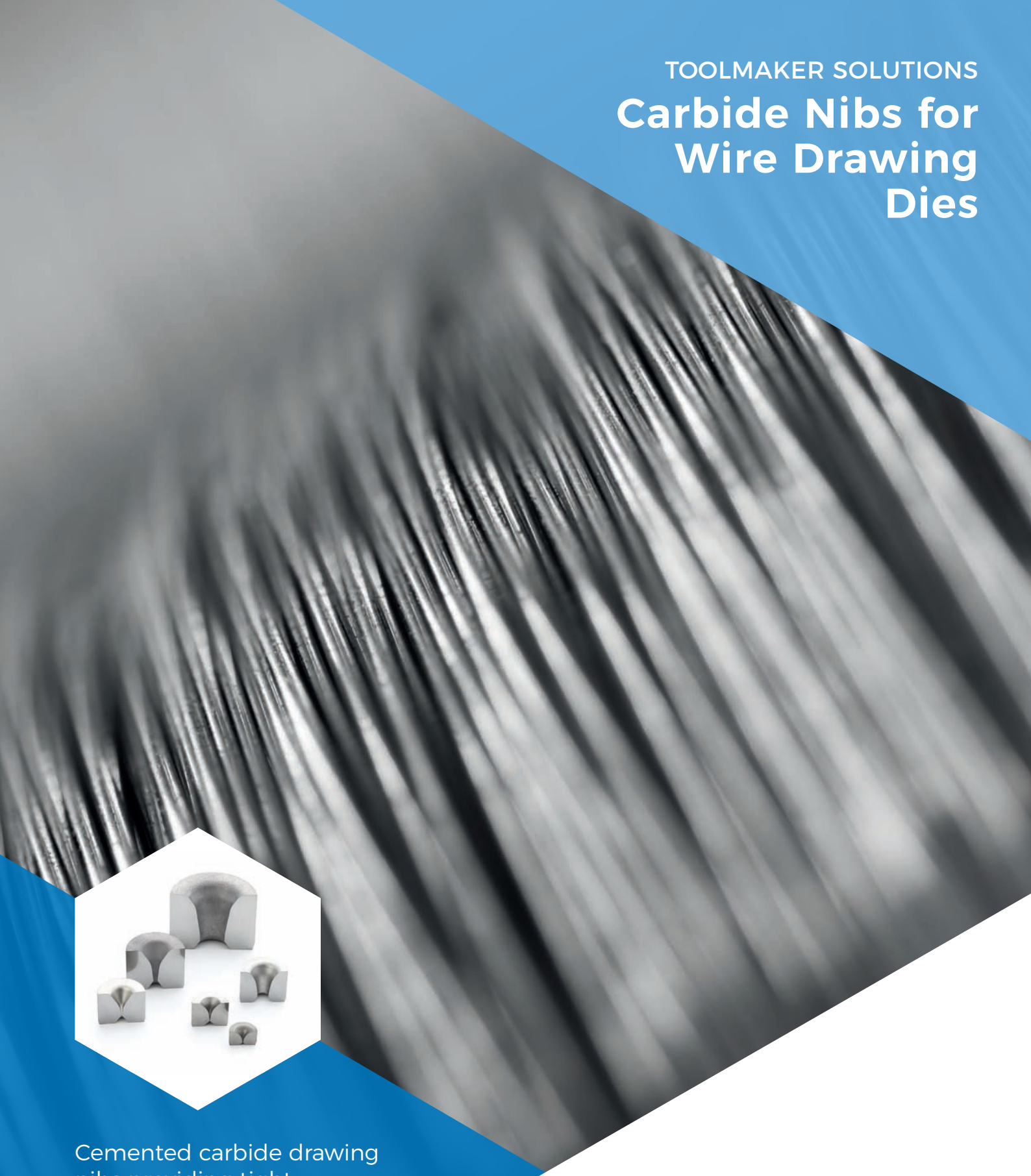
TOOLMAKER SOLUTIONS

Carbide Nibs for Wire Drawing Dies



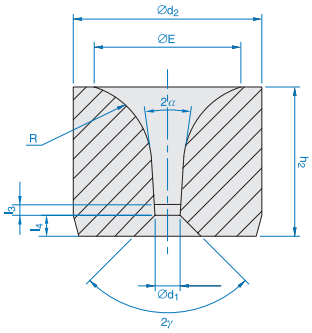
Cemented carbide drawing nibs providing tight dimensional tolerance and perfect coaxiality and meeting point

