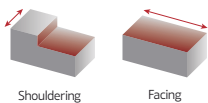


# Double-sided shoulder milling insert



**palbit**<sup>®</sup>  
TOOLING SOLUTIONS EXPERTS  
SINCE 1916

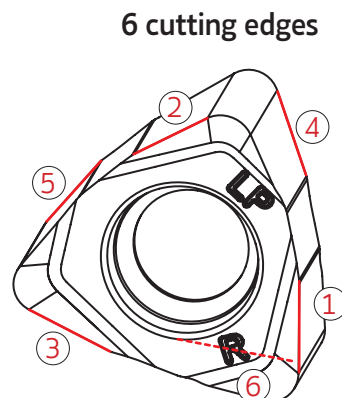
PLUS  
49090



SINCE **1916**

# MAIN FEATURES

PLUS 49090 is a new milling line with a negative insert of 6 cutting edges.



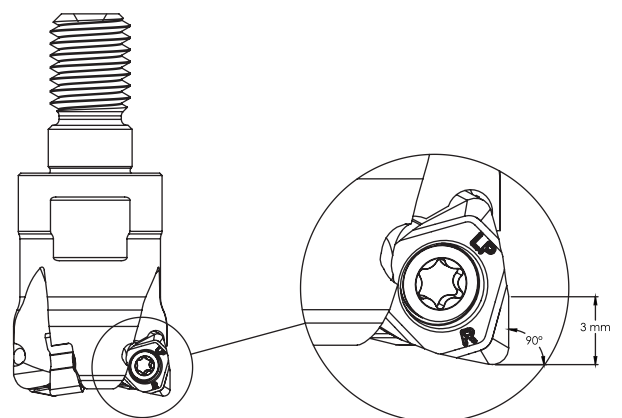
## Features

- 6-cornered design for economic advantage
- Fully effective cutting edge length in square shoulder milling
- Low cutting force even in large depth of cut
- Machining depth of cut up to 3mm
- Plus 49090 is well suited for small and medium sized milling machines

The 90° setting angle ensures a true 90° square in one operation, saving valuable production time.

## Benefits

- True 90 degrees
- High productivity
- Lower cost per edge
- High quality surface finish



## Main operation:



Shouldering

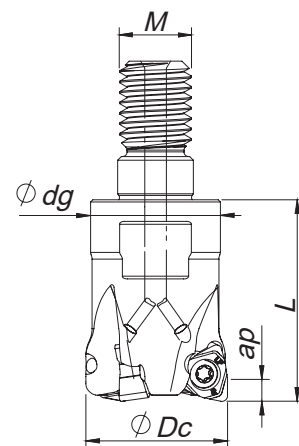
## Working materials:





## Threaded Coupling

$K_r = 90^\circ$  |  $\gamma_p = -7^\circ$



Order code Código	Reference Referência Referencia		Dimensions   Dimensões   Dimensiones (mm)				Kg	Specification	Insert Pastilha Inserto	Stock
			ØDc	M	Ødg	L		Ap max (mm)		
181136000	016R49090-02-07-M08023	2	16	M08	13	23	0,023	3,00	WNHU 04T308-LP	
181128300	020R49090-03-07-M10028	3	20	M10	18	28	0,052	3,00	WNHU 04T308-LP	
181110900	025R49090-04-07-M12030	4	25	M12	21	30	0,078	3,00	WNHU 04T308-LP	
181128400	032R49090-05-07-M16035	5	32	M16	29	35	0,150	3,00	WNHU 04T308-LP	

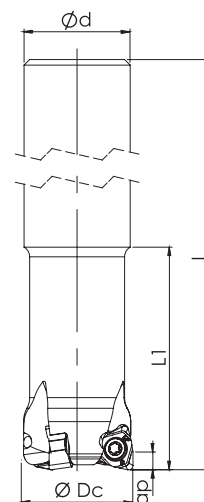
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta



