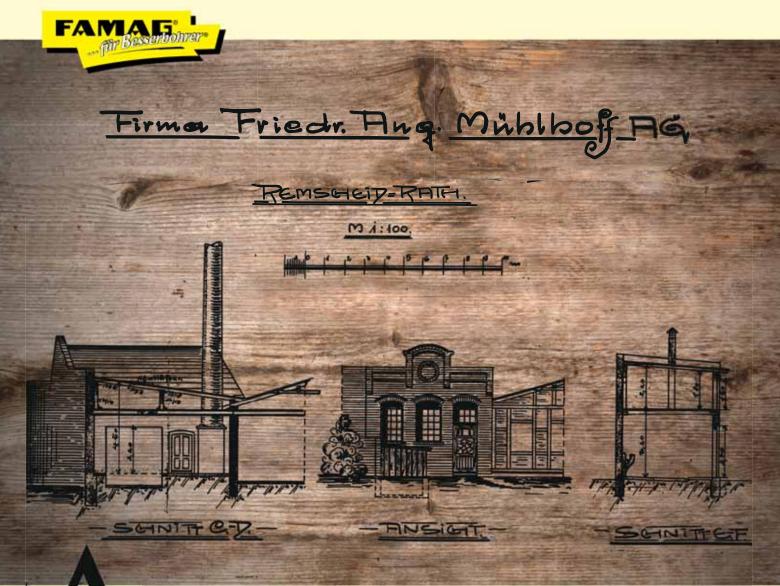


We produce quality tools for a better drilling since 1865!





## Make a statement: Become a DELTA-F!

Today, we are pleased to present the new FAMAG catalogue, which bears a title hat reflects our philosophy: DELTA-F. This is our mark on the ever-changing modern world.

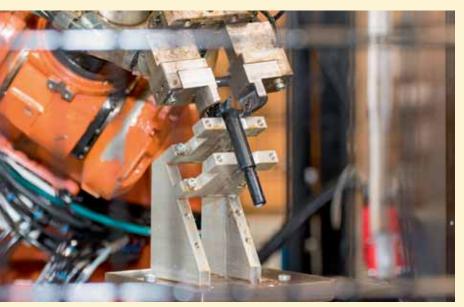


We all know the letter 'Delta' from the Greek alphabet. In mathematics and technology it means amongst other things, a small difference between operand and measurand. Figuratively speaking it refers to the difference between two things which at first sight look

the same, but can be very different when considered in detail. Does that sound familiar to you? Could we be talking about tools?



It could also be said that 'Delta' is a principal element for a mark of superior quality. Superior to what, though? Tools that stand out in the market for their superior quality. We want to define ourselves and the quality of our tools through the creation of our own Delta standard. In other words DELTA-F, or DELTA FAMAG. But what does this mean in practice?



Let's take our customer service as an example: If you call us, you can be sure that you will talk to a human being; someone who has learned his trade, is competent and who will help you. We guarantee to inform you of the cost of an item, its availability and when you can expect to receive it. If it has already been dispatched we will tell you exactly where it is and when you can expect it to arrive. But more than this, for us, 'service' also means being able to advise you on the most suitable FAMAG product to get the

best drilling results, no matter the wood. Finally, for us, 'service' means having sufficient stock quantities of all the products in our catalogue. We want you to be able to place your order today, and receive your FAMAG products tomorrow. Please call us, we will listen to you and are open to your suggestions.

But that's not all. You will also find the difference in our products in form of further developments of the traditional tools and the hereby resulting unique selling points. Sometimes these improvements are so subtle, that they are barely discernible with the naked eye. More than 150 years of experience and an ultra-modern machinery enable us to manufacture such products in daily series.



At latest in the application you will discover that this small DELTA-F simply gives pleasure. A small sign in many ways. But might it also be a sign that sets a new standard ? The DELTA-F range will impress you with their superior cutting properties, their ease of use, their incredible performance and their durability.



As you browse through our new catalogue, keep an eye out for the products in the DELTA-F range. It is very easy to identify them, as they are all marked with the new logo. As well as that you will also see a QR code. Access the code to discover all the fine details and special qualities of these wonderful tools!

Do you share our view that our products are quite simply in a class of their own? If you agree that the time has come to take a different and better approach, then take a stand! Use only quality tools; crafted with care in Germany! Join us as part of DELTA-F! With DELTA-F we put a small sign on the ever-changing modern world – it's a small symbol that represents a community of values – the world of DELTA-F.





Email us your address to <u>DELTA-F@famag.com</u> and we will send you our complimentary DELTA-F pin.

We wish you every success with your work and hope you greatly enjoy using the FAMAG tools "Made in Germany".

Sincerely Yours,

Thomas Pomp & Ralf Hunke



Drils and Countersinks for Wood 5 Hole Saws 6 Router Bits 7 Twist Drills and Countersinks for Metal 105 Hand Tools 12 Information 125 Article index 140

## **DELTA-F**



## Looking for the difference?

Looking for real highlights in this catalogue? Products, which are incomparable and have practice-oriented unique selling points? Welcome as a friend of the DELTA-F products. Please take some time and have a closer look at the new catalogue. For the first time all DELTA-F products are marked with a QR code in this new edition. Following the code you will receive interesting details about all these articles. We tell you something about the history and practice of today. The characteristics of the tools are described in detail and we specify the perfect application. We show the unique selling points and define the product-





parameters as well as details of the packaging. For the bestsellers of each product group we point out the recommended speed rotation. Finally you receive information about the available sets of each DELTA-F product and if there is any accessory available. Perhaps there is an alternative tool that suits you better? We will find it for you. Now we wish you a lot of pleasure with the new DELTA-F's. For any question you may have please do not hesitate to contact us by phone or e-mail - we are at your disposal.

#### **Abbreviations**

OØ	outer diameter
Ø	inner diameter
SØ	shank diameter
L	length of shaft/ shank length
OAL	overall length
MC/HS	main cutters
EL	Effective length
SPL	<b>S</b> piral length
W	weight
т	teeth
R	radius
$\angle$	degrees
max.rpm	maximum acceptable rpm
L1	length of first step (step drill bit)
L2	length of second ster (step drill bit)
D1	core diameter
Lead/1"	no. of threads
PU	packing unit

### Information blocks



Subtle distinction



Description of the tool design



Tool material

Recommended rpm and specific example for the most common diameters in the corresponding field of application



Description of application

Practical advice and specialty of the tool

Packaging unit and information on individual packaging

#### **Quality classification**

O quality level Hobby: reasonable quality tools for the non-professional segment

OO quality level Classic: for the quality-conscious user

OO quality level Profi: professional tools for the craftsman with high demanding requirements on tool and application

OOO **quality level Excellent:** wear-resistant tools of the highest quality level, even for extreme conditions of use

# **Drills and Countersinks for Wood** 5

n

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9	Bormax® 2.0 Prima (Pilot Guided)
10	ormax® 2.0 Prima, Long Version (Special Counterbore)
12	TCT Bormax <sup>3</sup> Prima (Pilot Guided)
14	TCT-Bormax <sup>3</sup> , Forstner Bit
15	TCT-Cylinder Boring Bit
17	Forstner Bit, Classic
18	Cylinder Boring Bit
19	Depth Stop supported by Ball Bearing
20	Disc + Plug Cutter
22	Extension
24	Spiral Slot Milling Cutter
27	Auger Bit, Lewis Pattern
30	Countersink for Auger Bits 180°
31	Special Auger Bit for Joinery Machines
32	Auger Bit with Morse Cone Shank No. 2
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62	Countersink
63	Drill Bit - Countersink Set
67	Machine Expansive Bit
68	Flat Centre Bit

000 Profi

**Bormax® 2.0, Forstner Bit** 



439,50

187,50

188,70

1622



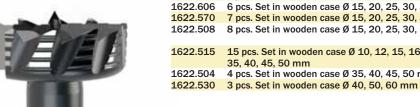






	0-Ø	Stem Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	[mm]	€
1622.008	8	6,5	8	90	57	21,80
1622.009	9	7,5	8	90	57	21,80
1622.010	10	8	8	90	57	21,80
1622.011	11	8	8	90	57	21,80
1622.012	12	8	8	90	57	21,80
1622.013	13	8	8	90	57	21,80
1622.014	14	8	8	90	57	22,50
1622.015	15	8	8	90	57	22,00
1622.016	16	8	8	90	57	22,00
1622.017	17	8	8	90	57	23,95
1622.018	18	8	8	90	57	23,95
1622.019	19	8	8	90	57	28,75
1622.020	20	8	8	90	57	23,95
1622.021	21	8	8	90	57	28,75
1622.022	22	10	10	90	57	25,90
1622.023	23	10	10	90	57	26,70
1622.024	24	10	10	90	57	26,70
1622.025	25	10	10	90	57	27,65
1622.026	26	10	10	90	57	27,65
1622.027	27	10	10	90	57	35,65
1622.027	28	12	10	90	57	32,00
1622.029	29	12	10	90	57	38,80
1622.030	30	12	10	90	57	32,00
1622.032	32	12	10	90	57	32,00
1622.033	33	12	10	90	57	38,80
1622.034	34	12	10	90	57	38,80
1622.035	35	12	10	90	57	38,80
1622.036	36	14	10	90	57	45,10
1622.038	38	14	10	90	57	45,10
1622.040	40	14	10	90	57	45,10
1622.042	42	16	10	90	57	59,05
1622.043	43	16	10	90	57	59,05
1622.044	44	16	10	90	57	59,05
1622.045	45	16	10	90	57	59,05
1622.046	46	16	10	90	57	65,50
1622.048	48	16	10	90	57	65,50
1622.049	49	18	10	90	57	96,00
1622.050	50	18	10	90	57	65,50
1622.054	54	18	10	90	57	105,55
1622.055	55	20	13	90	57	96,00
1622.058	58	20	13	90	57	98,45
1622.060	60	20	13	90	57	99,15
						,
Cata						
Sets	Desident					•
Art No.	Description	unadan ana a d	E 00 0E 00	25		€ 100.75
1622.505		vooden case Ø 1				129,75
1622.606		vooden case Ø 1			•	170,30
1622.570	•	vooden case Ø 1				229,20
1622.508	o pcs. Set in v	vooden case Ø 1	.5, 20, 25, 30,	35, 40, 45, 50	mm	282,25

15 pcs. Set in wooden case Ø 10, 12, 15, 16, 18, 20, 22, 25, 26, 28, 30, 35, 40, 45, 50 mm 4 pcs. Set in wooden case Ø 35, 40, 45, 50 mm



	Bormax 2.0! Centre point with cutting character. Two in reverse order staggered, grooved main cutting edges (from Ø 11 mm), a circumferential cutting edge with longitudinal grooves - both effecting that a clear less feed force is necessary. Also they minimize the friction and the growth of heat. Hexagonal shank for a better power transfer	C. C	Rapid drilling in soft wood, European hard wood, chipboard, MDF etc. Rapid chipping of solid wood and chipboards. Clearly less effort is needed and boring is more rapid than with the usual Forstner bit
R	Alloyed tool steel		Top for freehand drilling and stationary use. The low heat development offers an incredibly long service life with highest drilling quality. In combination with extension shanks of product line 1639 perfectly suitable for drilling deep holes
UPM	900 - 3200 rpm. e.g. Ø 35 mm 1500 rpm in glue lam (glue laminated timber). Further details in the speed diagram		Packing unit = 1, Blister pack







Sets



	O-Ø	AØ	Stem Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[Inch]	[mm]	[mm]	[mm]	[mm]	€
1622.214	7,94	5/16	6,5	8	90	57	24,25
1622.215	9,53	3/8	8	8	90	57	24,25
1622.217	12,7	1/2	8	8	90	57	24,25
1622.219	15,88	5/8	8	8	90	57	24,25
1622.220	17,46	11/16	8	8	90	57	26,30
1622.221	19,05	3/4	8	8	90	57	26,30
1622.222	20,64	13/16	8	8	90	57	31,60
1622.223	22,23	7/8	10	10	90	57	28,50
1622.224	23,81	15/16	10	10	90	57	29,30
1622.225	25,4	1	10	10	90	57	30,50
1622.226	26,99	1 1/16	10	10	90	57	35,65
1622.227	28,58	1 1/8	12	10	90	57	42,60
1622.228	30,16	1 3/16	12	10	90	57	35,20
1622.229	31,75	1 1/4	12	10	90	57	35,20
1622.230	33,34	1 5/16	12	10	90	57	42,60
1622.231	34,93	1 3/8	12	10	90	57	38,80
1622.233	38,05	1 1/2	14	10	90	57	49,65
1622.235	41,28	1 5/8	14	10	90	57	64,95
1622.237	44,45	13/4	16	10	90	57	64,95
1622.239	47,63	17/8	16	10	90	57	72,05
1622.241	50,8	2	18	10	90	57	72,05
1622.243	53,98	2 1/8	18	10	90	57	105,55
1622.245	57,15	2 1/4	20	13	90	57	109,05

Art.- No. € Description 5 pcs. Set in wooden case Ø 5/8, 3/4, 1, 1 1/8, 1 3/8 INCH 7 pcs. Set in wooden case Ø 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1 INCH 16 pcs. Set in wooden case Ø 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1.1/8, 1.1/4, 1.3/8, 1.7/8, 2, 2.1/8 INCH 161,15 1622.605 1622,607 161.15 668,90 1622.616 Bormax 2.0! Centre point with cutting character. Two in Rapid drilling in soft wood, European hard wood, chipboard, reverse order staggered, grooved main cutting edges (from MDF etc. Rapid chipping of solid wood and chipboards. Clearly less effort is needed and boring is more rapid than Ø 11 mm), a circumferential cutting edge with longitudinal grooves - both effecting that a clear less feed force is with the usual Forstner bit necessary. Also they minimize the friction and the growth of heat. Hexagonal shank for a better power transfer Alloyed tool steel Top for freehand drilling and stationary use. The low heat development offers an incredibly long service life with highest drilling quality 111 900 - 3200 rpm. e.g. Ø 1 inch 2200 rpm in glue lam (glue Packing unit = 1, Blister pack laminated timber). Further details in the speed diagram UPM



Bormax® 2.0, Forstner Bit, Long Version





1623







		O-Ø	AØ	Stem Ø	SØ	OAL	Effective L.	
Art No.	Description	[mm]	[Inch]	[mm]	[mm]	[mm]	[mm]	€
1623.010		10		8	13	120	70	29,70
1623.012		12		8	13	120	70	29,70
1623.013	End of Series	13		8	13	125	75	29,70
1623.014		14		8	13	125	75	29,70
1623.015		15		8	13	125	75	27,65
1623.016		16		8	13	125	75	30,15
1623.018		18		8	13	130	80	32,30
1623.019		19		8	13	130	80	34,10
1623.020		20		8	13	130	80	32,30
1623.022		22		13	13	130	80	32,75
1623.024		24		13	13	135	85	33,80
1623.025		25		13	13	135	85	34,10
1623.225		25,40	1"	13	13	135	85	38,85
1623.026		26		13	13	135	85	37,35
1623.226		26,99	1 1/16	13	13	135	85	42,30
1623.027	End of Series	27		13	13	135	85	42,30
1623.028		28		13	13	135	85	38,85
1623.030		30		13	13	140	90	39,60
1623.229		31,75	1 1/4"	14	13	140	90	45,10
1623.032		32		14	13	140	90	42,30
1623.034		34		14	13	140	90	50,80
1623.035		35		14	13	145	95	45,80
1623.036		36		14	13	145	95	50,10
1623.038		38		16	13	145	95	54,70
1623.233		38,10	1 1/2"	16	13	145	95	62,25
1623.040		40		16	13	145	95	54,70

## For bigger diameters we recommend product line 1614 on page 10

	Bormax 2.0! Centre point with cutting character. Two in reverse order staggered, grooved main cutting edges, a circumferential cutting edge with longitudinal grooves - both effecting that a clear less feed force is necessary. Also they minimize the friction and the growth of heat. Hexagonal shank for a better power transfer	C. Sur	Rapid drilling in soft wood, European hard wood, chipboard, MDF etc. Rapid chipping of solid wood and chipboards. Clearly less effort is needed and boring is faster than with the usual Forstner bit
	Alloyed tool steel		Top for freehand drilling and stationary use. The low heat development offers an incredibly long service life with highest drilling quality. In combination with extension shanks product line 1639 perfectly suitable for drilling deep holes. For bigger diameters we recommend product line 1614 Bormax® 2.0 WS prima, long version
UPM	900 - 3200 rpm. e.g. Ø 30 mm 1750 rpm in soft wood. Further details in the speed diagram		Packing unit = 1, yellow cardboard tube







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	0-Ø	Stem Ø	SØ	OAL	Effective L.		
Art No.	[mm]	[mm]	[mm]	[mm]	[mm]	HS	€
1624.015	15	10	10	90	57	1	30,95
1624.016	16	10	10	90	57	1	30,95
1624.162	16,2	10	10	90	57	1	33,00
1624.018	18	10	10	90	57	1	33,00
1624.020	20	10	10	90	57	1	33,00
1624.022	22	10	10	90	57	2	35,10
1624.025	25	10	10	90	57	2	36,75
1624.030	30	12	10	90	57	2	41,05
1624.035	35	12	10	90	57	2	47,90
1624.040	40	14	10	90	57	2	54,25
1624.045	45	16	10	90	57	2	69,15
1624.050	50	18	10	90	57	2	74,60
Accessory							
		O-Ø	SØ	OAL	Effective L.	PU	
Art No.	Description	[mm]	[mm]	[mm]	[mm]	[pcs]	€
1624.004	pre-drill bit	4	4	45	30	1	3,75
1624.104	pre-drill bit (PU 4)	4	4	45	30	4	13,40
1624.005	Centre point	4	4	22	6	1	3,05
1624.105	Centre point (PU 4)	4	4	22	6	4	11,00

Sets

0013		
Art No.	Description	€
1624.505	5 pcs. Set in wooden case Ø 15, 20, 25, 30, 35 mm	170,60
1624.507	5 pcs. Set in wooden case Ø 16, 18, 20, 22, 25 mm	151,85
1624.506	6 pcs. Set in wooden case Ø 15, 20, 25. 30, 35 mm incl. extension 125 mm (1639.001)	191,35
1624.606	6 pcs. Set in wooden case Ø 15, 20, 25, 30, 35, 40 mm	219,40
1624.570	7 pcs. Set in wooden case Ø 15, 20, 25, 30, 35, 40, 50 mm	286,55
1624.508	8 pcs. Set in wooden case Ø 15, 20, 25, 30, 35, 40, 45, 50 mm	348,75
1624.509	9 pcs. Set in wooden case Ø 15, 20, 25, 30, 35, 40, 45, 50 mm incl. extension 250 mm (1639.002)	373,45
1624.504	4 pcs. Set in wooden case Ø 35, 40, 45, 50 mm	221,25

	Bormax 2.0 prima with exchangeable centre point and pre- drill bit. Two in reverse order staggered, grooved main cutting edges, a circumferencial cutting edge with longitudinal grooves - both effecting that a clear less feed force is necessary. Also they minimize the friction and the growth of heat	C. C	The pilot-drill bit is ideal for drilling at an angle which is not $90^{\circ}$ in workpieces surface, which occurs for example in the construction of staircase. Can be used with the centre point as traditional Bormax
	Alloyed tool steel, pre-drill bit HSS-G		Clean drilling at many angles into soft wood, European hard wood, and MDF panels. Very good alternative to the expensive drill bit for construction of stairs product line 1575. In combination with extension shanks product line 1639 perfectly suitable for drilling deep holes. For harder materials like solid wood or plastic coated boards we recommend our new product line 1664 from page 13
UPM	1500 - 3000 rpm. e.g. Ø 20 mm 2400 rpm in soft wood. Further details in the speed diagram	F	Packing unit = 1, Blister pack



Effective

**F** DELTA





							Effective	
	0-Ø	AØ	Stem Ø	SØ	IØ	OAL	L.	
Art No.	[mm]	[Inch]	[mm]	[mm]	[mm]	[mm]	[mm]	€
1614.020	20		13	13	8	140	90	78,05
1614.025	25		13	13	8	140	90	81,20
1614.030	30		14	13	8	140	90	89,85
1614.032	32		14	13	8	140	90	93,90
1614.035	35		16	13	8	145	95	93,90
1614.040	40		20	13	8	145	95	102,25
1614.237	44,45	13/4"	20	13	10	150	100	108,45
1614.045	45	, -	20	13	10	150	100	108,45
1614.050	50		20	13	10	150	100	113,75
1614.241	50,80	2"	20	13	10	150	100	113,75
1614.243	53,98	2 1/8"	20	13	10	150	100	123,85
1614.054	54	2 1/0	20	13	10	150	100	145,05
1614.055	55		20	13	10	150	100	113,75
1614.245	57,15	2 1/4"	20	13	10	150	100	123,85
1614.058	58	2 1/ 4	20	13	10	150	100	123,85
1614.060	60		20	13	10	150	100	123,85
1614.247	60,33	2 3/8"	20	13	10	155	105	144,50
1614.247	63,50	2 3/8	20	13	10	155	105	154,85
1614.065	65	21/2	20	13	10	155	105	144,50
1614.065		0 E /0"	20	13	10	155	105	
	66,68	2 5/8"	20	13	10	155	105	154,85
1614.068	68	0.2/4						154,85
1614.253	69,85	2 3/4"	20	13	10	155	105	154,85
1614.070	70	0.7 (0)	20	13	10	155	105	154,85
1614.255	73,03	2 7/8"	20	13	10	155	105	185,80
1614.075	75	0.1	20	13	10	155	105	185,80
1614.257	76,20	3"	20	13	10	155	105	185,80
1614.080	80		20	13	10	155	105	185,80
1614.085	85		20	13	10	160	110	232,30
1614.261	88,90	3 1/2"	20	16	10	160	110	232,30
1614.090	90		20	16	10	160	110	232,30
1614.095	95		24	16	10	160	110	289,05
1614.100	100		24	16	10	160	110	289,05
1614.265	101,60	4"	24	16	10	160	110	289,05
1614.110	110		25	16	10	160	110	335,55
1614.120	120		25	16	10	160	110	335,55
Accessory								
Art No.	Description							€
1619.208							17,40	
1619.210	HSS centre drill bit with shank-Ø 10 mm						17,40	
1614.208			nm for Ø 20		_			17,40
1614.210	HSS pre-drill bit Ø 10 mm for Ø 44,45 - 120 mm							17,40
Sets								
Art No.	Description							€
<b>1614.509</b>			th stop in w			50, 60, 70	mm.	452,55
		, ,	m and MK2					
1614.510			0 pcs: 1614			-	it 1410.3	417,70
	incl. 1619 Ø 12, 14, 18 mm and extension shank 250 mm							

incl. 1619 Ø 12, 14, 18 mm and extension shank 250 mm 1614.511 Combination set of 10 pcs: 1614 Ø 40, 50, 60 mm and auger bit 1410.3 425,20 incl. 1619 Ø 12, 16, 20 mm and extension shank 250 mm

	Bormax® 2.0 prima with exchangeable pre-drill bit, centre drill bit or guiding pin. Much less feed force needed as well as minimized friction and therefore less heat generation. Reasons: The two main cutting edges are grooved shifted, as well as the toothed linear grooved pre-cutters. A matching centre drill bit and an allen wrench are included in the delivery. Hexagonal shank for a better power transfer	C. C	Perfect fit for slanting drills with our pre-drill bit or guiding pins 1619. Clean drilling in soft wood, European hard wood, chipboard and MDF
Ø	Alloyed tool steel		We recommend our Bormax® 2.0 WS prima (pilot guided) with matching extension for smaller diameters (1624 & 1639)
UPM	300 - 800 rpm, for example Ø 60 mm 500 rpm in laminated timber. Further details in the speed diagram		packing unit = 1, yellow cardboard tube (Ø 100 mm max.) > 100 mm in carton

