

12101 - 12107

Countersinks



Type
Multiple flutes, right-hand cut, straight shank (shape a).

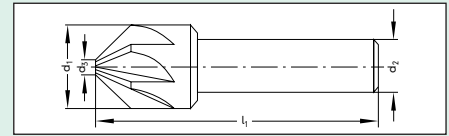
Application
For deburring, chamfering and counterboring of boreholes in standard-duty materials such as: steel, cast iron, non-ferrous and light metals.

Quality
HSS.

12101
Type
DIN 334, countersink angle 60°.

12105
Type
DIN 335, countersink angle 90°.

12107
Type
DIN 347, countersink angle 120°.



60°				
d ₁	d ₂ h ₉	l ₁	d ₃	12101 ...
mm	mm	mm	mm	
8	8	50	1,5	203
10	8	50	1,8	204
12,5	8	50	2,0	205
16	10	60	3,2	206
20	10	63	5,0	207
25	12	72	7,0	208

90°				
d ₁	d ₂ h ₉	l ₁	d ₃	12105 ...
mm	mm	mm	mm	
8	8	48	1,5	102
10	8	48	1,8	103
12,5	8	48	2,0	104
16	10	56	3,2	105
20	10	60	5,0	106
25	12	70	7,0	107
31,5	16	75	9,0	108

120°				
d ₁	d ₂ h ₉	l ₁	d ₃	12107 ...
mm	mm	mm	mm	
16	10	53	3,2	101

12115

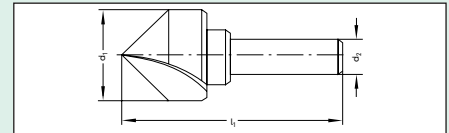
Countersinks and Deburrers



Type
Countersink angle 90°, single flute, right-hand cut, straight shank (shape A).

Quality
HSS-E.

Countersink range				HSS-E
mm	d ₁ mm	d ₂ mm	l ₁ mm	12115 ...
1 - 8	8	6	50	102
1 - 10	10	6	50	103
2 - 12	12	8	56	104
2 - 16	16	10	60	105
2 - 20	20	10	63	106
2 - 25	25	10	67	107
3 - 30	30	12	70	108
4 - 40	40	15	92	109
5 - 50	50	15	100	110



12205 - 12207

Countersinking and Deburring Tools

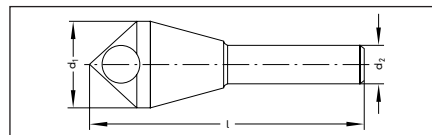


Type
Countersink angle 90°, right-hand cut, straight shank.

Application
For burr and chatter-free countersinking and deburring holes for nearly all materials.

12205
Quality
HSS.

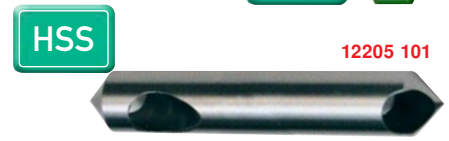
12207
Quality
HSS/TiN-coated.



Countersink range	d ₁ mm	d ₂ mm	l mm	HSS		HSS/TiN	
				12205	12207
1 - 4	6,35	6,35	45	101			
2 - 5	10	6	46	102		102	
5 - 10	14	8	48,5	103		103	
10 - 15	21	10	65	104		104	
15 - 20	27,5	15	85	105		105	
20 - 25	35	15	102	106			

12205																	
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
25-40	10-30	25-80	26-30	25-28	18-25	6-10	5-8	2-5	-	-	-	-	4-10	4-10	4-10	9-15	10-60

12207																	
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
30-80	30-50	30-100	32-36	30-34	22-30	7-12	6-10	3-6	-	-	-	-	5-12	5-12	5-12	10-25	10-60



Countersinks and deburrers

12240 - 12241

Countersinks and Deburrers

DIN 334

60°



ATORN®

Type

Countersink angle 60°, 3 flutes, right-hand cut, straight shank (shape C).

Application

For burr and chatter-free countersinking and deburring of steel, cast iron and non-ferrous metals.

Note:

Best results at low cutting speed and high feed rate.

