



# HSS-DRILLS

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## Center drills

Form	Cutting direction		Tool material	Surface	Standard	Diameter range (mm)	Catalog no.	Discount group	Standard range, page
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### Center drills without flat

	A	right-hand	HSS	bright	DIN 333	0,500 - 12,500	<b>71600</b>	132	367
	A	left-hand	HSS	bright	DIN 333	0,500 - 8,000	<b>71601</b>	138	367
	R	right-hand	HSS	bright	DIN 333	0,500 - 10,000	<b>71602</b>	138	368
	R	right-hand	HSS	TiN	DIN 333	0,800 - 6,300	<b>61602</b>	139	368
	A	right-hand	reinf. neck HSS	bright	Stock std.	1,000 - 6,300	<b>71605</b>	138	369
	B	right-hand	HSS	bright	DIN 333	1,000 - 6,300	<b>71604</b>	138	370

### Center drills with flat

	A	right-hand	HSS	bright	Stock std.	1,600 - 6,300	<b>71607</b>	138	371
	R	right-hand	HSS	bright	Stock std.	1,600 - 8,000	<b>71609</b>	138	371

## Center drills

### Center drills without flat

#### Catalog no. 71600



Standard drill for producing centre holes acc. to DIN 332, Sheet 1, form A (without protecting chamfer).  
Center drills with  $\varnothing$  0.5 and 0.8 mm are only single-sided.

### DIN 333

Tool material	<b>HSS</b>
Surface	bright
Form	A
Cutting direction	right-hand
Point grinding	Relieved cone
Point angle °	118
Web thinned $\geq \varnothing$	1.60
Tolerance on $\varnothing$	
tol. on body $\varnothing$ : h7 (to DIN h9)	
tol. on pilot $\varnothing$ (to new standard):	
$\varnothing$ 0,50 – 2,50	= + 0,14 mm
$\varnothing$ 3,15 – 5,00	= + 0,18 mm
$\varnothing$ 6,30 – 10,0	= + 0,22 mm
$\varnothing$ 12,50	= + 0,27 mm
Web thinning: to DIN 1412, form A	

### Center drills without flat

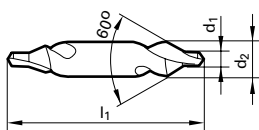
#### Catalog no. 71601



Standard drill for producing centre holes acc. to DIN 332, Sheet 1, form A (without protecting chamfer).  
Center drills with  $\varnothing$  0.5 and 0.8 mm are only single-sided.

### DIN 333

Tool material	<b>HSS</b>
Surface	bright
Form	A
Cutting direction	left-hand
Point grinding	Relieved cone
Point angle °	118
Web thinned $\geq \varnothing$	1.60
Tolerance on $\varnothing$	
tol. on body $\varnothing$ : h7 (to DIN h9)	
tol. on pilot $\varnothing$ (to new standard):	
$\varnothing$ 0,50 – 2,50	= + 0,14 mm
$\varnothing$ 3,15 – 5,00	= + 0,18 mm
$\varnothing$ 6,30 – 10,0	= + 0,22 mm
$\varnothing$ 12,50	= + 0,27 mm
Web thinning: to DIN 1412, form A	



Catalog no.	71600	71601
Tool material	<b>HSS</b>	<b>HSS</b>
Discount group	132	138
Cutting direction	right-hand	left-hand
Surface	bright	bright

d1	d2	l1	price per piece	
mm	mm	mm		
0.500	3.150	25.00	●	●
0.800	3.150	25.00	●	●
1.000	3.150	31.50	●	●
1.250	3.150	31.50	●	●
1.600	4.000	35.50	●	●
2.000	5.000	40.00	●	●
2.500	6.300	45.00	●	●
3.150	8.000	50.00	●	●
4.000	10.000	56.00	●	●
5.000	12.500	63.00	●	●
6.300	16.000	71.00	●	●
8.000	20.000	80.00	●	●
10.000	25.000	100.00	●	
12.500	31.500	125.00	●	

## Center drills

### Center drills without flat

#### Catalog no. 71602



Special purpose drill for producing centre holes to DIN 332, sheet 1, form R (radiused). Special features of these tools are: 1. high fracture-resistant properties. 2. precise concentricity of the point in relation to the body. 3. radiused form providing a protected centre hole.