10



OOO Profi

### Accessories for Bormax® 2.0 Prima, Long Version



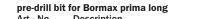


	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1619.008	8	8	75	50	17,40
1619.110	10	8	75	50	17,40
1619.112	12	8	75	50	18,9
1619.113	13	8	75	50	19,1
1619.114	14	8	75	50	19,1
1619.116	16	8	75	50	20,3
1619.118	18	8	75	50	21,2
1619.120	20	8	75	50	22,1
1619.122	22	8	75	50	25,9
Guiding pin for	r Bormax prima l	ong from Ø 44, 45	mm		
•••	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1619.010					
10101010	10	10	75	50	17,4
	10 12	10 10	75 75	50 50	
1619.012 1619.013					17,4 18,9 19,1
1619.012 1619.013	12	10	75	50	18,9
1619.012 <mark>1619.013</mark> 1619.014	12 13	10 10	75 75	50 50	18,9 19,1
1619.012 1619.013 1619.014 1619.016	12 13 14	10 10 10	75 75 75	50 50 50	18,9 <mark>19,1</mark> 19,1
1619.012 1619.013 1619.014 1619.016 1619.017	12 13 14 16	10 10 10 10 10	75 75 75 75	50 50 50 50	18,9 19,1 19,1 20,3
1619.012 1619.013 1619.014 1619.016 1619.017 1619.018	12 13 14 16 17	10 10 10 10 10 10	75 75 75 75 75 75	50 50 50 50 50 50	18,9 19,1 19,1 20,3 21,2
1619.012         1619.013         1619.014         1619.016         1619.017         1619.018         1619.020	12 13 14 16 17 18	10 10 10 10 10 10 10	75 75 75 75 75 75 75	50 50 50 50 50 50 50	18,9 19,1 19,1 20,3 21,2 21,2 22,1
1619.012	12 13 14 16 17 18 20	10 10 10 10 10 10 10 10	75 75 75 75 75 75 75 75 75	50 50 50 50 50 50 50 50 50	18,9 19,1 19,1 20,3 21,2 21,2





centre drill bit for Bormax prima long							
Art No.	Description	€					
1619.208	HSS centre drill bit with shank-Ø 8 mm	17,40					
1619.210	1619.210 HSS centre drill bit with shank-Ø 10 mm						



Art No.	Description	€
1614.208	HSS pre-drill bit Ø 8 mm for Ø 20 - 40 mm	17,40
1614.210	HSS pre-drill bit Ø 10 mm for Ø 44,45 - 120 mm	17,40



Adjustable stop for Bormax prima long						
Art No.	Description	€				
1619.100	depth stop for Ø 40 - 90 mm	118.85				

	Stepped guiding pin with shank of 8 or 10 mm x 25 mm	THE REAL PROPERTY IN	To be used with counterbore product lines 1614 or 1618. Ensures the good guidance of the counterbore tools
	Tool steel		Ground slightly undersized so that easy working is ensured
UPM	please see drill range 1614 and 1619	K	Packing unit = 1, Rose-tube



FA MA Besserbohrer

TCT Bormax<sup>3</sup> Prima (Pilot Guided)



1664



OOOO Excellent





	0-Ø	Stem Ø	SØ	OAL	Effective L.			
Art No.	[mm]	[mm]	[mm]	[mm]	[mm]	HS	€	
1664.015	15	10	10	90	57	1	68,40	
1664.020	20	10	10	90	57	1	69,95	
1664.025	25	10	10	90	57	2	71,65	
1664.030	30	12	10	90	57	2	73,30	
1664.035	35	12	10	90	57	2	76,30	
1664.040	40	14	10	90	57	2	88,90	
1664.045	45	16	10	90	57	2	112,15	
1664.050	50	18	10	90	57	2	127,20	
Accessory								
		0-Ø	SØ	OAL	Effective L.	PU		
Art No.	Description	[mm]	[mm]	[mm]	[mm]	[pcs]	€	
1624.004	pre-drill bit	4	4	45	30	1	3,75	
1624.104	pre-drill bit (PU 4 )	4	4	45	30	4	13,40	
1624.005	Centre point	4	4	45	30	1	3,05	
1624.105	Centre point (PU 4 )	4	4	45	30	4	11,00	
Sets								
Art No.	Description						€	
1664.505	5 pcs set in wooden ca	se Ø 15, 20, 25, 30,	35 mm				323,70	
1664.506	6 pcs set in wooden ca	se Ø 15, 20, 25, 30,	35 mm incl. extensio	n 125 mm			345,35	
1664.606							403,65	
1664.570	7 pcs set in wooden ca	se Ø 15, 20, 25, 30,	35, 40, 50 mm				518,25	
1664.508	8 pcs set in wooden ca	se Ø 15, 20, 25, 30,	35, 40, 45, 50 mm				619,15	
1664.509	9 pcs set in wooden ca	se Ø 15, 20, 25, 30,	35, 40, 45, 50 mm in	ncl. extension 250 m	ım		643,80	
1664.504	4 pcs set in wooden ca	se Ø 35, 40, 45, 50	mm				364,10	
6				-4				
BA A	र्ी TCT Bormax prima wi	th exchangeable ce	ntre point and pre-	Clean	drilling at many angles ir	n all wood materia	als like	
N Com	drill bit. The two carb	ide tipped main cut	ting edges ensure	Europe	ean and exotic hard wood	d (also Bongossi),	MDF,	
WA Me	a maximum service l	fe also in hard and	coated materials.	coated	I and uncoated chipboard	ds, as well as ma	ny plastics,	
Art No.         Description         €           1664.505         5 pcs set in wooden case Ø 15, 20, 25, 30, 35 mm         323           1664.506         6 pcs set in wooden case Ø 15, 20, 25, 30, 35 mm         345           1664.606         6 pcs set in wooden case Ø 15, 20, 25, 30, 35, 40 mm         345           1664.606         6 pcs set in wooden case Ø 15, 20, 25, 30, 35, 40 mm         403           1664.507         7 pcs set in wooden case Ø 15, 20, 25, 30, 35, 40, 50 mm         518           1664.508         8 pcs set in wooden case Ø 15, 20, 25, 30, 35, 40, 45, 50 mm         619           1664.509         9 pcs set in wooden case Ø 15, 20, 25, 30, 35, 40, 45, 50 mm         643								

	TCT Bormax prima with exchangeable centre point and pre- drill bit. The two carbide tipped main cutting edges ensure a maximum service life also in hard and coated materials. Included in the delivery: Bormax, exchangeable centre point, pre-drill bit Ø 4 mm and one allen key. Hexagonal shank for a better power transfer	C. The	Clean drilling at many angles in all wood materials like European and exotic hard wood (also Bongossi), MDF, coated and uncoated chipboards, as well as many plastics, such as acrylic glass, Corian, GFRP, HPL coating, polycarbonate, PVC and Trespa board
	TCT (main cutting edges), pre-drill HSS-G		In combination with extension shanks product line 1639 perfectly suitable for drilling deep holes
UPM	1800 - 5000 rpm. e.g. Ø 35 mm 3000 rpm in European hard wood. Further details in the speed diagram	F	Packing Unit = 1, Blister pack

**TCT-Bormax<sup>3</sup>, Forstner Bit** 





1663



OOOO Excellent









	O-Ø	AØ	Stem Ø	SØ	OAL	Effective L.		
Art No.	[mm]	[Inch]	[mm]	[mm]	[mm]	[mm]	HS	€
1663.015	15		8	8	90	57	1	59,50
1663.219	15,88	5/8	8	8	90	57	1	61,45
1663.016	16		8	8	90	57	1	61,10
1663.018	18		8	8	90	57	1	61,10
1663.019	19		8	8	90	57	1	61,10
1663.221	19,05	3/4	8	8	90	57	1	61,10
1663.020	20		8	8	90	57	1	61,10
1663.022	22		10	10	90	57	1	62,75
1663.223	22,23	7/8	10	10	90	57	1	62,75
1663.023	23		10	10	90	57	1	62,75
1663.024	24		10	10	90	57	1	62,75
1663.025	25		10	10	90	57	2	62,75
1663.225	25,4	1	10	10	90	57	2	64,40
1663.026	26		10	10	90	57	2	62,75
1663.028	28		12	10	90	57	2	64,40
1663.227	28,58	1 1/8	12	10	90	57	2	67,40
1663.030	30		12	10	90	57	2	64,40
1663.229	31,75	1 1/4	12	10	90	57	2	64,40
1663.032	32		12	10	90	57	2	64,40
1663.231	34,93	13/8	12	10	90	57	2	67,35
1663.035	35		12	10	90	57	2	67,40
1663.038	38		14	10	90	57	2	80,00
1663.233	38,10	1 1/2	14	10	90	57	2	80,00
1663.040	40		14	10	90	57	2	80,00
1663.044	44		16	10	90	57	2	109,95
1663.237	44,45	13/4	16	10	90	57	2	118,30
1663.045	45		16	10	90	57	2	103,20
1663.050	50		18	10	90	57	2	118,30
1663.241	50,80	2	18	10	90	57	2	130,10
1663.243	53,98	2 1/8	18	10	90	57	2	154,95
1663.054	54	,	18	10	90	57	2	154,95
1663.060	60		20	13	90	57	2	165,15

### Sets

Sets				
	Description		€	
1663.505 §	5 pcs. Set in wooden case Ø 15, 20, 25, 30, 35 mm		283,45	
1663.606 0	6 pcs. Set in wooden case Ø 15, 20, 25, 30, 35, 40 mm		355,40	J
1663.570	7 pcs. Set in wooden case Ø 15, 20, 25, 30, 35, 40, 50 mm		461,80	
1663.508 8	3 pcs. Set in wooden case Ø 15, 20, 25, 30, 35, 40, 45, 50 mm	า	554,35	5
1663.504 4	pcs. Set in wooden case Ø 35, 40, 45, 50 mm		331,75	
	The first carbide tipped Forstner bit with centre point, carbide-tipped main cutting edge and toothed circumferential cutter. Hexagonal shank for a better power transfer	C. Har	Freehand drilling in all types of wood: European and exotic wood (also Bongossi), MDF, panel materials, as well as laminated materials and many plastics, such as acrylic glass, Corian, GFRP, HPL coating, polycarbonate, PVC and Trespa board	
	TCT (main cutting edge and taper tap)		The first universal carbide tipped drill bit for freehand drilling and of course also for stationary use. In combination with extension shanks perfectly suitable for drilling deep holes	
UPM	1800 - 5000 rpm. e.g. Ø 35 mm 3000 rpm in European hard wood. Further details in the speed diagram	F	Packing unit = 1, Blister pack	

Excellent TCT-Cylinder Boring Bit















	0-Ø	Stem Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	[mm]	€
1662.008	8	7	10	90	57	51,25
1662.010	10	8	10	90	57	51,25
1662.011	11	8	10	90	57	54,55
1662.012	12	8	10	90	57	54,55
1662.013	13	8	10	90	57	61,45
1662.014	14	10	10	90	57	61,4
1662.015	15	10	10	90	57	61,45
1662.016	16	10	10	90	57	63,10
1662.017	17	10	10	90	57	63,10
1662.018	18	10	10	90	57	63,10
1662.019	19	10	10	90	57	63,10
1662.020	20	10	10	90	57	63,10
1662.021	21	10	10	90	57	64,80
1662.022	22	10	10	90	57	64,80
1662.023	23	10	10	90	57	64,80
1662.024	24	10	10	90	57	64,80
1662.025	25	12	10	90	57	64,80
1662.026	26	12	10	90	57	64,80
1662.027	27	13	10	90	57	83,30
1662.028	28	13	10	90	57	66,50
1662.029	29	13	10	90	57	83,30
1662.030	30	13	10	90	57	66,50
1662.031	31	13	10	90	57	87,25
1662.032	32	14	10	90	57	69,60
1662.033	33	14	10	90	57	95,95
1662.034	34	14	10	90	57	69,60
1662.035	35	14	10	90	57	69,60
1662.036	36	14	10	90	57	69,60
1662.037	37	14	10	90	57	103,00
1662.038	38	14	10	90	57	82,60
1662.039	39	16	10	90	57	103,00
1662.040	40	16	10	90	57	82,60
1662.042	42	18	10	90	57	103,60
1662.043	43	18	10	90	57	113,55
1662.044	44	18	10	90	57	113,55
1662.045	45	18	10	90	57	106,60
1662.046	46	18	10	90	57	123,70
1662.048	48	18	10	90	57	128,35
1662.050	50	18	10	90	57	122,15
1662.055	55	18	13	90	57	145,00
1662.058	58	18	13	90	57	164,85
1662.060	60	18	13	90	57	170,60
Sets						
Art No.	Description					€
1662.505	5 pcs. Set in w	ooden case Ø 1	5, 20, 25, 30, 3	35 mm		292,70
1662.606	6 pcs. Set in w	ooden case Ø 1	5, 20, 25, 30, 3	35, 40 mm		367,00
1662.508	8 pcs. Set in w	ooden case Ø 1	5, 20, 25, 30, 3	35, 40, 45, 50	mm	572,70
1662.510	10 pcs. Set in	wooden case Ø	10, 15, 18, 20	, 22, 25, 26, 3	0, 35, 40	642,90
1662.515	15 pcs. Set in 40, 45, 50 mn	wooden case Ø	10, 12, 15, 16	, 18, 20, 22, 2	5, 26, 30, 35,	957,4

	Carbide tipped with centre point, two main cutting edges, two taper taps. Precisely ground by diamond wheel on CNC machines. High quality carbide tipping and special curved grinding (> Ø 23 mm) on the main cutting edges	Contraction of the second seco	Tear free, accurate drillings in all hard wood materials, coated and plastic coated chipboards, as well as many plastics, such as acrylic glass, Corian, GFRP, HPL coating, polycarbonate, PVC and Trespa board. Very good chip removal due to serrated grinding on main cutting edges. For stationary use only	
	TCT (main cutting edges and taper tap)		Drilling with nearly no effort as well as an unbelievable service life, also for use in hard wood and hard plastics. For freehand drilling we recommend the TCT-Bormax <sup>3</sup> (product line 1663)	
UPM	1500 - 8000 rpm. e.g. Ø 35 mm 3000 rpm in European hard wood. Further details in the speed diagram		Packing unit = 1, Rose-tube (up to Ø 55 mm)	

Excellent

TCT-Cylinder Boring Bit, Long Version





1661





16



	0-Ø	Stem Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	[mm]	€
1661.010	10	8	13	140	90	77,75
1661.012	12	8	13	140	90	77,75
1661.014	14	8	13	140	90	78,90
1661.015	15	8	13	140	90	78,90
1661.016	16	8	13	140	90	80,95
1661.017	17	8	13	140	90	81,85
1661.018	18	8	13	140	90	81,85
1661.019	19	8	13	140	90	85,15
1661.020	20	8	13	140	90	85,15
1661.022	22	10	13	140	90	87,30
1661.024	24	10	13	140	90	91,45
1661.025	25	10	13	140	90	93,55
1661.026	26	10	13	140	90	94,55
1661.028	28	13	13	140	90	99,85
1661.030	30	13	13	140	90	102,00
1661.032	32	13	13	140	90	107,50
1661.034	34	16	13	140	90	117,95
1661.035	35	16	13	140	90	121,35
1661.036	36	16	13	140	90	128,60
1661.038	38	16	13	140	90	130,20
1661.040	40	16	13	140	90	136,20
1661.042	42	16	16	140	90	149,45
1661.045	45	16	16	140	90	154,15
1661.048	48	16	16	140	90	170,00
1661.050	50	18	16	140	90	165,15
1661.055	55	18	16	140	90	170,60
1661.058	58	18	16	140	90	185,80
1661.060	60	18	16	150	100	185,80
1661.062	62	18	16	160	110	232,25
1661.065	65	18	16	160	110	216,80
1661.068	68	20	16	140	120	232,25
1661.070	70	20	16	160	110	232,25
1661.075	75	20	16	160	110	278,75
1661.080	80	20	16	160	110	278,75
1661.085	85	20	16	160	110	348,40
1661.090	90	25	20	160	110	348,40
1661.095	95	25	20	160	110	433,60
1661.100	100	25	20	160	110	433,60
1661.120	120	25	20	160	110	503,30

	Long version, carbide tipped with centre point, two main cutting edges, two taper taps. Precisely ground by diamond wheel in CNC machines. High quality carbide tipping and special curved grinding (> $\emptyset$ 23 mm) on the main cutting edges	C. C	Tear free, accurate drillings in all hard wood materials, laminated and plastic laminated chipboards, as well as many plastics, such as acrylic glass, Corian, GFRP, HPL coating, polycarbonate, PVC and Trespa board. For stationary use only
Ø	TCT (main cutting edges and taper tap)		For freehand drilling in European hard wood we recommend the long version of Bormax® 2.0 WS prima, our product line 1614
UPM	600 - 6000 rpm. e.g. Ø 68 mm 1300 rpm in European hard wood. Further details in the speed diagram		Packing unit = 1, yellow cardboard tube (up to Ø 100 mm)







OO Classic





							-
	0-Ø	AØ	Stem Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[Inch]	[mm]	[mm]	[mm]	[mm]	€
1630.213	6,35	1/4"	4,5	8	90	57	17,65
1630.214	7,94	5/16"	8	8	90	57	17,65
1630.215	9,53	3/8"	8	8	90	57	17,65
1630.010	10		8	8	90	57	15,55
1630.216	11,11	7/16"	8	8	90	57	16,50
1630.012	12		8	8	90	57	16,05
1630.217	12,70	1/2"	8	8	90	57	18,50
1630.014	14		8	8	90	57	16,75
1630.218	14,29	9/16"	8	8	90	57	17,95
1630.015	15		8	8	90	57	17,35
1630.219	15,88	5/8"	8	8	90	57	19,15
1630.016	16	,	8	8	90	57	17,40
1630.220	17,46	11/16"	8	8	90	57	18,95
1630.018	18	,	8	8	90	57	18,55
1630.221	19,05	3/4"	8	8	90	57	21,50
1630.020	20	-/	8	8	90	57	19,45
1630.222	20.64	13/16"	8	8	90	57	21,50
1630.022	22	,	10	10	90	57	20,95
1630.223	22,23	7/8"	10	10	90	57	23,10
1630.224	23,81	15/16"	10	10	90	57	22,95
1630.024	24	10/10	10	10	90	57	22,15
1630.025	25		10	10	90	57	23,50
1630.225	25,40	1"	10	10	90	57	25,95
1630.026	26	-	10	10	90	57	24,55
1630.027	27		10	10	90	57	27,20
1630.028	28		12	10	90	57	27,20
1630.227	28,58	1 1/8"	12	10	90	57	29,95
1630.030	30	11/0	12	10	90	57	25,55
1630.228	30,16	1 3/16"	12	10	90	57	,
1630.228	31,75	1 1/4"	12	10	90	57	34,00 34,00
1630.229	32	11/4	12	10	90	57	30,95
		1 5/10	10	10	90		,
1630.230	33,34 34	1 5/16"	10	10	90	57	33,60
1630.034		4.2 /01	12			57	32,35
1630.231	34,93	1 3/8"		10	90	57	33,60
1630.035	35	4 7 (4 0)	12	10	90	57	33,60
1630.232	36,51	1 7/16"	14	10	90	57	36,75
1630.038	38	4.4.(0)	14	10	90	57	36,80
1630.233	38,05	1 1/2"	14	10	90	57	36,75
1630.040	40		14	10	90	57	40,25
1630.235	41,28	1 5/8"	14	10	90	57	53,95
1630.237	44,45	1 3/4"	16	10	90	57	53,95
1630.045	45		16	10	90	57	49,05
1630.239	47,63	1 7/8"	16	10	90	57	53,95
1630.050	50		18	10	90	57	53,10
1630.241	50,80	2"	18	10	90	57	58,35
1630.243	53,98	2 1/8"	18	10	90	57	85,60
1630.245	57,15	2 1/4"	20	10	90	57	88,35
Sets							
Art No.	Description						€
1630.505		wooden cas	e Ø 15. 20. 2	5, 30, 35 m	ım		109,25
1630.508		wooden cas	, ,	, ,		m	237,25
	•		, -,	. , ,			, -

1630.508	8 pcs. Set in wooden case Ø 15, 20, 25, 30, 35, 40, 45, 50 mm	237,25
1630.510	10 pcs. Set in wooden case Ø 10, 15, 18, 20, 22, 25, 26, 30, 35, 40	241,25
1630.515	15 pcs. Set in wooden case Ø 10, 12, 15, 16, 18, 20, 22, 25, 26, 28, 30, 35, 40, 45, 50 mm	363,00
1630.607	7 pcs. Set in wooden case Ø 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1"	128,65
1630.616	16 pcs. Set in wooden case Ø 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1.1/8, 1.1/4, 1.3/8, 1.1/2, 1.5/8, 1.3/4, 1.7/8, 2, 2.1/8"	530,50

N.	Traditional Forstner bit with centre point, two main cutting edges and circumferential cutter. Low friction due to the reduced peripheral cutting edge	C. Hur	Tear free accurate holes in soft wood, glued laminated timber etc. Specially suitable for freehand boring with a drilling machine
	Alloyed tool steel		This bit obtained the first position in an important test of Forstner bits in the U.S. published in "Fine Woodworking 04.2008". For hard wood we recommend the rapid Forstner bit Bormax® of our product line 1622 or the TCT-Bormax <sup>3</sup> of our product line 1663
UPM	700 - 2800 rpm. e.g. Ø 35 mm 1000 rpm in soft wood. Further details in the speed diagram	F	Packing unit = 1, Rose-tube

Sets



**Cylinder Boring Bit** 







	0-Ø	Stem Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	[mm]	€
1633.010	10	8	8	90	57	15,55
1633.012	12	8	8	90	57	16,05
1633.014	14	8	8	90	57	16,75
1633.015	15	8	8	90	57	17,35
1633.016	16	8	8	90	57	17,40
1633.018	18	8	8	90	57	18,55
1633.020	20	8	8	90	57	19,45
1633.022	22	10	10	90	57	20,95
1633.023	23	10	10	90	57	22,15
1633.024	24	10	10	90	57	22,15
1633.025	25	10	10	90	57	23,50
1633.026	26	10	10	90	57	24,55
1633.028	28	12	10	90	57	27,20
1633.030	30	12	10	90	57	27,75
1633.032	32	12	10	90	57	30,95
1633.034	34	12	10	90	57	32,35
1633.035	35	12	10	90	57	33,60
1633.036	36	12	10	90	57	32,95
1633.038	38	12	10	90	57	34,80
1633.040	40	14	10	90	57	40,25
1633.045	45	16	10	90	57	49,05
1633.050	50	18	10	90	57	53,10
1633.060	60	20	10	90	57	101,95

Art.- No. Description € 5 pcs. Set in wooden case Ø 15, 20, 25, 30, 35 mm 109,25 1633.505 10 pcs. Set in wooden case Ø 10, 12, 15, 18, 20, 22, 25, 26, 30, 35, 40 mm 15 pcs. Set in wooden case Ø 10, 12, 15, 16, 18, 20, 22, 25, 26, 28, 30, 35, 40, 45, 50 mm 1633.510 216,85 1633.515 363,00 Traditional cylinder boring bit with centre point, two main Tear free accurate holes in soft wood, can also be used for cutting edges and two taper taps European hard wood and veneered boards. Especially easy to resharpen due to the straight taper taps. Stationary deephole drilling is possible with our extension shank product line 1639 Alloyed tool steel Cylinder boring bits are only suitable for stationary operation. For freehand drilling we recommend our rapid Forstner bit Bormax product line 1622 or the TCT-Bormax<sup>3</sup> product line 1663 Packing unit = 1, Rose-tube 700 - 3000 rpm. e.g. Ø 15 mm 2300 rpm in soft wood. Further details in the speed diagram UPM



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#### Depth Stop Supported by Ball Bearing for FAMAG-Forstner Bits







Art No.	Description	€
1621.108	Depth Stop for 1622, 1623, 1630, 1663, Drills-Ø 10 - 21 mm	41,60
1621.110	Depth Stop for 1622, 1623, 1630, 1663, Drills-Ø 28 - 35 mm	41,60
1621.112	Depth Stop for 1622, 1623, 1630, 1663, Drills-Ø 28 - 35 mm	41,60
1621.114	Depth Stop for 1622, 1623, 1630, 1663, Drills-Ø 36 - 40 mm	41,60
1621.116	Depth Stop for 1622, 1623, 1630, 1663, Drills-Ø 42 - 48 mm	41,60

Sets		
Art No.	Description	€
1621.200	Depth Stop Set for 1622,1630,1663, for drills-Ø 10 - 48 mm, incl. a nipper	106,60

Accessory		
Art No.	Description	€
1621.100	Depth Stop single for 1622, 1623, 1630, 1663	27,75
1621.001	Plier for locking ring	18,15
1621.008	Guide bush I-Ø 8 mm for 1621.100	13,90
1621.010	Guide bush I-Ø 10 mm for 1621.100	13,90
1621.012	Guide bush I-Ø 12 mm for 1621.100	13,90
1621.014	Guide bush I-Ø 14 mm for 1621.100	13,90
1621.016	Guide bush I-Ø 16 mm for 1621.100	13,90

	Depth stop supported by ball bearing for FAMAG-Forstner bits with exchangeable guide bushings	C. Hur	The depth stop is mounted on the stalk and the drilling depth has to be adjusted. This makes it possible to drill stud holes with exactly the same depth at all times. The bushings are rotatably supported by ball bearings and thus produce no disturbing marks on the workpiece surface
	Depth Stop made of resistant ABS plastic, guide bushing made of steel		For larger drilling depths, it is possible to mount the guide bushing in reverse form, so that you can reach a larger adjustment of the depth stop
UPM	see speed of Forstner bit	F	Packing unit = 1

