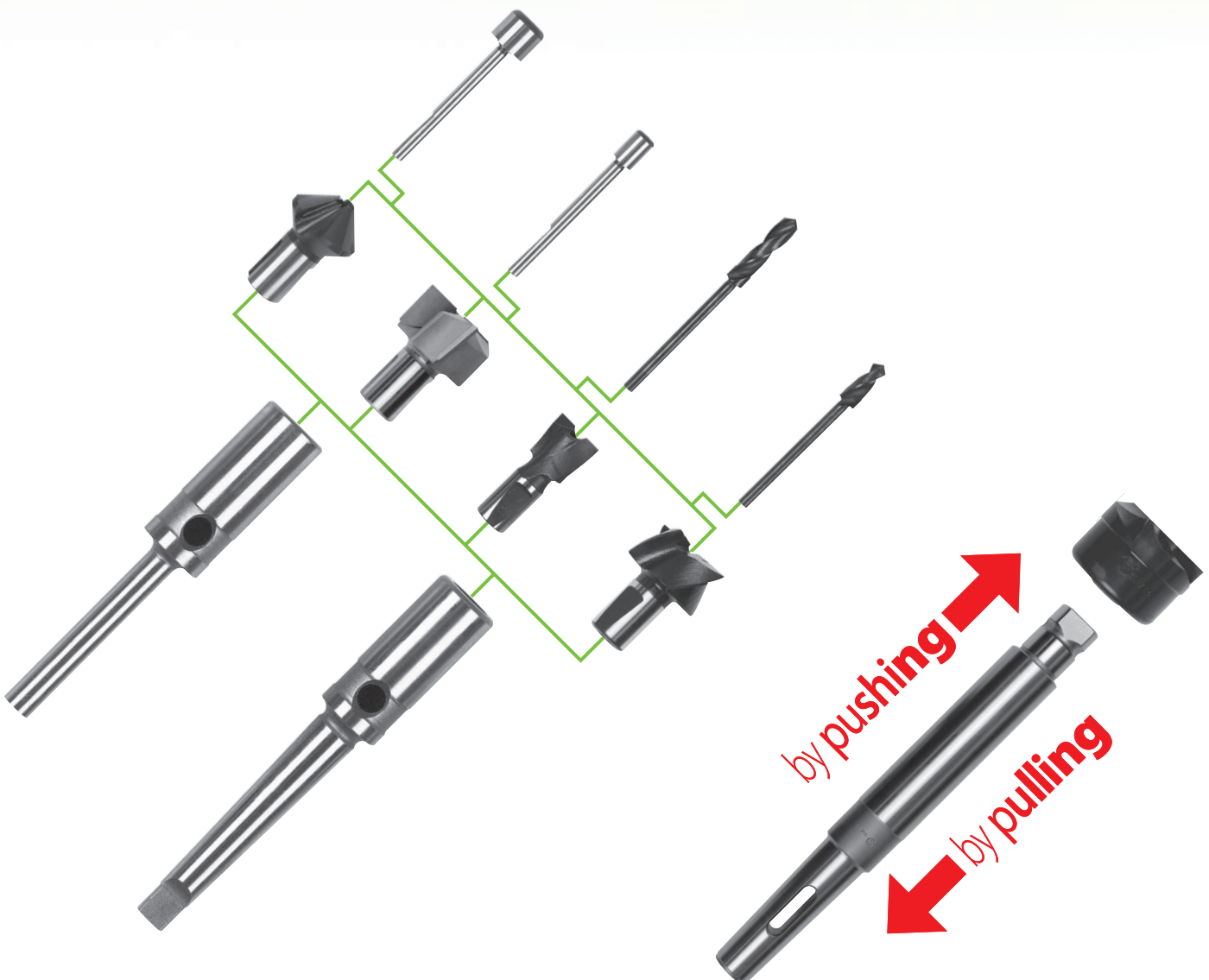




# Modular Interchangeable tooling



# Modular Interchangeable tooling

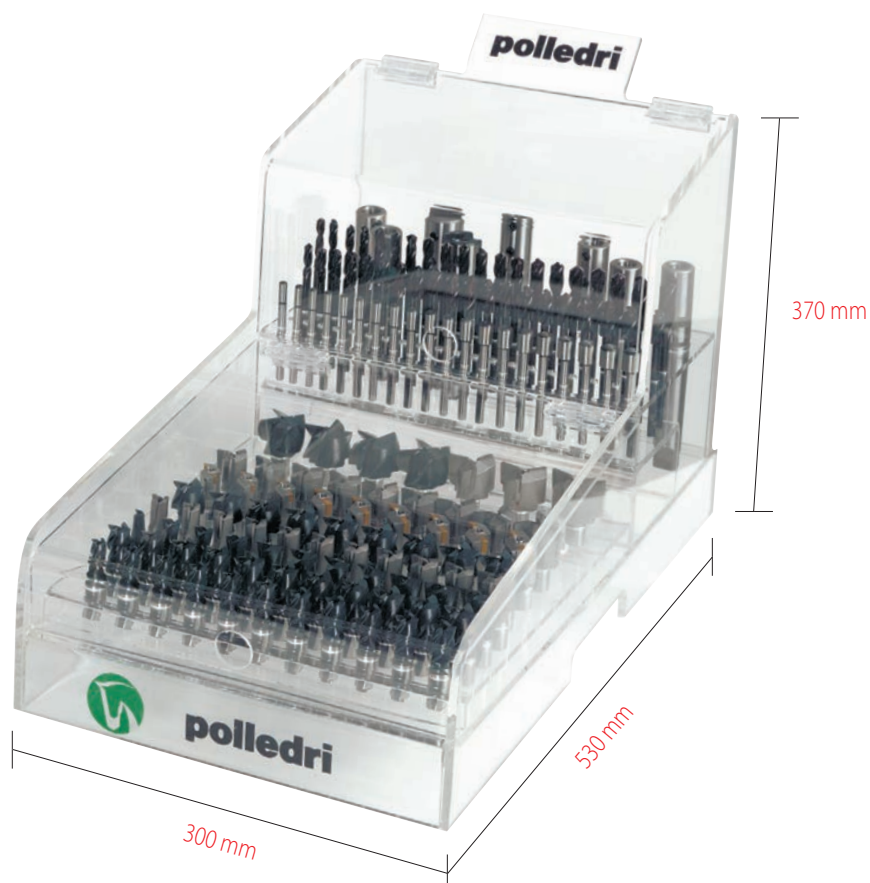


Depending on your special application, create the appropriate **standard solution**.

