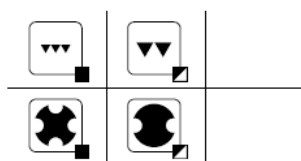
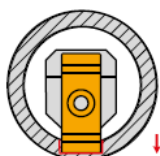
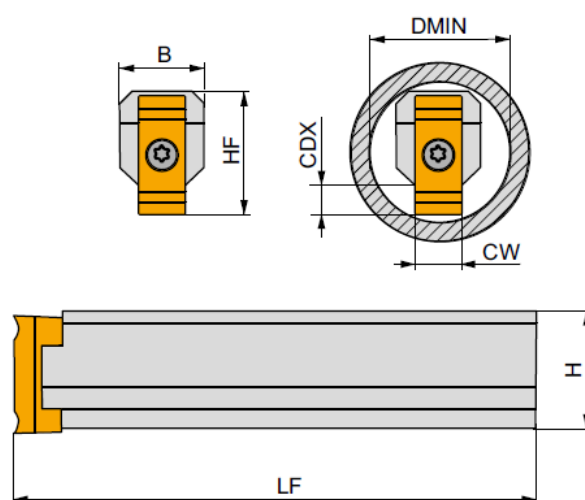


PHZ-2



Porta-Ferramentas Interno de Brochar para Diâmetros Grandes com Insertos HZ de duas faces

Porta-ferramentas interno para brochar até 20 mm de largura. Diâmetro interno mínimo Ø44 mm. Corpo tratado para maior tempo de vida útil da ferramenta.



Produto	H	HF	B	OAL	CW	DMIN	CDX	kg		
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
N PHZ/2 3625-14	36	37.5	25	300	—	44	—	1.86	GI235	SH23
PHZ/2 4832-18	48	50	32	400	—	58	—	2.00	GI241	SH24

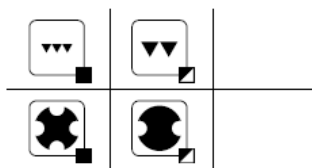
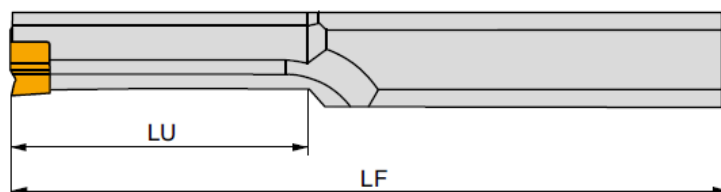
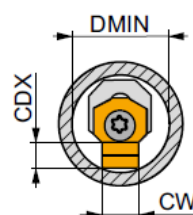
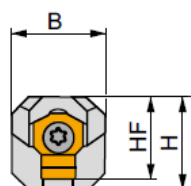
GI235		HZ/2 14-14						HZ/2 16-16		
GI241		HZ/2 18-18						HZ/2 20-20		

SH23	5513 020-14	8.5	M 6	18	TX225PLUS					
SH24	5513 021-03	13.0	M 8	22	DMN 3124					

PHZ

Porta-Ferramentas Interno de Brochar para Diâmetros Pequenos com Insertos HZ de uma face

Porta-ferramentas interno para brochar até 12 mm de largura. Diâmetro interno mínimo Ø9,5 mm. Corpo tratado para maior tempo de vida útil da ferramenta.

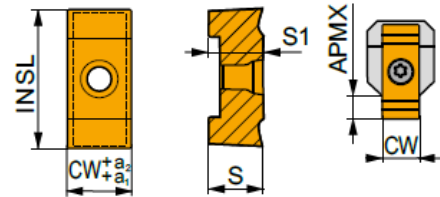


Produto		H	HF	B	OAL	LU	CW	DMIN	CDX			
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
N	PHZ 90 1104-06	11.3	9	8.5	160	35	3.00	9.5	1.6	0.17	GI239	SH21
	PHZ 90 1107-06	11.3	10	7	200	60	—	—	—	0.19	GI240	SH21
	PHZ 90 1111-06	11.3	12	—	200	60	—	—	—	0.19	GI240	SH21
	PHZ 1512-10	15.5	16.2	—	220	—	—	—	—	0.40	GI224	SH22
	PHZ 2014-13	20.6	21.5	—	250	—	—	—	—	0.65	GI225	SH23

		
GI224	HZ 1006-60	HZ 1006-80
GI225	HZ 1309-100	HZ 1309-120
GI239	HZ90 0604-30	—
GI240	HZ90 0604-40	HZ90 0604-50

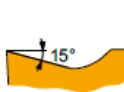
HZ-2

	INSL	APMX	S	S1	CW
	(mm)	(mm)	(mm)	(mm)	(mm)
14-14	36.0	8.00	13.90	14.00	14.00
16-16	36.0	9.00	13.90	14.00	16.00
18-18	45.0	12.00	15.90	16.00	18.00
20-20	45.0	13.00	15.90	16.00	20.00



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (fz). Consulte o nosso app Calculadora de Usinagem para cálculos adicionais.

