STELLRAM™

5505VX Roughing ball nose

THE MATERIAL

- Steels, cast irons and hardened steels (52HRc - 56HRc).

THE APPLICATION

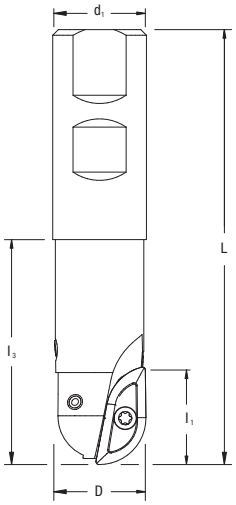
- General roughing and semi finishing of profiles and complex contours.
- Pocketing by ramping and helical interpolation.

PERFORMANCE FEATURES

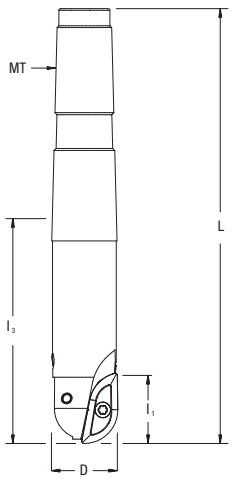
- Strong, thick inserts ideal for medium to heavy roughing in die and mould applications.
- X400 - new grade (patent pending) for steels and hardened steels (52HRc - 56HRc).
- Axial retention screw for added security.
- Increased feeds and speeds possible due to helical insert design and rigid fixation system.
- Capable of plunging to full radius.
- Double edge insert is indexable for reduced inventory.

Stellram™ tooling systems for all your milling requirements.

5505VX Roughing ball nose



Weldon Shank



Morse Taper

5505VX Weldon Shank

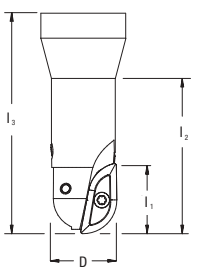
EDP #	Part Number	Dimensions (mm) D	L	l_1	l_2	l_3	d_{1h6}	Z	Insert style
029539	**5505VX20W020R50**	20,0	106,0	20,0	34,0	50,0	25,00	2	XPNT20
029540	**5505VX25W025R60**	25,0	116,0	25,0	-	60,0	25,00	2	XPNT25
029541	**5505VX25W025R90**	25,0	150,0	25,0	70,0	90,0	32,00	2	XPNT25
029542	**5505VX32W032R75**	32,0	130,0	32,0	-	75,0	32,00	2	XPNT32
029543	**5505VX32W032R100**	32,0	160,0	32,0	-	100,0	32,00	2	XPNT32
029544	**5505VX40W040R100**	40,0	170,0	40,0	-	100,0	40,00	2	XPNT40
029545	**5505VX40W040R150**	40,0	220,0	40,0	-	150,0	40,00	2	XPNT40
029546	**5505VX50W050R100**	50,0	170,0	50,0	-	100,0	40,00	2	XPNT50
029547	**5505VX50W050R150**	50,0	230,0	50,0	-	150,0	50,00	2	XPNT50

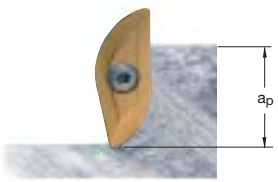
5505VX Morse Taper Shank

EDP #	Part Number	Dimensions (mm) D	L	l_1	l_2	l_3	Morse taper	Z	Insert style
029548	**5505VX20M020R70**	20,0	156,0	20,0	50,0	70,0	MT3	2	XPNT20
029549	**5505VX25M025R80**	25,0	161,0	25,0	-	80,0	MT3	2	XPNT25
029550	**5505VX25M025R100**	25,0	181,0	25,0	-	100,0	MT3	2	XPNT25
029551	**5505VX32M032R90**	32,0	192,5	32,0	-	90,0	MT4	2	XPNT32
029552	**5505VX32M032R125**	32,0	227,5	32,0	-	125,0	MT4	2	XPNT32
029553	**5505VX40M040R100**	40,0	202,5	40,0	-	100,0	MT4	2	XPNT40
029554	**5505VX40M040R150**	40,0	252,5	40,0	-	150,0	MT4	2	XPNT40
029555	**5505VX50M050R100**	50,0	233,0	50,0	-	100,0	MT5	2	XPNT50
029556	**5505VX50M050R150**	50,0	283,0	50,0	-	150,0	MT5	2	XPNT50

5505VX Spares

Cutter Diameter (mm)	Part Number	Spares for retaining insert through hole EDP #		EDP #		Spares for axial retaining screw EDP #		EDP #	
20,0	**5505VX20.....**	015063	F3008T	022157	T8	015063	F3008T	022157	T8
25,0	**5505VX25.....**	015262	D4010T	015240	T15	022056	F3507T	015240	T15
32,0	**5505VX32.....**	015266	D5013T	015241	T20	029639	F4007T	015241	T20
40,0	**5505VX40.....**	029640	D6014T	015241	T20	015270	F4011T	015241	T20
50,0	**5505VX50.....**	029641	F8017S	018288	KH5005	018486	D6018S	018287	KH5004

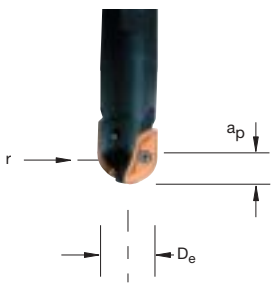




Depth of Cut (a_p)