With **over 400 standard** components,  
the **POLLEDRI range** offers more than **100,000 possibilities**.

Additionally, all components can be modified:  
Send us a sketch with your requirements.  
In most cases: Emergency 48 hour service.

Display cases  
Please ask about  
discounted prices  
on display cases



## COMBINED TOOLS to counterbore and chamfer

### Group 0

To machine  $\varnothing$  7~24

Page 2

### Group 1

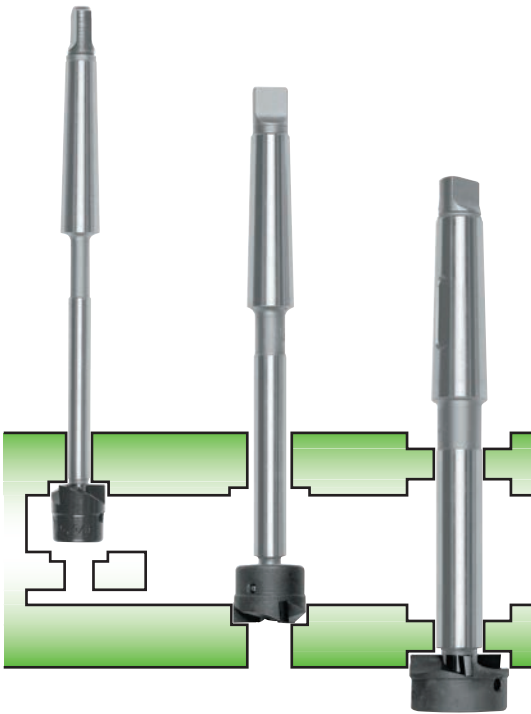
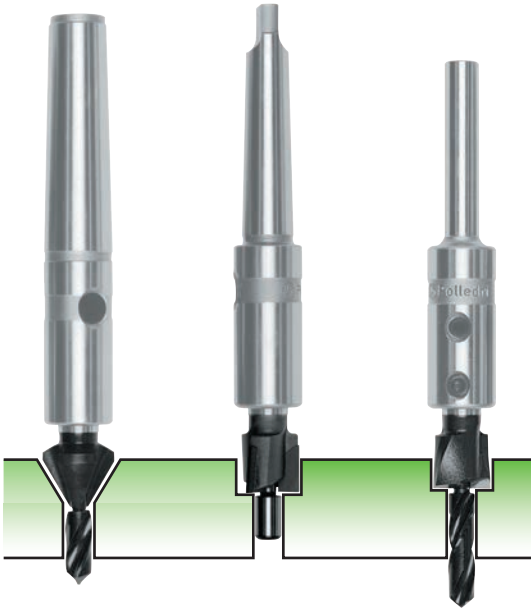
To machine  $\varnothing$  10~40

Page 4

### Group 2

To machine  $\varnothing$  16~75

Page 6



## BACK SPOTFACING TOOLS

By **pulling**

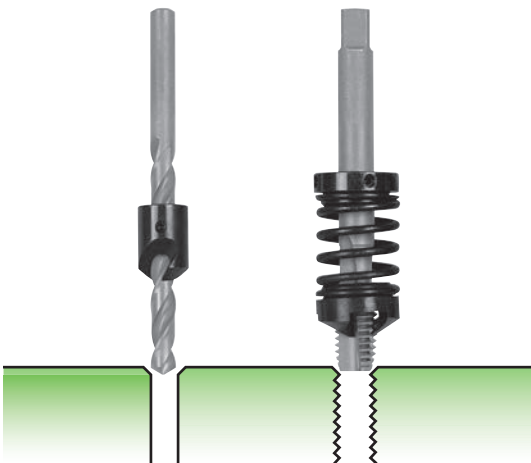
To machine  $\varnothing$  12~34

Page 8

By **pulling** and **pushing**

To machine  $\varnothing$  24~125

Page 10



## ADAPTED TOOLS for chamfering

Angle  $90^\circ$  for drilling

Page 12

Angle  $120^\circ$  for threading

Page 13

# COMBINED TOOLS

## To counterbore and chamfer

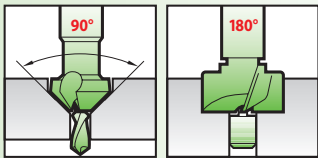


### Group 0

For machining  $\varnothing 7 \sim 24$

All combinations can be used with the components from the same group.

The three different groups are not compatible with each other.