12240
Quality
HSS.

12241
Quality
HSS/TiN-coated.

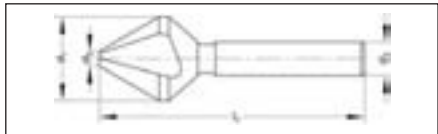
HSS

12240



HSS-TiN

12241



d ₁ mm	d ₂ h9 mm	l ₁ mm	d ₃ mm	HSS		HSS/TiN	
				12240	...	12241	...
6,3	5	45	1,6		101		101
8,0	6	50	2,0		102		102
10,0	6	53	2,5		103		103
12,5	8	56	3,2		104		104
16,0	10	63	4,0		105		105
20,0	10	67	5,0		106		106
25,0	10	71	6,3		107		107
31,5	12	76	10,0		108		108
40,0	15	91	10,0		109		

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
25-40	10-30	25-80	26-30	25-28	18-25	6-10	-	-	-	-	-	-	-	-	-	9-15	10-60

12242

Countersinks and Deburrers

DIN 334

75°

HSS



ATORN®

Type

Countersink angle 75°, 3 flutes, right-hand cut, straight shank (shape C).

Application

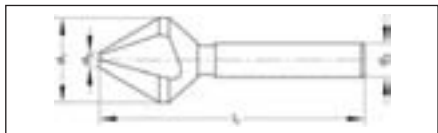
For burr and chatter-free countersinking and deburring of steel, cast iron and non-ferrous metals.

Quality

HSS.



12242



d ₁ mm	d ₂ h9 mm	l ₁ mm	d ₃ mm	HSS	
				12242	...
6,3	5	45	1,5		101
8,3	6	50	2,0		102
10,4	6	51	2,5		103
12,4	8	55	3,0		104
16,5	10	61	3,5		105
20,5	10	65	4,0		106
25,0	10	69	5,0		107

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
25-40	10-30	25-80	26-30	25-28	18-25	6-10	-	-	-	-	-	-	-	-	-	9-15	10-60

Countersinks and Deburrers DIN 335 C and D



Type

Countersink angle 90°, with 3 flutes, right-hand cut.

Application

For burr and chatter-free countersinking, deburring of steel, cast iron and non-ferrous metals.

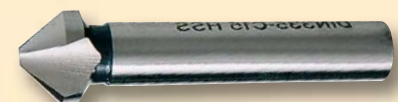
For countersinking to DIN 74 and 75 page 1, quality grade fine,

A for countersunk screws DIN 963 and DIN 965, oval head screws DIN 964 and DIN 966, tapping dies DIN 7513 and DIN 7516,

B for countersunk screws DIN 7991.

Note:

Best results at low cutting speed and high feed rate.





12204 - 12259

Countersink and Deburrer Sets

ATORN®

Application
For counterboring and deburring.

Type
Right-hand cut with straight shank.

Contents	Quality	Set contents	12204 ...
4-part	HSS	1 ea. Ø 2,5 / 5-10 / 10-15 / 15-20 in plastic case	201 NEW



Contents	Quality	Set contents	12250 ...
6-part	HSS	1 ea. Ø 6,3 / 8,3 / 10,4 / 12,4 / 16,5 / 20,5 in metal box	201 NEW



Contents	Quality	Set contents	12251 ...
6-part	HSS TiCN + TiN	1 ea. Ø 6,3 / 8,3 / 10,4 / 12,4 / 16,5 / 20,5 in metal box	101 NEW



Contents	Quality	Set contents	12252 ...
6-part	HSS extra long shank	1 ea. Ø 6,3 / 8,3 / 10,4 / 12,4 / 16,5 / 20,5 in metal box	101 NEW



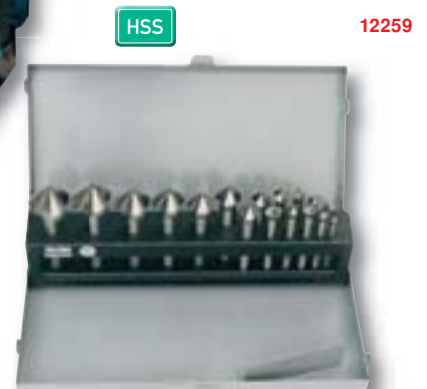
Contents	Quality	Set contents	12254 ...
6-part	HSS	1 ea. Ø 6,3 / 8,3 / 10,4 / 1/4 Hexagon shank DIN 3126 with adapter, handle, circlip and magnet, drilling paste in plastic case	101 NEW