Center drills with  $\varnothing$  0.5 and 0.8 mm are only single-sided.

### DIN 333

Tool material	<b>HSS</b>
Surface	bright
Form	<i>R</i>
Cutting direction	right-hand
Point grinding	Relieved cone
Point angle °	118
Web thinned $\geq \varnothing$	1.60
Tolerance on $\varnothing$	
tol. on body $\varnothing$ : h7 (to DIN h9)	
tol. on pilot $\varnothing$ (to new standard):	
$\varnothing$ 0,50 – 2,50	= + 0,14 mm
$\varnothing$ 3,15 – 5,00	= + 0,18 mm
$\varnothing$ 6,30 – 10,0	= + 0,22 mm
$\varnothing$ 12,50	= + 0,27 mm
Web thinning: to DIN 1412, form A	

### Center drills without flat

#### Catalog no. 61602

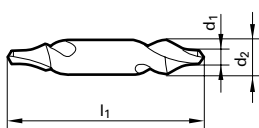


Special purpose drill for producing centre holes to DIN 332, sheet 1, form R (radiused). Special features of these tools are: 1. high fracture-resistant properties. 2. precise concentricity of the point in relation to the body. 3. radiused form providing a protected centre hole.

Center drills with  $\varnothing$  0.5 and 0.8 mm are only single-sided.

### DIN 333

Tool material	<b>HSS</b>
Surface	TiN
Form	<i>R</i>
Cutting direction	right-hand
Point grinding	Relieved cone
Point angle °	118
Web thinned $\geq \varnothing$	1.60
Tolerance on $\varnothing$	
tol. on body $\varnothing$ : h7 (to DIN h9)	
tol. on pilot $\varnothing$ (to new standard):	
$\varnothing$ 0,50 – 2,50	= + 0,14 mm
$\varnothing$ 3,15 – 5,00	= + 0,18 mm
$\varnothing$ 6,30 – 10,0	= + 0,22 mm
$\varnothing$ 12,50	= + 0,27 mm
Web thinning: to DIN 1412, form A	



Catalog no.	71602	61602
Tool material	<b>HSS</b>	<b>HSS</b>
Discount group	138	139
Cutting direction	right-hand	right-hand
Surface	bright	TiN

d1	d2	l1	price per piece	
mm	mm	mm		
0.500	3.150	25.00	●	
0.800	3.150	25.00	●	
1.000	3.150	31.50	●	●
1.250	3.150	31.50	●	●
1.600	4.000	35.50	●	●
2.000	5.000	40.00	●	●
2.500	6.300	45.00	●	●
3.150	8.000	50.00	●	●
4.000	10.000	56.00	●	●
5.000	12.500	63.00	●	●
6.300	16.000	71.00	●	●
8.000	20.000	80.00	●	
10.000	25.000	100.00	●	

## Center drills

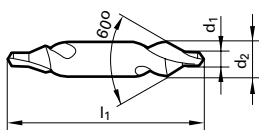
### Center drills without flat

#### Catalog no. 71605



Special purpose drill for producing centre holes to DIN 332, sheet 1, form A (without protecting chamfer), except for an annular groove at the junction of the countersink and the drilled hole. Special features of these tools are: high fracture-resistant properties, specially strengthened form at the junction of the pilot and body which permits high metal removal rates, special form cuts annular groove which acts as a reservoir for the lubricant.

Stock std.	reinf. neck
Tool material	HSS
Surface	bright
Form	A
Cutting direction	right-hand
Point grinding	Relieved cone
Point angle °	118
Web thinned $\geq \emptyset$	1.60
Tolerance on $\emptyset$	
tol. on body $\emptyset$ : h7 (to DIN h9)	
tol. on pilot $\emptyset$ (to new standard):	
$\emptyset$ 0,50 – 2,50	= + 0,14 mm
$\emptyset$ 3,15 – 5,00	= + 0,18 mm
$\emptyset$ 6,30 – 10,0	= + 0,22 mm
$\emptyset$ 12,50	= + 0,27 mm
Web thinning: to DIN 1412, form A	



Catalog no.	71605
Tool material	HSS
Discount group	138
Cutting direction	right-hand
Surface	bright

d1	d2	l1	price per piece
mm	mm	mm	
1.000	3.150	31.50	●
1.250	3.150	31.50	●
1.600	4.000	35.50	●
2.000	5.000	40.00	●
2.500	6.300	45.00	●
3.150	8.000	50.00	●
4.000	10.000	56.00	●
5.000	12.500	63.00	●
6.300	16.000	71.00	●

## Center drills

### Center drills without flat

#### Catalog no. 71604

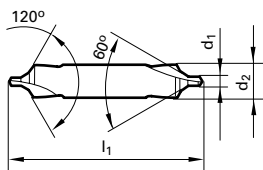


Special purpose drill for producing centre holes to DIN 332, Sheet 1, form B (with protecting countersink of 120°).