1616







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Profi



	IØ	SØ	O-Ø		OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	Teeth	[mm]	[mm]	€
1616.006	6	13	16	4	140	70	74,60
1616.008	8	13	18	4	140	70	74,60
1616.009	9	13	19	4	140	70	87,90
1616.010	10	13	20	4	140	70	61,05
1616.011	11	13	21	4	140	70	87,90
1616.012	12	13	22	4	140	70	66,10
1616.013	13	13	23	4	140	70	87,90
1616.014	14	13	24	4	140	70	66,10
1616.015	15	13	25	4	140	70	66,10
1616.016	16	13	26	4	140	70	70,95
1616.018	18	13	28	4	140	70	70,95
1616.020	20	13	30	4	140	70	70,95
1616.022	22	13	32	4	140	70	78,90
1616.024	24	13	36	5	140	70	104,00
1616.025	25	13	37	5	140	70	79,10
1616.026	26	13	38	5	140	70	115,15
1616.028	28	13	40	5	140	70	115,15
1616.030	30	13	42	5	140	70	86,35
1616.032	32	13	44	5	140	70	132,20
1616.034	34	13	48	6	140	70	132,20
1616.035	35	13	49	6	140	70	95,95
1616.036	36	16	50	6	140	70	142,85
1616.040	40	16	54	6	140	70	109,80
1616.045	45	16	59	6	140	70	122,10
1616.050	50	16	64	6	140	70	138,60
1616.055	55	16	69	6	140	70	209,50
1616.060	60	16	74	6	140	70	209,50
1616.065	65	16	79	6	140	70	315,10
1616.070	70	16	84	8	140	70	315,10
1616.080	80	16	94	9	140	70	407,10

Sets

Art	lo. Description	€
1616	.505 5 pcs. Set in wooden case Ø 15, 20, 25, 30, 35 mm	359,65
1628	.306 6 pcs. Set in wooden case with Plug Cutter 1616: Ø 15, 20, 25 mm and Bormax 1622: Ø 15, 20, 25 mm	260,60
1629	.308 8 pcs. Set in wooden case with Plug Cutter 1616 and Brad point drill bit HSS-G 1594, each Ø 6, 8, 10 and 12 mm	289,00
1629	.306 6 pcs. Set in wooden case with Plug Cutter 1616 incl. Bormax 2.0 WS prima 1624 each Ø 15, 20, 25 mm	285,15

1629.306 6 pcs. Set in wooden case with Plug Cutter 1616 incl. Bormax 2.0 WS prima 1624 each Ø 15, 20, 25 mm

NR'	Twofold ground main cutting edges and circumferential cutters. Effective length of the plug max. 70 mm	C. HIN	For the production of plugs for filling knot holes or fixing partial wood damage in combination with Bormax®. For precise fitting use FAMAG drill bits
	Alloyed tool steel		Place 1616 at the edge of the workpiece in a way that the circular ring is opened sideways and a good removal of the chips is guaranteed
UPM	400 - 1500 rpm e.g. Ø 15 mm 1000 rpm in soft wood	F	Packing unit = 1, Blister pack, from Ø 35 in rose-box, from Ø 55 in yellow cardboard tube

1616.2	OOO Profi	Disc + Plug	Cutter					F/	für B	esserbo	hrer
	4) Hade in Ber	Land Land Land Land	Art No. 1616.215 1616.217 1616.219 1616.221 1616.223 1616.225 1616.231	lØ [mm] 9,53 12,70 15,88 19,05 22,23 25,40 34,93	lø [Inch] 3/8 1/2 5/8 3/4 7/8 1 1 3/8	0-Ø [mm] 19,53 22,70 25,88 29,05 32,23 37,40 48,93	Teeth 4 4 4 4 5 6	SØ [mm] 13 13 13 13 13 13 13 13	OAL [mm] 140 140 140 140 140 140 140	Effective L. [mm] 70 70 70 70 70 70 70 70 70	€ 94,45 94,45 94,45 94,45 99,70 99,70 121,60
	vofold ground mai utters. Effective plu			ntial	C. Martin	wood da	plug produc amage in co se FAMAG o	ombinatio	0		<u> </u>
	lloyed tool steel					circular	616 at the ring is oper guaranteed	ned sidewi			

		X	onpo lo galianteca
UPM	400 - 1000 rpm. e.g. Ø 1/2 ich 1200 rpm in soft wood		Packing unit = 1, Blister pack

1616.1 COOC Excellent TCT-Disc	+ Plug Cutter				F		r Besserbol	hrer•
HM Hartmetall Garbide	Art No.	lØ [mm]	SØ	0-Ø	Teeth	OAL	Effective L.	€
	1616.115	15	[mm] 13	[mm] 25	4	[mm] 140	[mm] 70	178,60
	1616.120	20	13	30	4	140	70	185,15
	1616.125	25	13	37	5	140	70	191,15
and the second se	1616.130	30	13	42	5	140	70	197,15
And the second se	1616.135	35	13	49	6	140	70	201,95
Marrier #	1616.140	40	16	54	6	140	70	221,00
	<b>1616.150</b>	50	16	64	6	140	70	286,65

N.	Twofold by robots relief ground main cutting edges and circumferential cutters. Total length 140 mm. Effective length of the plug max. 70 mm. Precisely ground by diamond wheel on CNC	Contraction of the second seco	For the plug production of European and exotic hardwood. Also applicable for some plastics like acrylic glass, Corian, GFRP, HPL coating, polycarbonate, PVC and Trespa board . Long service life
	TCT (main cutting edges and circumeference cutter)		Place 1616 at the edge of the work piece in a way that the outside of the cutter is overlapping the edge, allowing fast chip ejection
UPM	1500 - 2000 rpm. e.g. Ø 15 mm 1800 rpm in European hard wood		Packing unit = 1, Blister pack



**Extension** 







€ <mark>67,05</mark> 67,05

	IØ	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	[mm]	€
1639.011	8	16	10	80	50	22,20
1639.003	8	16	10	125	100	24,85
1639.004	8	16	10	250	220	27,50
1639.010	10	16	10	80	50	22,20
1639.001	10	16	10	125	100	24,85
1639.002	10	16	10	250	220	27,50
1639.009	10	22	13	400	360	44,95
1639.007	12	22	13	400	360	44,95
1639.005	13	22	13	125	100	27,50
1639.006	13	22	13	250	220	31,15
1639.008	13	22	13	400	360	44.95

#### Sets

Art.- No.

Description

3 pcs. Set in wooden case IØ 8mm, GL 80, 1 1639.503 25, 250

	Ø of the shank 10 mm, or 13 x 30 mm. With four attachment screws for fixing. Solid quality. The shank of Ø 13 mm has three clamping surfaces	C. HUT	For the extension of all cylinder boring bits or all tools with Ø of shank 8, 10, 12, 13 mm
	Tool steel		Perfect for drilling deep holes, also for turnery. Only limited suitable for drilling end grain (especially hard wood) because there is considerable strain on the drill chuck
UPM	In combination with extentions please use less speed	F	Packing unit = 1, Rose-tube



Classic



With Borm	ax geometry				-
	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
3514.026	26	10	60	40	17,00
3514.035	35	10	60	40	17,00
Alloyed too	l-steel version				
	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
3515.026	26	8	60	40	11,20
3515.030	30	8	60	40	11,60
3515.035	35	8	60	40	11,70
TCT versior	ı				
	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
3516.015	15	8	60	40	21,20
3516.020	20	8	60	40	21,20
3516.025	25	8	60	40	20,40
3516.026	26	8	60	40	20,40
3516.030	30	8	60	40	21,20
3516.035	35	8	60	40	20,40
Self center	ing hinge drill bit Ze	enterfix			
	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
3582.020	2,0	E 6,3	84	14	17,65
3582.030	2,75	E 6,3	86	14	18,00
3582.035	3,5	E 6,3	95	15	19,30
Spare drill	bit for Zenterfix				
			(	0-Ø	
Art No.	Description		[]	nm]	€
3582.120	spare drill bit HSS			2,0	1,30
3582.130	spare drill bit HSS			2,75	1,70
3582.135	spare drill bit HSS	for 3582.035		3,5	1,90

		Small centre point, taper tap and two main cutting edges. The Zenterfix is equipped with a guide bush incl. spring and a core drill HSS with roof tip	C. Mar	Tear free accurate hinge drillings. The tool steel version for uncoated soft wood. The Bormax® - geometry for coated boards and limited for plastic laminated chipboards or MDF. Carbide tipped version can be used without problems for plastic coated materials. The Zenterfix will centre itself in a screw hole of a fitting or a hinge
Ø		Alloyed tool steel or TCT (main cutting edge and taper tap)		Only the BORMAX - geometry tools are suitable for freehand drilling. When using Bormax® on coated boards, let the power drill run very slowly so that the teeth can tear the coating open and the drill won't be damaged by too much heat
	PM)	1000 rpm for Tool steel-types. 2500 rpm for TCT-types. Further details in the speed diagram	F	Packing unit = 1, Rose-tube





für Besserbohrer

FAMAI

Technical changes or mistakes reserved! All prices are recommended retail prices additionally value added tax.



**Spiral Slot Milling Cutter** 







#### version with shank Ø 13mm

version with sha					
	O-Ø	SØ	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1607.106	6	13	120	40	24,90
1607.108	8	13	130	40	25,85
1607.110	10	13	140	45	28,20
1607.112	12	13	150	50	29,25
1607.114	14	13	160	55	30,70
1607.116	16	13	170	65	34,10
version with sha	nk Ø 16mm				
	O-Ø	SØ	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1607.206	6	16	120	40	24,90
1607.208	8	16	130	40	25,85
1607.210	10	16	140	45	28,20
1607.212	12	16	150	50	29,25
1607.214	14	16	160	55	30,70
1607.216	16	16	170	65	34,10

#### Sets

Art.- No. Description

1607.606 6 pcs. Set in wooden case Ø 6, 8, 10, 12, 14, 16 mm, shank Ø 13 mm

€ 155,30

N.	Two spiraled main cutting edges in fully ground quality with stepped cylindrical shank $\emptyset$ 13 or 16 mm	C. Hur	Milling of slots in soft wood and limited in European hard wood with a slot drilling machine. Higher cutting rate and ideal removal of the chips due to the twisted geometry of the main cutting edges
	Alloyed tool steel		Thanks to the twisted spiral this drill runs particulary smoothly and without any annoying chattering
UPM	2500 - 5000 rpm. e.g. Ø 16 mm 2500 rpm in soft wood. Further details in the speeddiagram	F	Packing unit = 1, Rose-tube



Shank-Ø	13mm

		O-Ø	SØ	OAL	SpL	
Art No.	Description	[mm]	[mm]	[mm]	[mm]	€
1601.105		5	13	115	35	20,35
1601.106		6	13	120	35	18,70
1601.108		8	13	130	40	18,55
1601.110		10	13	140	45	17,70
1601.111		11	13	145	48	18,05
1601.112		12	13	150	50	17,25
1601.113		13	13	155	53	18,20
1601.114		14	13	160	55	18,55
1601.116		16	13	170	60	21,10
1601.118		18	13	180	68	24,70
1601.120		20	13	185	70	31,30
1601.122		22	13	190	75	45,10
1601.124	End of Series	24	13	195	77	51,20
Shank-Ø 16	Smm					
		O-Ø	SØ	OAL	SpL	
Art No.	Description	[mm]	[mm]	[mm]	[mm]	€
1601.206		6	16	120	35	18,70
1601.208		8	16	130	40	18,55
1601.210		10	16	140	45	17,70
1601.212		12	16	150	50	17,25
1601.214		14	16	160	55	18,55
1601.216		16	16	170	60	21,10
1601.218		18	16	180	68	24,70
1601.220		20	16	185	70	31,30
1601.222		22	16	190	75	45,10
1601.224	End of Series	24	16	195	77	51,20



**Slot Mortise Bit LH** 





#### Shank - Ø 13 mm

		O-Ø	SØ	OAL	SpL	
Art No.	Description	[mm]	[mm]	[mm]	[mm]	€
1601.406		6	13	120	35	18,70
1601.407	End of Series	7	13	120	35	18,55
1601.408		8	13	130	40	18,55
1601.409	End of Series	9	13	130	40	18,55
1601.410		10	13	140	45	17,70
1601.411	End of Series	11	13	140	45	18,05
1601.412		12	13	150	50	17,25
1601.413	End of Series	13	13	150	50	18,20
1601.414		14	13	160	55	18,55
1601.416		16	13	170	60	21,10
1601.418		18	13	180	68	24,70
1601.420		20	13	185	70	31,30
1601.422		22	13	190	75	45,10
1601.424	End of Series	24	13	195	77	51,20
Shank - Ø 1	L6 mm					
		O-Ø	SØ	OAL	Snl	
					SpL	-
Art No.	Description	[mm]	[mm]	[mm]	[mm]	€
1601.506	Description	[mm] 6	[mm] 16	[mm] 120	[mm] 35	18,70
1601.506 1601.508	Description	[mm] 6 8	[mm] 16 16	[mm] 120 130	[mm] 35 40	18,70 18,55
1601.506 1601.508 1601.510	Description	[mm] 6 8 10	[mm] 16 16 16 16	[mm] 120 130 140	[mm] 35 40 45	18,70 18,55 17,70
1601.506 1601.508 1601.510 1601.512	Description	[mm] 6 8 10 12	[mm] 16 16 16 16 16	[mm] 120 130 140 150	[mm] 35 40 45 50	18,70 18,55 17,70 17,25
1601.506           1601.508           1601.510           1601.512           1601.514	Description	[mm] 6 8 10 12 14	[mm] 16 16 16 16 16 16	[mm] 120 130 140 150 160	[mm] 35 40 45 50 55	18,70 18,55 17,70 17,25 18,55
1601.506           1601.508           1601.510           1601.512           1601.514           1601.516	Description	[mm] 6 8 10 12 14 16	[mm] 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170	[mm] 35 40 45 50 55 60	18,70 18,55 17,70 17,25 18,55 21,10
1601.506           1601.508           1601.510           1601.512           1601.514           1601.516           1601.518	Description	[mm] 6 8 10 12 14 16 18	[mm] 16 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170 180	[mm] 35 40 45 50 55 60 68	18,70 18,55 17,70 17,25 18,55 21,10 24,70
1601.506           1601.508           1601.510           1601.512           1601.514           1601.516           1601.518           1601.520	Description	[mm] 6 8 10 12 14 16 18 20	[mm] 16 16 16 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170 180 185	[mm] 35 40 45 50 55 60 68 70	18,70 18,55 17,70 17,25 18,55 21,10 24,70 31,30
1601.506           1601.508           1601.510           1601.512           1601.514           1601.516           1601.518           1601.520           1601.522		[mm] 6 8 10 12 14 16 18 20 22	[mm] 16 16 16 16 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170 180 185 190	[mm] 35 40 45 50 55 60 68 70 75	18,70 18,55 17,70 17,25 18,55 21,10 24,70 31,30 45,10
1601.506           1601.508           1601.510           1601.512           1601.514           1601.516           1601.518           1601.520	Description	[mm] 6 8 10 12 14 16 18 20	[mm] 16 16 16 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170 180 185	[mm] 35 40 45 50 55 60 68 70	18,70 18,55 17,70 17,25 18,55 21,10 24,70 31,30
1601.506           1601.508           1601.510           1601.512           1601.514           1601.516           1601.518           1601.520           1601.524	End of Series	[mm] 6 8 10 12 14 16 18 20 22	[mm] 16 16 16 16 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170 180 185 190	[mm] 35 40 45 50 55 60 68 70 75	18,70 18,55 17,70 17,25 18,55 21,10 24,70 31,30 45,10
1601.506           1601.508           1601.510           1601.512           1601.514           1601.516           1601.518           1601.520           1601.524	End of Series e Bit, RH, for lock casing	[mm] 6 8 10 12 14 16 18 20 22 24	[mm] 16 16 16 16 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170 180 185 190 195	[mm] 35 40 45 50 55 60 68 70 75 75 77	18,70 18,55 17,70 17,25 18,55 21,10 24,70 31,30 45,10
1601.506 1601.508 1601.510 1601.512 1601.514 1601.516 1601.518 1601.520 1601.522 1601.524 Slot Mortis	End of Series	[mm] 6 8 10 12 14 16 18 20 22	[mm] 16 16 16 16 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170 180 185 190	[mm] 35 40 45 50 55 60 68 70 75	18,70 18,55 17,70 17,25 18,55 21,10 24,70 31,30 45,10 51,20
1601.506 1601.508 1601.512 1601.512 1601.516 1601.516 1601.520 1601.522 1601.524 Slot Mortis Art No.	End of Series The Bit, RH, for lock casing O-Ø [mm]	[mm] 6 8 10 12 14 16 18 20 22 24 SØ [mm]	[mm] 16 16 16 16 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170 180 185 190 195 OAL [mm]	[mm] 35 40 45 50 55 60 68 70 75 77 77 SpL [mm]	18,70 18,55 17,70 17,25 18,55 21,10 24,70 31,30 45,10 51,20 €
1601.506 1601.508 1601.510 1601.512 1601.514 1601.516 1601.520 1601.522 1601.524 Slot Mortis	End of Series e Bit, RH, for lock casing 0-Ø	[mm] 6 8 10 12 14 16 18 20 22 24 5Ø	[mm] 16 16 16 16 16 16 16 16 16 16 16	[mm] 120 130 140 150 160 170 180 185 190 195	[mm] 35 40 45 50 55 60 68 70 75 77 77 SpL	18,70 18,55 17,70 17,25 18,55 21,10 24,70 31,30 45,10 51,20

SetsArt.- No.Description1601.6066 pcs. Set in wooden case right cutting version Ø 6, 8, 10, 12, 14, 16 mm

€ 100,30

N.	Two straight main cutting edges with chip breaking flutes. With stepped cylindrical shank Ø 13 or 16 mm	C. C	Milling of slots in soft wood with a slot drilling machine. Due to the special geometry of the head piercing use is possible
	Alloyed tool steel		Not appropriate for hard wood. Limited suitable for hard wood is our product line 1607 (curved and fully ground version)
UPM	2200 - 4000 rpm. e.g. Ø 16 mm 2200 rpm in soft wood. Further details in the speed diagram	F	Packing unit = 1, Rose-tube







OOO Profi





0AL 235 mm		27			
	0-Ø	SØ	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1410.205	5	4,5	235	160	12,40
1410.206	6	5,5	235	160	12,40
1410.207	7	6,5	235	160	12,40
1410.208	8	7,8	235	160	12,40
1410.209	9	8	235	160	12,40
1410.210	10	9,8	235	160	12,40
1410.211	11	9,8	235	160	12,95
1410.212	12	11,8	235	160	12,95
1410.213	13	12,8	235	160	14,15
1410.214	14	13	235	160	14,15
1410.215	15	13	235	160	15,10
1410.216	16	13	235	160	15,10
1410.217	17	13	235	160	16,60
1410.218	18	13	235	160	16,60
1410.219	19	13	235	160	18,35
1410.220	20	13	235	160	18,35
1410.222	22	13	235	160	21,85
1410.224	24	13	235	160	23,65
1410.225	25	13	235	160	27,25
1410.226	26	13	235	160	27,25
1410.228	28	13	235	160	30,45
1410.230	30	13	235	160	33,45
1410.232	32	13	235	160	43,20
1410.234	34	13	235	160	62,90
1410.235	35	13	235	160	70,35
1410.235	36	13	235	160	68,80
1410.238	38	13	235	160	83,60
1410.238	40	13	235	160	93,60
1410.245 1410.250	45 50	13 13	235 235	160 160	<mark>126,00</mark> 166,05
0AL 320 mm	0.0	sø	041	Sal	
	0-Ø	SØ	OAL	SpL	£
Art No.	[mm]	[mm]	[mm]	[mm]	€ 16.00
Art No. <mark>1410.305</mark>	[mm] 5	[mm] 4,5	[mm] 320	[mm] 255	16,00
Art No. <mark>1410.305</mark> 1410.306	[mm] 5 6	[mm] 4,5 5,5	[mm] 320 320	[mm] 255 255	16,00 16,00
Art No. 1410.305 1410.306 1410.307	[mm] 5 6 7	[mm] 4,5 5,5 6,5	[mm] 320 320 320 320	[mm] 255 255 255 255	16,00 16,00 16,00
Art No. 1410.305 1410.306 1410.307 1410.308	[mm] 5 6 7 8	[mm] 4,5 5,5 6,5 7,8	[mm] 320 320 320 320 320 320	[mm] 255 255 255 255 255	16,00 16,00 16,00 16,00
Art No. 1410.305 1410.306 1410.307 1410.308 1410.309	[mm] 5 6 7 8 9	[mm] 4,5 5,5 6,5 7,8 8	[mm] 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255	16,00 16,00 16,00 16,00 16,00
Art No. 1410.305 1410.306 1410.307 1410.308 1410.309 1410.310	[mm] 5 6 7 8 9 10	[mm] 4,5 5,5 6,5 7,8 8 9,8	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255	16,00 16,00 16,00 16,00 16,00 16,00
Art- No. 1410.305 1410.306 1410.307 1410.308 1410.309 1410.310 1410.311	[mm] 5 6 7 8 9 10 11	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8	[mm] 320 320 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255	16,00 16,00 16,00 16,00 16,00 16,00 17,55
Art No. 1410.305 1410.306 1410.307 1410.308 1410.309 1410.310 1410.311 1410.312	[mm] 5 6 7 8 9 10 11 12	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8	[mm] 320 320 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 16,00 17,55 17,55
Art No. 1410.305 1410.306 1410.307 1410.308 1410.309 1410.310 1410.311 1410.312 1410.313	[mm] 5 6 7 8 9 10 10 11 12 12 13	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8	[mm] 320 320 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85
Art No. 1410.305 1410.306 1410.307 1410.309 1410.310 1410.311 1410.312 1410.313 1410.314	[mm] 5 6 7 8 9 10 11 12 12 13 14	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85
Art No. 1410.305 1410.306 1410.307 1410.308 1410.309 1410.310 1410.311 1410.312 1410.313 1410.314 1410.315	[mm] 5 6 7 8 9 10 11 12 13 13 14 15	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 16,00 17,55 17,55 17,55 18,85 18,85 18,85 21,45
Art No.         1410.305         1410.306         1410.307         1410.308         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.316	[mm] 5 6 7 8 9 10 11 12 13 14 15 16	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 18,85 21,45 21,45
Art No. 1410.305 1410.306 1410.307 1410.308 1410.309 1410.310 1410.311 1410.312 1410.313 1410.315 1410.316 1410.317	[mm] 5 6 7 8 9 10 11 12 13 14 15 16 17	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 18,85 21,45 21,45 22,60
Art No. 1410.305 1410.306 1410.307 1410.308 1410.309 1410.310 1410.311 1410.312 1410.313 1410.314 1410.315 1410.316 1410.317 1410.318	[mm] 5 6 7 8 9 10 11 12 13 14 15 16 17 18	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 18,85 21,45 21,45 21,45 22,60 22,60
Art No. 1410.305 1410.306 1410.307 1410.309 1410.310 1410.311 1410.312 1410.313 1410.313 1410.315 1410.316 1410.317 1410.318 1410.319	[mm] 5 6 7 8 9 10 11 12 13 13 14 15 16 17 18 19	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 21,45 22,60 22,60 22,60
Art No. 1410.305 1410.306 1410.307 1410.309 1410.310 1410.311 1410.312 1410.313 1410.313 1410.314 1410.315 1410.316 1410.317 1410.318 1410.319 1410.320	[mm] 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 26,25
Art No.         1410.305         1410.306         1410.307         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.316         1410.318         1410.320         1410.322	[mm] 5 6 7 8 9 10 11 12 13 13 14 15 16 17 18 19 20 22	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 26,25 31,50
Art No. 1410.305 1410.306 1410.307 1410.308 1410.309 1410.310 1410.311 1410.312 1410.313 1410.314 1410.315 1410.316 1410.317 1410.318 1410.319 1410.322 1410.322	[mm] 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 20 22 24	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 22,60 26,25 26,25 31,50 32,35
Art No. 1410.305 1410.307 1410.307 1410.308 1410.309 1410.310 1410.311 1410.312 1410.313 1410.314 1410.315 1410.316 1410.317 1410.318 1410.320 1410.322 1410.324	[mm] 5 6 7 8 9 10 11 12 13 14 15 16 16 17 18 19 20 22 22 24 25	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 26,25 31,50 32,35 36,45
Art No.         1410.305         1410.306         1410.307         1410.308         1410.310         1410.310         1410.312         1410.313         1410.314         1410.316         1410.317         1410.318         1410.319         1410.320         1410.321	[mm] 5 6 7 8 9 10 11 12 13 13 14 15 16 17 18 19 20 22 24 24 25 26	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 22,60 26,25 26,25 31,50 32,35 36,45
Art No. 1410.305 1410.307 1410.307 1410.309 1410.310 1410.311 1410.312 1410.313 1410.314 1410.315 1410.316 1410.317 1410.318 1410.319 1410.320 1410.322 1410.324 1410.325 1410.326 1410.328	[mm] 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 24 25 26 28	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 26,25 26,25 31,50 32,35 36,45 36,45 36,45
Art No. 1410.305 1410.306 1410.307 1410.309 1410.310 1410.311 1410.312 1410.313 1410.313 1410.314 1410.315 1410.316 1410.317 1410.318 1410.320 1410.322 1410.324 1410.325 1410.328 1410.328	[mm] 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 22 24 22 24 25 26 26 28 30	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 26,25 31,50 32,35 36,45 36,45 36,45 40,55 43,70
Art No.         1410.305         1410.306         1410.307         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.316         1410.319         1410.320         1410.325         1410.326         1410.328         1410.330	[mm] 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 22 24 22 24 22 24 25 26 28 30 32	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 26,25 31,50 32,35 36,45 36,45 40,55 43,70 60,35
Art No.         1410.305         1410.306         1410.307         1410.308         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.316         1410.317         1410.318         1410.320         1410.322         1410.324         1410.325         1410.326         1410.330         1410.332         1410.332	[mm] 5 6 7 8 9 10 11 11 12 13 14 15 16 17 16 17 18 19 20 20 22 24 22 24 25 26 28 30 32 32	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 22,60 22,60 22,60 26,25 26,25 26,25 31,50 32,35 36,45 36,45 40,55 43,70 60,35
Art No.         1410.305         1410.307         1410.307         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.316         1410.319         1410.320         1410.322         1410.324         1410.325         1410.326         1410.332         1410.334	[mm] 5 6 7 8 9 10 11 12 13 13 14 15 16 17 18 19 20 22 24 20 22 24 22 24 25 26 28 30 32 34	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 26,25 31,50 32,35 36,45 36,45 40,55 43,70 60,35 85,60 95,45
Art No.         1410.305         1410.306         1410.307         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.316         1410.317         1410.318         1410.320         1410.322         1410.324         1410.325         1410.326         1410.328         1410.330         1410.334	[mm] 5 6 7 8 9 10 11 12 13 13 14 15 16 17 18 19 20 22 24 25 26 22 24 25 26 28 30 32 34 35 36	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 21,45 21,45 22,60 22,60 22,60 26,25 26,25 31,50 32,35 36,45 36,45 40,55 43,70 60,35 85,60 95,45
Art No.         1410.305         1410.306         1410.307         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.316         1410.317         1410.318         1410.320         1410.322         1410.324         1410.325         1410.328         1410.330         1410.332         1410.334         1410.335	[mm] 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 24 25 26 22 24 25 26 28 30 32 34 35 36 38	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 31,50 32,35 36,45 36,45 36,45 40,55 43,70 60,35 85,60 95,45
Art No.         1410.305         1410.306         1410.307         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.316         1410.317         1410.319         1410.320         1410.322         1410.324         1410.325         1410.326         1410.328         1410.330         1410.334         1410.335         1410.334         1410.335         1410.334	[mm] 5 6 7 8 9 10 11 11 12 13 13 14 15 16 17 18 19 20 20 22 24 22 24 25 26 26 28 30 32 34 35 36 38 40	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 31,50 32,35 36,45 36,45 36,45 40,55 43,70 60,35 85,60 95,45 95,45 95,45
Art No.         1410.305         1410.306         1410.307         1410.308         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.316         1410.317         1410.318         1410.320         1410.321         1410.322         1410.324         1410.325         1410.326         1410.332         1410.334         1410.335         1410.334         1410.335         1410.336         1410.334         1410.335         1410.336         1410.336         1410.336         1410.336         1410.336         1410.336	[mm] 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 22 24 22 24 22 24 22 24 22 24 25 26 28 30 30 32 34 35 36 38 40	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 22,60 22,60 26,25 26,25 26,25 31,50 32,35 36,45 36,45 36,45 40,55 43,70 60,35 85,60 95,45 95,45 126,00 143,60 143,60
Art No.         1410.305         1410.306         1410.307         1410.309         1410.310         1410.311         1410.312         1410.313         1410.314         1410.315         1410.317         1410.319         1410.320         1410.322         1410.324         1410.325         1410.326         1410.328         1410.330         1410.335         1410.334         1410.335         1410.334         1410.335         1410.334	[mm] 5 6 7 8 9 10 11 11 12 13 13 14 15 16 17 18 19 20 20 22 24 22 24 25 26 26 28 30 32 34 35 36 38 40	[mm] 4,5 5,5 6,5 7,8 8 9,8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13 13 13 13	[mm] 320 320 320 320 320 320 320 320	[mm] 255 255 255 255 255 255 255 255 255 25	16,00 16,00 16,00 16,00 17,55 17,55 18,85 18,85 21,45 21,45 22,60 22,60 26,25 31,50 32,35 36,45 36,45 36,45 40,55 43,70 60,35 85,60 95,45 95,45 126,00 143,60