Contents	Quality	Set contents	12255 ...
6-part	HSS-E	1 ea. Ø 6,3 / 8,3 / 10,4 / 12,4 / 16,5 / 20,5 in metal box	101 101



Contents	Quality	Set contents	12259 ...
17-part	HSS	1 ea. Ø 4,3 / 5,0 / 6,0 / 6,3 / 7,0 / 8,0 / 8,3 / 10,0 / 10,4 / 11,5 mm 12,4 / 15,0 / 16,5 / 19,0 / 20,5 / 23 / 25 in metal box	101



• Countersinks and deburrers • Countersinks for Reversible Cutting Inserts

12265 - 12270

Countersinks and Deburrers

DIN 335

90°



ATORN®

Type
Countersink angle 90°, 3 flutes, straight shank (shape C).
Application
For countersinking to DIN 74 and DIN 75, page 1, quality grade fine.

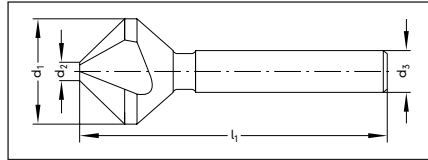
12265
Quality
HSS.

12266
Quality
HSS-E.

12267
Quality
HSS/TiCN + TiN-coated.

12269
Application
For stainless steel.
Quality
HSS powder steel, ASP 30.

12270
Type
6,3 - 8,3 mm solid carbide, above carbide-tipped.
Quality
Carbide quality, K 20.



HSS

HSS-E



12265 - 12266

12267

HSS-TiN
TiAlN



12269

HSS
ASP30

VA



12270

HM
K20



12265-12269			12270		HSS		HSS-E		HSS/TiN-TiAlN		HSS/ASP30		Carbide/K 20	
d ₁ mm	d ₃ mm	l ₁ mm	d ₂ mm	d ₂ mm	12265	...	12266	...	12267	...	12269	...	12270	...
4,3	4	40	1,3				101							
5,0	4	40	1,5				102			102				
6,0	5	45	1,5				103			103				
6,3	5	45	1,5	2,2			104	104		104	104		104	104
7,0	6	50	1,8				105							
7,3	6	50	1,8				106			106				
8,0	6	50	2,0				107			107				
8,3	6	50	2,0	2,8			108	108		108	108		108	108
9,4	6	50	2,2				109							
10,0	6	50	2,5				110			110				
10,4	6	50	2,5	3,5			111	111		111		111		111
11,5	8	56	2,8				112			112				
12,4	8	56	2,8	4,0			113	113		113		113		113
15,0	10	60	3,2				114	114		114				
16,5	10	60	3,2	5,0			115	115		115		115		115
19,0	10	63	3,5				116			116				
20,5	10	63	3,5	7,0			117	117		117		117		117
23,0	10	67	3,8				118			118				
25,0	10	67	3,8	9,0			119	119		119		119		119
31,0	12	71	4,2	10,0			120	120		120				120
40,0	15	80	10,0				121	121		121				

12265 + 12266

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	plastics
25-40	10-30	25-80	26-30	25-28	18-25	6-10	5-8	2-5	-	-	-	-	4-10	4-10	4-10	9-15	10-60

12267 + 12269

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	plastics
30-80	30-50	30-100	32-36	30-34	22-30	7-12	6-10	3-6	-	-	-	-	5-12	5-12	5-12	10-25	10-60

12270

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	plastics
55-180	25-70	60-140	55-75	50-65	40-55	13-22	10-18	8-15	6-14	6-14	-	-	10-22	10-22	10-22	20-45	20-65

12260

Countersinks and Deburrers

90°

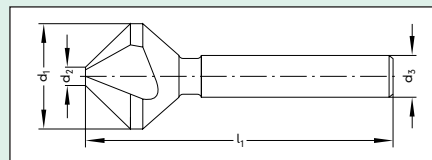
HSS



HHW

Type
With extended straight shank (shape C), 100 mm long. 3 cutting blades.

Application
For countersinking to DIN 74 and DIN 75, page 1, quality grade fine.