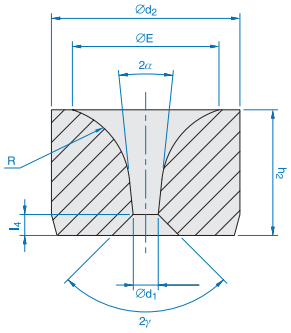
HYPERION
Materials & Technologies

HYPERION NIBS FOR WIRE DRAWING DIES

Hyperion Materials & Technologies cemented carbide drawing nibs are known for their impeccable geometry and unique and consistent grade composition. We offer not only a huge range of standard dimensions but also a superior quality in special designs.

Hyperion Cemented Carbide Standard ISO Nibs





NIB d_2 x h_2	Ordering Code / Grade	2α	ød$_1$						l_2	l_3	l_4	2β	R	øE	2γ
10x8	WDINR10...126F / **H6F**	12°	0.20 0.60 1.20 1.30 1.40 1.50 1.60 1.70 1.80	0.25 0.70 – – – – – – – –	0.30 0.80 – – – – – – – –	0.35 0.90 – – – – – – – –	0.40 1.00 – – – – – – – –	0.50 1.10 – – – – – – – –	–	0	1.80 1.80 1.75 1.66 1.73 1.75 1.60 1.66 1.55	–	5.7 5.7 5.7 5.0 5.0 5.0 5.2 4.7 4.8	6.8 6.8 7.1 7.1 7.1 7.1 7.3 6.9 7.1	90°
12x10	WDINR12...126F / **H6F**	12°	1.00 0.65 0.25	0.9 0.6 0.2	0.8 0.5 –	0.75 0.4 –	0.7 0.3 –	– – –	–		1.95 2.00 2.00	–	8.6 8.9 8.9	8.0	90°
14x12	WDINR14...126F / **H6F**	12°	0.60 0.90 1.00 1.10 1.20 1.30 1.70 1.80 2.45 2.60	0.70 – – – – 1.40 – 1.90 – 2.90	0.80 – – – – 1.50 – 2.00 – –	– – – – – – – 2.20 – –	– – – – – – – 2.40 – –	– – – – – – – – – –	–	0	2.40 2.58 2.40 2.59 2.40 2.55 2.53 2.40 3.21 2.40	–	10.5 10.3 10.5 10.3 10.5 10.0 10.0 10.5 10.0 10.5	10.0 10.0 10.0 10.2 10.0 10.0 10.0 10.0 10.4 10.0	75°
16x13	WDINR16...12F / **H6F**	12°	0.25 0.35 0.40 0.70 0.80 0.90 1.10 1.30 1.50 1.60 1.90 2.25 2.40 2.80 3.40	0.30 – 0.45 – – 1.00 1.20 1.40 – 1.70 – – 2.50 – –	– – 0.50 – – – – – – – – – – – –	– – 0.55 – – – – – – – – – – – –	– – 0.60 – – – – – – – – – – – –	– – – – – – – – – – – – – – –	–	0	3.00 3.00 3.00 3.00 3.00 3.00 3.00 2.90 2.90 2.90 2.90 2.85 3.00 3.00 3.00	–	10.6 10.6 10.6 10.6 10.6 10.3 10.3 10.0 10.0 10.0 9.7 9.7 9.2 9.0 8.6	12.1 12.2 12.3 12.5 12.0 12.2 12.4 12.0 12.2 12.3 12.0 12.4 12.0 11.7 11.8	75°
	WDINR16...14F / **H6F**	14°	2.50 2.60	– –	– –	– –	– –	– –	–	0.64 0.66	3.13 3.00	–	8.0 8.1	11.7 12.0	75°
	WDINR16...16F / **H6F**	16°	3.00	–	–	–	–	–	–	0.78	3.12	–	7.7	11.7	75°
	WDINR16...16F / **H6F**	16°	3.97	–	–	–	–	–	–	0.99	3.00	–	8.1	13.4	75°
20x17	WDINR20...12F / **H6F**	12°	0.70 0.80 0.90 1.00 1.10 1.30 1.40 1.60 1.80 2.00 2.40 2.65 2.70 3.05 3.20 3.60	– – – – 1.20 – – – – – – – – – – –	– – – – – – – – – – – – – – – –	– – – – – – – – – – – – – – – –	– – – – – – – – – – – – – – – –	– – – – – – – – – – – – – – – –	–	0	4.25 4.25 4.25 4.20 4.20 4.20 4.20 4.20 4.15 4.10 4.10 4.05 4.05 4.00 4.00 4.00	–	13.5 13.5 13.5 13.2 13.2 13.2 13.2 13.2 12.9 12.6 12.6 12.3 12.3 12.0 12.0 11.7	15.1 15.2 15.3 14.9 15.0 15.2 15.3 15.5 15.1 14.8 15.2 14.9 15.0 14.8 15.0 14.9	60°