#### OAL 460 mm

	0-Ø	SØ	OAL	SpL	
Ant No					6
Art No.	[mm]	[mm] 4,5	[mm]	[mm] 380	€
1410.405	5	4,5	460		21,15
1410.406	6	5,5	460	380	21,15
1410.407	7	6,5	460	380	21,15
1410.408	8	7,8	460	380	21,15
1410.409	9	8	460	380	21,15
1410.410	10	9,8	460	380	21,15
1410.411	11	9,8	460	380	21,70
					21,70
1410.412	12	11,8	460	380	21,70
1410.413	13	12,8	460	380	25,60
1410.414	14	13	460	380	25,60
1410.415	15	13	460	380	28,80
1410.416	16	13	460	380	28,80
1410.417	17	13	460	380	30,60
1410.418	18	13	460	380	30,60
1410.419	19	13	460	380	33,45
1410.420	20	13	460	380	33,45
1410.421	21	13	460	380	41,75
1410.422	22	13	460	380	41,75
1410.423	23	13	460	380	44,55
1410.424	24	13	460	380	45,40
	25	13	460	380	51,45
1410.425					
1410.426	26	13	460	380	51,45
1410.427	27	13	460	380	57,10
1410.428	28	13	460	380	57,10
1410.430	30	13	460	380	58,45
1410.432	32	13	460	380	75,75
1410.434	34	13	460	380	115,80
1410.435	35	13	460	380	120,80
1410.436	36	13	460	380	118,65
1410.438	38	13	460	380	163,40
1410.440	40	13	460	380	188,50
1410.445	45	13	460	380	248,25
T4T0'440	40	13	-00	300	
1410.450	50	13	460	380	320,50
1410.450					
	50	13	460	380	
1410.450 OAL 650 mm	50 0-Ø	13 Sø	460 OAL	380 SpL	320,50
1410.450 OAL 650 mm Art No.	50 0-Ø [mm]	13 SØ [mm]	460 OAL [mm]	380 SpL [mm]	320,50 €
1410.450 OAL 650 mm	50 0-Ø [mm] 6	13 SØ [mm] 5,5	460 OAL [mm] 650	380 SpL [mm] 535	320,50 € 46,65
1410.450 OAL 650 mm Art No.	50 0-Ø [mm]	13 SØ [mm] 5,5	460 OAL [mm]	380 SpL [mm] 535 535	€ 46,65 28,90
1410.450 OAL 650 mm Art No. 1410.606	50 0-Ø [mm] 6	13 SØ [mm]	460 OAL [mm] 650	380 SpL [mm] 535	320,50 € 46,65
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609	50 0-Ø [mm] 6 8 9	13 SØ [mm] 5,5 7,8 8	460 OAL [mm] 650 650 650	380 SpL [mm] 535 535 535 535	€ 46,65 28,90 28,90
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610	50 0-Ø [mm] 6 8 9 10	13 SØ [mm] 5,5 7,8 8 9,8	460 OAL [mm] 650 650 650 650 650	380 [mm] 535 535 535 535 535 535	€ 46,65 28,90 28,90 28,90
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611	50 [mm] 6 8 9 10 11	13 SØ [mm] 5,5 7,8 8 9,8 9,8 9,8	460 OAL [mm] 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535	€ 46,65 28,90 28,90 28,90 28,90 28,90
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612	50 0-Ø [mm] 6 8 9 10 11 11 12	13 SØ [mm] 5,5 7,8 8 9,8 9,8 9,8 11,8	460 OAL [mm] 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 535	€ 46,65 28,90 28,90 28,90 29,80 29,80
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613	50 0-Ø [mm] 6 8 9 10 11 11 12 13	13 SØ [mm] 5,5 7,8 8 9,8 9,8 9,8 11,8 12,8	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 535	€ 46,65 28,90 28,90 28,90 29,80 29,80 29,80 36,15
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.611 1410.613 1410.613 1410.614	50 0-Ø [mm] 6 8 9 10 11 12 13 14	13 SØ [mm] 5.5 7,8 8 9,8 9,8 9,8 11,8 12,8 13	460 OAL [mm] 650 650 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613	50 0-Ø [mm] 6 8 9 10 11 11 12 13	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 28,90 29,80 29,80 29,80 36,15
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.611 1410.613 1410.613 1410.614	50 0-Ø [mm] 6 8 9 10 11 12 13 14	13 SØ [mm] 5.5 7,8 8 9,8 9,8 9,8 11,8 12,8 13	460 OAL [mm] 650 650 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 36,15 36,15 36,15
1410.450         OAL 650 mm         Art No.         1410.606         1410.608         1410.610         1410.611         1410.613         1410.614         1410.615         1410.616	50 0-Ø [mm] 6 8 9 10 11 12 13 13 14 15 16	13 SØ [mm] 5,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.613 1410.615 1410.616 1410.616	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17	13 SØ [mm] 5,5 7,8 8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 28,90 29,80 29,80 36,15 36,15 36,15 36,15 40,50 40,50 40,50
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.613 1410.614 1410.615 1410.616 1410.617 1410.618	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 43,30
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.613 1410.614 1410.615 1410.616 1410.617 1410.618 1410.619	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 43,30 43,30
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.611 1410.613 1410.613 1410.614 1410.615 1410.616 1410.617 1410.618 1410.619 1410.620	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20	13 SØ [mm] 5.5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 43,30 43,30 49,40
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.613 1410.613 1410.613 1410.615 1410.615 1410.616 1410.617 1410.618 1410.620 1410.620	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21	13 SØ [mm] 5.5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 36,15 36,15 40,50 40,50 43,30 43,30 49,40 49,40 58,25
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.611 1410.613 1410.613 1410.614 1410.615 1410.616 1410.617 1410.618 1410.619 1410.620	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20	13 SØ [mm] 5.5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 43,30 43,30 49,40
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.613 1410.613 1410.613 1410.615 1410.615 1410.616 1410.617 1410.618 1410.620 1410.620	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21	13 SØ [mm] 5.5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 36,15 36,15 40,50 40,50 43,30 43,30 49,40 49,40 58,25
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.613 1410.614 1410.615 1410.615 1410.617 1410.618 1410.619 1410.620 1410.621 1410.622	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 40,50 40,50 43,30 43,30 43,30 49,40 49,40 58,25 58,25 58,25 58,25
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.613 1410.614 1410.615 1410.616 1410.617 1410.618 1410.619 1410.620 1410.621 1410.624 1410.624	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 40,50 43,30 43,30 49,40 49,40 58,25 58,25 58,25 61,75 69,55
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.614 1410.615 1410.615 1410.617 1410.618 1410.619 1410.620 1410.622 1410.622 1410.625 1410.625	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 24 25 26	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 43,30 43,30 49,40 49,40 58,25 58,25 61,75 69,55
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.611 1410.613 1410.613 1410.614 1410.615 1410.615 1410.619 1410.620 1410.621 1410.622 1410.624 1410.625 1410.626 1410.628	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 28	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 40,50 43,30 43,30 43,30 43,30 43,40 58,25 58,25 58,25 61,75 69,55 69,55 69,55
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.613 1410.615 1410.616 1410.617 1410.618 1410.621 1410.621 1410.622 1410.622 1410.625 1410.628 1410.628 1410.630	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 22 24 25 26 28 30	13 SØ [mm] 5,5 7,8 8 9,8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 28,90 29,80 36,15 36,15 36,15 36,15 36,15 36,15 40,50 40,50 43,30 49,40 49,40 58,25 58,25 61,75 69,55 77,30 85,65
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.611 1410.613 1410.613 1410.614 1410.615 1410.615 1410.619 1410.620 1410.621 1410.622 1410.624 1410.625 1410.626 1410.628	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 22 24 25 26 28 30 32	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 36,15 36,15 36,15 40,50 40,50 40,50 40,50 40,50 40,50 40,50 58,25 56,55 69,55 69,55 60,50 60,
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.613 1410.615 1410.616 1410.617 1410.618 1410.621 1410.621 1410.622 1410.622 1410.625 1410.628 1410.628 1410.630	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 22 24 25 26 28 30	13 SØ [mm] 5,5 7,8 8 9,8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 28,90 29,80 36,15 36,15 36,15 36,15 36,15 36,15 40,50 40,50 43,30 49,40 49,40 58,25 58,25 61,75 69,55 77,30 85,65
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.614 1410.615 1410.616 1410.617 1410.618 1410.620 1410.621 1410.622 1410.622 1410.625 1410.628 1410.632 1410.632 1410.634	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 28 30 32 34	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 40,50 40,50 43,30 43,30 43,30 43,30 49,40 49,40 58,25 50,00 85,65 10,60 85,65 10,600
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.614 1410.615 1410.616 1410.617 1410.618 1410.620 1410.621 1410.622 1410.622 1410.624 1410.628 1410.632 1410.634 1410.635	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 28 30 32 34 35	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 40,50 43,30 43,30 49,40 49,40 58,25 58,25 61,75 69,55 69,55 77,30 85,65 106,00 148,85 156,30
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.611 1410.612 1410.612 1410.613 1410.614 1410.615 1410.615 1410.617 1410.618 1410.621 1410.622 1410.622 1410.622 1410.625 1410.628 1410.630 1410.635 1410.635 1410.636	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 24 25 26 28 30 32 34 35 36	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 29,80 36,15 36,15 40,50 40,50 40,50 43,30 43,30 49,40 43,30 49,40 49,40 58,25 58,25 61,75 69,55 69,55 77,30 85,65 106,00 148,85 156,30 153,55
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.613 1410.615 1410.616 1410.617 1410.618 1410.621 1410.622 1410.622 1410.622 1410.625 1410.628 1410.638 1410.635 1410.635 1410.636 1410.638	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 22 24 25 26 28 30 32 34 35 36 38	13 SØ [mm] 5,5 7,8 8 9,8 9,8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 36,15 36,15 36,15 36,15 36,15 36,15 40,50 40,50 43,30 49,40 58,25 58,25 61,75 69,55 77,30 85,65 106,00 148,85 156,30 153,55 210,80
1410.450         OAL 650 mm         1410.606         1410.608         1410.609         1410.610         1410.611         1410.612         1410.613         1410.614         1410.615         1410.616         1410.617         1410.618         1410.621         1410.622         1410.624         1410.625         1410.626         1410.630         1410.632         1410.633         1410.634         1410.638         1410.638	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 22 24 25 26 28 30 32 34 35 36 38 40	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 36,15 36,
1410.450 OAL 650 mm Art No. 1410.606 1410.608 1410.609 1410.610 1410.611 1410.612 1410.613 1410.614 1410.615 1410.616 1410.617 1410.618 1410.617 1410.620 1410.622 1410.622 1410.622 1410.625 1410.628 1410.638 1410.635 1410.638 1410.638 1410.638 1410.640 1410.645	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 28 30 32 34 35 36 38 40 45	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 36,15 36,15 36,15 40,50 40,50 40,50 40,50 40,50 40,50 40,50 58,25 50,00 148,85 156,30 153,55 210,80 210,80 210,80 210,80 210,80 210,80 210,80 20,80
1410.450         OAL 650 mm         1410.606         1410.608         1410.609         1410.610         1410.611         1410.612         1410.613         1410.614         1410.615         1410.616         1410.617         1410.618         1410.621         1410.622         1410.624         1410.625         1410.626         1410.630         1410.632         1410.633         1410.634         1410.638         1410.638	50 0-Ø [mm] 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 22 24 25 26 28 30 32 34 35 36 38 40	13 SØ [mm] 5,5 7,8 8 9,8 9,8 11,8 12,8 13 13 13 13 13 13 13 13 13 13	460 OAL [mm] 650 650 650 650 650 650 650 650	380 SpL [mm] 535 535 535 535 535 535 535 53	€ 46,65 28,90 28,90 29,80 29,80 36,15 36,







#### OAL 1080 mm, spiral length 1010 mm

OOO Profi

UAL 1080 mm, sp	irai length 1010 mm				
	O-Ø	SØ	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1410.014	14	13	1080	1010	116,80
1410.016	16	13	1080	1010	127,85
1410.018	18	13	1080	1010	140,65
1410.020	20	13	1080	1010	149,60
1410.022	22	13	1080	1010	169,05
1410.024	24	13	1080	1010	185,10
1410.026	26	13	1080	1010	204,55
1410.028	28	13	1080	1010	219,55
1410.030	30	13	1080	1010	247,35
1410.032	32	13	1080	1010	264,60
0AL 1000 mm					
	O-Ø	SØ	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1410.112	12	12	1000	380	89,80
1410.114	14	13	1000	380	89,80
1410.115	15	13	1000	380	92,80
1410.116	16	13	1000	380	92,80
1410.118	18	13	1000	380	94,40
1410.120	20	13	1000	380	97,25
1410.122	22	13	1000	380	103,70
1410.124	24	13	1000	380	107,00
1410.125	25	13	1000	380	116,85
1410.126	26	13	1000	380	116,70
1410.128	28	13	1000	380	123,45
1410.130	30	13	1000	380	123,45
1410.132	32	13	1000	380	138,30
1410.134	34	13	1000	535	164,50
1410.135	35	13	1000	535	171,95
1410.136	36	13	1000	535	171,95
1410.138	38	13	1000	535	235,40
1410.140	40	13	1000	535	272,70
1410.145	45	13	1000	535	358,65
1410.150	50	13	1000	535	466,80
Sets					

Sets				
Art No.	Description			€
1410.200	8 pcs. Set in wooden case with OAL 235 mm Ø 6, 8, 10, 12, 14	, 16, 18, 20 n	ım	102,50
1410.201	6 pcs. Set in wooden case with OAL 235 mm Ø 10, 12, 14, 16,			80,25
1410.300	6 pcs. Set in wooden case with OAL 320 mm Ø 10, 12, 14, 16,			110,15
1410.400	6 pcs. Set in wooden case with OAL 460 mm Ø 10, 12, 14, 16,	,		144,80
1410.600	6 pcs. Set in wooden case with OAL 650 mm. Ø 10, 12, 14, 16			205,15
1410.303	8 pcs. Set in wooden case with OAL 320 mm Ø 10, 12, 14, 16,			167,10
1410.403	8 pcs. Set in wooden case with OAL 460 mm Ø 10, 12, 14, 16,	18, 20, 22, 24	4 mm	223,15
	<sup>4</sup> "Lewis" pattern, crest of thread, main cutting edge and taper tap in premium quality. Version with stepped head and hexagonal shank from Ø 8mm	C. The	For drilling deep holes in soft wood and European I wood with power drill and joinery machine. < Ø 24 also be used with cordless screw driver	
	Alloyed tool steel		Due to the precise production of the auger bits, the also be used for drilling exact holes for stud bolts. wood we recommend our profi product line 1493	
UPM	500 - 2800 rpm. e.g. Ø 12 mm 2000 rpm in soft wood. Further details in the speed diagram	F	Packing unit = 1, Rose-tube up to Ø 36 mm and w length 650 mm	hole





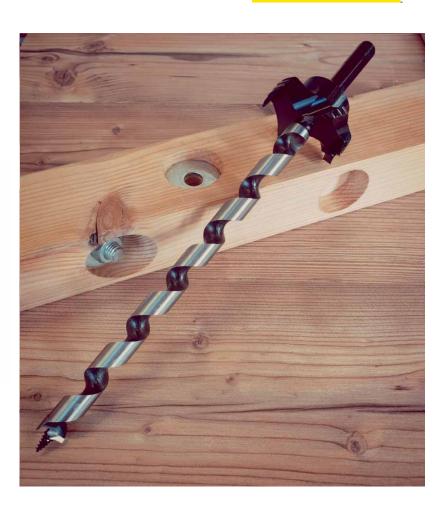
€

269,00 284,65 303,90









	0-Ø	IØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1411.040	40	13	30	30	69,70
1411.050	50	13	30	30	81,20
1411.060	60	13	30	30	103,80
1411.070	70	13	30	30	136,00

Sets Art.- No.

Description

 1411.200
 Combination Set auger bit / countersink, OAL 235 mm, auger bits 14, 16, 18 mm and countersinks Ø 40, 50, 60 mm

 1411.200
 Combination Set auger bit / countersink, OAL 320 mm, auger bits 14, 16, 18 mm and countersinks Ø 40, 50, 60 mm

 1411.400
 Combination Set auger bit / countersink, OAL 460 mm, auger bits 14, 16, 18 mm and countersinks Ø 40, 50, 60 mm

	Two in reverse order staggered, grooved main cutting edges and taper taps with longitudinal grooves - both effecting that a clear less feed rate force is necessary. Also they minimize the friction and the growth of heat. With lateral attachment screw for being fixed on the shanks of FAMAG auger bits	C. Har	To fit on FAMAG auger bits with shank-Ø 13 mm. Drilling and counterboring in one single operation. Recommended for soft wood
	Alloyed tool steel		Can be used universally on all FAMAG auger bits with shank-Ø 13 mm
UPM	500 - 800 rpm e.g. Ø 40 mm 800 rpm in soft wood. Further details in the speed diagram	F	Packing unit = 1, Rose-box













	0-Ø	SØ	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1420.412	12	12	460	400	31,55
1420.413	13	13	460	400	37,40
1420.414	14	13	460	400	37,40
1420.415	15	13	460	400	41,45
1420.416	16	13	460	400	41,45
1420.417	17	13	460	400	43,35
1420.418	18	13	460	400	43,35
1420.419	19	13	460	400	47,30
1420.420	20	13	460	400	47,30
1420.421	21	13	460	400	60,00
1420.422	22	13	460	400	60,00
1420.424	24	13	460	400	63,90
1420.425	25	13	460	400	72,70
1420.426	26	13	460	400	72,70
1420.428	28	13	460	400	78,65
1420.430	30	13	460	400	80,65
1420.432	32	13	460	400	102,30

Sets

 Art.- No.
 Description

 1420.400
 6 pcs. Set in wooden case Ø 12 ,14 ,16 ,18, 20, 22 mm

	Premium single-edged auger bit with specially ground tip and very dimensionally stable spirals. Premium coating to ensure minimal friction	C. C	For drilling in all soft woods on joinery machines. Due to the spiral's especially sturdy geometry it is also possible to drill exactly into thick joists. Due to the negative tolerance of the drill-Ø a tight fit is guaranteed
	Alloyed tool steel		Due to the head's special geometry it is especially applicable for drilling in planed or finished glued laminated timber. Entry and exit of the drill bit are considerably cleaner than with a usual auger bit
UPM	2800 - 3600 rpm e.g. Ø 18 mm 2800 rpm in glulam (glue laminated timber, on joinery machines)	F	Packing unit = 1. Rose-tube



Profi





#### OAL 480 mm

•					
	O-Ø	Shank	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1492.410	10	MK 2	480	380	62,60
1492.412	12	MK 2	480	380	62,60
1492.414	14	MK 2	480	380	69,80
1492.416	16	MK 2	480	380	71,65
1492.418	18	MK 2	480	380	71,65
1492.420	20	MK 2	480	380	71,65
1492.422	22	MK 2	480	380	81,40
1492.424	24	MK 2	480	380	90,35
OAL 680 mm					
	O-Ø	Shank	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1492.610	10	MK 2	650	550	91,30
1492.612	12	MK 2	650	550	91,30
1492.614	14	MK 2	650	550	95,40
1492.616	16	MK 2	650	550	105,30
1492.618	18	MK 2	650	550	105,30
1492.620	20	MK 2	650	550	112,20
1492.622	22	MK 2	650	550	117,70
1492.624		141/ 0	050	EEO	126,25
1475.054	24	MK 2	650	550	120,25
1492.626	24 26	MK 2 MK 2	650	550	139,90