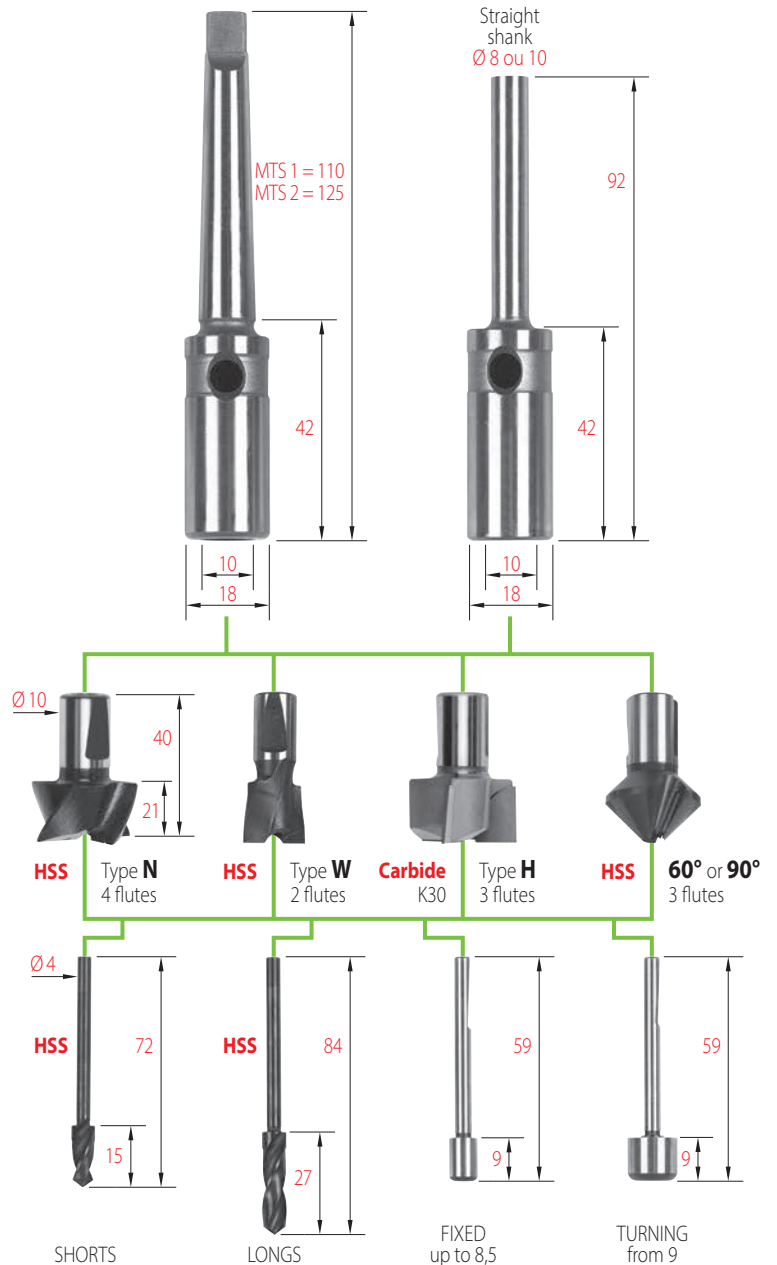


60°-90°	180°	Group	Pages
$\varnothing$	$\varnothing$		
8,3 ~ 16,5	7,0 ~ 24,0	0	2
12,4 ~ 31,0	10,0 ~ 40,0	1	4
20,5 ~ 75,0	16,0 ~ 82,0	2	6

Tolerances

Countersinks	Drills	Pilots
k7	h8	e8

### Possible Combinations



Promo-Kits



For Standard cap screws: one arbor with MTS n°1, one group of HSS cutters and two groups of pilots (for fine and large adjustments).

Typ	Composition	CODE	£
180°	Countersinks $\varnothing 8 - 10 - 11 - 15 - 18$ Type N Pilots $\varnothing 4,3 - 4,5 - 5,3 - 5,5 - 6,4 - 6,6 - 8,4 - 9 - 10,5 - 11$	P DIK-0	724,48
90°	Countersinks $\varnothing 8,3 - 10,4 - 12,4 - 16,5 / 3$ flute Pilots $\varnothing 4,3 - 4,5 - 5,3 - 5,5 - 6,4 - 6,6 - 8,4 - 9$	P K-0	664,85



# COMBINED TOOLS

## To counterbore and chamfer

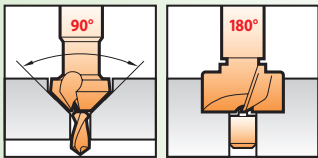


### Group 1

For machining  $\varnothing 10 \sim 40$

All combinations can be used with the components from the same group.

The three different groups are not compatible with each other.