With outer diameter as sintered or ground. All dimensions in mm unless otherwise noted.

HYPERION NIBS FOR WIRE DRAWING DIES

TOLERANCES FOR d_2 AND h_2

Nib $\varnothing d_2 \times h_2$	As Sintered				Ground*	
	$\varnothing d_2$		h_2		$\varnothing d_2$	
	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
10x8	9.65	±0.15	8.00	±0.20	9.55	+0.015/0
12x10	12.00	+0.040/+0.010	10.00		12.00	
14x12	13.91	±0.10	12.00	±0.30	13.70	+0.018/0
16x13	15.80	±0.15	13.00		15.54	
20x17	19.75	±0.15	17.00		19.50	+0.021/0

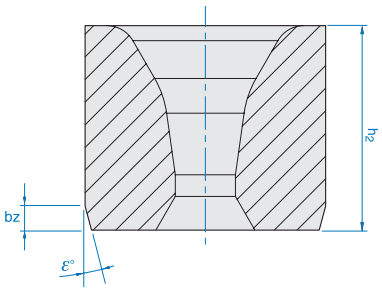
* Faces will not be ground.

TOLERANCES FOR $\varnothing d_1$

$\varnothing d_1$ From	To	Tolerance
0.10	0.29	0/-0.03
0.30	0.49	0/-0.04
0.50	0.69	0/-0.05
0.70	0.99	0/-0.06
1.00	1.50	0/-0.07
1.51	3.00	0/-0.08
3.01	5.09	0/-0.09

TOLERANCES FOR l_3 (nibs with round bearing)

l_3 From	To	Tolerance
	< 0.51	+0.25/0
0.51	1.02	+0.30/0
1.03	1.50	+0.40/0
1.51	2.50	+0.50/0
> 2.50		+0.60/0



All dimensions in mm unless otherwise noted.