N.	"Lewis" pattern with crest of thread, main cutting edge and taper tap, morse cone shank No. 2	C. Hur	For drilling precisely fitting holes in all European solid woods. For joinery machines taking up morse cone No. 2
	Alloyed tool steel		For hard wood and exotic hard wood like Bongossi we recommend the auger bit with knife, our product line 1493. Larger diameters can be combined with our product line 1410/1493 and morse cone No. 2 adapter (product line 1488)
UPM	1250 - 2500 rpm e.g. Ø 22 mm 1500 rpm in soft wood. Further details in the speed diagram	F	Packing unit = 1, Rose-tube













	0-Ø	SØ	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1494.414	14	12	460	400	60,95
1494.416	16	12	460	400	68,90
1494.418	18	12	460	400	72,90
1494.419	19	12	460	400	79,50
1494.420	20	12	460	400	79,50
1494.424	24	12	460	400	108,20
1494.425	25	12	460	400	108.20

#### Spare part: crest of thread or centre point

		O-Ø	
Art No.	Description	[mm]	€
1494.903	crest of thread for Ø 14 mm	3	6,90
1494.901	crest of thread for Ø 16 - 19mm	4	6,90
1494.902	crest of thread for Ø 20 - 25 mm	5	6,90
1494.906	Centre point for Ø 14 mm	3	6,90
1624.005	Centre point	4	3,05
1494.904	Centre point for Ø 20 - 25 mm	5	6,90

N.	Specially formed channel for removing chips, teflon-coated, changeable crest of thread HSS, two carbide tipped main cutting edges, protruding cutting edges and cylindrical shank with three clamping surfaces. Ground by diamond wheels on CNC-machines	C. Mar	For drilling precisely fitting holes in hard wood. For exotic hard wood like Bongossi we recommend auger bit product line 1493. Also applicable with a powerful joinery machine for drilling end-grained hard wood
	TCT (main cutting edge), changeable crest of thread HSS		Unbelievable service life in hard wood
UPM	1750 - 3000 rpm e.g. Ø 18 mm 2250 rpm in European hard wood. Further details in the speed diagram	F	Packing unit = 1, Rose-tube



Auger Bit for Hard Wood





	0-Ø	SØ	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1493.408	8	8	460	380	33,75
1493.410	10	10	460	380	33,75
1493.412	12	12	460	380	34,70
1493.414	14	13	460	380	40,85
1493.416	16	13	460	380	46,20
1493.418	18	13	460	380	48,90
1493.420	20	13	460	380	53,45
1493.422	22	13	460	380	66,55
1493.424	24	13	460	380	72,65
1493.426	26	13	460	380	82,30
1493.428	28	13	460	380	91,30
1493.430	30	13	460	380	93,40

 Sets

 Art.- No.
 Description

 1493.400
 6 pcs. in wooden case Ø 10, 12, 14, 16, 18, 20 mm

€ 231,70





	"Lewis" pattern with crest of thread, main cutting edge and bottom blade	C. C	For drilling deep holes in all hard woods and also in Bongossi
	Alloyed tool steel		Due to the special knife you have a low heat development, which guarantees a long service life. For drilling in soft wood we recommend product line 1410
UPM	700 - 2250 rpm e.g. Ø 12 mm 1500 rpm in European hard wood. Further details in the speed diagram	K	Packing unit = 1, Rose-tube



Kombifix version





OOO Profi



NUMBER OF STREET					
	IØ	Shank	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1489.001	MK 1	10	125	90	57,70
1489.002	MK 2	13	135	100	60,95
ZB-fix version					
	IØ	Shank	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1489.613	13	ZB	100	60	62,80
Morse Cone 2-					
	IØ	Shank	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1488.210	10	MK 2	120	40	44,20
1488.213	13	MK 2	120	40	44,20





	Adapter, external morse cone No. 2 or Mafell-ZB (inside cylindrical) with two attachment screws. Kombi-Fix inside morse cone, outside cylindrical with hexagonal shank	Contraction of the second seco	For joinery machines taking up morse cone No. 2/mafell-ZB so that cylindrical drill bits can be held. For all FAMAG cylinder drill bits and auger bits, etc.
Ø	Alloyed tool steel		With this adapter it is possible to use low-price drill bits with cylindrical shank for machines using morse cone No. 2/ mafell-ZB
UPM	Find recommended rpm at the corresponding tools	F	Packing unit = 1, Rose-tube



Screw Auger, Lewis Pattern





O-Ø OAL	SpL	Effective L.	
Art No. [mm] [mm]	[mm]	[mm]	€
1014.608 8 600	160	550	22,20
1014.610 10 600	160	550	22,20
1014.612 12 600	160	550	23,95
1014.614 14 600	160	550	25,15
1014.616 16 600	155	550	27,30
1014.618 18 600	150	550	30,30
1014.620 20 600	145	550	33,30
1014.622 22 600	140	550	36,60
1014.624 24 600	140	550	40,25
1014.626 26 600	140	550	44,15
1014.628 28 600	140	550	48,25
1014.630 30 600	135	550	53,20
1014.632 32 600	135	550	58,20
1014.634 34 600	145	550	73,60
1014.636 36 600	145	550	83,10
1014.638 38 600	145	550	95,00
1014.640 40 600	145	550	106,60

N.	"Lewis" pattern, with crest of thread, one main cutting edge and one taper tap. With lug for wooden handle	C. Mar	For drilling deep holes in soft wood (depending on the diameter) and also limited in European hard wood
	Alloyed tool steel		Use beech handles. NOT included in delivery scope
UPM	Depending on one's skill and strength		Packing unit = 1, yellow cardboard tube





0AL 400 mm					
	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1001.408	8	6	400	370	10,45
1001.410	10	8	400	370	12,20
1001.412	12	8	400	370	15,25
1001.414	14	8	400	370	17,45
1001.416	16	10	400	370	20,05
1001.418	18	10	400	370	24,10
1001.420	20	10	400	370	31,95
1001.422	22	12	400	370	41,85
1001.424	24	12	400	370	48,75
1001.425	25	12	400	370	52,05
1001.426	26	12	400	370	53,55
1001.428	28	12	400	370	58,25
1001.430	30	12	400	370	61,60
1001.432	32	12	400	370	63,95
1001.435	35	12	400	370	70,45
1001.439	39	12	400	370	92,35

0AL 600 mm					
	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1001.608	8	6	600	570	11,05
1001.610	10	8	600	570	12,85
1001.612	12	8	600	570	16,00
1001.614	14	8	600	570	18,20
1001.616	16	10	600	570	21,10
1001.618	18	10	600	570	25,30
1001.620	20	10	600	570	33,00
1001.622	22	12	600	570	44,40
1001.624	24	12	600	570	51,30
1001.625	25	12	600	570	55,25
1001.626	26	12	600	570	56,15
1001.628	28	12	600	570	60,95
1001.630	30	12	600	570	64,45
1001.632	32	12	600	570	66,25
1001.635	35	12	600	570	72,45
1001.639	39	12	600	570	96,55

0AL 800 mm					
	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1001.808	8	6	800	770	13,30
1001.810	10	8	800	770	15,10
1001.812	12	8	800	770	18,25
1001.814	14	8	800	770	21,30
1001.816	16	10	800	770	24,85
1001.818	18	10	800	770	29,50
1001.820	20	10	800	770	37,30
1001.822	22	10	800	770	48,65

OAL 1.000 mn	ı				
	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1001.108	8	6	1000	970	14,00
1001.110	10	8	1000	970	15,65
1001.112	12	8	1000	970	18,85
1001.114	14	8	1000	970	22,10
1001.116	16	10	1000	970	25,60
1001.118	18	10	1000	970	31,35
1001.120	20	10	1000	970	39,10
1001.122	22	12	1000	970	50,60
1001.124	24	12	1000	970	55,45
1001.126	26	12	1000	970	59,85
1001.128	28	12	1000	970	64,50
1001.130	30	12	1000	970	67.45

#### OO Classic





0AL 400mm					
	0-Ø	Shank	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1005.410	10	SDS	400	370	23,05
1005.412	12	SDS	400	370	25,85
1005.414	14	SDS	400	370	27,75
1005.416	16	SDS	400	370	31,55
1005.418	18	SDS	400	370	42,25
1005.420	20	SDS	400	370	46,05
1005.422	22	SDS	400	370	56,85
1005.424	24	SDS	400	370	64,75
1005.425	25	SDS	400	370	76,80

#### OAL 600mm

	0-Ø	Shank	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1005.610	10	SDS	600	570	24,00
1005.612	12	SDS	600	570	26,95
1005.614	14	SDS	600	570	29,75
1005.616	16	SDS	600	570	33,00
1005.618	18	SDS	600	570	43,70
1005.620	20	SDS	600	570	47,35
1005.622	22	SDS	600	570	58,75
1005.624	24	SDS	600	570	68,80
1005.625	25	SDS	600	570	82,45
1005.626	26	SDS	600	570	87,10
1005.628	28	SDS	600	570	92,10
1005.630	30	SDS	600	570	99,90

	Twist drill with long shank (SDS-plus) and specially ground roof-like tip which can be regrounded easily. Quality according to DIN 7490 and the valid safety regulations	C. Hur	For drilling of external and internal form boards in one single operation. Also for drilling in wooden ceilings and floors for installation work in old-building renovation
	Chrome vanadium steel		Not to be used with hammer or impact drill
UPM	1200 - 2500 rpm. e.g. Ø 22 mm rpm in formwork panel	K	Packing unit = 1, PE clip





0-Ø	SØ	OAL	Effective L.	
[mm]	[mm]	[mm]	[mm]	€
6	5	400	370	12,05
8	6	400	370	11,30
10	8	400	370	13,40
12	8	400	370	16,75
14	8	400	370	20,40
16	10	400	370	25,25
18	10	400	370	29,80
20	10	400	370	33,85
22	10	400	370	49,40
	[mm] 6 8 10 12 14 16 18 20	[mm]         [mm]           6         5           8         6           10         8           12         8           14         8           16         10           18         10           20         10	[mm]         [mm]         [mm]           6         5         400           8         6         400           10         8         400           12         8         400           14         8         400           16         10         400           18         10         400           20         10         400	[mm]         [mm]         [mm]         [mm]           6         5         400         370           8         6         400         370           10         8         400         370           12         8         400         370           14         8         400         370           16         10         400         370           18         10         400         370           20         10         400         370

#### 0AL 600 mm

Formwork Drill Bit, HSS

	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1002.608	8	8	600	570	12,35
1002.610	10	8	600	570	14,35
1002.612	12	8	600	570	17,80
1002.614	14	8	600	570	21,45
1002.616	16	10	600	570	26,85
1002.618	18	10	600	570	31,55
1002.620	20	10	600	570	35,50

	Twist drill with long shank and specially ground roof-like tip which can be regrounded easily. Quality according to DIN 7490 and the valid safety regulations	C. Hur	For drilling of external and internal form boards in one single operation. Also for drilling in wooden ceilings and floors for installation work in old-building renovation
	HSS		For hardest application or for drilling in metal material
UPM	1600 - 3000 rpm. e.g. Ø 14 mm 2200 rpm in formwork panel	F	Packing unit = 1, PE bag





Art No.	For drill length [mm]	Drilling depth [mm]	Foot measure outside [mm]	Foot measure inside [mm]	OAL [mm]	€
1405.210	max. 240	210	Ø 150	<mark>Ø 90</mark>	~330	135,00
1405.320	max. 350	320	250 x 150	135 x 90	~490	200,00

#### Fixture

		max. clamping width	
Art No.	Description	[mm]	€
1402.000	Fixture	0 - 90	69,95
1402.901	Set of Tails for broadening	200	41,30

N.	With additional handle, two stageless adjustable depth stops. Plate for drill bush and springs are not included in scope of delivery	C. Har	Precise drilling in exact 90° setting angle 1402.000: mountable on all FAMAG drill rigs with square foot
	Tool holder and foot made of cast aluminium, guide posts made of stainless steel		For power drills 43 mm
UPM			Packing unit = 1, in carton

1403 Excellent

**Drill Rig, Fixed Version** 









					Foot measure	Foot measure		
	For drill length	Drilling depth			outside	inside	OAL	
Art No.	[mm]	[mm]	Fixture	Drill bushing plate	[mm]	[mm]	[mm]	€
1403.320	320	190	-	incl.	250 x 150	135 x 90	~490	280,00
1403.322	320	190	incl.	incl.	250 x 150	135 x 90	~490	350,00
460 mm								
Art No.								€
1403.460	460	310	-	incl.	250 x 150	135 x 90	~630	280,00
1403.462	460	310	incl.	incl.	250 x 150	135 x 90	~630	350,00
650 mm								
Art No.								€
1403.650	650	460	-	incl.	250 x 150	135 x 90	~810	280,00
1403.652	650	460	incl.	incl.	250 x 150	135 x 90	~810	350,00

Fixture

Art No. Description	max. clamping width [mm] €	
1402.000         Fixture           1402.901         Set of Tails for broadening		<mark>9,95</mark> 1,30
With additional handle, two stageless adjustable depth stops and two spiral springs for back stroke of the power drill. With adjustable plate for the drill bush for exact guidance of the drill bit	Precise drilling in exact 90° setting angle. Additional guidance of the drill bits by drill bushing plate. Easy back stroke of the power drill by spiral springs. 1402.000: mountable on all FAMAG drill rigs with square foot	
Tool holder and foot made of cast aluminium. Springs and guide posts made of stainless steel	For power drills 43 mm. For drill bits Ø 8, 10, 12, 14, 16, 18, 20, 22, 24, 26 mm. Version with two solid guide rods	
UPM	Packing unit = 1, in carton	



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150





#### 320 mm

020 1111					Foot measure	Foot measure		
	For drill length	Drilling depth			outside	inside	OAL	
Art No.	[mm]	[mm]	Fixture	Drill bushing plate	[mm]	[mm]	[mm]	€
1404.320	320	160	-	incl.	250 x 150	135 x 90	~490	380,00
1404.322	320	160	incl.	incl.	250 x 150	135 x 90	~490	450,00
<b>460 mm</b> Art No.								€
1404.460	460	250	-	incl.	250 x 150	135 x 90	~630	380,00
1404.462	460	250	incl.	incl.	250 x 150	135 x 90	~630	450,00
<b>650 mm</b> Art No.								€
1404.650	650	430	-	incl.	250 x 150	135 x 90	~810	380,00
1404.652	650	430	incl.	incl.	250 x 150	135 x 90	~810	450,00

Fixture
---------

		max. clamping width	
Art No.	Description	[mm]	€
1402.000	Fixture	0 - 90	69,95
1402.901	Set of Tails for broadening	200	41,30

	With additional handle, two stageless adjustable depth stops and two spiral springs for back stroke of the power drill. With adjustable plate for drill bush for exact guidance of the drill bit. The product line 1406 is delivered without springs and drill bushing plate	C. C	Precise drilling in exact 90° to 45° stepless pivoted setting angle . Additional guidance of the drill bits by drill bushing plate. Easy back stroke of the power drill by spiral springs. 1402.000: mountable on all FAMAG drill rigs with square foot
	Tool holder and foot made of cast aluminium. Springs and guide posts made of stainless steel		For power drills 43 mm. For drill bits Ø 8, 10, 12, 14, 16, 18, 20, 22, 24, 26 mm. Version with two solid guide rods
UPM		K	Packing unit = 1, in Carton

**Drills and Countersinks for Wood** 





OOOO Excellent







				Foot measure			
	For drill length	Drilling depth		outside	Foot measure inside	OAL	
Art No.	[mm]	[mm]	Fixture	[mm]	[mm]	[mm]	€
1406.320	max. 350	320	-	200 x 150	155 x 100	~490	280,00
1406.322	max. 350	320	incl.	200 x 150	155 x 100	~490	350,00

E	ixt		•
	IXU	ur	e

		max. clamping width	
Art No.	Description	[mm]	€
1402.000	Fixture	0 - 90	69,95
1402.901	Set of Tails for broadening	200	41,30

N.	With additional handle, stageless adjustable depth stop and pivoting range up to $45^{\circ}.$ Easy setting by clamping lever	C. HIN	For power drills 43 mm. Precise drilling in exact 90 -45° setting angle, especially suitable for the construction of stairs. 1402.000: mountable on all FAMAG drill rigs with square foot
	Tool holder and foot made of cast aluminium. Guide posts made of stainless steel		Due to the pivoting fixture also applicable for curved cheeks. For staircase > 45° please use a shim
UPM		K	Packing unit = carton



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OOO Profi



	0-Ø	SØ	OAL	SpL	CPL	
Art No.	[mm]	[mm]	[mm]	[mm]	[mm]	€
1575.010	10	13	160	85	11	60,45
1575.012	12	13	170	100	12	60,45
1575.013	13	13	180	110	13	63,35
1575.014	14	13	180	105	13	63,35
1575.015	15	13	185	120	14	70,00
1575.016	16	13	190	120	14	70,00
1575.018	18	13	200	130	15	76,50
1575.020	20	13	210	135	16	86,70
1575.022	22	13	220	140	18	118,90
1575.024	24	13	240	160	19	148,15
1575.025	25	13	240	170	19	166,45
1575.026	26	13	240	160	20	183,95
1575.028	28	13	260	180	21	197,10
1575.030	30	13	270	180	23	216,20

N.	Brad point drill bit with extra long brad point (ground three- edged), two main cutting edges, two taper taps, four grooves on the spiral	C. Hur	For drilling paling fences in stringers or handrails of staircases. Only limitedly recommended for hard wood
	Tool alloyed steel		Better results with the three-edged than the four-edged brad point. As alternative item we offer the Bormax 1624. For hard wood we recommend the TCT-Bormax <sup>3</sup> prima 1664 combined with a drill rig
UPM	800 - 2500 rpm e.g. Ø 16 mm 2000 rpm in soft wood	K	Packing unit = 1, Rose-tube

0000 1594

Excellent **Brad Point Drill Bit, HSS-G** 

Qualit



Effective L.





	0-0	30	UAL	Ellective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1594.020	2,0	2,0	49	22	7,20
1594.025	2,5	2,5	57	25	7,20
1594.030	3,0	3,0	60	33	5,75
1594.035	3,5	3,5	70	39	6,20
1594.040	4,0	4,0	75	43	6,20
1594.045	4,5	4,5	80	47	6,55
1594.050	5,0	5,0	85	52	6,55
1594.055	5,5	5,5	92	57	6,85
1594.060	6,0	6,0	92	57	6,85
1594.065	6,5	6,5	100	63	8,05
1594.070	7,0	7,0	108	69	8,40
1594.075	7,5	7,5	108	69	9,60
1594.080	8,0	8,0	115	75	9,25
1594.085	8,5	8,5	115	75	10,30
1594.090	9,0	9,0	125	81	11,25
1594.095	9,5	9,5	125	81	12,55
1594.100	10,0	10,0	130	87	12,80
1594.105	10,5	10,5	130	87	18,15
1594.110	11,0	11,0	140	94	16,60
1594.115	11,5	11,5	140	94	21,30
1594.120	12,0	12,0	150	101	19,80
1594.125	12,5	12,5	150	101	24,05
1594.130	13,0	13,0	150	101	21,30
1594.135	13,5	13,0	160	108	30,90
1594.140	14,0	13,0	160	108	32,00
1594.145	14,5	13,0	168	114	35,45
1594.150	15,0	13,0	168	114	37,70
1594.155	15,5	13,0	176	120	41,20
1594.160	16,0	13,0	176	120	42,30
1594.162	16,2	13,0	200	140	48,00
1594.165	16,5	13,0	180	120	48,00
1594.180	18,0	13,0	190	130	53,05
1594.190	19,0	13,0	192	132	62,30
1594.200	20,0	13,0	200	140	66,70

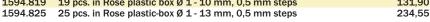
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OAL

#### For bigger diameters we recommend product line 1599.2 on page 48

0-Ø

Art No.	Description	€
1594.835	5 pcs. Set in plastic box Ø 3, 4, 5, 6, 8 mm	30,95
1594.845	5 pcs. Set in plastic box Ø 4, 5, 6, 8, 10 mm	40,60
3575.505	6 pcs. Set in wooden case, brad point drill bit HSS, type 1594 Ø 3, 4, 5, 6,	63,10
	8 mm incl. VARIO Countersink 2202 (90°)	
1594.507	7 pcs. Set in wooden case Ø 3, 4, 5, 6, 8, 10, 12 mm	69,85
1594.838	8 pcs. Set in plastic box Ø 3, 4, 5, 6, 7, 8, 9, 10 mm	60,15
1594.510	10 pcs. Set in wooden case Ø 3, 4, 5, 6, 8, 10, 12, 13, 14, 16 mm	161,30
1594.819	19 pcs. in Rose plastic box Ø 1 - 10 mm, 0,5 mm steps	131,90





Premium version, fully ground quality with two main cutting edges and two taper taps. Specially ground spiral for a very good chip removal

HSS-G

UPM



Premium quality at a fair price. Specially suitable for stationary use. For soft wood the cordless drill is only limited applicable, due to the low rotation speed. Here we recommend product lines 1591 with cylindrical shank or 1596/1597 with hexagonal shank

For exact drilling in all, particularly hard materials. Also

suitable for some plastics, like acrylic glass, Corian®, GFRP, HPL coating, polycarbonate, PVC and Trespa® board.

Specially designed flutes ensure a very good chip removal

2400 - 8000 rpm e.g. Ø 4 mm 5000 rpm in European hard wood. Further details in the speed diagram

Packing unit = 1, Rose-tube

Technical changes or mistakes reserved! All prices are recommended retail prices additionally value added tax.



	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1595.020	2,0	2,0	49	22	12,90
1595.025	2,5	2,5	57	25	12,90
1595.030	3,0	3,0	60	33	10,85
1595.035	3,5	3,5	70	39	11,60
1595.040	4,0	4,0	75	43	11,60
1595.045	4,5	4,5	80	47	12,35
1595.050	5,0	5,0	85	52	12,35
1595.060	6,0	6,0	92	57	13,10
1595.070	7,0	7,0	108	69	15,00
1595.080	8,0	8,0	115	75	16,15
1595.090	9,0	9,0	125	81	20,15
1595.100	10,0	10,0	130	87	21,70

N.	Premium version, left hand cutting, fully ground quality with two main cutting edges and two taper taps. Internally ground special spiral for very good chip removal	C. Mar	For exact drilling in all, particularly hard materials. Also suitable for some plastics, like acrylic glass, Corian®, GFRP, HPL coating, polycarbonate, PVC and Trespa® board. Shank constructed for drill chuck Ø 13 mm. Left hand cut
	HSS-G		Premium quality at a fair price. Specially designed chip flutes guarantee a good chip removal
UPM	3000 - 8000 rpm e.g. Ø 5 mm 4500 rpm in European hard wood. Further details in the speed diagram	K	Packing unit = 1, Rose-tube









	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1599.103	3	3	150	100	12,40
1599.104	4	4	150	100	12,40
1599.105	5	5	150	100	13,10
1599.106	6	6	150	100	13,90
1599.107	7	7	150	100	18,05
1599.108	8	8	150	100	18,05
1599.109	9	9	150	100	19,15
1599.110	10	10	150	100	20,95
1599.111	11	11	150	100	23,70

#### For bigger diameters we recommend product line 1594 on page 46

0AL 250 mm					
	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1599.203	3	3	250	200	17,85
1599.204	4	4	250	200	17,85
1599.205	5	5	250	200	20,35
1599.206	6	6	250	200	22,80
1599.207	7	7	250	200	29,40
1599.208	8	8	250	200	29,40
1599.209	9	9	250	200	32,80
1599.210	10	10	250	200	35,70
1599.211	11	11	250	200	41,15
1599.212	12	12	250	200	45,30
1599.213	13	13	250	200	48,10
1599.214	14	13	250	200	52,05
1599.215	15	13	250	200	59,75
1599.216	16	13	250	200	65,85
1599.218	18	13	250	200	97,30
1599.220	20	13	250	200	123,55
1599.222	22	13	250	200	150,30
1599.224	24	13	250	200	179,85
1599.225	25	13	250	200	196,85

### SØ [mm]

	0-0	30	UAL	LITECTIVE L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1599.303	3	3	315	250	23,25
1599.304	4	4	315	250	23,25
1599.305	5	5	315	250	26,50
1599.306	6	6	315	250	29,65
1599.307	7	7	315	250	38,25
1599.308	8	8	315	250	38,25
1599.309	9	9	315	250	42,60
1599.310	10	10	315	250	46,45
1599.311	11	11	315	250	53,40
1599.312	12	12	315	250	58,95
1599.313	13	13	315	250	62,50
1599.314	14	13	315	250	68,80
1599.315	15	13	315	250	80,05
1599.316	16	13	315	250	93,25

OAL

Effective L.