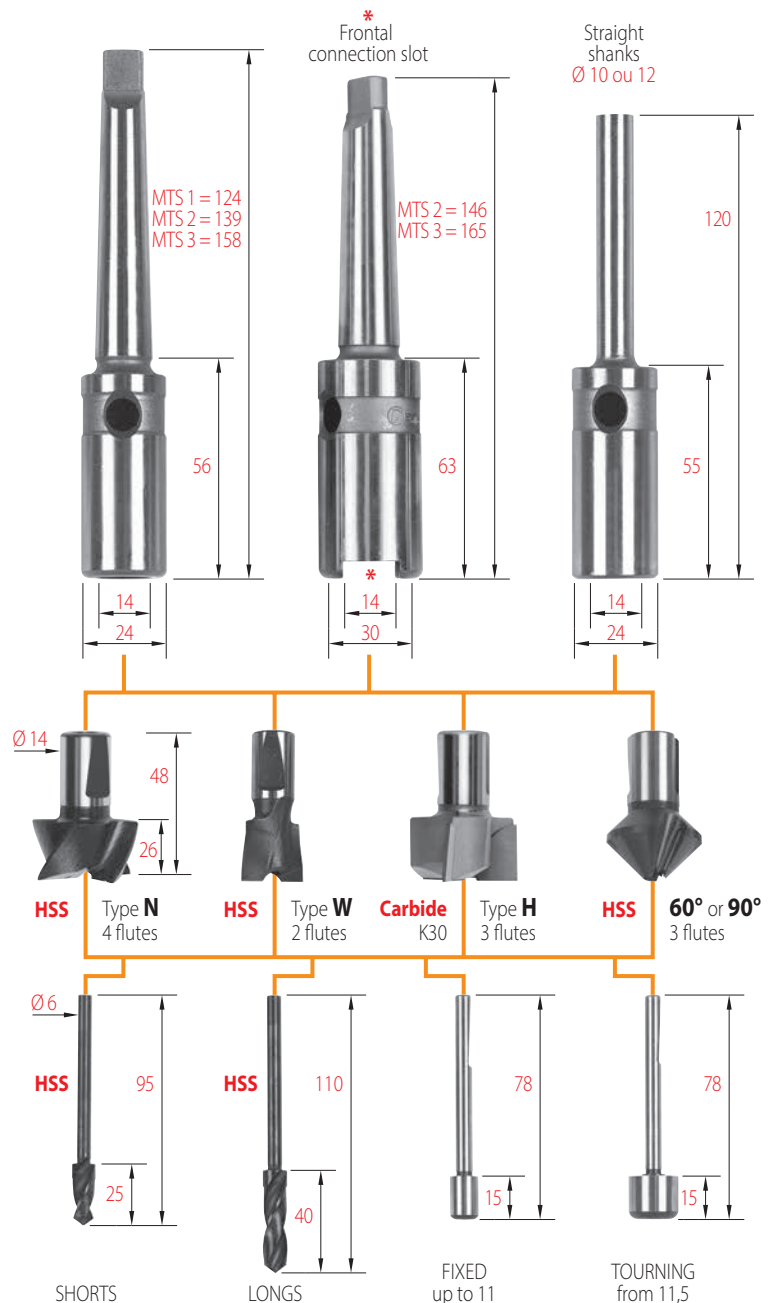


60°-90°	180°	Group	Pages
$\varnothing$	$\varnothing$		
8,3 ~ 16,5	7,0 ~ 24,0	0	2
12,4 ~ 31,0	10,0 ~ 40,0	1	4
20,5 ~ 75,0	16,0 ~ 82,0	2	6

Tolerances

Countersinks	Drills	Pilots
k7	h8	e8

### Possible Combinations



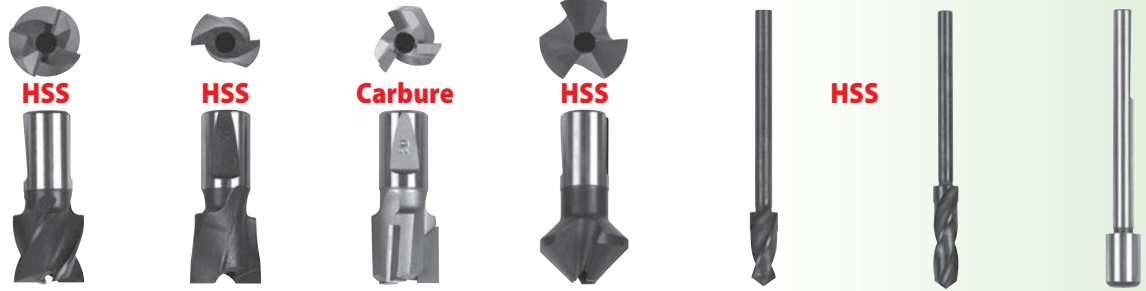
Promo-Kits



For Standard cap screws: one arbor with MTS n°2, one group of HSS cutters and two groups of pilots (for fine and large adjustments).

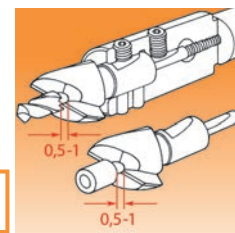
Type	Composition	CODE	£
180°	Countersinks $\varnothing 20 - 24 - 26 - 30 - 33$ Type N Pilots $\varnothing 13 - 13,5 - 15 - 15,5 - 17 - 17,5 - 19 - 20 - 21 - 22$	P DIK-1	1221,37
90°	Countersinks $\varnothing 20,5 - 25 - 28 / 3$ flute Pilots $\varnothing 10,5 - 11 - 13 - 13,5 - 15 - 15,5$	P K-1	694,66

Other sizes: please enquire!