### DIN 333

Tool material	<b>HSS</b>
Surface	bright
Form	<b>B</b>
Cutting direction	right-hand
Point grinding	Relieved cone
Point angle °	118
Web thinned $\geq \emptyset$	1.60
Tolerance on $\emptyset$	

tol. on body  $\emptyset$ : h7 (to DIN h9)  
 tol. on pilot  $\emptyset$  (to new standard):  
 $\emptyset$  0,50 – 2,50 = + 0,14 mm  
 $\emptyset$  3,15 – 5,00 = + 0,18 mm  
 $\emptyset$  6,30 – 10,0 = + 0,22 mm  
 $\emptyset$  12,50 = + 0,27 mm  
 Web thinning: to DIN 1412, form A



Catalog no.	71604
Tool material	<b>HSS</b>
Discount group	138
Cutting direction	right-hand
Surface	bright

d1	d2	l1	price per piece
mm	mm	mm	
1.000	4.000	35.50	●
1.250	5.000	40.00	●
1.600	6.300	45.00	●
2.000	8.000	50.00	●
2.500	10.000	56.00	●
3.150	11.200	60.00	●
4.000	14.000	67.00	●
5.000	18.000	75.00	●
6.300	20.000	80.00	●

## Center drills

### Center drills with flat

#### Catalog no. 71607



Special purpose drill for producing centre holes to DIN 332, sheet 1, form A (without protecting chamfer). For centering and facing machines where the end face is required to be dressed and centred in the same operation.

### Stock std.

Tool material	<b>HSS</b>
Surface	bright
Form	<b>A</b>
Cutting direction	right-hand
Point grinding	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Tolerance on Ø	
tol. on body Ø: h7 (to DIN h9)	
tol. on pilot Ø (to new standard):	
Ø 0,50 – 2,50	= + 0,14 mm
Ø 3,15 – 5,00	= + 0,18 mm
Ø 6,30 – 10,0	= + 0,22 mm
Ø 12,50	= + 0,27 mm
Web thinning: to DIN 1412, form A	

### Center drills with flat

#### Catalog no. 71609

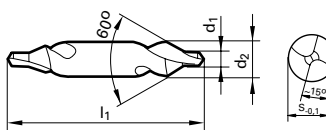


Special purpose drill for producing centre holes to DIN 332, sheet 1, form R (radiused). For centering and facing machines where the end face is required to be dressed and centered in the same operation. Special features of these tools are:

1. high fracture-resistant properties.
2. precise concentricity of the point in relation to the body.
3. radiused form providing a protected centre hole.

### Stock std.

Tool material	<b>HSS</b>
Surface	bright
Form	<b>R</b>
Cutting direction	right-hand
Point grinding	Relieved cone
Point angle °	118
Web thinned ≥Ø	1.60
Tolerance on Ø	
tol. on body Ø: h7 (to DIN h9)	
tol. on pilot Ø (to new standard):	
Ø 0,50 – 2,50	= + 0,14 mm
Ø 3,15 – 5,00	= + 0,18 mm
Ø 6,30 – 10,0	= + 0,22 mm
Ø 12,50	= + 0,27 mm
Web thinning: to DIN 1412, form A	



Catalog no.	71607	71609
Tool material	<b>HSS</b>	<b>HSS</b>
Discount group	138	138
Cutting direction	right-hand	right-hand
Surface	bright	bright

d1	d2	l1	price per piece	
mm	mm	mm		
1.600	4.000	35.50	●	●
2.000	5.000	40.00	●	●
2.500	6.300	45.00	●	●
3.150	8.000	50.00	●	●
4.000	10.000	56.00	●	●
5.000	12.500	63.00	●	●
6.300	16.000	71.00	●	●
8.000	20.000	80.00	●	●