#### OAL 400/ 460 mm

OAL 315 mm

0-Ø

		0-Ø	SØ	OAL	Effective L.	
Art No.	Description	[mm]	[mm]	[mm]	[mm]	€
1599.403	End Of Series	3	3	400	300	30,20
1599.404	End Of Series	4	4	400	300	30,20
1599.405	End Of Series	5	5	400	300	34,40
1599.406	End Of Series	6	6	400	300	38,50
1599.407	End Of Series	7	7	400	300	49,60
1599.408	End Of Series	8	8	400	300	49,60
1599.409	End Of Series	9	9	400	300	55,40
1599.410	End Of Series	10	10	400	300	60,30
1599.411	End Of Series	11	11	400	300	69,30
1599.412	End Of Series	12	12	400	300	76,60
1599.413	End Of Series	13	13	400	300	81,20
1599.414	End Of Series	14	13	400	300	89,40
1599.415	End Of Series	15	13	400	300	104,00
1599.416	End Of Series	16	13	400	300	121,10

#### OAL 460 mm

	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1599.603	3	3	460	380	39,55
1599.604	4	4	460	380	39,55
1599.605	5	5	460	380	44,80
1599.606	6	6	460	380	49,25
1599.607	7	7	460	380	63,90
1599.608	8	8	460	380	63,90
1599.609	9	9	460	380	73,90
1599.610	10	10	460	380	73,90
1599.611	11	11	460	380	84,75
1599.612	12	12	460	380	90,90
1599.613	13	13	460	380	99,65
1599.614	14	13	460	380	108,65
1599.615	15	13	460	380	128,80
1599.616	16	13	460	380	146,25

Sets

#### Art.- No. € 167,55 Description 1599.507 7 pcs. Set in wooden case: OAL 250 mm, EL 200 mm, Ø 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 mm 1599.510 10 pcs. Set in wooden case: OAL 150 mm, NL 100 mm, Ø 3, 4, 5, 6, 8, 10, 12 mm 149,90

	Premium quality version, extra long, fully ground quality with two main cutting edges and two taper taps. Internally ground special spiral for very good chip removal	C. C	For exact drilling in all, particularly hard materials. Also suitable for some plastics, such as acrylic glass, Corian®, GFRP, HPL coating, polycarbonate, PVC and Trespa® board. Specially designed chip flutes guarantee a good chip removal, you receive best results when drilling deep holes
	HSS-G		Please do not use drills with a smaller Ø than 8 mm in the power drill, it might break. Premium quality at a fair price. Optionally put the brad point on the surface
UPM	2500 - 4000 rpm e.g. Ø 5 mm 4000 rpm in European hard wood. Smaller Ø with long OAL should be used with less speed		Packing unit = 1, Rose-tube



**Brad Point Drill Bit, HSS** 





1591





	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1591.030	3	3	61	33	4,55
1591.040	4	4	75	43	4,65
1591.050	5	5	86	52	4,95
1591.060	6	6	93	57	5,15
1591.070	7	7	109	69	5,75
1591.080	8	8	117	75	6,00
1591.090	9	9	125	80	6,70
1591.100	10	10	133	87	7,05
1591.110	11	10	142	89	8,80
1591.120	12	10	151	96	10,65
1591.130	13	10	151	96	12,30
1591.140	14	10	151	96	15,00
1591.150	15	10	160	100	17,35
1591.160	16	10	160	100	20,00
1591.180	18	10	180	130	28,80
1591.200	20	10	200	140	33,75

Sets

Description	€
5 pcs. Set in plastic box Ø 3, 4, 5, 6, 8 mm	22,65
5 pcs. Set in plastic box Ø 4, 5, 6, 8, 10 mm	24,60
7 pcs. Set in wooden case Ø 3, 4, 5, 6, 8, 10, 12 mm	41,25
8 pcs. Set in plastic box Ø 3, 4, 5, 6, 7, 8, 9, 10 mm	40,20
11 pcs. Set in wooden case Ø 3, 4, 5, 6, 8, 10, 12, 13, 14, 15, 16 mm	103,20
	Description 5 pcs. Set in plastic box Ø 3, 4, 5, 6, 8 mm 5 pcs. Set in plastic box Ø 4, 5, 6, 8, 10 mm 7 pcs. Set in wooden case Ø 3, 4, 5, 6, 8, 10, 12 mm 8 pcs. Set in plastic box Ø 3, 4, 5, 6, 7, 8, 9, 10 mm 11 pcs. Set in wooden case Ø 3, 4, 5, 6, 8, 10, 12, 13, 14, 15, 16 mm

N.	With brad point, two main cutting edges and two taper taps. Cylindrical shank up to Ø 10 mm, ≥ Ø 10 mm with shank-Ø 10 mm.	C. The	For accurate drillings in soft wood, European hard wood, chipboards as well as MDF panels. Ideal use with cordless screwdriver in soft wood
	HSS		The cost-effective brad point drill bit. For higher demands we recommend our product line 1594 in HSS-G with taper taps
UPM	2400-8000 rpm e.g. Ø 4 mm 5000 rpm in European hard wood. Further details in the speed diagram	K	Packing unit = 1, Rose tube



FA PA Besserbohrer



					× .
	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1593.030	3	3	58	30	18,00
1593.040	4	4	72	40	18,00
1593.050	5	5	83	49	18,70
1593.060	6	6	90	54	20,10
1593.070	7	7	106	66	22,00
1593.080	8	8	114	72	22,00
1593.090	9	9	122	78	27,70
1593.100	10	10	130	84	27,70
1593.110	11	11	139	91	31,15
1593.120	12	12	148	98	31,15

Sets		
Art No.	Description	€
1593.845	5 pcs. Set in plastic box Ø 4, 5, 6, 8, 10 mm	95,80
3575.507	6 pcs. Set in wooden case, brad point drill bit TCT, type 1593 Ø 3, 4, 5, 6, 8 mm incl. VARIO Countersink 2202 (90°)	119,00
1593.507	7 pcs. Set in wooden case Ø 3, 4, 5, 6, 8, 10, 12 mm	139,90
1593.510	10 pcs. Set in wooden case Ø 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 mm	212,55

N.	TCT brad point drill bit, cylindrical, two main cutting edges, two taper taps. Spiral form N	C. Hur	For dimensionally stable and clean drilling in hard wood (European and exotic), laminated and untreated chipboards and plastics like acrylic glass, Corian, GFRP, HPL coating, polycarbonate, PVC and Trespa board
	TCT (main cutting edges and taper taps)		Professional tool with highest service life at a fair price. Ideal for freehand drilling as well as stationary use. Boring and countersinking in one step in combination with countersink VARIO 2202
UPM	4.000 - 10.000 rpm e.g. Ø 5 mm 8.000 rpm in European hard wood. Further details in the speed diagram	K	Packing unit = 1, Rose-tube



**Brad Point Drill Bit, CV** 









	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
3500.030	3	3	61	33	2,50
3500.040	4	4	75	43	2,80
3500.050	5	5	86	52	3,05
3500.060	6	6	93	57	3,15
3500.070	7	7	109	69	3,30
3500.080	8	8	117	75	3,65
3500.090	9	9	120	80	4,20
3500.100	10	10	129	87	4,35
3500.110	11	10	142	89	5,50
3500.120	12	10	151	96	5,85
3500.130	13	10	151	96	6,90
3500.140	14	10	151	96	7,30
3500.150	15	10	160	100	8,05
3500.160	16	10	160	100	8,55
3500.180	18	10	180	130	15,10
3500.200	20	10	200	140	20,05
3500.220	22	13	210	140	22,00
3500.240	24	13	215	140	24,25
3500.250	25	13	215	140	26,50
3500.260	26	13	215	145	26,50
3500.280	28	13	220	145	28,35
3500.300	30	13	220	145	30,90

Sets

Art No.	Description	€
3501.505	5 pcs. Set in plastic box. Ø 4, 5, 6, 8, 10 mm	11,75
3501.508	8 pcs. Set in plastic box. Ø 3, 4, 5, 6, 7, 8, 9, 10 mm	17,05
3500.515	15 pcs. Set in wooden case Ø 3, 4, 5, 6, 8, 10 mm with each one depth adjusting collar and 16 mm HSS machine countersink	53,35

	With brad point, two main cutting edges and protruding cutting edges	C. C	For exact drilling in soft wood and some European hard wood
	Chrome vanadium steel		The low-cost machine drill . For higher demands we recommend our product line 1594 HSS-G
UPM	1000 - 5000 rpm e.g. Ø 5 mm 5000 rpm in softwood. Further details in the speed diagram		Packing unit = 1, PE pouch







	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
3491.006	6	6	250	190	8,55
3491.008	8	8	250	190	9,10
3491.010	10	10	250	190	10,95
3491.012	12	10	250	190	13,00
3491.014	14	10	250	190	15,70
3491.016	16	10	250	190	18,70
3491.018	18	10	250	190	21,30
3491.020	20	10	250	190	22,95

N.	With brad point, two main edges and protruding cutting edges	C. The	For exact drilling in soft wood and some European hard wood
	Chrome Vanadium steel		The low-cost long brad point drill bit. For high demands we recommend our product line 1594 HSS-G
UPM	1500 - 4000 rpm e.g. Ø 5 mm 4000 rpm in soft wood. Further details in the speed diagram	K	Packing unit = 1, Rose-tube



**Depth Adjusting Collars** 







		IØ	O-Ø	
Art No.	Description	[mm]	[mm]	€
2108.003	PU = 1 (contains10 pcs.)	3	7	15,80
2108.004	PU = 1 (contains10 pcs.)	4	8	15,80
2108.005	PU = 1 (contains10 pcs.)	5	10	15,05
2108.006	PU = 1 (contains10 pcs.)	6	12	15,05
2108.007	PU = 1 (contains10 pcs.)	7	12	15,05
2108.008	PU = 1 (contains10 pcs.)	8	16	15,80
2108.009	PU = 1 (contains10 pcs.)	9	18	17,40
2108.010	PU = 1 (contains10 pcs.)	10	20	18,05
2108.011	PU = 1 (contains10 pcs.)	11	20	19,60
2108.012	PU = 1 (contains10 pcs.)	12	22	20,40

Sets		
Art No.	Description	€
2108.505	5 pcs. Set in plastic tube Ø 4, 5, 6, 8, 10 mm	7,25
2108.507	7 pcs. Set in plastic tube Ø 3, 4, 5, 6, 8, 10, 12 mm	10,45

Single depth adjusting collar for countersinks with IØ 16 mm							
		IØ	OAL				
Art No.	Description	[mm]	[mm]	€			
2108.216	depth adjusting collar for countersinks	16	20	5,55			
	type 2100: 3 - 7 mm						

N.	Clamp collar to be mounted on drill bits, with lateral attachment screw	C. Hur	For fixing on drill bits to adjust the drilling depth
	Tool steel		If you don't need 10 pcs. of one size, we recommend product line 2108.505 und 2108.507
UPM	Ø 3 and 4 mm drill bits with assembled ring should be used with lower rpm than the recommended speed for the single drill bit	F	PU = 1 (10 pcs in Rose tube), 2108.216 and sets PU = 1, SB packaging in Rose tube



	Bit		Height	
Art No.	[mm]	Angle	[mm]	€
1598.750	6,3	90°	40	59,95
Sets				
Art No.	Description			€
1598.757	90fix set, for woodworking, in wooden case			88,55
1598.758	90fix set, for metalworking, in wooden case			88,55
1598.612	90fix set 13 pcs, for woodworking, in pouch			116,15

N.	Solid right-angle-driver with aluminium housing and bevel toothed metal gear wheels (ideal transmission of force). Take-up device for all 1/4" bits and drilling tools (e.g. product line 1596) with hexagonal shank. Angle of screwing 90°, exchangeable plastic handle	C. Hur	Professional screwing and drilling "to the last corner" with cordless screwdriver. Maximum transferable torque 50Nm
	aluminium housing		Ideal for screwings with a cordless screwdriver in a small space. Works well in combination with product lines 1596/2596
UPM	Rotation speed of cordless screwdriver max 2000 rpm	F	Packing unit = 1, Blister pack



**Brad Point Drill Bit, HSS-G** 







	0-Ø	Shank	OAL	Effective L.	
	0-0	Slidlik	UAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1596.030	3	C 6,3	38	16	7,10
1596.035	3,5	C 6,3	40	18	7,10
1596.040	4	C 6,3	44	20	7,10
1596.045	4,5	C 6,3	46	24	7,30
1596.050	5	C 6,3	50	26	7,30
1596.055	5,5	C 6,3	50	26	7,80
1596.060	6	C 6,3	50	26	7,80
1596.065	6,5	C 6,3	50	30	7,80
1596.070	7	C 6,3	50	30	7,80
1596.075	7,5	C 6,3	51	32	9,80
1596.080	8	C 6,3	51	32	9,80
1596.085	8,5	C 6,3	53	33	10,60
1596.090	9	C 6,3	53	33	12,00
1596.100	10	C 6.3	54	38	12,00

#### Sets

Art No.	Description	€
1596.508	9 pcs. Set in wooden case Ø 3, 4, 5, 6, 7, 8, 9, 10 mm and bitholder	66,85
1596.805	5 pcs. Set in blister pack Ø 3, 4, 5, 6, 8 mm	34,90

 One-piece drill bit (C6,3) with brad point, two main cutting edges, two protruding cutting edges and a hexagonal shank for bit holder (1/4"; C 6,3)
 For pre-drilling and lightning-fast tool change to screw bit, drilling in all wooden materials and many plastics

 Image: the state of the stat









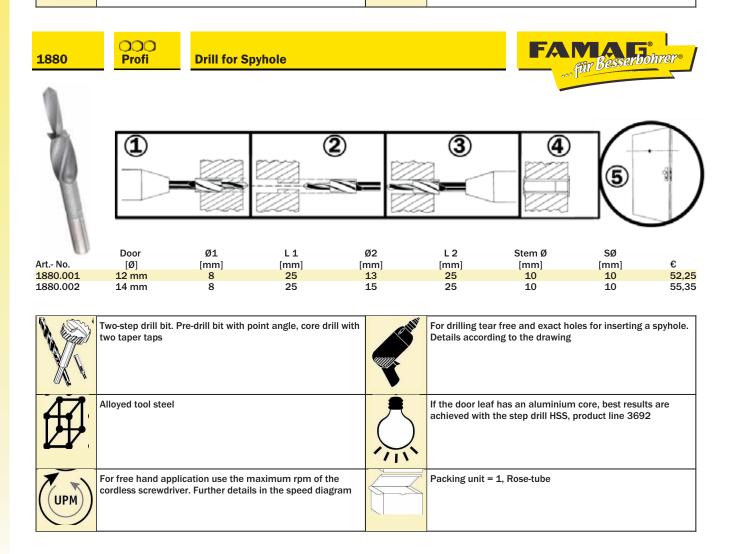


	0-Ø	Shank	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1597.030	3	C 6,3	70	45	8,40
1597.035	3,5	C 6,3	70	45	8,40
1597.040	4	C 6,3	75	50	8,20
1597.045	4,5	C 6,3	80	55	8,20
1597.050	5	C 6,3	86	61	8,10
1597.055	5,5	C 6,3	93	68	7,85
1597.060	6	C 6,3	93	68	7,85
1597.065	6,5	C 6,3	101	76	7,80
1597.070	7	C 6,3	109	84	8,45
1597.075	7,5	C 6,3	109	84	9,80
1597.080	8	C 6,3	117	92	9,80
1597.085	8,5	C 6,3	117	92	10,60
1597.090	9	C 6,3	125	100	12,00
1597.100	10	C 6,3	133	108	12,00
1597.110	11	C 6,3	142	117	15,15
1597.120	12	C 6,3	151	126	16,60
1597.130	13	C 6,3	151	126	17,80

Sets		
Art No.	Description	€
1597.805	5 pcs. Set in PVC-Box Ø 3, 4, 5, 6 and 8 mm	37,85
1597.507	7 pcs. Set in wooden case Ø 3, 4, 5, 6, 8, 10, 12 mm	58,60
1597.511	11 pcs. Set in wooden case Ø 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 mm	111,05

N.	One-piece drill bit (C6,3) with brad point, two main cutting edges, two protruding cutting edges and a hexagonal shank for bit holder $(1/4^{\circ}; C6,3)$	C. Mar	For pre-drilling and lightning-fast tool change to screw bit, drilling in all wooden materials and lot of plastics
	HSS-G		Good handling with cordless screwdriver. The specially smooth chip flutes enable a good chip removal. Also available as twist drill product line 2597, see twist drills and countersinks
UPM	Maximum rotation speed of the cordless screwdriver: recommended 3000 rpm		Packing unit = 1, Rose-tube

1886	OOO Profi	Ste	p Drill Bit, I	HSS				FAN	ür Besserboh	nrer®
HSS Qualität Quality						4				
Art No. 1886.050	Description with depth stop	Ø1 [mm] 5	L 1 [mm] 36	Ø2 [mm] 7	L 2 [mm] 20	Ø3 [mm] 10	L 3 [mm] 20	SØ [mm] 8	Shank length [mm] 25	€ 51,00
1886.150	without depth stop	5	36	7	20	10	20	8	25	49,15
	Three-step ma cutting edges	chine drill bi	t with brad po	int and protrudi	ng	For pre-coperatio		untersinking	holes in one sing	le
	HSS				, ,	line 210		the depth a	djusting collar pro	duct
UPM	Ø 5 mm 5000 laminated mat		ooard. Use witl	h less speed in		Packing	unit = 1, Rose	e-tube		



**Contersinks for Wood** 

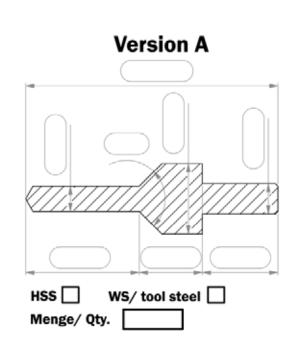


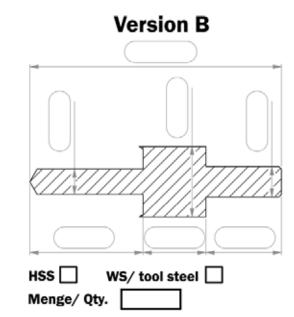


FAMAG 8/16,2mm HS

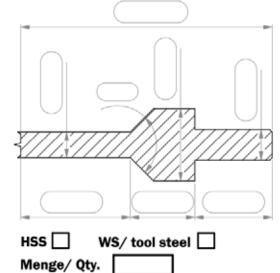
1887

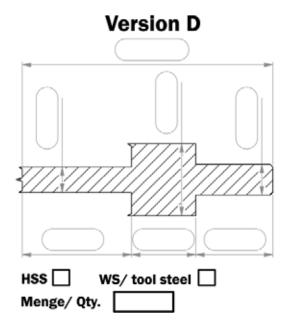
OOO Profi





Version C





	Two or more-step spiral drill bit with a fixed countersink. Version A and B with ground surface of a cone, version C and D with brad point and protruding cutting edges	C. Mar	Drilling and countersinking (90° or 180°) in soft wood, European hard wood and shipboard as well as MDF. Production according to drawing respectively indication of the desired sizes and design
	HSS / alloyed tool steel		Depending on the quantity, you have to schedule a delivery time of 4 - 6 weeks. Please use the parameters shown above for your inquiry and do not forget to mention the quantity
UPM	1500 - 4000 rpm. e.g. sink-Ø 25 mm 2000 rpm in European hard wood. Further details in the speed diagram	F	Packing unit = 1, Rose-tube

OOO Profi 1775

Countersink, with Pointed Angle 90°, HSS



















	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
1775.010	10	8	90	60	15,55
1775.013	13	8	90	60	16,75
1775.016	16	8	90	60	17,40
1775.020	20	8	90	60	19,45
1775.025	25	8	90	60	23,50
1775.030	30	8	90	60	27,75
Sets					
Art No.	Description				€
1775.505	5 pcs. Set in wooden case Ø 10,	13, 16, 20, 25 mm			83,20

	Seven-edged countersink with pointed angle 90°, irregular pitch, with fully ground tool head for finest results	C. Mar	Countersinking in all sorts of wood, also suitable for veneered, laminated panels and many plastics like acrylic glass, Corian®, GFRP, HPL coating, polycarbonate, PVC and Trespa® board
	HSS		Due to the specially designed pitch, it is possible to countersink without chattering also in soft wood. For all non-ferrous metals, hard plastics etc., we recommend the carbide tipped adjustable countersink VARIO 2202 or the countersinks of the product line 3540
UPM	1000 - 2500 rpm. e.g. Ø 16 mm 1800 rpm in soft wood. Further details in the speed diagram	F	Packing unit = 1, Rose-tube



C FAMAG Made in Germany Art.- No.

2115.013

2115.016

2115.020



Effective L.

[mm]

50

60

60

bohrer <sup>®</sup>
€
20,35
23,35
27,35

One-edged countersink with bored hole and countersinking angle of 90°	C. C	Countersinking in all sorts of wood, also suitable for veneered, laminated panels (for plastic laminated panels we recommend product line VARIO 2202)
Alloyed tool steel		Thanks to the geometry of the tool head, a good guidance and countersinking without chattering is possible. For bigger countersinking series we recommend product line countersink 1775
600 - 1000 rpm. e.g. Ø 16 mm 800 rpm in soft wood		Packing unit = 1, Rose-tube

0-Ø

[mm]

13 16

20

sø

[mm]

8 8

8

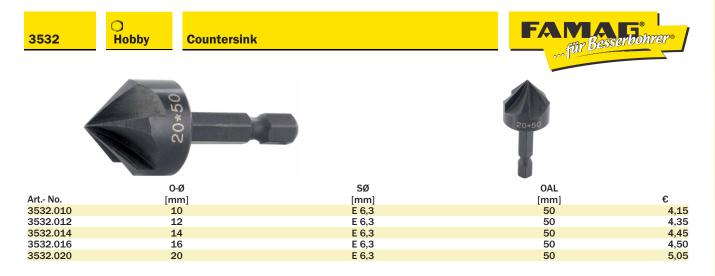
OAL

[mm]

80

90

90



N.	Countersink with five edges, point angle 90 $^\circ$ and bit shank E 6,3	C. Mar	Countersinking in soft wood, also suitable for veneered panels (for plastic laminated panels we recommend product line VARIO 2202). The low-price countersink for DIY clientele
	Alloyed tool steel		For hard plastics etc. we recommend the carbide tipped VARIO 2202 or the version 3540
UPM	500 - 2500 rpm. e.g. Ø 12 mm 2000 rpm in soft wood. Further details in the speed diagram		Packing unit = 1, Rose-tube

	untersink			fill Desser	
		IØ	O-Ø	OAL	
	Art No.	[mm]	[mm]	[mm]	€
18 189	2100.030	3,0	16	25	13,0
	2100.035	3,5	16	25	13,
	<b>2100.040</b>	4,0	16	25	13,
	2100.045	4,5	16	25	13,
	<b>2100.050</b>	5,0	16	25	13,
	2100.055	5,5	16	25	13,
650	<b>2100.060</b>	6,0	16	25	13,
	2100.065	6,5	16	25	16,
	2100.070	7,0	16	25	16,
all market 5	2100.080	8,0	20	25	16,
(0)	2100.100	10,0	20	25	16,
<i>w</i>	Accessory				
		cription			€
	AIL 110. DO.				
~ (	<mark>2108.216 de</mark> p	th adjusting collar	for countersinks type 2100:	: 3 - 7 mm	5
Countersink with five edge clipped on drill bits, incl. a	es and point angle 90°, to be		for countersinks type 2100: Drilling and countersinkin clipping on drill bits with t soft wood and veneered p only limited applicable	g in one single operati he appropriate Ø. Very	on. For suitable fo
	es and point angle 90°, to be		Drilling and countersinkin clipping on drill bits with t soft wood and veneered p	g in one single operati he appropriate Ø. Very anels, for European ha eads and drilling in so imend the use of our d D1. For higher demand	suitable fo ard wood ft wood at Irill bit s we





Art No.	lØ [mm]	0-Ø [mm]	OAL [mm]	€
3537.003	3	12	20	6,85
3537.004	4	12	20	6,85
3537.005	5	12	20	6,85
3537.006	6	12	20	6,85

N.	Countersink with five edges and point angle 90° to be clipped on drill bits. For DIY clientele. Without allen key	C. HIT	Drilling and countersinking in one single operation. For clipping on drill bits with the appropriate Ø. Very suitable for soft wood
	Alloyed tool steel		Countersinking of screw heads and drilling in soft wood at the same time. We recommend the use of our drill bit product lines 3500 or 1590. For higher demands we recommend our product line 2100 with VARIO 2202
UPM	2000 - 2200 rpm. e.g. all countersinks with A-Ø 12 mm 2000 rpm in soft wood. Further details in the speed diagram		Packing unit = 1, Rose-tube