	4 flutes Type N		2 flutes Type W		3 flutes Type H		3 flutes Angle 90°		Short drills		Long drills		Fixed pilots		
	P 1109		P 1110		P 1111		P 1112		P 1114		P 1115		P 1116		
Shank	Ø	£	Ø	£	Ø	€	Ø	£	Ø	£	Ø	£	Ø	£	
	10,0	61,62	10,0	66,58			12,4	74,53	6,5**	44,22	6,5**	48,20	6,0**	21,17	
	10,5	66,58	10,5	71,55			15,0	75,53	6,6**	44,22	6,6**	48,20	6,4**	21,17	
	11,0	61,62	11,0	66,58			16,5	79,50	6,8**	44,22	6,8**	48,20	6,5**	21,17	
	11,5	70,56	11,5	74,53			20,5	85,47	7,0**	44,22	7,0**	48,20	6,8**	21,17	
	12,0	61,62	12,0	66,58	12,0	158,01	25,0	92,92	7,6**	44,22	7,6**	48,20	7,0**	21,17	
	12,5	70,56	12,5	75,53			28,0	110,31	7,9**	45,22	7,9**	48,20	7,4**	21,17	
	13,0	61,62	13,0	66,58	13,0	165,96	31,0	111,31	8,0**	46,21	8,0**	51,68	7,5**	21,17	
	13,5	70,56	13,5	76,52			Note: Ø 12,4 ~ 31,0 Pilot 7,0 mini		8,4	46,21	8,4	51,68	8,0**	21,17	
	14,0	61,62	14,0	68,57	14,0	160,00			8,5	46,21	8,5	51,68	8,4	21,17	
	14,5	70,56	14,5	77,52				8,8	46,21	8,8	51,68	8,5	21,17		
	15,0	61,62	15,0	69,57	15,0	160,00		9,0	46,21	9,0	51,68	9,0	21,17		
	15,5	72,55	15,5	78,51				9,3	46,21	9,3	51,68	9,5	21,17		
	16,0	65,59	16,0	69,57	16,0	163,98		9,5	46,21	9,5	51,68	10,0	21,17		
	16,5	78,51	16,5	84,97				10,0	54,66	10,0	59,63	10,5	22,36		
	17,0	67,58	17,0	71,55	17,0	163,98		10,2	54,66	10,2	59,63	11,0	22,36		
17,5	83,98	17,5	83,98			10,5		54,66	10,5	59,63					
18,0	71,55	18,0	74,53	18,0	164,97	10,7		54,66	10,7	59,63					
18,5	91,93	18,5	92,92			11,0		54,66	11,0	59,63					
19,0	77,52	19,0	77,52	19,0	166,96	11,5		54,66	11,5	59,63					
19,5	91,93	19,5	92,92			12,0		63,60	12,0	74,04					
20,0	77,52	20,0	77,52	20,0	171,93	Note: Ø 12,4 ~ 25,0 Pilot 7,0 mini Ø 31,0 Pilot 11,0 mini		** Not to be used with carbide cutters P 1111							
20,5	93,91	20,5	92,92												
21,0	79,50	21,0	81,99	21,0	177,89										
21,5	96,40	21,5	92,92												
22,0	81,99	22,0	83,98	22,0	179,88	12,4	77,52								
22,5	100,37	22,5	104,35			16,5	80,50								
23,0	93,91	23,0	97,39	23,0	188,82	25,0	92,92								
23,5	103,35					31,0	111,31								
Morse taper P 1102 £	24,0	92,92	24,0	97,39	24,0	188,82									
	24,5	107,33													
	25,0	92,92	25,0	98,88	25,0	193,79									
	N° 1 157,02	25,5	111,31												
	N° 2 141,12	26,0	101,37			26,0	193,79								
Morse Taper P 1104 £	26,5	111,31													
	27,0	103,35			27,0	200,75									
	27,5	113,29													
	28,0	104,35			28,0	198,76									
	28,5	114,29													
	29,0	108,32			29,0	200,75									
	29,5	124,22													
	Ø 0,00 Horizontal connection slot for tool														
	30,0*	133,17			30,0*	207,70									
	30,5*	160,00													
31,0*	139,13			31,0*	240,50										
32,0*	147,08			32,0*	234,54										
33,0*	150,06			33,0*	234,54										
34,0*	158,01			34,0*	241,49										
35,0*	162,98			35,0*	247,45										
36,0*	166,96			36,0*	261,37										
37,0*	178,88			37,0*	266,34										
N° 2 311,06	38,0*	184,85			38,0*	275,28									
N° 3 254,41	40,0*	207,70			40,0*	284,23									

RECOMMENDATIONS FOR USE PAGE 6



IMPORTANT

Usage:  
In blind or through holes for the pilots.  
Only in through holes for the drills.  
The drill has to step out prior the cutter starting to cut.

# COMBINED TOOLS

## To counterbore and chamfer

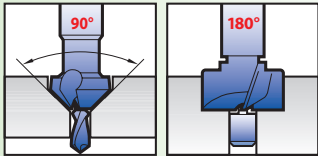


### Group 2

For machining  $\varnothing 16 \sim 82$

All combinations can be used with the components from the same group.

The three different groups are not compatible with each other.



60°-90°	180°	Group	Pages
$\varnothing$	$\varnothing$		
8,3 ~ 16,5	7,0 ~ 24,0	0	2
12,4 ~ 31,0	10,0 ~ 40,0	1	4
20,5 ~ 75,0	16,0 ~ 82,0	2	6