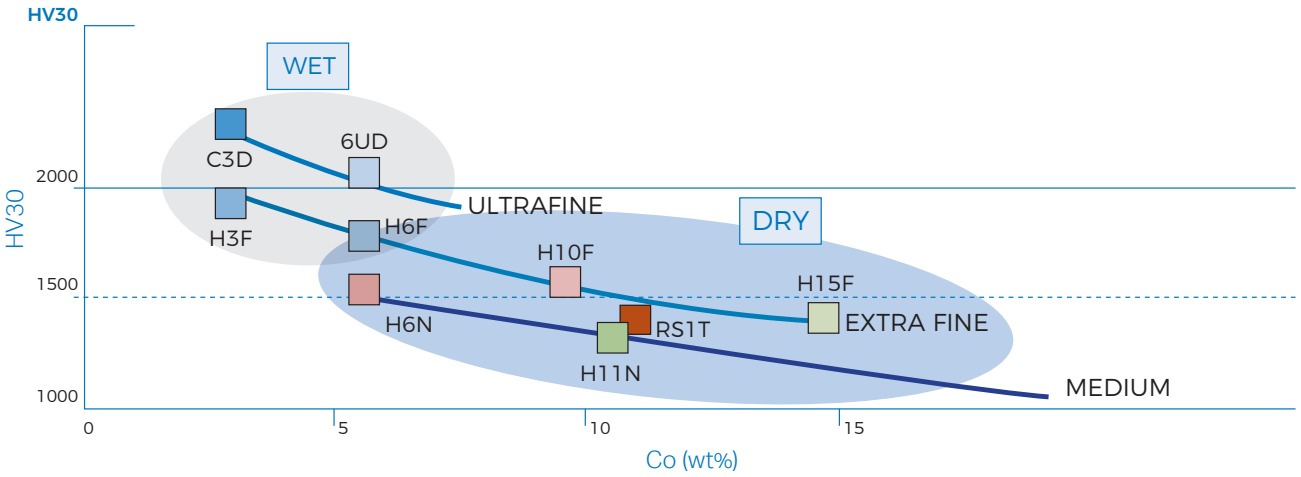
TOLERANCES FOR 2α AND 2γ

Angle	Tolerance
2α	± 1°
2γ	± 5°

CASING CHAMFER

h_2	ε°	bz	Tolerance
≤ 8	15°	12% h_2	±3% h_2
10, 12, 13	15°	11% h_2	±3% h_2
17	15°	8% h_2	±3% h_2

WIRE DRAWING STANDARD CEMENTED CARBIDE GRADES



ORDERING INFORMATION

When ordering, replace dots (...) in the ordering code with your required inner diameter found in the table.

ORDERING EXAMPLES:

Nib 16x13, 12°, $\varnothing d_1$ = 2.10 mm with outer diameter as sintered
Ordering code: WDSNR 160210 12MH6F
M in the code (WDSNR... 16MH6F) = "meeting point" = > l_3 = 0
When ordering nibs with ground outer diameter, replace the R in the code with a G = WDSNG...

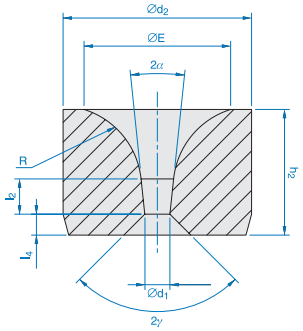
Nib 25x20, 16°, $\varnothing d_1$ = 4.80 mm with outer diameter as sintered
Ordering code: WDSNR 250480 16BH6N
B in the code (WDSNR...16BH6N) = "bearing length" = > l_3 = 0

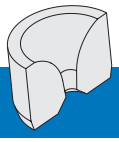
ORDERING CODE KEY

WD	S	N	R	16	0210	12	M	H6F
Wire drawing	Standard	Nibs	R = As sintered G = Ground	Outside diameter	Nominal hole diameter	Drawing angle	M = Meeting point B = Bearing length	Carbide grade