12260

HSS					HSS						
d ₁ mm	d ₃ mm	l ₁ mm	d ₂ mm	12260	...	d ₁ mm	d ₃ mm	l ₁ mm	d ₂ mm	12260	...
6,3	5	100	1,5			16,5	10	115	3,2	104	
8,3	6	112	2,0	100	NEW	20,5	10	119	3,5	105	
10,4	8	112	2,5	102		25,0	10	122	3,8	106	
12,4	8	113	2,8	103							

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	plastics
25-40	10-30	25-80	26-30	25-28	18-25	6-10	5-8	2-5	-	-	-	-	4-10	4-10	4-10	9-15	10-60

12271

Countersink and Deburrer Bits



Type

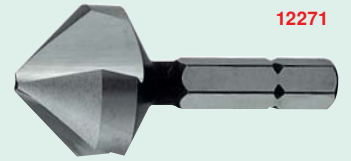
Countersink angle 90°, 3 flutes, ground, countersink head in compliance with DIN 335 C with 1/4 inch hexagon shank, ground, in compliance with HSS

DIN 3126.

Quality
HSS.

Nominal Ø	Overall length	for counter	12271	...
mm	mm	sinking		
6,3	31	M 3	101	
8,3	31	M 4	102	
10,4	34	M 5	103	

Nominal Ø	Overall length	for counter	12271	...
mm	mm	sinking		
12,4	35	M 6	104	
16,5	40	M 8	105	
20,5	41	M 10	106	



12271

12272

Countersinks and Deburrers



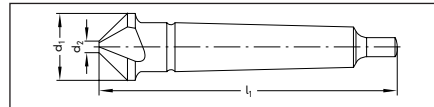
Type

Countersink angle 90°, with 3 cutting blades, morse taper shank (shape D).

Quality
HSS.

Note:

Further dimensions available on request.



12272

d ₁	d ₂	l ₁	MT	HSS	12272	...
mm	mm	mm				
15,0	3,2	85	1		101	
20,5	3,5	100	2		102	
25,0	3,8	106	2		103	
30,0	4,2	112	2		104	
31,0	4,2	112	2		105	
34,0	4,5	118	2		106	

d ₁	d ₂	l ₁	MT	HSS	12272	...
mm	mm	mm				
37,0	4,8	118	2		107	
40,0	10,0	140	3		108	
50,0	14,0	150	3		109	
63,0	16,0	155	4		110	
80,0	22,0	190	4		111	
100,0	30,0	200	4		112	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
25-40	10-30	25-80	26-30	25-28	18-25	6-10	5-8	2-5	-	-	-	-	4-10	4-10	4-10	9-15	10-60

12274

Countersinks and Deburrers



Type

With plastic handle, countersink angle 90°, with 3 flutes, right-hand cut.

Quality
HSS.

Ø	HSS	12274	...
mm			
12,5		101	
15,0		110	
16,5		102	

Ø	HSS	12274	...
mm			
20,5		103	
25,0		104	



12274

12310 - 12313

Countersinks for Reversible Cutting Inserts



12310

Type

Countersink angle 90°, right-hand cut, straight shank. For mounting 2 solid carbide exchangeable blades, each bearing 38 blades, clearance angle 8°, including clamping screws, exchangeable blades not included

Application

For screw head countersinks (countersinking in compliance with DIN 74 page 1, shape A, fine).

12312

Spare Clamping Screws

Application

For countersink for reversible cutting inserts cat.-no. 12310.

12313

Carbide-Tipped Cutting Tools with Reversible Cutting Edges

Type

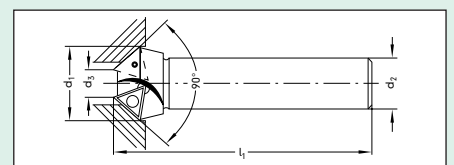
3 cutting blades, clearance angle 8°.

Application

For countersink for reversible cutting inserts cat.-no. 12310.

Quality

PVD coating (P25).



12313

Type	d ₁	d ₂	d ₃ H13	Cutting insert size	Torx Plus screw	Countersink		Spare screw		Carbide cutting insert	
						12310	...	12312	...	12313	...
KWS-M 10	19	16	7,0	W30 14660.338425	S/M 2,6 x 6,2 - 8 IP/T8	101		101		101	
KWS-M 14	26	16	11,0	W30 14720.048425	S/M 2,6 x 6,2 - 8 IP/T8	103		101		103	
KWS-M 16	30	20	12,0	W30 26720.0560	S/M 3,5 x 7,3 - 10 IP/T10	104		102		105	
KWS-M 18	34	20	16,0	W30 26720.0560	S/M 3,5 x 7,3 - 10 IP/T10	105		102		105	

Countersink • Counterbores • Spot facing cutters

12405

Countersink (Screw Head Countersinks and Spot Facing Cutters)

DIN 1866

90°

HSS

Uni



Type

Countersink angle 90°, right-hand cut, right-hand helix. Straight shank and fixed pilot.