3573 Classic Dri	II Bit - Countersink	Set			fir Besserbo	hrer•
A						
		IØ	0-Ø	OAL	Effective L.	
	Art No.	[mm]	[mm]	[mm]	[mm]	€
	3573.030	3	16	60	15	13,95
	3573.040	4	16	75	30	13,95
	3573.050	5	16	85	40	13,95
	3573.060	6	16	95	50	13,95
	3573.080	8	20	115	70	15,10
	3573.100	10	20	130	85	15,70
		10	20	100	00	10,10
	Accessory					
	Art No.	Description				€
	2108.216	depth adjustir	ng collar for countersinks	s type 2100: 3 - 7	mm	5,55
	Sets					
	Art No. 3574.504		vooden case. Drill bits 3 2100, assembled,  + dej			€ 53,30
Brad point drill bit, our pro assembled countersink pr steel), incl. allen key					ne single operation. red applicable for Eu	
Alloyed tool steel		, ,	product line 1 product line V Put the depth	594 (HSS-G) and ARIO 2202.	our brad point drill I adjustable counters 2108.216 directly or ng depth	sink
3572 Classic Dri	II Bit - Countersink	Set, HSS		FA	Resserbo	hrer•
					·· fur bee	
LICC		O-Ø	Shank	OAL	Effective L.	
		[	[mm]	[mm]		
	Art No.	[mm]			[mm]	€
Qualitat	Art No. <mark>3572.030</mark>	[mm] 3	C 6,3	75		
Qualität Quality			C 6,3 C 6,3		[mm]	15,05
	3572.030	3		75	[mm] 25	15,05 15,20
	<mark>3572.030</mark> 3572.040	3 4	C 6,3	75 75	[mm] 25 25	15,05 15,20 15,85
	3572.030 3572.040 <mark>3572.050</mark>	3 4 5	C 6,3 C 6,3	75 75 86	[mm] 25 25 36	15,05 15,20 15,85 16,40
	3572.030 3572.040 3572.050 3572.060	3 4 5 6	C 6,3 C 6,3 C 6,3	75 75 86 93	[mm] 25 25 36 43	15,05 15,20 15,85 16,40 21,75
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100	3 4 5 6 8	C 6,3 C 6,3 C 6,3 C 6,3 C 6,4	75 75 86 93 117	[mm] 25 25 36 43 67	15,05 15,20 15,85 16,40 21,75
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory	3 4 5 6 8 10	C 6,3 C 6,3 C 6,3 C 6,3 C 6,4	75 75 86 93 117	[mm] 25 25 36 43 67	15,05 15,20 15,85 16,40 21,75 24,15
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory Art No.	3 4 5 6 8 10 Description	C 6,3 C 6,3 C 6,3 C 6,4 C 6,5	75 75 86 93 117 133	[mm] 25 25 36 43 67 83	15,05 15,20 15,85 16,40 21,75 24,15 €
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory Art No. 2108.216	3 4 5 6 8 10 Description	C 6,3 C 6,3 C 6,3 C 6,3 C 6,4	75 75 86 93 117 133	[mm] 25 25 36 43 67 83	15,05 15,20 15,85 16,40 21,75 24,15
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory Art No. 2108.216 Sets	3 4 5 6 8 10 Description depth adjustir	C 6,3 C 6,3 C 6,3 C 6,4 C 6,5	75 75 86 93 117 133	[mm] 25 25 36 43 67 83	15,05 15,20 15,85 16,40 21,75 24,15 € 5,55
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory Art No. 2108.216 Sets Art No.	3 4 5 6 8 10 Description depth adjustir Description	C 6,3 C 6,3 C 6,3 C 6,4 C 6,5 ng collar for countersinks	75 75 86 93 117 133 s type 2100: 3 - 7	[mm] 25 25 36 43 67 83 mm	15,05 15,20 15,85 16,40 21,75 24,15 € 5,55
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory Art No. 2108.216 Sets	3 4 5 6 8 10 Description depth adjustir Description	C 6,3 C 6,3 C 6,3 C 6,4 C 6,5	75 75 86 93 117 133 s type 2100: 3 - 7	[mm] 25 25 36 43 67 83 mm	15,05 15,20 15,85 16,40 21,75 24,15 € 5,55
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory Art No. 2108.216 Sets Art No.	3 4 5 6 8 10 Description depth adjustir Description 5 pcs. Set in v	C 6,3 C 6,3 C 6,3 C 6,4 C 6,5 ng collar for countersinks	75 75 86 93 117 133 5 type 2100: 3 - 7 3, 4, 6 mm with 6	[mm] 25 25 36 43 67 83 mm	15,05 15,20 15,85 16,40 21,75 24,15 € 5,55
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory Art No. 2108.216 Sets Art No.	3 4 5 6 8 10 Description depth adjustir Description 5 pcs. Set in v 2100, bithold 5 pcs. Set in v	C 6,3 C 6,3 C 6,3 C 6,4 C 6,5 ng collar for countersinks wooden case. Drill bits Ø er and depth stop collar wooden case. Drill bits Ø	75 75 86 93 117 133 5 type 2100: 3 - 7 3, 4, 6 mm with 0 2108.216 3, 4, 5, 6 mm with	[mm] 25 25 36 43 67 83 mm	15,05 15,20 15,85 16,40 21,75 24,15 € 5,55
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory Art No. 2108.216 Sets Art No. 3572.503	3 4 5 6 8 10 Description depth adjustir Description 5 pcs. Set in v 2100, bithold 5 pcs. Set in v	C 6,3 C 6,3 C 6,3 C 6,4 C 6,5 ng collar for countersinks wooden case. Drill bits Ø er and depth stop collar wooden case. Drill bits Ø	75 75 86 93 117 133 5 type 2100: 3 - 7 3, 4, 6 mm with 0 2108.216 3, 4, 5, 6 mm with	[mm] 25 25 36 43 67 83 mm	15,05 15,20 15,85 16,40 21,75 24,15 € 5,55 € 61,85
	3572.030 3572.040 3572.050 3572.060 3572.080 3572.100 Accessory Art No. 2108.216 Sets Art No. 3572.503 3572.503	3 4 5 6 8 10 Description depth adjustin Description 5 pcs. Set in v 2100, bithold 5 pcs. Set in v type 2100 wit	C 6,3 C 6,3 C 6,3 C 6,4 C 6,5 over and depth stop collar vooden case. Drill bits Ø h depth stop collar type For very fast of countersinkin	75 75 86 93 117 133 5 type 2100: 3 - 7 3, 4, 6 mm with 0 2108.216 3, 4, 5, 6 mm wit 2018.216 thange in bit hold	[mm] 25 25 36 43 67 83 mm countersinks type h countersinks ers. Drilling and one single operation	15,05 15,20 15,85 16,40 21,75 24,15 € 5,55 € 61,85 80,80
Brad point drill bit fully gration two taper taps and hexago 6,3). With assembled course	3572.030 3572.040 3572.060 3572.080 3572.100 Accessory Art No. 2108.216 Sets Art No. 3572.503 3572.504	3 4 5 6 8 10 Description depth adjustin Description 5 pcs. Set in v 2100, bithold 5 pcs. Set in v type 2100 wit	C 6,3 C 6,3 C 6,3 C 6,3 C 6,4 C 6,5 ng collar for countersinker vooden case. Drill bits Ø h depth stop collar vooden case. Drill bits Ø h depth stop collar type For very fast of countersinkin limited applic	75 75 86 93 117 133 s type 2100: 3 - 7 3, 4, 6 mm with 6 2108.216 3, 4, 5, 6 mm with 2018.216 thange in bit hold g in soft wood in 6 able for hard wood d we recommend 594 (HSS-G) and Put the depth adj	[mm] 25 25 36 43 67 83 mm countersinks type h countersinks ers. Drilling and one single operation	15,05 15,20 15,85 16,40 21,75 24,15 € 5,55 € 61,85 80,80 . Only

OOOO Excellent 2202

Adjustable Countersink VARIO, TCT











	IØ	O-Ø	OAL	>	
Art No.	[mm]	[mm]	[mm]	[°]	€
2202.000	3 - 8	10,5 - 14,5	34	90	35,65
2204.000	3 - 8	10,5 - 14,5	35	180	35,65

Sets		
Art No.	Description	€
3575.505	6 pcs. Set in wooden case, brad point drill bit HSS, type 1594 Ø 3, 4, 5, 6, 8 mm incl. VARIO Countersink 2202 (90°)	63,10
3575.504	6 pcs. Set in wooden case, brad point drill bit HSS, type 1594 Ø 3, 4, 5, 6, 8 mm incl. VARIO Countersink 2204 (180°)	63,10
3575.507	6 pcs. Set in wooden case, brad point drill bit TCT, type 1593 Ø 3, 4, 5, 6, 8 mm incl. VARIO Countersink 2202 (90°)	119,00

	Professional carbide tipped adjustable countersink, countersinking angle 90° or $180°$ , two-part version. Can be clipped universally on all drill bits Ø 3-8 mm, incl. allen key. Ø 8 mm must be pushed into the countersink from behind with the flute in front	C. Har	Drilling and countersinking in one single operation by direct clipping on drill bits (also intermediate sizes e.g. 5.5 mm). Suitable for all sorts of wood, laminated panels and many plastics like acrylic glass, Corian, GFRP, HPL coating, polycarbonate, PVC and Trespa board
	тст		Countersinking of screw heads and drilling at the same time. Once the VARIO is fitted, you get the following dimensions (Ø drill bit/countersink size); 3/12 4/12,5 5/13,5 6/14,5 7/16 8/17,5 mm
UPM	3000 - 5000 rpm. e.g. Drill-Ø 4 mm 4000 rpm in European hard wood, also possible with less speed in cordless screwdrivers	F	Packing unit = 1, Rose-tube



Art.- No.

Description



**Drill Bit - Countersink Set with Rotating Depth Stop** 



No.

€

FAMAFonren



3577.040	Drill-bit Countersink Set 4 mm with depth stop	32,00
3577.050	Drill-bit Countersink Set 5 mm with depth stop	32,00
3577.060	Drill-bit Countersink Set 6 mm with depth stop	32,00
Sets		
Art No.	Description	€
3577.504	Drill-Countersink Set of 4 pcs. Ø 4, 5, 6 mm and Depth Stop in wooden case	75,40
Accessory		
Art No.	Description	€
3577.104	Countersink single I-Ø 4 mm	15,75
3577.105	Countersink single I-Ø 5 mm	15,75
3577.106	Countersink single I-Ø 6 mm	15,75
3577.140	Pre-drill Ø 4 mm	4,50
3577.150	Pre-drill Ø 5 mm	4,95
3577.160	Pre-drill Ø 6 mm	5,80
3577.212	Depth stop single, rotationally supported	18,00

N.	High quality drill bit - countersink set with rotating depth stop (brass). Depth of pre-drill is adjustable. Countersink angle 60°	C. Mar	This set is particularly well suited for terrace construction. It makes it easy to drill screwholes and to countersink them properly and accurate in the terrace boards. The depth stop is rotatably mounted and stops when it touches the workpiece. This prevents the depth stop from leaving marks on the terrace boards.
	Countersink/Pre-drill: alloyed tool steel. Depth Stop: brass		Adjust the depth so that the floor board is just perforated (board thickness). Thus, the self-tapping terrace screw can find a perfect hold state.
UPM	1500 - 2200 rpm, e.g. recommended value aprox. 1800 rpm in hard wood	F	Packing unit = 1, Rose tube

**Countersink, HSS** 



HSS Quality



OOO Profi

	IØ	O-Ø	OAL	
Art No.	[mm]	[mm]	[mm]	€
2101.030	3,0	16	16	41,65
2101.035	3,5	16	16	41,65
2101.040	4,0	16	16	41,65
2101.045	4,5	16	16	41,65
2101.050	5,0	16	16	41,65
2101.060	6,0	16	16	41,65
2101.070	7,0	16	16	41,65
2101.080	8,0	18	16	44,85
2101.100	10,0	20	16	45,75



	Countersink with two edges and point angle 90°, to be clipped on drill bits	Contraction of the second seco	Drilling and countersinking in one single operation. For fitting on drill bits. Suitable for soft wood, European hard wood, veneered panels and plastics like acrylic glass, Corian®, GFRP, HPL coating, polycarbonate, PVC and Trespa® board
	HSS		Countersinking of screw heads and drilling at the same time. Long service life due to the HSS material. We recommend to use the drill bits product line 1594. Not suitable for depth adjusting collar 2106.216
UPM	2000 - 3500 rpm. e.g. standard value ca. 3000 rpm in European hard wood, also suitable for use in cordless screwdrivers, but with clearly less speed		Packing unit = 1, Rose-tube

2106	OOO Profi	Countersink 180°, HSS			FAMA <sub>in für</sub> Bess	erbohrer*
HSS Qualität Quality		Art No. 2106.050	اھ [mm] 5	0-ø [mm] 15	OAL [mm] 23	€ 42,15
		2106.060	6	16	23	43,45
	1 8	2106.061	6	15	25	43,90
	1	2106.180	8	20	25	50,30
	1	2106.280	8	25	25	52,90
		2106.290	9	25	25	55,10
		<mark>2106.110</mark>	10	20	25	48,40
		2106.210	10	25	25	52,85
		2106.211	11	25	25	70,20
		2106.310	10	30	25	80,45
		2106.212	12	25	25	67,35
	a a a a	2106.312	12	30	25	80,45

N.	Countersink for straight countersinking with two main cutting edges and two taper taps; to be clipped on drill bits	C. THE	Drilling and countersinking in one single operation. For fitting on drill bits. Suitable for soft wood, European hard wood, veneered panels and plastics like acrylic glass, Corian®, GFRP, HPL coating, polycarbonate, PVC and Trespa® board
	HSS		For countersinking of washers/screw nuts and drilling at the same time. For drill bits with Ø 3-8 mm. Our product line VARIO 2204 might be a cost-efficient solution
UPM	1700 - 3000 rpm. e.g. Ø 12 mm 2000 rpm in European hard wood, also suitable for use in cordless screwdrivers, but with clearly less speed	F	Packing unit = 1, Rose-tube







	O-Ø	SØ	OAL	
Art No.	[mm]	[mm]	[mm]	€
1540.001	15 - 45	12	150	47,85
1540.002	22 - 76	13	150	59,75
1540.003	22 - 100	13	150	130,25

#### spare blades

	0-Ø	
Art No.	[mm]	€
1540.101	15-25	13,85
1540.102	25 - 45	14,40
1540.201	22 - 40	14,40
1540.202	40 - 76	17,95
1540.203	70 - 100	65,85
1540.101         1540.102         1540.201         1540.202	15 - 25 25 - 45 22 - 40 40 - 76	14,40 14,40 17,95

N.	Version with centre point, one fixed main cutting edge and adjustable knife with taper tap. Adjustable center bit with a solid cylindrical shank 13 x 50 mm	C. HIT	For drilling in soft wood, universal for all diameters and intermediate sizes
	Alloyed tool steel		Suitable for stationary use only. This tool is a compromise, for professional use we recommend our cylinder boring bits as e.g. our product line Bormax ® 2.0
UPM	300 - 1500 rpm. e.g. for Ø 50 mm 600 rpm in soft wood, stationary use	K	Packing unit = 1, Rose-tube



	0-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
3510.008	8	E 6,3	150	120	3,50
3510.010	10	E 6,3	150	120	3,50
3510.011	11	E 6,3	150	120	3,55
3510.012	12	E 6,3	150	120	3,55
3510.013	13	E 6,3	150	120	3,75
3510.014	14	E 6,3	150	120	3,75
3510.015	15	E 6,3	150	120	3,80
3510.016	16	E 6,3	150	120	3,80
3510.017	17	E 6,3	150	120	4,15
3510.018	18	E 6,3	150	120	4,15
3510.019	19	E 6,3	150	120	4,25
3510.020	20	E 6,3	150	120	4,25
3510.021	21	E 6,3	150	120	4,30
3510.022	22	E 6,3	150	120	4,30
3510.025	25	E 6,3	150	120	4,55
3510.028	28	E 6,3	150	120	4,75
3510.032	32	E 6,3	150	120	5,65
3510.034	34	E 6,3	150	120	6,35
3510.036	36	E 6,3	150	120	7,40
3510.038	38	E 6,3	150	120	7,50
3510.040	40	E 6,3	150	120	8,20
Extension					
	O-Ø	SØ	OAL	Effective L.	

	0,0	65	0/1E	Ellocato El	
Art No.	[mm]	[mm]	[mm]	[mm]	€
3511.000	16	E 6,3	305	280	10,25

Sets

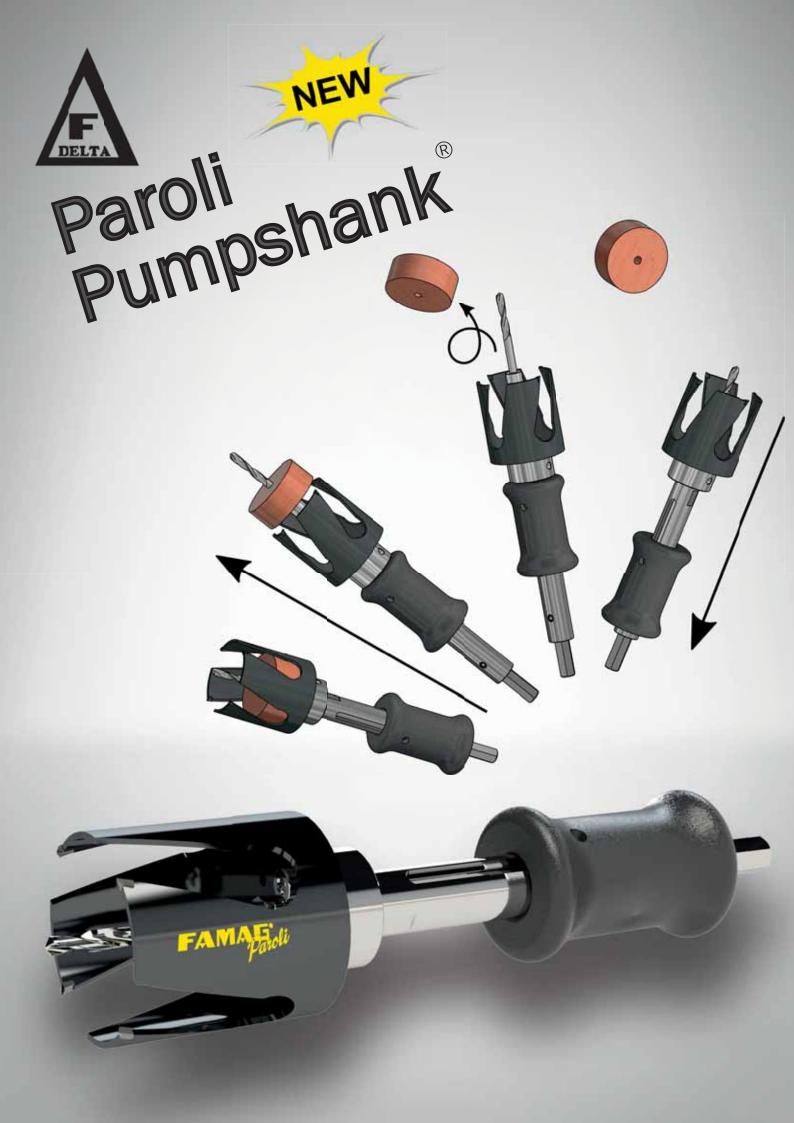
## Art.- No. Description 3510.506 6 pcs. Set in plastic box Ø 12, 16, 18, 20, 22, 25 mm

€ 21,80

	Classical centre bit with centre point. Polished face with two taper taps and bit shank E 6,3. The extension shank 3511.305 has a quick-action chuck	C. The	For drilling in soft wood without any particular precision and quality. Due to the taper taps the results are clearly better than the usual versions
	Alloyed tool steel		In our opinion flat centre bits are in principal no tools for professional use and are not suitable for hard wood. We recommend to use FAMAG cylinder boring bits, especially the product lines Bormax® 2.0 (alloyed tool steel / TCT)
UPM	800 - 3000 rpm. e.g. Ø 18 mm 1600 rpm in soft wood. Further details in the speed diagram	F	Packing unit = 1, on Rose-card

# Hole Saws 69

PAROLI all-round	70
PAROLI all-round 50, TCT- Hole Saw	71
PAROLI all-round 165, TCT-Hole Saw, Long Version	72
PAROLI 100 Hole Saw for Insulating Material	73
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Universal Hole Saw, TCT	75
Bi-Metal Hole Saw , HSS-Co, for Roller Shutter	76
Bi-Metal Hole Saw for Carpentry, HSS-Co	77



OOO Profi

# PAROLI all-round 50, TCT- Universal Hole Saw













					-
		0-Ø	AØ	Effective L.	
Art No.	Description	[mm]	[Inch]	[mm]	€
2166.035	End of Series	35	13/8	50	17,3
2166.040		40	19/16	50	17,3
2166.045		45	-	50	17,9
2166.050		50	-	50	22,5
2166.051		51	2	50	22,5
2166.054		54	2 1/8	50	22,9
2166.057		57	2 1/4	50	23,2
2166.060		60	2 3/8	50	24,5
2166.064		64	2 1/2	50	28,2
2166.065		65	2 9/16	50	28,2
2166.068		68	2 11/16	50	29,8
2166.070		70	2 3/4	50	30,3
2166.073		73	27/8	50	30,3
2166.074		74	-	50	30,3
2166.076		76	3	50	32,0
2166.080		80	-	50	31,4
2166.082		82	-	50	31,4
2166.086		86	3 3/8	50	32,9
2166.092		92	3 5/8	50	32,9
2166.102		102	4	50	41,9
2166.105		105	4 1/8	50	41.9
2166.111		111	4 3/8	50	45,3
2166.114		114	4 1/2	50	47.0
2166.121		121	4 3/4	50	60,9
2166.125		125	-	50	64.9
2166.133		133	5 1/2	50	72,3
2166.140		140	5 1/2	50	72,3
2166.152		152	6	50	82,3
2166.160		160	6 5/16	50	94.2
2166.165		165	-	50	98,6
2166.177		177	7	50	107,7
2166.185		185		50	118,1
2166.210		210	8 1/4	50	128,2

Edge countersink cap

Eugo ooune	Eugo obuntoronni oup		
Art No.	Description		
2166.468	Edge countersink cap Ø 68mm for wall sockets		

unu	ersnik cap	
	Description	€
68	Edge countersink cap Ø 68mm for wall sockets	27,80

Ejector-sha	nk system	
Art No.	Description	€
2166.605	Pumpshank® incl. adapter and HSS-G centre drill	79,95
2166.606	Pumpshank® incl. 3 adapters and HSS-G centre drill	99,95
2166.607	single adapter	10,95
2166.608	Set of 5 pcs of adapters	49,95
2166.626	single HSS-G centre drill Ø 6 mm for Pumpshank®	7,95
2166.636	single TCT centre drill Ø 6 mm for Pumpshank®	9,95

3612		
Art No.	Description	€
2166.808	8 pcs. Set Ø 45, 50, 57, 60, 68, 80 incl. edge countersink cap for Ø 68 mm + Pumpshank incl. 6 adapters & HSS centre drill	259,95

No.	Carbide tipped hole saw, the saw body is made of steel, cutting depth 50 mm	C. Lan	Round sawing in all kinds of woods and boards, MDF, aerated concrete, plaster board, tile (up to a scratch hardness of 6) and plastics like acrylic glass, Corian, GFRP, HPL coating, polycarbonate, PVC and Trespa board
	тст		By using the particularly clever ejector-shank system, you can easily remove the core and save a lot of time and trouble. Perfect run-out thanks to massive ground and one- piece saw body
UPM	For larger diameters a high torque is needed. Rotation speed according to the corresponding diagram	K	packing unit: 1, SB Rose clip









	O-Ø	Effective L.	
Art No.	[mm]	[mm]	€
2169.051	51	165	70,05
2169.060	60	165	78,70
2169.070	70	165	92,85
2169.080	80	165	104,45
2169.102	102	165	117,85
2169.111	111	165	131,75
2169.121	121	165	153,20
2169.130	130	165	177,35
2169.152	152	165	203,40
2169.160	160	165	258,45

# Ejector-shank system

Art No.	Description	€
2169.310	Ejector-shank incl. guiding spike for PAROLI 165	35,15
2169.309	Ejector-shank for PAROLI 165	27,15
2169.320	single guiding spike Ø 10 mm for PAROLI 165	8,15

	Carbide tipped hole saw, the saw body is made of steel, cutting depth 165 mm	C. Har	Round sawing in all kinds of woods and boards (also solid wood), MDF, aerated concrete, plaster board and plastics. The long version is ideal for drilling clearing holes in solid wood for ventilating pipes, drain pipes and flue
	тст		By using the particularly clever ejector-shank system, you can easily remove the core and save a lot of time and trouble. After the saw has bitten, the spike can be removed
UPM	For larger diameters a high torque is needed. Rotation speed according to the corresponding diagram		packing unit: 1, SB Rose clip





PAROLI 100 Hole Saw for Insulating Material











		O-Ø	Effective L.	
Art No.	Description	[mm]	[mm]	€
2155.035	Junction box for wall lamps	35	100	63,95
2155.065	Facade dowel	65	100	88,85
2155.068	Hollow wall box, junction box	68	100	100,00
2155.074	Hollow wall box, junction box	74	100	111,10
2155.106	Blow-in opening insulation	106,5	100	165,60
2155.121	Fire protection – halogen lamp – casing	121	100	177,80

#### Ejector shank system

Art No.	Description	€
2155.311	Ejector-shank for 2155 (wrench size 11mm)	22,20

	The first hole saw with serrated knife for really all insulating materials such as: Wood insulating boards, polystyrene, mineral wool, PU- foam etc. Very clean cuts The ejector-shank has to be ordered separately! It is not included in the scope of delivery	C. S.	Fast, very clean and circular cuts in mineral wool, PUR foam, polystyrene, leather, rubber, paper, carpet and especially in wood fiber insulating boards
	Alloyed tool steel		Due to the ejector shank system the drill core can be removed in a breath. The thin-walled cutting offers to use the core again, e.g. to close the blow-in opening
UPM	According to the corresponding diagram		packing unit = 1, SB packaging PE Clip, Ø 106 + 121 in carton



**PAROLI Bi-Metal Hole Saw, HSS-Co** 

Art.- No.