HYPERION NIBS FOR WIRE DRAWING DIES

Hyperion Cemented Carbide Standard JIS Nibs





JIS
9x6 to 20x14 Nibs

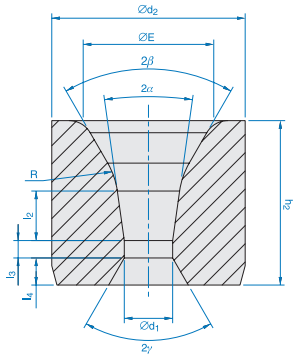
NIB d_2 x h_2	Ordering Code / **Grade**	2α	Ød$_1$						l_2	l_3	l_4	2β	R	ØE	2γ
9x6	WDJNR09...12M / **H3F**	12°	0.10 0.12 0.15 0.16 0.17 0.20 0.21 0.25 0.26 0.27 0.34 0.55 0.85 1.00 1.20	– 0.13 – – 0.18 – 0.22 – – 0.28 0.35 0.60 0.90 1.10 1.30	– 0.14 – – 0.19 – 0.23 – – 0.29 0.40 0.65 – – 1.40	– – – – – – 0.24 – – 0.30 0.45 0.70 – – 1.50	– – – – – – – – – 0.32 0.50 0.75 – – –	– – – – – – – – – 0.33 – 0.80 – – –	1.0 1.7 1.7 1.7 2.6	0	1.0	–	5.0 3.9	6.2 6.0 6.2 6.0 6.1 6.2 6.1 6.2 6.1 6.2 6.2 6.6 6.6 7.0 7.0	90°
12x8	WDJNR12...12M / **H3F**	12°	0.50 0.80	0.55 0.85	0.60 0.90	0.65 0.95	0.70 –	0.75 –	6.8 $(l_1 + l_2)$	0	–	–	5.2	8.1+d_1	–
	WDJNR12...12B / **H3F**	12°	1.00 1.50	1.05 1.60	1.10 –	1.20 –	1.30 –	1.40 –	5.9 $(l_1 + l_2)$	0.9	–	–	4.0	7.1+d_1	–
			1.70	1.80	1.90	–	–	–	5.7 $(l_1 + l_2)$	1.1			3.9		
			2.00	–	–	–	–	–					3.3	8.5	
			2.10	–	–	–	–	–	5.5 $(l_1 + l_2)$	1.3				6.5+d_1	
	WDJNR12...16M / **H3F**	16°	0.50 0.90	0.55 0.95	0.60 –	0.70 –	0.75 –	0.80 –	6.8 $(l_1 + l_2)$	0	–	–	5.4	8.1+d_1	–
	WDJNR12...16B / **H3F**	16°	1.70	1.80	1.90	–	–	–	5.7 $(l_1 + l_2)$	1.1			4.0	7.1+d_1	
			2.00	–	–	–	–	–					3.5	8.0	
			2.10	–	–	–	–	–	5.5 $(l_1 + l_2)$	1.3				6.0+d_1	
15x10	WDJNR15...12M / **H6F**	12°	0.50 0.90	0.70 –	0.75 –	0.80 –	– –	– –	8.5 $(l_1 + l_2)$	0	–	–	6.5	10.6+d_1	–
	WDJNR15...12B / **H6F**	12°	1.00 1.60	1.10 1.70	1.20 1.80	1.30 1.90	1.40 –	1.50 –	7.6 $(l_1 + l_2)$ 7.4 $(l_1 + l_2)$	0.9 1.1	–	–	5.2	9.7+d_1	–
			2.00	–	–	–	–	–					4.6	10.6	
			2.10	2.20	2.30	2.40	2.50	–	7.2 $(l_1 + l_2)$	1.3				8.7+d_1	
			2.60	2.70	2.80	–	–	–	7.1 $(l_1 + l_2)$	1.4					
			3.00	–	–	–	–	–					4.1	10.6	
			3.10	–	–	–	–	–	6.9 $(l_1 + l_2)$	1.6				7.6+d_1	
	WDJNR15...16B / **H6F**	16°	1.60	1.70	1.80	1.90	–	–	7.4 $(l_1 + l_2)$	1.1	–	–	4.8	11.5	–
			2.00	–	–	–	–	–						8.7+d_1	
			2.10	2.20	2.30	2.40	2.50	–	7.2 $(l_1 + l_2)$	1.3					
			2.60	2.70	2.80	2.90	–	–	7.1 $(l_1 + l_2)$	1.4			4.3	10.7	
			3.00	–	–	–	–	–						7.7+d_1	
			3.10	3.20	3.30	3.40	3.50	–	6.9 $(l_1 + l_2)$	1.6					
			3.60	3.70	3.80	3.90	–	–	6.7 $(l_1 + l_2)$	1.8			4.6	10.6	
			4.00	–	–	–	–	–						6.6+d_1	
			4.10	4.30	4.40	4.50	–	–	6.5 $(l_1 + l_2)$	2.0					
			4.60	4.70	4.80	–	–	–	6.6 $(l_1 + l_2)$	2.2					
20x14	WDJNR20...16B / **H6N**	16°	1.70	1.80	–	–	–	–	11.0 $(l_1 + l_2)$	1.1	–	–	8.1	13.7+d_1	–
			2.00	–	–	–	–	–	10.6 $(l_1 + l_2)$				7.6	12.7+d_1	
			2.10	2.20	2.30	2.40	2.50	–		1.3					75°
			2.60	2.70	2.80	2.90	–	–		1.4					
			3.00	–	–	–	–	–					7.1	11.7+d_1	
			3.10	3.20	3.30	3.40	3.50	–		1.6					
			3.60	3.70	3.80	3.90	–	–		1.8					
			4.00	–	–	–	–	–					7.3	10.7+d_1	
			4.10	4.20	4.30	4.40	4.50	–	10.2 $(l_1 + l_2)$	2.0					
			4.60	4.70	4.80	4.90	–	–		2.2					
			5.00	–	–	–	–	–					7.9	9.6+d_1	
			5.20	5.40	5.50	–	–	–		2.3					
			6.00	–	–	–	–	–		2.5					

All dimensions in mm unless otherwise noted.