Produto		RE (mm)	P		M		K		N		S		H		CW (mm)	CWTOLL (mm)	CWTOLU (mm)
			vc (m/min)	fz (mm/tooth)	vc (m/min)	fz (mm/tooth)	vc (m/min)	fz (mm/tooth)	vc (m/min)	fz (mm/tooth)	vc (m/min)	fz (mm/tooth)	vc (m/min)	fz (mm/tooth)			

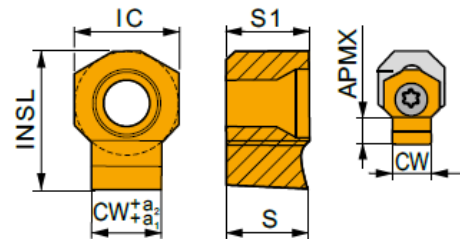


Geometria positiva para furação (duas arestas de corte).

HZ/2 14-14 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	14.00	0.10	0.21
HZ/2 14-14 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	14.00	0.00	0.02
HZ/2 14-14 P9	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	14.00	-0.06	-0.02
HZ/2 16-16 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	16.00	0.10	0.21
HZ/2 16-16 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	16.00	0.00	0.02
HZ/2 16-16 P9	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	16.00	-0.06	-0.02
HZ/2 18-18 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	18.00	0.10	0.21
HZ/2 18-18 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	18.00	0.00	0.02
HZ/2 18-18 P9	333TN	—	50	0.10	30	0.10	45	0.10	—	—	—	—	—	—	18.00	-0.06	-0.02
HZ/2 20-20 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	20.00	0.11	0.24
HZ/2 20-20 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	—	20.00	0.00	0.02
HZ/2 20-20 P9	333TN	—	50	0.10	30	0.10	45	0.10	—	—	—	—	—	—	20.00	-0.07	-0.02

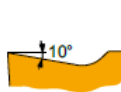
HZ

	IC	INSL	APMX	S	S1	CW
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
0604-30	6.000	7.5	1.60	4.66	4.76	3.00
0604-40	6.000	8.0	2.50	4.66	4.76	4.00
0604-50	6.000	8.0	3.00	4.66	4.76	5.00
1006-60	10.000	13.5	4.20	6.25	6.35	6.00
1006-80	10.000	13.5	5.20	6.25	6.35	8.00
1309-100	13.000	18.5	6.20	9.40	9.53	10.00
1309-120	13.000	18.5	7.20	9.40	9.53	12.00



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (fz). Consulte o nosso app Calculadora de Usinagem para cálculos adicionais.

Produto	RE	P		M		K		N		S		H		CW	CWTOLL	CWTOLU
		vc	fz	vc	fz	vc	fz	vc	fz	vc	fz	vc	fz			
	(mm)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(mm)	(mm)	(mm)



Geometria positiva para furação (uma aresta de corte).

HZ 1006-60 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	6.00	0.07	0.14
HZ 1006-60 D10	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	6.00	0.03	0.08
HZ 1006-60 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	6.00	0.00	0.01
HZ 1006-60 P9	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	6.00	-0.04	-0.01
HZ 1006-80 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	8.00	0.08	0.17
HZ 1006-80 D10	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	8.00	0.04	0.10
HZ 1006-80 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	8.00	0.00	0.02
HZ 1006-80 P9	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	8.00	-0.05	-0.02
HZ 1309-100 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	10.00	0.08	0.17
HZ 1309-100 D10	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	10.00	0.04	0.10
HZ 1309-100 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	10.00	0.00	0.02
HZ 1309-100 P9	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	10.00	-0.05	-0.02
HZ 1309-120 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	12.00	0.10	0.21
HZ 1309-120 D10	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	12.00	0.05	0.12
HZ 1309-120 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	12.00	0.00	0.02
HZ 1309-120 P9	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	12.00	-0.06	-0.02
HZ90 0604-30 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	3.00	0.06	0.12
HZ90 0604-30 D10	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	3.00	0.02	0.06
HZ90 0604-30 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	3.00	0.00	0.01
HZ90 0604-30 P9	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	3.00	-0.03	-0.01
HZ90 0604-40 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	4.00	0.07	0.14
HZ90 0604-40 D10	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	4.00	0.03	0.08
HZ90 0604-40 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	4.00	0.00	0.01
HZ90 0604-40 P9	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	4.00	-0.04	-0.01
HZ90 0604-50 C11	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	5.00	0.07	0.14
HZ90 0604-50 D10	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	5.00	0.03	0.08
HZ90 0604-50 H7	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	5.00	0.00	0.01
HZ90 0604-50 P9	333TN	—	50	0.10	30	0.09	45	0.10	—	—	—	—	—	5.00	-0.04	-0.01

BROCHAMENTO - VISÃO GERAL DOS SÍMBOLOS

SÍMBOLOS GERAIS

	Utilização principal		Acabamento - qualidade de superfície muito boa		Adequado para condições de trabalho estáveis
	Utilização possível		Usinagem média - qualidade de superfície boa		Adequado para condições de trabalho instáveis
			Desbaste - rugosidade de superfície ilimitada		Adequado para condições de trabalho muito instáveis

CARACTERÍSTICAS

	Modelagem interior		Opção de gama ampla universal		Aresta afiada
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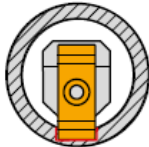
CARACTERÍSTICAS

	Modelagem interior		Opção de gama ampla universal		Aresta afiada
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OUTRO

	Torque de aperto do parafuso(Nm)		Alimentação de refrigerante interno
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SUPORTES PARA BROCHAMENTO - NAVEGADOR

PHZ		PHZ-2	
			
			
$\varnothing 9,5$ $\varnothing 24,7$		$\varnothing 44$ $\varnothing 58$	
HZ  03 04 05 06 08 10 12		HZ/2..  14 16 18 20	