DIPOSDUO SHOULDER MILL TJ\_J

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	LT	a	Z			
TJ5J050R00 <sup>1)</sup>	50	22	45	45	13,8	4	5,4	✓	0,41
TJ6J063R00	63	22	55	45	13,8	4	3,9	✓	0,66
TJ5J063R00 <sup>1)</sup>	63	22	55	45	13,8	6	3,9	✓	0,71
TJ6J080R00	80	27	70	50	13,8	5	2,9	✓	1,21
TJ5J080R00 <sup>1)</sup>	80	27	70	50	13,8	7	2,9	✓	1,30
TJ6J100R00	100	32	85	55	13,8	6	2,2	✓	2,11
TJ5J100R00 <sup>1)</sup>	100	32	85	55	13,8	9	2,2	✓	2,19
TJ6J125R00	125	40	100	63	13,8	7	1,7	✓	3,74
TJ5J125R00 <sup>1)</sup>	125	40	100	63	13,8	11	1,7	✓	3,86

<sup>1)</sup>arrow pitch (only for short chips producing materials)

MNHU140708R-M			MNHU140708PNR-M			UNHU140750R-HF			
Designation	fz(min/max)	Design	Grade	IN2505	IN2510	IN2530			
MNHU140708R-M	0,09/0,18	positive geometry R0,8							
MNHU140708PNR-M	0,09/0,18	positive Wiper-geometry R0,8							
UNHU140750R-HF <sup>1)</sup>	0,30/1,50	positive high feed geometry							

<sup>1)</sup>remachine cutter body

● = P ● = M ● = K ● = N ● = S ○ = H

## SPARE PARTS



SM50-127-10 (6,0Nm) TX20x90-B

① = Insert screw ② = Torx-bit

 **Notes**

Blank area for notes.

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