Tolerances

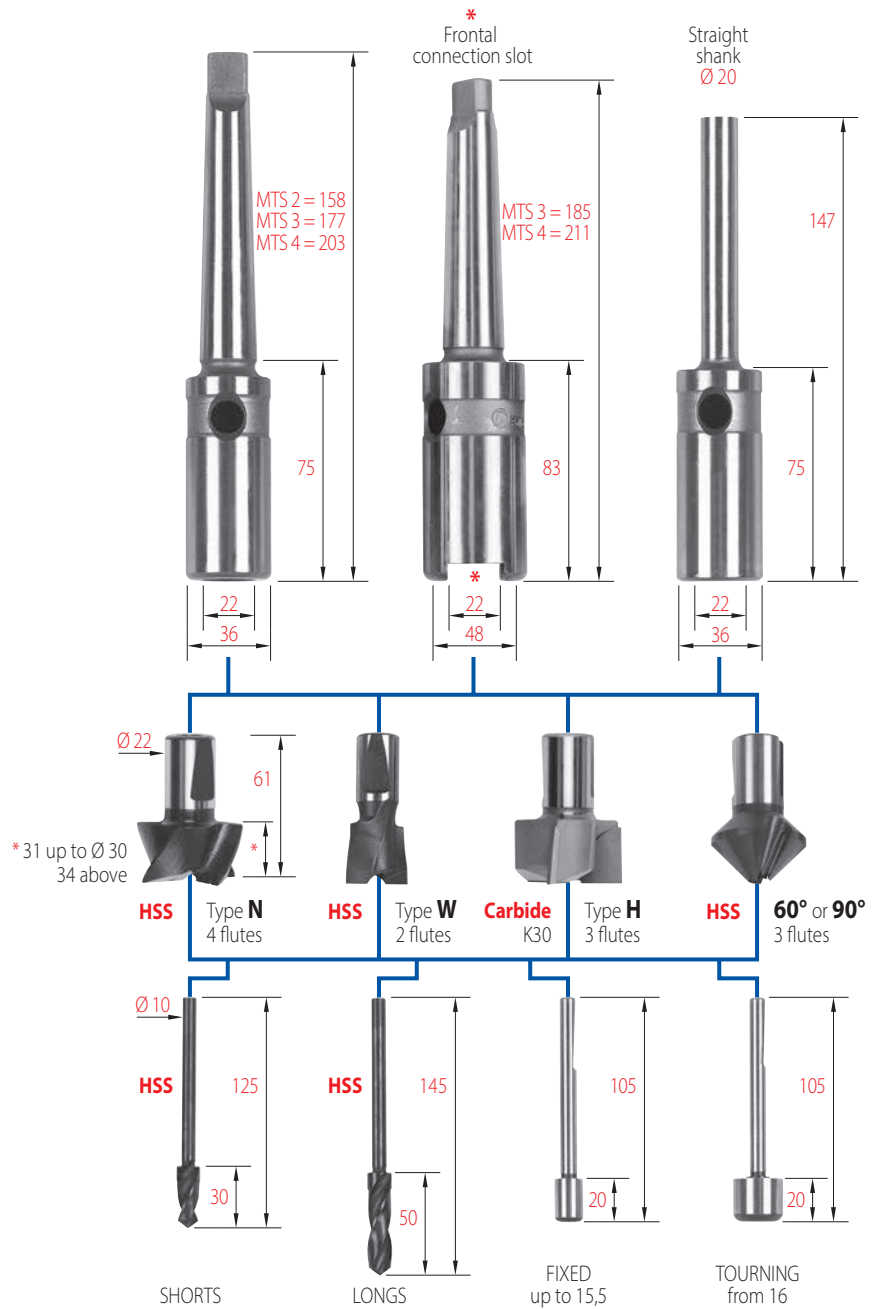
Countersinks	Drills	Pilots
k7	h8	e8

### RECOMMENDATION FOR USE

**Vc** = speed m/mn  
**f** = feed mm/tr  
 Lubrication: **E** = emulsion > 6%  
**H** = cutting oil  
**S** = dry

Material	Lubrication	Countersinks HSS		Countersinks CARBIDE	
		Vc	f	Vc	f
Steels < 700 N/mm <sup>2</sup>	E	15-40	0,1-0,5	50-130	0,1-0,6
Steels 700 ~ 950 N/mm <sup>2</sup>	E/H	10-25	0,05-0,3	40-110	0,1-0,3
Steels 950 ~ 1200 N/mm <sup>2</sup>	H/E	5-20	0,05-0,3	30-90	0,1-0,2
Stainless steel	H/E	12-18	0,05-0,3	20-60	0,1-0,4
Cast iron 100 ~ 400 N/mm <sup>2</sup>	E/S	20-40	0,2-0,5	60-120	0,2-0,5

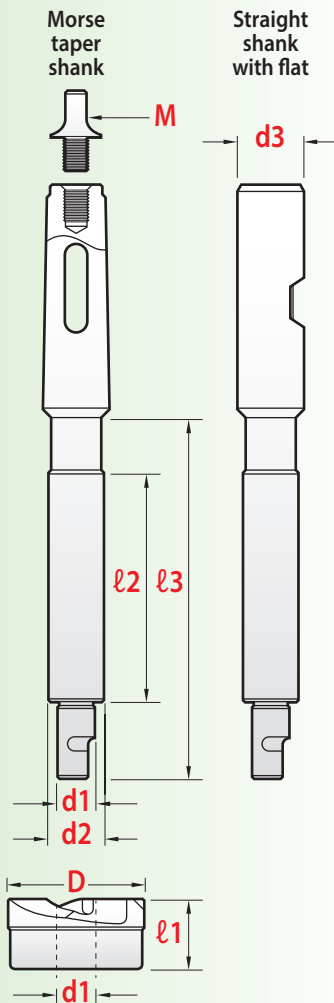
### Possible Combinations



Material	Lubrication	Countersinks HSS		Countersinks CARBIDE	
		Vc	f	Vc	f
Cast iron GS 370 ~ 800 N/mm <sup>2</sup>	E/H	15-35	0,1-0,4	50-110	0,2-0,5
Aluminium < 10% Si	E/H	100-200	0,05-0,5	100-350	0,1-0,8
Aluminium > 10% Si	E/H	80-160	0,1-0,4	100-350	0,1-0,5
Brass	E/H	40-80	0,1-0,4	50-150	0,1-0,4
Bronze Copper	E/H	30-60	0,1-0,5	50-150	0,1-0,8



# BACK SPOTFACING TOOLS 3 flutes to machine **by pulling** $\varnothing$ 12 to 34



Groups **A** and **B**



*All combinations can be used with the components from the same group. The six groups A to F are not compatible with each other.*

Tolerances

Cutters	Back Guide	Pilots
k7	e8	e8

**CUTTERS**



**ARBORS - GUIDES**



**Group A by pulling**

ℓ1	d1	D k7	HSS P 6001	CARBIDE P 6002
17	6	12	£ 166,96	£ 280,25
		13	166,96	280,25
		13,5	166,96	280,25
		14	166,96	280,25
		14,5	176,90	
		15	176,90	290,19
		16	176,90	290,19
		16,5	176,90	
		17	176,90	290,19
		17,5	181,86	290,19
		18	181,86	290,19
		20	181,86	304,10
		22	181,86	310,06
		24	194,78	
26	194,78			

ℓ2	ℓ3	d1	d2 e8	P 6004 CM1	P 6004 W d3 = 12
55	92	6	6 *	£ 141,12	£ 157,02
			6,5 *	141,12	157,02
			7 *	141,12	157,02
			7,5	141,12	173,91
			8	141,12	157,02
			8,5	141,12	157,02
			9	141,12	157,02
			9,5	141,12	173,91
			10	141,12	157,02

Ranges from 24 to 125 mm  
pages 10 -11

*Other sizes:  
Please enquire!*


**Group B by pulling**

ℓ1	d1	D k7	HSS P 9001	CARBIDE P 9002
21	9	16	£ 174,91	£ 276,28
		17	174,91	276,28
		18	177,89	284,23
		19	177,89	284,23
		20	179,88	284,23
		21	182,86	284,23
		22	182,86	284,23
		24	190,81	292,18
		25	190,81	292,18
		26	190,81	305,10
		28	202,73	305,10
		30	202,73	305,10
		32	205,72	333,92
		33	205,72	
		34	205,72	376,65

ℓ2	ℓ3	d1	d2 e8	P 9004 CM2	P 9004 W d3 = 16
75	116	9	9 *	£ 144,10	£ 160,00
			9,5 *	144,10	160,00
			10 *	144,10	160,00
			10,5	144,10	160,00
			11	144,10	160,00
			11,5	144,10	160,00
			12	144,10	160,00
			12,5	144,10	177,89
			13	144,10	160,00
			13,5	144,10	177,89
			14	144,10	160,00
			14,5	144,10	177,89
			15	144,10	160,00

\* Not to be used with the carbide cutters.