Application

For countersinking in compliance with DIN 74, page 1. For countersinking for countersunk screws DIN 963 and DIN 965, oval head screws DIN 964 and DIN 966, tapping dies F and G in compliance with

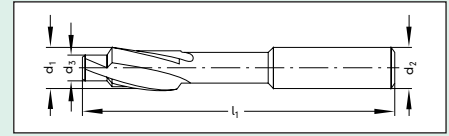
DIN 7513, tapping dies D and E in compliance with DIN 7516.

Quality HSS.

Note:

Pilot: $D = \text{through-hole}$.

Countersinking: $m = \text{quality grade medium}$, $f = \text{quality grade fine}$.



12405

for Thread	quality of accuracy grade	d ₁ z ₉ mm	d ₃ e ₈ mm	l ₁ mm	d ₂ h ₉ mm	HSS 12405 ...
M 3	Dm	6,6	3,4	71	5,0	209
M 3	Df	6,0	3,2	71	5,0	211
M 4	Dm	9,0	4,5	80	8,0	213
M 4	Df	8,0	4,3	80	8,0	215
M 5	Dm	11,0	5,5	80	8,0	217
M 5	Df	10,0	5,3	80	8,0	219

for Thread	quality of accuracy grade	d ₁ z ₉ mm	d ₃ e ₈ mm	l ₁ mm	d ₂ h ₉ mm	12405 ...
M 6	Dm	13,0	6,6	100	12,5	221
M 6	Df	11,5	6,4	80	8,0	223
M 8	Dm	17,2	9,0	100	12,5	225
M 8	Df	15,0	8,4	100	12,5	227
M 10	Dm	21,5	11,0	100	12,5	229
M 10	Df	19,0	10,5	100	12,5	231

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
20-30	15-25	15-30	15-20	12-18	8-15	-	-	-	-	-	-	-	-	-	-	10-18	20-30

12410

Sets of Counterbores

HSS

Uni



Type

6-part. with 1 ea. countersink for M 3 / M 4 / M 5 / M 6 / M 8 and M 10, in plastic case. Right-hand cut, right-hand helix, straight shank and fixed pilot.

Application

For countersinking in compliance with DIN 74, page 2. Counter bores for cheese head screws DIN 84 and Allen screws DIN 912 and DIN 6912.

Quality

HSS.

12410 201

Type KM-6

Application

For core hole.

12410 202

Type DM-6

Application

For through holes, quality grade medium.

12410 203

Type DF-6

Application

For through holes, quality grade fine.

HSS

12410 ...

Type	HSS 12410 ...
KM-6	201
DM-6	202
DF-6	203

NEW



12410

12411

Counterbores

HSS

Uni



Type

Similar to DIN 373, right-hand cut, right-hand helix, straight shank and fixed pilot.

Application

For countersinking in compliance with DIN 74, page 2. Counter bores for cheese head screws DIN 84 and Allen screws DIN 912 and DIN 6912.

Quality

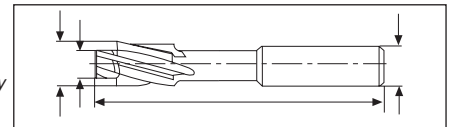
HSS.

Note:

Pilot: $D = \text{through-hole}$,

$K = \text{core hole}$.

Countersinking: $m = \text{quality grade medium}$, $f = \text{quality grade fine}$.



