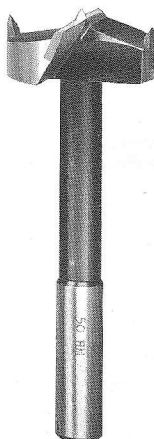


514

Drilling bits

with straight shank, broaching edges, 2 pre-cutters and center point



Drill dia.	Shank dia.	Total length	Design/Item No.			Drill dia.	Shank dia.	Total length	Design/Item No.		
			WS	HSS	HM				WS	HSS	HM
10 mm	13 mm	120 mm	514.110	514.210	514.310	38 mm	16 mm	140 mm	514.138	514.238	514.338
12 mm			514.112	514.212	514.312	40 mm			514.140	514.240	514.340
14 mm			514.114	514.214	514.314	41 mm			514.141	514.241	514.341
15 mm			514.115	514.215	514.315	45 mm			514.145	514.245	514.345
16 mm		130 mm	514.116	514.216	514.316	50 mm			514.150	514.250	514.350
18 mm			514.118	514.218	514.318	51 mm			514.151	514.251	514.351
19 mm			514.119	514.219	514.319	55 mm			514.155	514.255	514.355
20 mm			514.120	514.220	514.320	60 mm			514.160	514.260	514.360
22 mm		140 mm	514.122	514.222	514.322	63 mm	20 mm	150 mm	514.163	514.263	514.363
24 mm			514.124	514.224	514.324	65 mm			514.165	514.265	514.365
25 mm			514.125	514.225	514.325	70 mm			514.170	514.270	514.370
26 mm			514.126	514.226	514.326	75 mm			514.175	514.275	514.375
28 mm			514.128	514.228	514.328	80 mm			514.180	514.280	514.380
30 mm			514.130	514.230	514.330	90 mm			514.190	514.290	514.390
32 mm			514.132	514.232	514.332	100 mm			514.200	514.300	514.400
35 mm			514.135	514.235	514.335		24 mm	160 mm			

Other dimensions upon request!

515

Drill bits with exchangeable carbide tips

Three bit holder sizes fit all drill sizes (dia. 15 to 40 mm).

No resharpener – thanks to exchangeable carbide tips!

Considerable savings already with the use of two different diameters in comparison to two separate drills.

Adjustable broacher enables the drilling of intermediate sizes. Higher feeding rates on automatic boring machines and easy and accurate free-hand drilling.



1) Holders

Size	For dia. mm	Exch. carbide broacher	Item No.
1	15 – 22	–	515.201
2	22,5 – 31	2	515.212
3	31,5 – 40	2	515.213

Int. sizes by means of setting gauges (see 4).

2) Shanks

fitting all holders

Dia. mm	Total length mm	Item No.
10	90	515.221
13	140	515.222

3) Carbide tips

with centering tip and broachers

Dia. mm	For holder	Item No.
15	Size 1	515.015
16	Size 1	515.016
18	Size 1	515.018
19	Size 1	515.019
20	Size 1	515.020
22	Size 1	515.022
23	Size 2	515.023
24	Size 2	515.024
25	Size 2	515.025
26	Size 2	515.026
28	Size 2	515.028
30	Size 2	515.030
32	Size 3	515.032
34	Size 3	515.034
35	Size 3	515.035
38	Size 3	515.038
40	Size 3	515.040

4) Setting gauges for int. sizes holder size 2 and 3

Type	Dia. increase	Item No.
01*	nominal dia.	515.261
02	+ 0,2 mm	515.262
05	+ 0,5 mm	515.263
08	+ 0,8 mm	515.264
10	+ 1,0 mm	515.265

* included in holder size 2 and 3

5) Spares

Description	Size	Item No.
Exch.-tip broacher	2	515.232
Exch.-tip broacher	3	515.233
Torx-screw M 2,5	1	515.241
Torx-screw M4	2/3	515.242
Key	1	515.251
Key	2/3	515.252

6) Sets in a wooden box

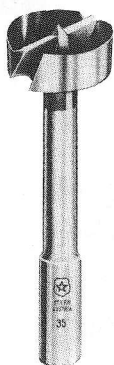
Item No.	515.104	515.105
Holders	on in size 1, 2, 3	on in size 1, 2, 3
Carbide tip. dia.	15-20-25-30-35	15-16-18-20-22-23-25-26-30-34-35-40
Shanks	3 10 x 90 mm	3 10 x 90 mm

516

Forstner-drills

with straight shank, center point, 2 broaching edges & peripheral cutter

in WS-quality; HSS or carbide metal-type are not available!



Drill dia.	Shank dia.	Total length	Item No.	Drill dia.	Shank dia.	Total length	Item No.	Drill dia.	Shank dia.	Total length	Item No.
10 mm	13 mm	120 mm	516.010	24 mm	13 mm	140 mm	516.024	36 mm	16 mm	140 mm	516.036
12 mm			516.012	25 mm			516.025	38 mm			516.038
14 mm			516.014	26 mm			516.026	40 mm			516.040
15 mm			516.015	28 mm			516.028	45 mm			516.045
16 mm		130 mm	516.016	30 mm			516.030	50 mm			516.050
18 mm			516.018	32 mm			516.032	55 mm			516.055
20 mm			516.020	34 mm			516.034	60 mm		150 mm	516.060
22 mm			516.022	35 mm			516.035				

Other sizes upon request!