**Tangs for all groups**

	M6 for TS1	P 6003006	£ 28,62
	M10 for TS2	P 9003010	34,78

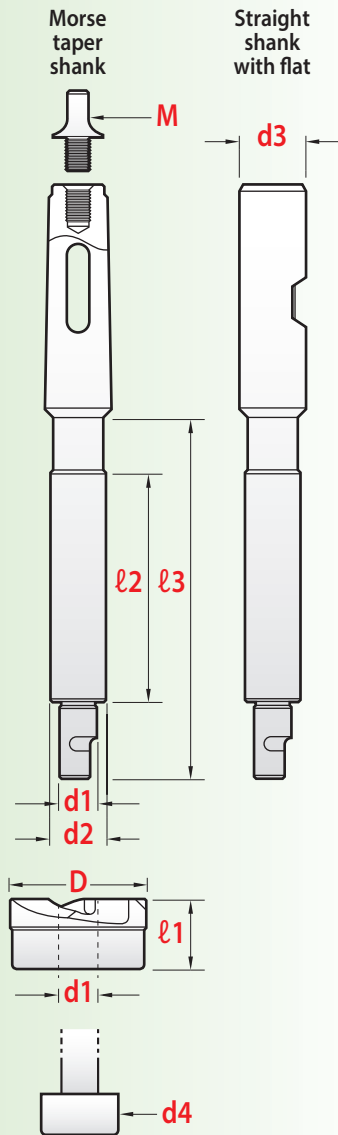


Magafor tools  
for front and back machining

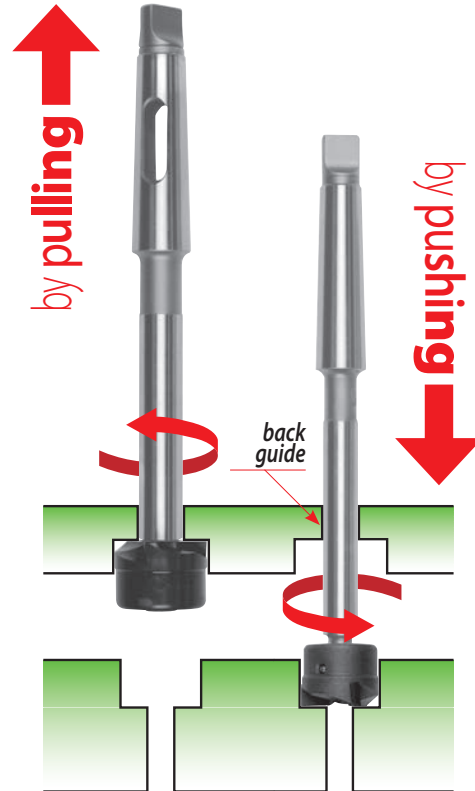
**Bi**face  
radius - chamfering  
General catalogues  
pages 79 - 80

# BACK SPOTFACING TOOLS 3 flutes

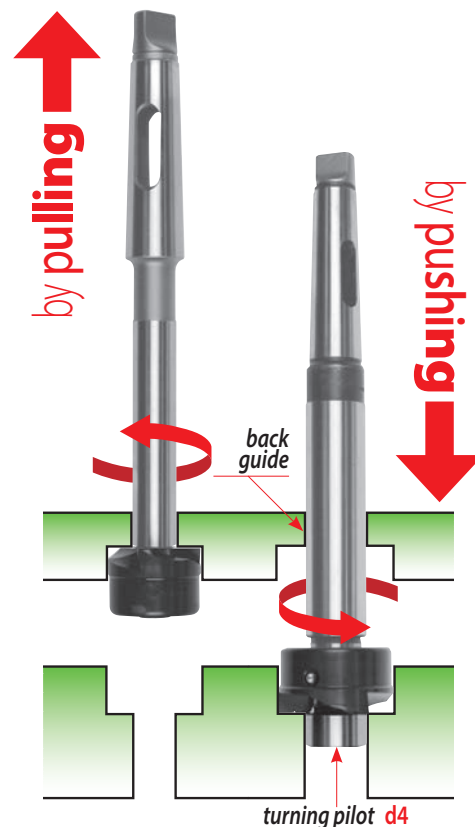
to machine **by pulling** and **by pushing** Ø 12 to 34



## Groups C and D



## Groups E and F




All combinations can be used with the components from the same group. The six groups A to F are not compatible with each other.

### Tolerances

Cutters	Back Guide	Pilots
k7	e8	e8

### Tangs for all groups

	M12 for TS3	P 1403012	£ 40,25
	M16 for TS4	P 2003016	45,71
	M20 for TS5	P 4003020	45,71



# ADAPTED COUNTERSINKS FOR DRILLS

**In a single operation, drilling + countersinking.**

Tools designed to be mounted on **drills type N Ø 3 ~ 30 mm.**

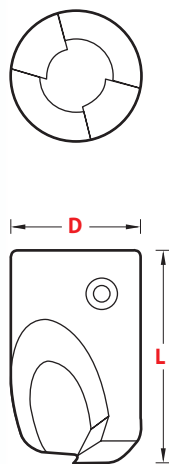
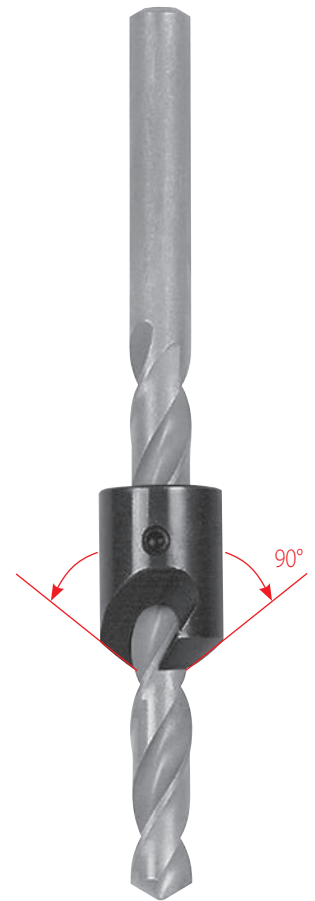
Fixed with 2 screws.