12411

for Thread	Quality of accuracy grade	d ₁ z ₉ mm	d ₃ e ₈ mm	l ₁ mm	d ₂ h ₉ mm	HSS 12411 ...
M 3	Dm	6,5	3,4	71	5,0	099
M 3	Df	6,5	3,2	71	5,0	100
M 3	Dm	6,0	3,4	71	5,0	101
M 3	Df	6,0	3,2	71	5,0	102
M 3	K	6,0	2,5	71	5,0	103
M 4	Dm	8,0	4,5	71	5,0	107
M 4	Df	8,0	4,3	71	5,0	108
M 4	K	8,0	3,3	71	5,0	109
M 5	Dm	10,0	5,5	80	8,0	110
M 5	Df	10,0	5,3	80	8,0	111
M 5	K	10,0	4,2	80	8,0	112
M 6	Dm	11,0	6,6	80	8,0	113

for Thread	Quality of accuracy grade	d ₁ z ₉ mm	d ₃ e ₈ mm	l ₁ mm	d ₂ h ₉ mm	HSS 12411 ...
M 6	Df	11,0	6,4	80	8,0	114
M 6	K	11,0	5,0	80	8,0	115
M 8	Dm	15,0	9,0	100	12,5	116
M 8	Df	15,0	8,4	100	12,5	117
M 8	K	15,0	6,8	100	12,5	118
M 10	Dm	18,0	11,0	100	12,5	119
M 10	Df	18,0	10,5	100	12,5	120
M 10	K	18,0	8,5	100	12,5	121
M 12	Dm	20,0	13,5	100	12,5	122
M 12	Df	20,0	13,0	100	12,5	123
M 12	K	20,0	10,2	100	12,5	124

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
20-30	15-25	15-30	15-20	12-18	8-15	-	-	-	-	-	-	-	-	-	-	10-18	20-30

12421

Counterbores

HSS



12421



Type

Similar to DIN 373, right-hand cut, right-hand helix, morse taper shank and fixed pilot.

Application

For countersinking in compliance with DIN 74, page 2. Counter bores for cheese head screws DIN 84 and Allen screws DIN 912 and DIN 6912.

Quality

HSS.

Note:

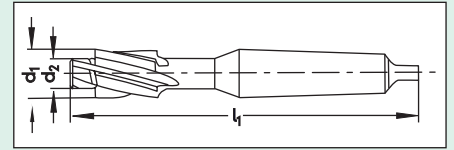
Pilot:

D = through-hole.

Countersinking:

m = quality grade medium,

f = quality grade fine.



		HSS					
for thread	countersinking accuracy grade	d ₁ z ₉ mm	l ₁ mm	d ₂ e ₈ mm	MT	12421	...
M 10	Dm	18,0	150	11,0	2	101	
M 10	Df	18,0	150	10,5	2	102	
M 12	Dm	20,0	150	13,5	2	104	
M 12	Df	20,0	150	13,0	2	105	
M 14	Dm	24,0	160	15,5	2	107	
M 14	Df	24,0	160	15,0	2	108	

		HSS					
for thread	countersinking accuracy grade	d ₁ z ₉ mm	l ₁ mm	d ₂ e ₈ mm	MT	12421	...
M 16	Dm	26,0	190	17,5	3	110	
M 16	Df	26,0	190	17,0	3	111	
M 18	Dm	30,0	190	20,0	3	113	
M 18	Df	30,0	190	19,0	3	114	
M 20	Df	33,0	190	21,0	3	117	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
20-30	15-25	15-30	15-20	12-18	8-15	-	-	-	-	-	-	-	-	-	-	10-18	20-30

12503 - 12504

Spot Facing Cutters



Type

3 flutes, with short taper fixture for mounting in holder cat.-no. 12540 - 12549, for exchangeable pilots cat.-no. 12506 - 12507, type A.

Application

For machinery steel, soft grey cast iron, medium-hard non-ferrous metals etc.

Note:

The exchangeable pilots make it possible for the spot facing cutters to be individually assembled.

They can therefore be used for countersinking in compliance with DIN 74 and old DIN 75.

12503

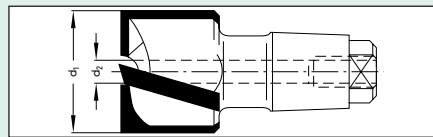
Quality

HSS.

12504

Quality

Carbide soldered (K10 - K35).



