

# VU SERIES

Z-PRO Ultimate machine tap series.  
The evolution of high performance tapping.



VUSP

VUPO

# VUSP



## New coated spiral fluted tap

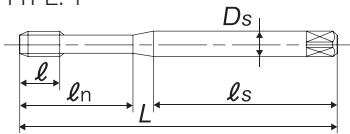


- Longer Life - Great improvement thanks to the new premium grade of powder high speed steel and new special coating!
- New Flute Shape - Improved chip evacuation, reduced cutting resistance, excellent internal threads finishing thanks to unique flute shape!
- The Z-PRO VUSP is designed for high performance tapping with either oil or water soluble cutting fluid.

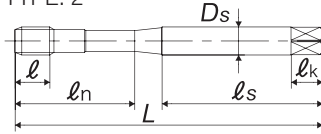
Lubricant	Hole shape	Process area	Hand tapping	Drilling machine	Low speed	Middle speed	High speed
Water Soluble		Products				<b>VUSP</b> $V_c \leq 25$ m/min	
Insoluble		Products	IHT	ISP	SP	+SP	AU+SP
			IPO	PO	+PO	AU+SL	

## Dimensions and sizes

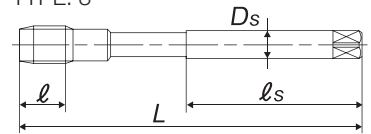
TYPE: 1



TYPE: 2



TYPE: 3



Size	Class	Code	Chamfer	L (mm)	l (mm)	ln (mm)	ls (mm)	Ds (mm)	K (mm)	lk (mm)	No. of flutes	Type
<b>M</b>												
M3X0.5	ISO2X	3101101035	2.5P	56	5	18	34	3.5	2.7	6	3	1
M4X0.7	ISO2X	3101101042	2.5P	63	7	21	38	4.5	3.4	6	3	1
M5X0.8	ISO2X	3101101049	2.5P	70	9	25	39	6	4.9	8	3	1
M6X1	ISO2X	3101101055	2.5P	80	11	30	45	6	4.9	8	3	1
M8X1.25	ISO2X	3101101064	2.5P	90	12	35	47	8	6.2	9	3	2
M10X1.5	ISO2X	3101101078	2.5P	100	13	39	52	10	8	11	3	2
M12X1.75	ISO2X	3101101088	2.5P	110	15	-	56	9	7	10	3	3
M14X2	ISO2X	3101101100	2.5P	110	18	-	56	11	9	12	3	3
M16X2	ISO2X	3101101114	2.5P	110	18	-	56	12	9	12	3	3
<b>MF</b>												
M3X0.35	ISO2X	3101101036	2.5P	56	5	18	34	3.5	2.7	6	3	1
M4X0.5	ISO2X	3101101043	2.5P	63	5	21	38	4.5	3.4	6	3	1
M5X0.5	ISO2X	3101101051	2.5P	70	6	25	39	6	4.9	8	3	1
M6X0.75	ISO2X	3101101056	2.5P	80	8	30	45	6	4.9	8	3	1
M6X0.5	ISO2X	3101101057	2.5P	80	8	30	45	6	4.9	8	3	1
M8X1	ISO2X	3101101065	2.5P	90	12	-	46	6	4.9	8	3	3
M10X1.25	ISO2X	3101101079	2.5P	100	13	-	51	7	5.5	8	3	3
M10X1	ISO2X	3101101080	2.5P	90	13	-	46	7	5.5	8	3	3
M12X1.5	ISO2X	3101101089	2.5P	100	15	-	51	9	7	10	3	3
M12X1.25	ISO2X	3101101090	2.5P	100	15	-	51	9	7	10	3	3
M14X1.5	ISO2X	3101101102	2.5P	100	14	-	51	11	9	12	3	3
M16X1.5	ISO2X	3101101116	2.5P	100	14	-	51	12	9	12	3	3

## Parameters

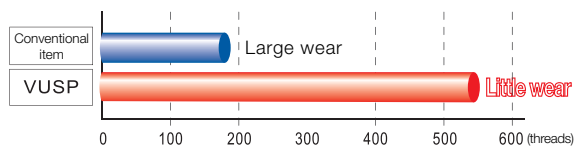
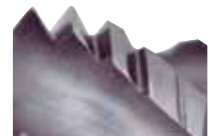
Work-materials	Vc (m/min)
General structural steel	10~20
Carbon steel	10~25
Alloy steel	10~20
Stainless steel	5~10

## Process data

**M3×0.5**

Work-material	Ck50 - 1.1213
Thread length	4.5 mm
Tapping speed	20 m/min
Machinery	Vertical machining center
Tapping oil	Water soluble cutting fluid

Enlarged Photo  
no wear after 250  
threads with VUSP



# VUPO

## New coated spiral pointed tap

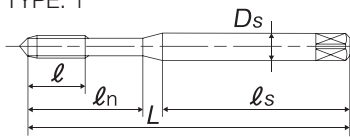


- Longer Life - Great improvement thanks to the new premium grade of powder high speed steel and new special coating!
- New Flute Shape - Improved chip evacuation, reduced cutting resistance, excellent internal threads finishing thanks to unique flute shape!
- The Z-PRO VUPO is designed for high performance tapping with either oil or water soluble cutting fluid.