Standard range:

- per 0,1 and 0,25 mm up to Ø 11 mm,
- per 0,25 mm over 11 mm.

**Stock:**

- per 0,25 mm Ø 3 ~ 12 mm,
  - per 0,50 mm Ø 12,5 ~ 14,5 mm,
- Other diameters: please enquire.



Angle 90° - HSS

2 flutes

Drilling Ø	Countersink		£	CODE*
	D	L		
3,0 ~ 3,9	9	15	64,60	P 8509
4,0 ~ 4,9	10	17	63,11	P 8510
5,0 ~ 5,9	12	19	66,09	P 8512
6,0 ~ 6,9	14	22	68,07	P 8514
7,0 ~ 7,9	15	24	68,07	P 8515
8,0 ~ 8,9	17	26	74,53	P 8517
9,0 ~ 9,9	19	28	74,53	P 8519
10,0 ~ 10,9	20	30	74,53	P 8520
11,0 ~ 12,75	23	32	80,50	P 8523
13,0 ~ 14,75	25	35	84,47	P 8525
15,0 ~ 16,75	28	38	96,40	P 8528
17,0 ~ 18,75	30	40	101,37	P 8530
19,0 ~ 20,75	34	42	117,27	P 8534
21,0 ~ 22,75	37	48	117,27	P 8537
23,0 ~ 25,75	40	50	156,03	P 8540
26,0 ~ 30,0	48	58	303,11	P 8548

+  
Drilling  
diameter

\* Example for Ø 7,5 the code is: P 8515 075

# ADAPTED COUNTERSINKS FOR TAPS

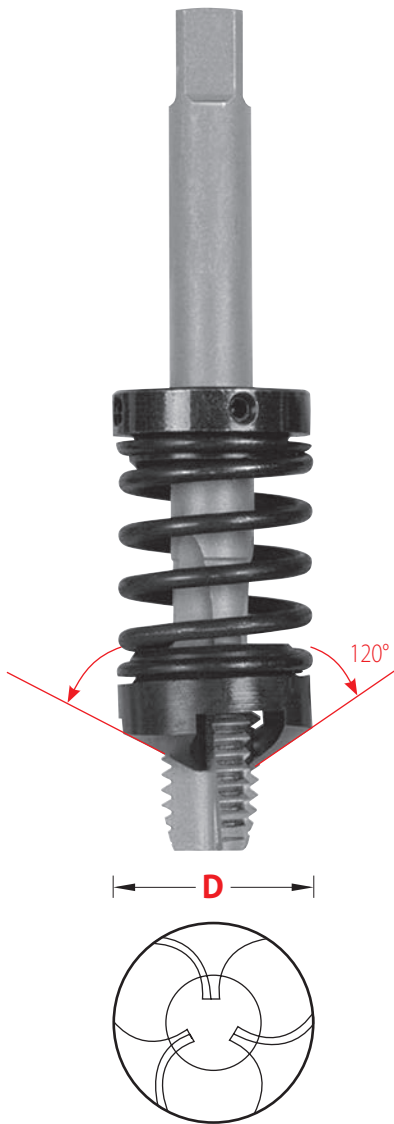
These tools are designed to be mounted on taps, so that **thread and countersink in one operation**.

This tooling is made up of 3 parts, a holder, a spring and the countersink head.

The holder is fixed on the tap with 2 screws. As the countersink is "left hand" it will be compressed while the tap works.

By reversing the rotation at the end of the threading operation, the countersink will chamfer.

To be used on all standard taps from  $\varnothing$  M3 to M14 GAZ - UNC/UNF - W straight flutes and spiral up to  $15^\circ$  with 3 flutes. (not suitable for taps with spiral flute).



Angle  $120^\circ$  - HSS

For taps with 3 flutes M3 to M14

3 flutes

Threading	D Countersinks	For taps DIN 371 with reinforced shank			For taps DIN 376 with reduced shank			Compatible with...
		Tap shank $\varnothing$	CODE Countersink	£	Tap shank $\varnothing$	CODE Countersink	£	
M2	8,0	2,8	P 803102	58,63				
M2,3	8,0	2,8	P 8031023	58,63				
M2,6	8,0	2,8	P 8031026	58,63				
M3	9,5	3,5	P 803103	58,63	2,2	P 803603	58,63	5UNC - UNF
M4	9,5	4,5	P 803104	58,63	2,8	P 803604	58,63	8UNC - UNF
M5	9,5	6,0	P 803105	58,63	3,5	P 803605	58,63	10UNC - UNF
M6	13,0	6,0	P 803106	58,63	4,5	P 803606	58,63	1/4" - WH
M8	14,5	8,0	P 803108	60,12	6,0	P 803608	60,12	5/16" - WH
M10	17,0	10,0	P 803110	68,57	7,0	P 803610	68,57	3/8"-WH-1/8"-GAZ
M12	21,0				9,0	P 803612	68,57	1/2" - WH
M14	25,5				11,0	P 803614	68,57	1/4" - GAZ

For other diameters and taps with 2 or 4 flutes : please inquire !