HSS

12503



HM K10/K35

12504



d ₁ mm	size	d ₂ mm	for holder size	HSS		Carbide quality	
				12503	...	12504	...
5,0	A 00	1,7	H 0	203			
6,0	A 01	2,0	H 0	207			
6,5	A 01	2,0	H 0	210			
7,0	A 02	2,5	H 0	212			
7,4	A 02	2,5	H 0	213			
7,5	A 02	2,5	H 0	214			
8,0	A 02	2,5	H 0	215			
8,5	A 02	2,5	H 0	218			
9,0	A 1	3,0	H, HB 1	219		219	
9,5	A 1	3,0	H, HB 1	221			
10,0	A 1	3,0	H, HB 1	222		222	
10,4	A 1	3,0	H, HB 1	223			
10,5	A 1	3,0	H, HB 1	224		224	
11,0	A 1	3,0	H, HB 1	225		225	
11,5	A 1	3,0	H, HB 1	226		226	
12,0	A 1	3,0	H, HB 1	227		227	
12,5	A 1	3,0	H, HB 1	228		228	
13,0	A 1	3,0	H, HB 1	290		229	
15,0	A 1	3,0	H, HB 1	291		291	
16,0	A 2	4,0	H, HB 2	235		235	
16,5	A 2	4,0	H, HB 2	236			
17,0	A 2	4,0	H, HB 2	237		237	
17,5	A 2	4,0	H, HB 2	238		238	
18,0	A 3	5,0	H, HB 3	239		239	
18,5	A 3	5,0	H, HB 3	240			

d ₁ mm	size	d ₂ mm	for holder size	HSS		Carbide quality	
				12503	...	12504	...
19,0	A 3	5,0	H, HB 3	241		241	
20,0	A 3	5,0	H, HB 3	243		243	
20,5	A 3	5,0	H, HB 3			244	
21,0	A 3	5,0	H, HB 3	245		245	
22,0	A 3	5,0	H, HB 3	247		247	
22,5	A 3	5,0	H, HB 3	248			
23,0	A 4	6,0	H, HB 4	249		249	
24,0	A 4	6,0	H, HB 4	251		251	
25,0	A 4	6,0	H, HB 4	252		252	
26,0	A 4	6,0	H, HB 4	254		254	
27,0	A 4	6,0	H, HB 4	255			
28,0	A 4	6,0	H, HB 4	256		256	
29,0	A 4	6,0	H, HB 4	257			
30,0	A 4	6,0	H, HB 4	259		259	
32,0	A 4	6,0	H, HB 4	261		261	
33,0	A 4	6,0	H, HB 4	262		262	
34,0	A 5	8,0	H, HB 5	263		263	
35,0	A 5	8,0	H, HB 5	264		264	
36,0	A 5	8,0	H, HB 5	265		265	
38,0	A 5	8,0	H, HB 5	267			
40,0	A 5	8,0	H, HB 5	269		269	
41,0	A 5	8,0	H, HB 5			270	
42,0	A 5	8,0	H, HB 5	271		271	
45,0	A 5	8,0	H, HB 5	274		274	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
70-100	50-70	-	23-27	20-23	17-20	12-17	12-15	8-12	-	-	-	-	12-14	10-12	-	-	-

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel-900N	VA-steel-900N	Ti alloys	GG(G)	plastics
100-150	60-110	-	60-90	50-60	30-50	22-30	20-25	15-22	-	-	-	-	30-50	20-40	-	10-18	-

Pilot • Standard Sockets • Universal Sockets

12506 - 12507

Fixed Pilots



Type

Slides along longitudinal and mounted to allow slight rotation.

Note:

Exchangeable within the same countersink size. Therefore a large number of combinations is possible. Insert protection washer between the blade and the pilot only when using carbide countersinks.

12506

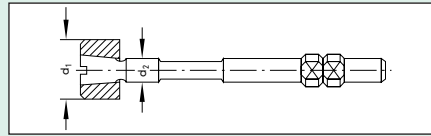
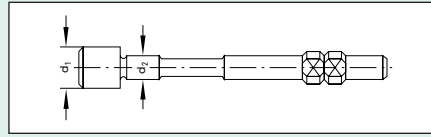
Type

One-part, assembly with nut and washer (size 00, 01 and 02 non-rotatable, mounted in countersink with lateral screw).

12507

Type

Two-part, guide bushings with locking screw, assembly with nut and washer.