Standard HYPERION stock

HYPERION NIBS FOR WIRE DRAWING DIES

Hyperion Cemented Carbide Standard DIN Nibs



DIN
12x10 to 30x24 Nibs

NIB d_2 x h_2	Ordering Code / **Grade**	2α	ød$_1$						l_2	l_3	l_4	2β	R	ØE	2γ
12x10	WDSNR12...12M / **H6F**	12°	0.10 0.35 0.40	0.20 – 0.50	0.30 – 0.60	– – 0.70	– – 0.80	– – 0.90	2.9	0	2.1 2.2 2.1	90°	6.5	7.0 6.8 7.0	90°
	WDSNR12...14M / **H6F**	14°	1.00 1.60 1.80 2.40	1.10 1.70 1.90 2.50	1.20 – 2.00 –	1.30 – 2.10 –	1.40 – 2.20 –	1.50 – 2.30 –	3.6	0	1.9	90°	6.5	7.6 7.6 8.2 8.2	90°
16x13	WDSNR16...08M / **H6F**	8°	0.70 0.80 0.90 1.00 1.10 1.20 1.30	– – – – 1.15 – 1.50	– – – – – – –	– – – – – – –	– – – – – – –	– – – – – – –	2.8 2.8 2.8 3.4 2.8 3.64 2.8	0	2.6 2.7 2.6 2.5 2.6 2.5 2.6	60°	8.0	8.5 8.0 8.5 7.9 8.5 7.8 8.5	75°
	WDSNR16...12M / **H6F**	12°	0.20 0.60 1.00 1.60 1.70 2.90 3.60 3.80	0.30 0.70 1.10 – 1.80 – – –	0.40 0.80 1.20 – 1.90 – – –	0.50 0.90 1.30 – 2.10 – – –	– – 1.40 – 2.25 – – –	– – 1.50 – – – – –	2.5 3.0 3.3 3.3 3.6 3.9 4.5 4.0	0	2.9 2.9 2.6 2.6 2.6 2.3 2.3 2.3	60°	8.0	8.2 8.2 8.7 8.7 8.7 10.0 10.0 10.0	75°
	WDSNR16...14M / **H6F**	14°	1.00 1.60	1.10 1.70	1.20 –	1.30 –	1.40 –	1.50 –	3.4	0	2.6	60°	8.0	8.7	75°
	WDSNR16...14B / **H6F**	14°	1.80 2.30 2.90	1.90 2.40 –	2.00 2.50 –	2.10 2.60 –	2.20 2.70 –	– 2.80 –	3.0 2.8 2.8	50% d_1	2.3	60°	8.0	9.3	75°
	WDSNR16...16B / **H6N**	16°	3.00 3.60 4.20 4.80	3.20 3.80 4.40 5.00	3.40 4.00 4.60 5.20	– – – –	– – – –	– – – –	3.5	1.5 1.6 1.7 1.8	2.3	60°	8.0	10.5	75°
20x17	WDSNR20...12M / **H6N**	12°	1.20 1.40 2.00 3.05 3.95 4.25 4.90	1.30 1.50 – 3.20 – 4.40 –	– 1.60 – 3.35 – 4.55 –	– 1.80 2.60 3.50 – 4.70 –	– – 2.70 3.65 – – –	– – 2.90 – – – –	4.9 5.7 7.0 6.4 6.4 7.2 6.2	0	3.9 3.9 3.1 3.1 3.1 3.1 3.97	60°	8.0	10.4 10.4 10.4 12.3 12.3 12.3 12.5	60°
	WDSNR20...14B / **H6N**	14°	1.80 2.00 2.50 3.00 3.65	– 2.10 2.60 – 3.85	– 2.20 2.70 – –	– 2.30 2.80 – –	– 2.40 – – –	– – – – –	5.6 6.2 5.8 5.0 5.0	50% d_1 50% d_1 50% d_1 1.5 1.6	3.5 2.8 2.8 2.8 2.8	60°	8.0	10.3 10.3 10.3 12.2 12.2	60°
	WDSNR20...16B / **H6N**	16°	3.20 3.60 4.20 5.00 6.00 7.20 7.40	3.40 3.80 4.40 5.20 6.20 – 7.60	– 4.00 4.60 5.40 6.40 – 7.80	– – 4.80 5.60 6.60 – –	– – – 5.80 6.80 – –	– – – – 7.00 – –	5.3 5.7 6.2 6.2 6.2 6.2 6.2	1.5 1.6 1.7 1.8 2.0 2.0 2.0	2.8	60°	8.0	12.2 12.2 12.2 13.0 13.8 13.8 15.2	60°