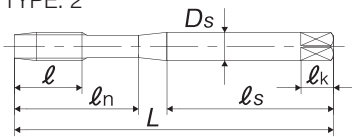
Lubricant	Hole shape	Process area	Hand tapping	Drilling machine	Low speed	Middle speed	High speed
Water Soluble		Products				<b>VUPO</b> Vc ≤ 30 m/min	
Insoluble		Products	IHT	ISP	SP	+SP	AU+SP
			IPO	PO	+PO	AU+SL	

## Dimensions and sizes

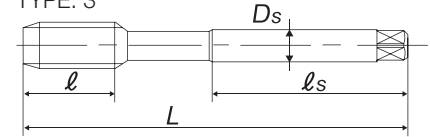
TYPE: 1



TYPE: 2



TYPE: 3



Size	Class	Code	Chamfer	L (mm)	l (mm)	ln (mm)	ls (mm)	Ds (mm)	K (mm)	lk (mm)	No. of flutes	Type
<b>M</b>												
M3X0.5	ISO2X	3102101035	5P	56	9	18	34	3.5	2.7	6	3	1
M4X0.7	ISO2X	3102101042	5P	63	13	21	38	4.5	3.4	6	3	1
M5X0.8	ISO2X	3102101049	5P	70	14	25	39	6	4.9	8	3	1
M6X1	ISO2X	3102101055	5P	80	15	30	45	6	4.9	8	3	1
M8X1.25	ISO2X	3102101064	5P	90	19	35	47	8	6.2	9	3	2
M10X1.5	ISO2X	3102101078	5P	100	23	39	52	10	8	11	3	2
M12X1.75	ISO2X	3102101088	5P	110	26	-	56	9	7	10	3	3
M14X2	ISO2X	3102101100	5P	110	26	-	56	11	9	12	3	3
M16X2	ISO2X	3102101114	5P	110	26	-	56	12	9	12	3	3
<b>MF</b>												
M3X0.35	ISO2X	3102101036	5P	56	6.5	18	34	3.5	2.7	6	3	1
M4X0.5	ISO2X	3102101043	5P	63	9	21	38	4.5	3.4	6	3	1
M5X0.5	ISO2X	3102101051	5P	70	9	25	39	6	4.9	8	3	1
M6X0.75	ISO2X	3102101056	5P	80	15	30	45	6	4.9	8	3	1
M6X0.5	ISO2X	3102101057	5P	80	9	30	45	6	4.9	8	3	1
M8X1	ISO2X	3102101065	5P	90	19	-	46	6	4.9	8	3	3
M10X1.25	ISO2X	3102101079	5P	100	23	-	51	7	5.5	8	3	3
M10X1	ISO2X	3102101080	5P	90	19	-	46	7	5.5	8	3	3
M12X1.5	ISO2X	3102101089	5P	100	21	-	51	9	7	10	3	3
M12X1.25	ISO2X	3102101090	5P	100	21	-	51	9	7	10	3	3
M14X1.5	ISO2X	3102101102	5P	100	21	-	51	11	9	12	3	3
M16X1.5	ISO2X	3102101116	5P	100	21	-	51	12	9	12	3	3

## Parameters

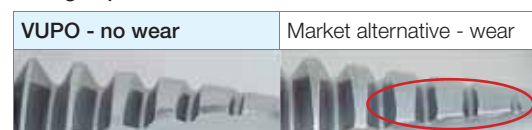
Work-materials	Vc (m/min)
General structural steel	10~30
Carbon steel	10~30
Alloy steel	10~30
Stainless steel	5~15

## Process data

**M10×1.5**

Work-material	Ck50 - 1.1213
Thread length	20 mm
Tapping speed	20 m/min
Machinery	Vertical machining center
Tapping oil	Water soluble cutting fluid

Enlarged photo after 560 threads



## WARNING

- Tools may shatter. Wear cover or eye glass to avoid injury during tapping.
- Tools may be shatter. Use tools under the proper tapping condition.
- Never wear gloves during turning operations as the gloves may get caught with the tools.
- Wear safety shoes to avoid injuring yourself by the falling tools.
- On attaching tools to the machine, fasten firmly to avoid chattering and run-out.
- Fasten the workpieces firmly so that they never move during operation. Never use worn tools or damaged tools with chipping.
- Take a special care to fire trouble. High temperature during machining may cause fire.



JQA-QMA14664 JQA-EM3465