12506



12507

One-part			
d ₁ mm	for countersink size	d ₂ mm	12506 ...
2,0	A 00	1,7	301
2,4	A 01	2,0	305
2,5	A 01	2,0	308
3,0	A 00	1,7	319
3,0	A 01	2,0	320
3,0	A 02	2,5	321
3,2	A 01	2,0	322
3,2	A 1	3,0	324
3,4	A 01	2,0	325
4,0	A 02	2,5	337
4,0	A 2	4,0	336
4,2	A 2	4,0	339
4,5	A 2	4,0	340

One-part			
d ₁ mm	for countersink size	d ₂ mm	12506 ...
4,5	A 1	3,0	342
5,0	A 02	2,5	343
5,0	A 1	3,0	344
5,3	A 1	3,0	346
5,5	A 1	3,0	349
6,0	A 1	3,0	351
6,2	A 1	3,0	380
6,4	A 1	3,0	353
6,5	A 1	3,0	355
6,6	A 1	3,0	357
6,8	A 1	3,0	358
7,0	A 1	3,0	360
8,0	A 1	3,0	381

One-part			
d ₁ mm	for countersink size	d ₂ mm	12506 ...
8,5	A 1	3,0	382
8,5	A 3	5,0	365
9,0	A 3	5,0	366
10,0	A 3	5,0	368
10,5	A 3	5,0	369
10,5	A 4	6,0	370
11,0	A 4	6,0	372
12,0	A 4	6,0	374
13,0	A 4	6,0	376

Two-part			
d ₁ mm	for countersink size	d ₂ mm	12507 ...
11,0	A 3	5,0	371
12,0	A 3	5,0	373
13,0	A 3	5,0	375
14,0	A 3	5,0	377
15,0	A 4	6,0	379

Two-part			
d ₁ mm	for countersink size	d ₂ mm	12507 ...
16,0	A 4	6,0	380
17,0	A 4	6,0	381
18,0	A 4	6,0	382
19,0	A 4	6,0	383
20,0	A 4	6,0	385

Two-part			
d ₁ mm	for countersink size	d ₂ mm	12507 ...
20,0	A 5	8,0	386
21,0	A 5	8,0	388
22,0	A 4	6,0	389
22,0	A 5	8,0	390
25,0	A 5	8,0	393

12540 - 12542

Standard Sockets



12540 - 12541

Type

Made of case-hardened steel and polished, short model (can also be used as a grinding pencil holder).

Application

For mounting spot facing cutters cat.-no. 12503 and 12504.

12540

With straight shank.

12541

With morse taper shank.

12542

Drift key

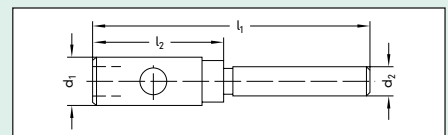
For cat.-no. 12540 and 12541.



12540



12541



12542

Size	l ₁ mm	l ₂ mm	d ₁ mm	d ₂ mm	shank	Straight	
						12540	...
H 0	59	24	9,0	6	str.	101	
H 1	76	36	12,5	8	str.	102	
H 2	91	41	17,0	10	str.	103	
H 3	109	49	21,0	12	str.	104	
H 4	112	52	28,0	14	str.	105	
H 5	65	32,0	125	16	str.	106	

Size	l ₁ mm	l ₂ mm	d ₁ mm	shank	MT		Ejector drift	
					12541	...	12542	...
H 1	104	42	12,5	MT 1	202		102	
H 2	109	47	17,0	MT 1	203		103	
H 3	132	57	21,0	MT 2	204		104	
H 4	135	60	28,0	MT 2	205		105	
H 5	168	74	32,0	MT 3	206		106	

12547 - 12549

Universal Sockets



12547

Type

Made of case-hardened steel and polished, with morse taper shank and drift sleeve.

Application

For mounting spot facing cutters
cat.-no. 12503- 12504.

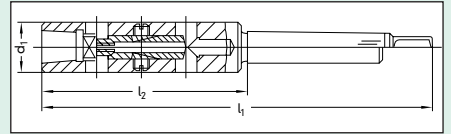
12549

With two-square drift key

operates by twisting.



12547



12549

Size	shank	l ₁ mm	l ₂ mm	d ₁ mm	MT		Ejector drift	
					12547	...	12549	...
HB 1	MT 1	127	65	12,5	101	...	101	...
HB 2	MT 1	137	75	18,0	102	...	102	...
HB 3	MT 2	164	89	21,0	103	...	103	...
HB 4	MT 2	176	101	28,0	104	...	104	...
HB 4	MT 3	196	102	28,0	105	...	104	...

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