Standard HYPERION stock

To be continue on the next page →

HYPERION NIBS FOR WIRE DRAWING DIES

Hyperion Cemented Carbide Standard DIN Nibs (continued)

NIB d_2 x h_2	Ordering Code / **Grade**	2α	⌀d_1						l_2	l_3	l_4	2β	R	⌀E	2γ
25x20	WDSNR25...12M / **H6N**	12°	2.20	–	–	–	–	–	6.7	0	4.2	60°	8.0	12.8	60°
			2.40	–	–	–	–	–	7.0					12.8	
			2.60	–	–	–	–	–	7.0					12.8	
			2.80	–	–	–	–	–	7.5					12.8	
			3.00	–	–	–	–	–	5.8					12.8	
			3.25	–	–	–	–	–	7.5					12.8	
			3.65	–	–	–	–	–	7.0					14.0	
			3.80	–	–	–	–	–	6.5					14.5	
	WDSNR25...16B / **H6N**	16°	3.80	–	–	–	–	–	5.3	1.5	4.0	60°	8.0	14.5	60°
			4.00	4.20	–	–	–	–	5.6	1.6	4.0			15.0	
			4.40	4.60	–	–	–	–	6.5	1.6	4.0			15.0	
			4.80	–	–	–	–	–	4.9	1.7	4.0			15.0	
			–	5.20	5.40	–	–	–	5.9	1.7	4.0			15.0	
			–	–	–	–	–	–	5.9	1.8	4.0			15.0	
			5.80	6.00	–	–	–	–	6.9	1.8	3.7			15.0	
			6.20	6.40	6.60	6.80	–	–	6.3	2.0	3.7			16.3	
			7.00	7.20	7.40	–	–	–	6.8	2.0	3.4			16.3	
			7.60	7.80	8.00	8.20	8.40	–	6.8	2.0	3.4			17.3	
			8.60	8.80	9.00	–	–	–	7.8	2.0	3.4			17.3	
30x24	WDSNR30...16B / **H6N**	16°	2.50	–	–	–	–	–	5.8	1.6	6.1	60°	8.0	14.9	60°
			2.80	–	–	–	–	–	6.4	1.6	5.8			15.0	
			3.20	–	–	–	–	–	5.8	1.6	5.8			16.0	
			3.50	–	–	–	–	–	6.3	1.6	5.6			16.0	
			3.80	–	–	–	–	–	5.8	1.6	5.4			17.0	
			4.00	–	–	–	–	–	5.7	1.6	5.2			17.5	
			4.20	–	–	–	–	–	6.0	1.6	5.2			17.5	
			4.40	–	–	–	–	–	5.2	1.6	5.0			17.5	
			4.60	–	–	–	–	–	7.0	1.6	4.8			17.5	
			5.00	5.20	–	–	–	–	8.4	1.7	4.6			17.2	
			–	5.80	–	–	–	–	7.4	1.8	4.6			18.7	
			6.00	–	6.40	6.60	–	–	6.9	2.0	4.6			18.7	
			6.80	–	–	–	–	–	8.4	2.0	4.6			18.7	
			7.40	7.60	–	–	–	–	9.0	2.0	4.6			18.7	
			7.80	–	–	–	–	–	8.1	2.0	4.6			18.7	
			–	–	8.60	–	–	–	9.3	2.0	4.6			18.7	
			8.80	9.00	–	–	–	–	10.4	2.0	4.6			18.7	
			–	–	–	–	–	–	11.2	2.0	4.6			18.7	
			9.60	–	–	–	–	–	9.5	2.2	4.6			19.8	
			10.00	10.20	–	–	–	–	10.0	2.2	4.6			19.8	
			–	–	–	11.00	–	–	9.6	2.3	4.6			21.2	
			–	11.40	–	–	–	–	10.6	2.4	4.6			21.2	
			11.80	12.00	–	–	–	–	9.9	2.4	4.6			21.2	

With outer diameter as sintered or ground. All dimensions in mm unless otherwise noted.