5505VX Technical Advice

Milling Cutter Order Example: **5505VX32W32R100**
Milling Insert Order Example: **XPNT32/320612.R-C X400**



Working Diameter:

$$D_e = 2 \times \sqrt{r^2 - (r - a_p)^2}$$

where:
D_e = Working Diameter
r = Cutter radius
a_p = Axial Depth of Cut

To find programmed feedrate:

$$f_z = \frac{h_m}{\frac{\sqrt{r^2-(r-a_e)^2}}{r} \times \frac{\sqrt{r^2-(r-a_p)^2}}{r}}$$

Average chip thickness:

$$h_m = f_z \times \frac{\sqrt{r^2-(r-a_e)^2}}{r} \times \frac{\sqrt{r^2-(r-a_p)^2}}{r}$$

where:
f_z = Feed per tooth
h_m = Average chip thickness
D = Cutter diameter (outside)
a_e = Radial Depth of Cut
D_e = Working Diameter
a_p = Axial Depth of Cut

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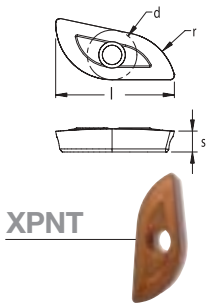
Inserts for 5505VX



EDP #	Part Number	Grade	Application & Material ▼ Roughing	Dimensions (mm) d	l	s plateau	s cutting edge	r
029559	**XPNT20/20T306.R-C**	**SC3025**	♦	9,00	20,85	4,26	3,97	10,0
029560	**XPNT20/20T306.R-C**	**X400**	♦♦♦	9,00	20,85	4,26	3,97	10,0
029561	**XPNT25/250408.R-C**	**SC3025**	♦	11,00	26,00	5,06	4,76	12,5
029562	**XPNT25/250408.R-C**	**X400**	♦♦♦	11,00	26,00	5,06	4,76	12,5
029563	**XPNT32/320612.R-C**	**SC3025**	♦	14,10	33,40	6,60	6,35	16,0
029564	**XPNT32/320612.R-C**	**X400**	♦♦♦	14,10	33,40	6,60	6,35	16,0
029567	**XPNT40/40T716.R-C**	**SC3025**	♦	18,00	41,84	8,25	7,95	20,0
029568	**XPNT40/40T716.R-C**	**X400**	♦♦♦	18,00	41,84	8,25	7,95	20,0
029569	**XPNT50/50T716.R-C**	**SC3025**	♦	22,25	52,86	8,25	7,95	25,0
029570	**XPNT50/50T716.R-C**	**X400**	♦♦♦	22,25	52,86	8,25	7,95	25,0

XP_Recommended Cutting Conditions

Material	▼ Roughing V_C (m/min)	Ø20mm f_z (mm)	Ø25mm f_z (mm)	Ø32mm f_z (mm)	Ø40mm f_z (mm)	Ø50mm f_z (mm)	a_p max. (mm)
♦ Unalloyed Steels	120 - 235	0,10 - 0,17	0,10 - 0,20	0,10 - 0,22	0,10 - 0,24	0,10 - 0,27	See l_1
♦ Alloyed Steels	70 - 150	0,10 - 0,15	0,10 - 0,18	0,10 - 0,20	0,10 - 0,22	0,10 - 0,25	See l_1
♦ Stainless Steels	-	-	-	-	-	-	See l_1
♦ PH Stainless	-	-	-	-	-	-	See l_1
♦ Cast Irons	120 - 395	0,10 - 0,17	0,10 - 0,20	0,10 - 0,22	0,10 - 0,24	0,10 - 0,27	See l_1
♦ Aluminium & Alloys	-	-	-	-	-	-	See l_1
♦ High Temp. Alloys	-	-	-	-	-	-	See l_1
♦ Hard Steels (52-56HRc)	35 - 100	0,10 - 0,12	0,10 - 0,15	0,10 - 0,17	0,10 - 0,19	0,10 - 0,24	See l_1

Star Guide Key to Recommended Inserts

Material Designations			
P ♦ Unalloyed Steels	M ♦ Stainless Steels	K ♦ Cast Irons	S ♦ High Temp. Alloys
P ♦ Alloyed Steels	M ♦ PH Stainless	N ♦ Aluminium & Alloys	H ♦ Hard Materials

STELLRAM™

Grade Information

MATERIALS	CODE	GRADE	
		Coated CVD	Coated PVD
	ISO	SC3025	X400
Unalloyed and alloyed steel P	P01		
	P05		
	P10		
	P15		
	P20		
	P25		
	P30		
	P35		
	P40		
	P50		
Stainless steel M	M05		
	M10		
	M15		
	M20		
	M30		
	M35		
	M40		
Cast iron K	K01		
	K05		
	K10		
	K15		
	K20		
	K25		
	K30		
	K35		
	K40		
Nonferrous metal N	N01		
	N05		
	N10		
	N15		
	N20		
	N25		
	N30		
High temperature alloys S	S01		
	S05		
	S10		
	S15		
	S20		
	S25		
	S30		
Hard materials H	H01		
	H05		
	H10		
	H15		
	H20		
	H25		
	H30		

New!
Patent Pending

X400
A high performance, tough ruthenium-based substrate with a TiAlN PVD coating for use in unalloyed and hardened alloyed steel (52-56HRc) applications.

SC3025
A new high performance cast iron grade is now available for milling. Grade SC3025 is a multi-layer CVD coating designed to offer wear and abrasion resistance in these materials.

Metalcutting answers.™

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