## Cylindrical Shank

$K_r = 90^\circ$  |  $\gamma_p = -7^\circ$



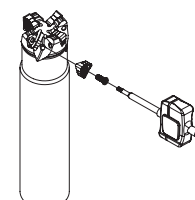
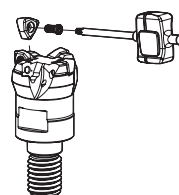
Order code Código	Reference Referência Referencia		Dimensions   Dimensões   Dimensiones (mm)				Kg	Specification	Insert Pastilha Inserto	Stock
			ØDc	Ød	L	L1		Ap max (mm)		
181136100	016E49090-02-07-U015150	2	16	15	150	32	0,185	3,00	WNHU 04T308-LP	
181136200	020E49090-03-07-U019150	3	20	19	150	40	0,292	3,00	WNHU 04T308-LP	
181136300	025E49090-04-07-U024150	4	25	24	150	50	0,471	3,00	WNHU 04T308-LP	

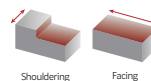
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS | Acessórios | Repuestos

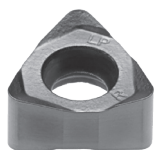
Cutter ØDc	Order separately			
	Insert Screw	Key (Torx)	Key (Torx - Nm)	Torque Value
R49090 - 20-32	P0250704	XT08	DT0812	1,2
E49090 - 16-25	P0250704	XT08	DT0812	1,2



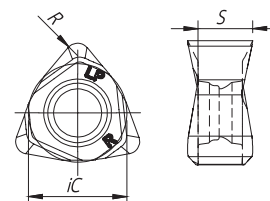


## WNHU 04T308 | Inserts | Pastilhas | Plaquitas

WNHU-LP



WNHU-LN



	(2) Grade code	P			K			N	Dimensions Dimensões Dimensiones (mm)		
		PVD			PVD			UNC			
		X5	T1	P4	X5	T1	P4	10			
(1) Geometry code	ISO Reference	PHP910	PHP920	PHP930	PHP910	PHP920	PHP930	PH0910	iC	S	R
1112277	WNHU 04T308 PNER-LP	⊗	⊗	⊗	⊗	⊗	⊗		6,35	3,50	0,80
1112988	WNHU 04T308 PNFR-LN							⊗	6,35	3,50	0,80

⊗ First choice | Primeira opção | 1ª opción

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta  
Disponible bajo consulta

Insert order code = (1) Geometry Code + (2) Grade Code

## GRADES SELECTION GUIDE | Guia para selecção de graus | Tabla para selección de calidades

ISO	PSM	Material	HB (Brinell)	Grades			
				← Wear Resistance		Toughness →	
				PH0910	PHP910	PHP920	PHP930
P	1	Unalloyed Steel	125-220	●	✓	✓	✓
	2	Low-Alloyed Steel	220-280		✓	✓	✓
	3	High-Alloyed Steel	280-380		✓	✓	✓
K	7	Malleable Cast Iron	130-230		✓	✓	✓
	8	Grey Cast Iron	180-245		✓	✓	✓
	9	Nodular Cast iron	160-250		✓	✓	✓
N	10	Aluminium and Non Ferrous	30-130	✓			

● Good Conditions  
● Average Conditions  
● Difficult Conditions

## RECOMMENDED CUTTING CONDITIONS | Condições de corte recomendadas | Condiciones de corte recomendables

ISO	PSM	Material	HB (Brinell)	Vc (m/min)				Feed fz (mm/t)
				← Wear Resistance		Toughness →		
				PH0910	PHP910	PHP920	PHP930	WNHU 04T3
P	1	Unalloyed Steel	125-220	-	180-250	180-250	160-230	0,10-0,30
	2	Low-Alloyed Steel	220-280	-	160-240	160-230	140-210	0,10-0,30
	3	High-Alloyed Steel	280-380	-	140-230	140-220	120-200	0,10-0,25
K	7	Malleable Cast Iron	130-230	-	180-300	160-270	150-250	0,10-0,30
	8	Grey Cast Iron	180-245	-	160-250	140-250	140-230	0,10-0,30
	9	Nodular Cast iron	160-250	-	150-210	120-210	100-200	0,10-0,25
N	10	Aluminium and Non Ferrous	30-130	100-2000	-	-	-	0,10-0,30

Insert	Feed fz (mm/t)		ap Rec.
	Roughing	Finishing	
WNHU 04T308-LP	0.15-0.30	0.10-0.25	0.50-3.00

(Note 1) Cutting conditions should be adjusted according to the machine and work rigidity.

(Note 2) If chattering occurs, reduce ap and Vc by 30% and keep the same fz per tooth.