Standard HYPERION stock

HYPERION NIBS FOR WIRE DRAWING DIES

Hyperion Cemented Carbide Large Standard Nibs

Nib $Ød_2$ x h_2	$Ød_1$ (recommended) nominal		Grades Available
	minimum	maximum	
35x24	12	16	H6N / H11N
40x24	15	19	H6N / H11N
45x25	18	22	H6N / H11N
50x25	21	25	H6N / H11N
55x27	24	28	H6N / H11N
60x27	27	31	H6N / H11N
65x27	29	34	H6N / H11N

Nib $Ød_2$ x h_2	$Ød_1$ (recommended) nominal		Grades Available
	minimum	maximum	
70x30	32	37	H11N
75x30	35	41	H11N
80x30	39	45	H11N
85x33	43	49	H11N
90x33	47	53	H11N
100x35	51	61	H11N

TOLERANCES FOR d_2 AND h_2

Nib d_2 x h_2	As Sintered				Ground*	
	$Ød_2$		h_2		$Ød_2$	
	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
9x6	9.00	+0.25/+0.05	6.00	±0.20	9.00	+0.015/0
12x10	12.00	+0.32/+0.12	10.00		12.00	+0.018/0
16x13	16.00	0/-0.30	13.00	±0.30	15.65	
20x17	20.00	+0.10/-0.30	17.00		19.65	+0.021/0
25x20	25.00	+0.50/+0.10	20.00	±0.40	25.00	
30x24	30.00	+0.60/+0.20	24.00		30.00	

* Faces will not be ground.

TOLERANCES FOR $Ød_2$

$Ød_1$ From	To	Tolerance
0.10	0.29	0/-0.03
0.30	0.49	0/-0.04
0.50	0.69	0/-0.05
0.70	0.99	0/-0.06
1.00	1.50	0/-0.07
1.51	3.00	0/-0.08
3.01	5.09	0/-0.09
5.10	7.09	0/-0.10
7.10	10.14	0/-0.12
10.15	12.00	0/-0.15

TOLERANCES FOR l_3 (nibs with round bearing)

l_3 From	To	Tolerance
< 1.02		+0.15/-0.15
1.03	1.50	+0.20/-0.20
1.51	2.50	+0.25/-0.25

TOLERANCES FOR 2α AND 2γ

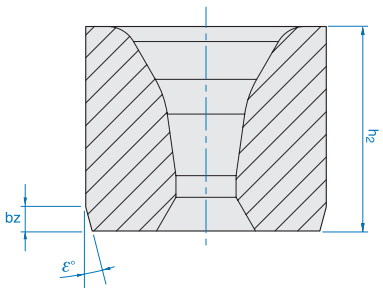
Angle	Tolerance
2α	± 1°
2γ	± 5°

CARBIDE GRADE PROPERTIES

Carbide Grade	Co (%wt)	Hardness (HV30)	Density (g/cm³)	Carbide Grain Size
6UD	6	2050	14.75	Ultrafine
H3F	3	1925	15.30	Extra fine
H6F	6	1775	14.90	Extra fine
H6N	6	1600	15.00	Fine
H10F	10	1600	14.50	Extra fine
H11N	11	1250	14.40	Fine
H15F	15	1380	13.95	Extra fine

CASING CHAMFER

Nib $Ød_2$ x h_2	ε°	Height of Chamfer (bz)	
		Nominal	Tolerance
9x6	15°	1.3	+0.15/-0.15
12x10		1.1	+0.30/-0.30
16x13		1.5	+0.30/-0.30
20x17		1.5	+0.30/-0.30
25x20		2.1	+0.30/-0.30
30x24	20°	2.4	+0.40/-0.40



All dimensions in mm unless otherwise noted.

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