2173.014

0-Ø

[mm] 14



Hole Saws

74

2173



Effective L.

[mm] 35

€

17,20

16,10

19.05

19,05



Bi-metal hole saw with HSS teeth, variable pitch, weld on a cylindrical tool head of steel. Cutting depth 35 mm. With help of the Pumpshank system the saw core can be removed easily Round sawing in steel and nonferrous metal as copper, bronze



packing unit = 1, Rose clip

	2173.014	14	9/16	35	17,20
	2173.016	16	5/8	35	17,20
	2173.017	17	11/16	35	17,20
	2173.019	19	3/4	35	17,20
	2173.020	20	-/ -	35	17,20
	2173.021	21	13/16	35	17,20
	2173.022	22	7/8	35	17,20
	2173.024	24	15/16	35	17,75
	2173.025	25	-	35	17,80
	2173.029	29	-	35	17,80
	2173.030	30	1 3/16	35	17,80
	2173.032	32	1 1/4	35	18,30
	2173.033	33	1 5/16	35	18,30
	2173.035	35	13/8	35	19,15
	2173.037	37	17/16	35	19,15
	2173.038	38	11/2	35	19,15
	2173.040	40	19/16	35	20,20
		40	15/8		
	2173.041		,	35	20,20
	2173.043	43	1 11/16	35	21,85
	2173.044	44	13/4	35	22,40
	2173.046	46	1 13/16	35	22,40
	2173.048	48	17/8	35	22,40
	2173.051	51	-	35	22,40
	2173.052	52	2 1/16	35	23,55
	2173.054	54	2 1/8	35	23,55
	2173.057	57	2 1/4	35	24,85
	2173.059	59	2 5/16	35	25,85
	2173.060	60	2 3/8	35	25,85
	2173.064	64	2 1/2		
			,	35	27,10
	2173.065	65	2 9/16	35	27,10
	2173.067	67	2 5/8	35	27,50
	2173.068	68	2 11/16	35	27,50
_	2173.070	70	2 3/4	35	28,25
	2173.073	73	2 7/8	35	28,25
	2173.076	76	-	35	29,50
	2173.083	83	3 1/4	35	30,05
	2173.086	86	3 3/8	35	30,05
	2173.089	89	3 1/2	35	30,05
	2173.092	92	3 5/8	35	34,10
	2173.095	95	3 3/4	35	35,75
	2173.098	98	37/8	35	37,40
			31/8		
	2173.102	102	4.4.10	35	38,45
	2173.105	105	4 1/8	35	42,40
	2173.108	108	4 1/4	35	47,95
_	2173.111	111	4 3/8	35	51,05
	2173.114	114	4 1/2	35	56,65
	2173.121	121	4 3/4	35	59,55
	2173.127	127		35	61,40
	2173.133	133	5 1/2	35	65,35
	2173.140	140	5 1/2	35	69,85
-	2173.146	146		35	72,05
	2173.152	152		35	77,45
	2173.160	160	6 5/16	35	110,40
	2173.160			35	
		168	6 5/8		114,55
	2173.177	177		35	118,90
	2173.200	200		35	133,25
	2173.210	210	8 1/4	35	139,90
	Adaptor				
	Adapter Art No.	Decorintion			6
		Description			€
	2166.605	Pumpshank® incl. adapter	and HSS-G centre dri	11	79,95
	2166.607	single adapter			10,95
	2166.606	Pumpshank® incl. 3 adapte			99,95
	2173.901	Adaptor 14 - 30 mm AF 9,5			10,25
	2172 005	Adaptor 22 210 mm AE 11	0 mm incl USS cont	ro drill	16 10

Adaptor 32-210 mm AF 11,0 mm incl. HSS-centre drill

Adaptor 14 - 30 mm with SDS-shank incl. HSS-centre drill Adaptor 32-210 mm with SDS-shank incl. HSS-centre drill

AØ

[Inch]

9/16

2173.905

2173.907

2173.908

2160	OOO Profi	Universal Hole	Saw, TCT		FAI	ar Besserbon	rer-
Kartmetall Carbide							
Art No.		-Ø im]	Teet	h	Effective I [mm]	-	€
2160.030	3	0	3		60		47,05
2160.040	4	0	3		60		57,25
2160.050	5	0	3		60		67,50
2160.055		5	3		60		68,60
2160.060	6	0	5		60		69,55
2160.065		5	5		60		77,80
2160.068	6	8	5		60		76,60
2160.080	8	0	5		60		117,70
2160.090		0	5		60		128,65
2160.105		05	6		60		160,30
Edge countersin	ık						
		O-Ø					
Art No.		[mm] 68			Teeth		€
2160.468		68			3		49,00
Shank	~ ~		10	~			
A.1. N.	0-Ø		IØ	OAL		5Ø	
Art No.	[mm]		[mm]	[mm]	[n	nm]	€
2160.201	M16		8	70		13	26,65
2160.203	M16		8	70	S	DS	32,00
Centre drill	O-Ø			OAL		SØ	

Centre drill					
	O-Ø		OAL	SØ	
Art No.	[mm]	Mat.	[mm]	[mm]	€
2160.307	10	HM	130	8	9,50
2160.308	8	HSS	120	8	10,05

N.	Carbide tipped hole saw, the saw body is made of tempered steel. Internal thread M16 for intake of the shank. Maximum cutting depth 60 mm	C. C	Drilling in plaster boards, aerated concrete, plastics, chipboards and plywood. Please order shanks and centre drills seperately
	тст		With the edge countersink you are able to countersink the lid of a flush socket, suitable for hole saw 2160.068
UPM	For larger diameters a high torque is needed. Rotation speed according to the diagram	K	packing unit = 1, Plastic sleeve



OOO Profi

**Bi-Metal Hole Saw , HSS-Co, for Roller Shutter** 











### Holesaw incl. shank and pre-drill

	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
2174.017	17	12	220	100	66,55
2174.022	22	12	220	100	66,55
2174.025	25	12	220	100	66,55

### Holesaw without shank and pre-drill

	0-Ø	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	€
2174.117	17	140	100	44,45
2174.122	22	140	100	44,45
2174.125	25	140	100	44,45

#### Accessory

Art No.	Description	€
2174.301	Hexagonal shank complete with pre-drill Ø 7 mm	22,20
2174.307	Pre-drill Ø 7 mm for holesaw 2174	6,15

	Special hole saw of HSS bi-metal to install roller shutters in window frames. Incl. hexagonal shank and pre-drill bit to place the hole saw in position	C. Hur	During the installation of the roller shutter you have to drill holes in the window frames for the belts. This was always an issue, but with this hole saw it is properly solved
	HSS Bi-metal		Remove the pre-drill bit from the hole saw after the first cut. This reduces the cutting forces and it works much more easier
UPM	500 - 750 rpm		packing unit = 1, PE tube



Hole Saws

77

	0-10	50	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
2170.086	85	SW 12	420	300	226,60
2170.111	110	SW 12	420	300	284,70
2170.130	130	SW 12	420	300	336,50
2170.152	152	SW 12	420	300	420,55
2170.170	170	SW 12	420	300	465,90
2170.200	200	SW 12	420	300	549,95

#### Guiding spike and drill head

Guiung spike and	u unin neau				
	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
2170.030	20	12	470	410	77,70
Guiding spike sin	gle				
	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
2170.010	19,5	12	430	380	55,70
Drill head single					
-	O-Ø	SØ	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	[mm]	€
3690.002	8-20	8	70	40	29,40

#### Hexagonal shank

Ar 21

Art No.	Description		€
2170.005	Hexagonal shank for carpentry bi-metal hole saw AF12		31,25
N.	<sup>4</sup> Special hole saw bi-metal with variable tooth pitch. Teeth made of HSS are welded on a cylindrical base body which has a usable length of 300 mm. Incl. exchangeable hexagonal shank (AF12). Please order guiding spike with drill head separately.	C. The	For drilling large diameter holes in one workstep e.g. the lead through of flue pipes and incoming air pipes in roof constructions. This high quality hole saw cuts all sorts of insulating materials (fibreglass, rockwool, styrofoam etc.) as well as wood/chipboards and gypsum plaster boards
	Bimetal HSS M42, 8% Co		The cutting of solid wood with a thickness of more than 30 mm, as well as cutting of stone and metal is not possible due to the finish of the hole saw. The hole saw for carpentry can be used freehand without any support with a strong power drill
UPM	For larger Ø approx. 500 rpm	K	packing unit = 1, yellow cardboard tube



# Router Bits 79

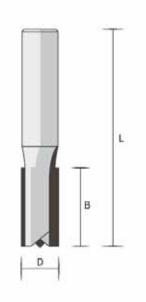
Straight Bit for Plunging, two Flutes	80
Classical Bit, Plunge Type, two Flutes	86
Chamfer Bit, two Flutes	90
Bull Nose Bit (Half Round), two Flutes	92
Cove Bit, two Flutes	93
Panelling Bit, two Flutes	95
Straight Bit, Plunge, one Flute	99
Ball Bearings	102

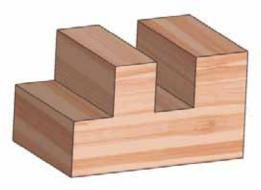
OOOO Excellent

**Straight Bit for Plunging, two Flutes** 









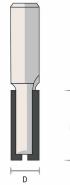
	D	Cutting I.	L	<	R1	R2	SØ	n max.	
Art No.	[mm]	[mm]	[mm]	[°]	[mm]	[mm]	[mm]	[RPM]	€
3167.008	8	32	63				8	26.000	40,95
3167.010	10	32	63				8	24.000	42,00
3167.014	14	32	63				8	22.000	48,95
3167.016	16	32	63				8	21.000	52,90
3167.018	18	32	63				8	21.000	53,75
3167.020	20	32	63				8	20.000	57,85
3167.808	8	19	57				8	26.000	38,65
3167.810	10	19	51				8	24.000	39,70
3167.812	12	19	51				8	22.000	41,70
3167.842	12	32	63				8	22.000	50,30
3167.814	14	19	51				8	22.000	43,50
3167.844	14	25	57				8	22.000	46,45
3167.816	16	19	51				8	21.000	45,40
3167.846	16	25	57				8	21.000	48,35
3167.818	18	19	51				8	21.000	48,05
3167.848	18	25	57				8	21.000	50,75
3167.820	20	19	51				8	20.000	50,45
3167.908	8	25	69				12	26.000	40,95
3167.910	10	19	63				12	24.000	42,00
3167.912	12	19	61				12	22.000	43,85
3167.942	12	32	73				12	22.000	50,30
3167.944	14	25	67				12	22.000	48,95
3167.916	16	25	67				12	21.000	51,00
3167.946	16	32	73				12	21.000	52,95
3167.918	18	25	67				12	21.000	53,75
3167.920	20	25	67				12	20.000	56,80
3167.922	22	32	73				12	20.000	64,25

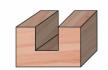
	Two carbide tipped cutting edges, side cutting and plunging. With ground and carbide tipped front cutter	C. Sur	For grooving, producing finger jointers, tongue and groove joints. Due to the carbide tipped front side cutting edge, you can use it indefinitely for plunging. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual and mechanical feed is allowed
	TCT (cutting edges, front cutter)		Due to the carbide tipped front side cutting edge, this article is particularly ideal for milling slots and continious cut outs up to a depth of 32 mm. Also appropriate for milling the cut outs of worktops in kitchens (e.g. hob and sink)
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packaging











	D	Cutting I.	L	<	R1	R2	SØ	n max.	
Art No.	[mm]	[mm]	[mm]	[°]	[mm]	[mm]	[mm]	[RPM]	€
3107.603	3	11	51				6	26.000	25,15
3107.604	4	11	51				6	25.000	25,30
3107.605	5	11	51				6	24.000	25,55
3107.606	6	19	51				6	23.000	25,85
3107.608	8	20	51				6	22.000	31,30
3107.610	10	20	51				6	22.000	32,10
3107.651	10	32	63				6	22.000	37,55
3107.612	12	20	51				6	20.000	33,80
3107.661	12	32	63				6	20.000	39,00
3107.614	14	20	51				6	20.000	34,65
3107.616	16	20	51				6	19.000	36,75
3107.618	18	20	51				6	19.000	39,00
3107.620	20	20	51				6	18.000	41,65
3107.803	3	11	51				8	26.000	25,15
3107.804	4	11	51				8	25.000	25,30
3107.805	5	11	51				8	24.000	25,55
3107.806	6	19	51				8	23.000	25,85
3107.808	8	20	51				8	22.000	31,30
3107.810	10	20	51				8	22.000	32,10
3107.851	10	32	63				8	22.000	37,55
3107.812	12	20	51				8	20.000	33,80
3107.861	12	32	63				8	20.000	39,00
3107.814	14	20	51				8	20.000	34,65
3107.816	16	20	51				8	19.000	36,75
3107.818	18	20	51				8	19.000	39,00
3107.820	20	20	51				8	18.000	41,65
3107.822	22	20	51				8	18.000	42,35
3107.825	25	20	51				8	17.000	45,35
3107.908	8	25	70				12	26.000	38,20
3107.910	10	32	76				12	24.000	40,70
3107.912	12	32	73				12	22.000	41,70
3107.962	12	50	108				12	22.000	60,60
3107.914	14	25	73				12	22.000	42,30
3107.916	16	32	73				12	21.000	43,10
3107.918	18	32	73				12	21.000	47,00
3107.920	20	32	73				12	20.000	49,50
3107.922	22	25	67				12	20.000	50,00
3107.925	25	32	73				12	19.000	60,00
3107.930	30	25	67				12	18.000	76,55
3107.935	35	25	67				12	18.000	82,50
3107.940	40	32	73				12	17.000	115,25
3107.950	51	32	73				12	17.000	138,00

	Two carbide tipped cutting edges parallel to the axis, side cutting and plunging . With ground (not carbide tipped) front cutter	C. Mar	For grooving, fixing of box joints, folding and producing of tongue and groove joints. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual and mechanical feed is allowed
Ø	TCT (cutting edges)		For professional plunging we recommend our product line 3167 with carbide tipped front side cutting edge
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packaging

Technical changes or mistakes reserved! All prices are recommended retail prices additionally value added tax.

	0000
	Excellent

Straight Bit, Template Profile, two Flutes



Hartmet

3157

	Art No.	D [mm]	Cutting I. [mm]	L [mm]	< [°]	R1 [mm]	R2 [mm]	SØ [mm]	n max. [RPM]	€
	3157.625	15,9	25,4	63		[]	[]	6	19.000	47,50
THE T	3157.816	16	25,4	63				8	19.000	47,50
	3157.819	19	25,4	63				8	19.000	47,50
ļ, İ										

82

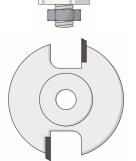
	Two carbide tipped side cutting edges parallel to the axis. With ball bearing guide (Ø 15.9 mm) on the side of the shank	C. In	For grooving any profile with a template. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual and mechanical feed is allowed
	TCT (cutting edges)		After producing a template you can groove the same profile in any workpiece with the straight bit.
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packaging

3108

Excellent Slotting Cutter







	D	Cutting I.		<	R1	R2	sø	n max.	
Art No.	[mm]	[mm]	d.	[°]	[mm]	[mm]	[mm]	[RPM]	€
3108.015	40	1,5	6,35					16.000	24,15
3108.020	40	2,0	6,35					16.000	24,15
3108.025	40	2,5	6,35					16.000	24,90
3108.030	40	3,0	6,35					16.000	26,60
3108.035	40	3,5	6,35					16.000	27,10
3108.040	40	4,0	6,35					16.000	27,10
3108.050	40	5,0	6,35					16.000	27,10
3108.060	40	6,0	6,35					16.000	27,10

shank with ball bearing

	D	Cutting I.	L	SØ	R1	n max.	R2	n max.	
Art No.	[mm]	[mm]	[mm]	[mm]	[mm]	[RPM]	[mm]	[RPM]	€
3108.690	15,9	58		6		16.000			23,90
3108.890	15,9	58		8		16.000			23,90

shank without ball bearing

Art No.	D [mm]	Cutting I. [mm]		SØ [mm]	R1 [mm]	n max. [RPM]	R2 [mm]	n max. [RPM]	€
3108.691	13	58	6,35	6	• •	16.000	• •	• •	13,05
3108.891	13	58	6,35	8		16.000			13,05

N.	Two carbide tipped, straight side cutting edges	C. The	For cutting grooves and slots. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual and mechanical feed is allowed
	TCT (cutting edges)		Specially for tongue and groove joints, production of plugs, cutting slots in general and special slots for the application of Lamello joints (B = 4,0 mm). For constant cutting depth of slots we recommend the version with ball bearing guide
UPM	Individually for each router bit, see product paramter		packing unit = 1. SB packaging

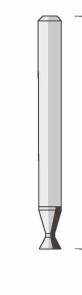


OOOO Excellent





One-sided



В

D

L



	D	Cutting I.	L	<	R1	R2	SØ	n max.	
Art No.	[mm]	[mm]	[mm]	[°]	[mm]	[mm]	[mm]	[RPM]	€
3107.663	3	11	60				6	30.000	31,30
3107.763	3	11	60				6,35	30.000	31,30
Double-sided									
	D	Cutting I.	L	<	R1	R2	SØ	n max.	
Art No.	[mm]	[mm]	[mm]	[°]	[mm]	[mm]	[mm]	[RPM]	€
3107.673	3	8	70				6	30.000	51,75
3107.773	3	8	70				6,35	30.000	51,75
Dovetailed pro	file								
	D	Cutting I.	L	<	R1	R2	SØ	n max.	
Art No.	[mm]	[mm]	[mm]	[°]	[mm]	[mm]	[mm]	[RPM]	€
3104.665	5	8	60	18			6	30.000	55,10
3104.765	5,5	8	60	18			6,35	30.000	55,10
Studded ancho	or profile								
Studded ancho	or profile D	Cutting I.	L	<	R1	R2	SØ	n max.	
Studded ancho Art No.	•	Cutting I. [mm]	L [mm]			R2 [mm]	SØ [mm]	n max. [RPM]	€
	D	0	L [mm] 65	< [°] 38	R1 [mm]				€ 64,60

	Two carbide tipped cutting edges parallel to the axis, fully ground, side cutting and plunging	C. Lan	For milling straight or molded lining grooves at windows or doors. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual and mechanical feed is allowed
	Solid carbide, 3104 with head of solid carbide		By using fine grained carbide the straight bits of FAMAG have a very high service life. With appropriate feed it is possible to make the lining groove in one single operation
UPM	Individually for each router bit, see product paramter	K	packing unit = 1. SB packaging

3104	COCO Excellent	Dovetail I	Bit, two Flute	s					FA	für B	esserboh	rer®
HIM Carting	I	4	Art No. 3104.612 3104.812 3104.925	D [mm] 12,7 12,7 25,4	Cutting I. [mm] 12,7 12,7 12,7	L [mm] 44,5 44,5 44,5	< [°] 14 14 14	R1 [mm]	R2 [mm]	SØ [mm] 6 8 12	n max. [RPM] 21.000 21.000 21.000	€ 31,7 31,7 47,2
	Гwo carbide tipped	cutting edges,	side cutting and p	olunging		and solid	grooves t d wood, w	for longitu /ooden ar	udinal join	nts. Suita ted mate	orner joints o ble for all ki rials and so allowed	nds of
	FCT (cutting edges)					) strai	ight bit (e Ier joints er the wo	e.g. produ we recom rkpiece. I	ct line 310 nmend cla	07). For p imping a clamping	e-cutting wit producing te piece of wo gyour workp ed out	ar free od
UPM	ndividually for eac	h router bit, see	e product parame	ter	£,	pack	king unit	= 1, SB p	ackaging			
	0000								FA			

3105	Excelle				ür Besserbo	hrer			
HM Hartmetall Carbide	)			В					
			D		54	50			
Art No.	D [mm]	Cutting I. [mm]	L [mm]	< [°]	R1 [mm]	R2 [mm]	SØ [mm]	n max. [RPM]	€
3105.660	12,7	16	44,5	60	[]	[]	6	21.000	31,75
3105.690	12,7	12,7	51	90			6	21.000	31,75
3105.860	12,7	16	44,5	60			8	21.000	31,75
3105.890	12,7	12,7	51	90			8	21.000	31,75

No.	Two carbide tipped cutting edges, side cutting and plunging. Available with angle of cutting edges of 60° and 90°	C. Line	For milling V-shaped grooves, ornamental grooves or for chamfering edges. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual and mechanical feed is allowed
	TCT (cutting edges)		The perfect router bit for exact and sharp ornamental grooves in doors and fronts of drawers
UPM	Individually for each router bit, see product parameter	M	packing unit = 1, SB packaging

3155	COCO Excellent	Solid Carb	<mark>ide Engravi</mark>	FAPA Besserbohrer						
HM Hartmetall Carbide				B					_	
Art No.	[mm]		L [mm]	< [°]	R1 [mm]	R2 [mm]	SØ [mm]	n max. [RPM]	€	
<mark>3155.660</mark> 3155.860	14 14	22 22	57 57	<mark>60</mark> 60			6 8	21.000 23.000	<mark>79,10</mark> 79,10	
	lead with three cut utting edges 60°,	ting edges of so plunging versior	lid carbide. An <sub>i</sub> I	gle of	C. The	For engraving lette shaped grooves wi			of V-	
	lead of solid carbic	le				Applicable for a cu a groove width up t		o 13 mm maximi	um and	
UPM	ndividually for each	ו router bit, see	product param	eter		packing unit = 1, S	B packaging			
3154	COOO Excellent	Keyhole B	it, one Flute	9				iir Besserbol	hrer®	
	HArtmetall Carbide		Art No. 3154.609 3154.809	D [mm] 9,8 9,8	[mm] [m	L < R1 im] [°] [mr i8 8	1 R2	SØ n max. mm] [RPM] 6 22.000 8 24.000	€ 24,80 24,80	
	One carbide tipped utting and plungin		rallel to the axi	s, side	C. The	For cutting slots fo so on. Suitable for laminated materia mechanical feed is	all kinds of solid Is and some pla	l wood, wooden a	and	
	CT (cutting edge)					If you want to fix an vertically so that yo sidewise				
UPM	ndividually for each	n router bit, see	product param	eter		packing unit = 1, S	B packaging			

**Router Bits** 

3106	OOOO Excellent	Core Box Bit	t (Round N	lose), ti	wo Flute	S			FA	für B	esserbol	rer®
	HM Hartmetall Carbide	5	Art No. 3106.609 3106.612 3106.615 3106.809 3106.812 3106.815 3106.819 3106.825	D [mm] 9,5 12,7 15,9 9,5 12,7 15,9 19,1 25,4	Cutting I. [mm] 9,5 9,5 6,4 9,5 9,5 12,7 16	L [mm] 38 38 40 38 38 38 40 40 46,5	< [°]	R1 [mm] 4,8 6,4 7,9 4,8 6,4 7,9 9,5 12,7	R2 [mm]	SØ [mm] 6 6 8 8 8 8 8 8 8 8 8	n max. [RPM] 22.000 21.000 22.000 21.000 21.000 19.000 19.000 18.000 17.000	€ 37,55 40,35 42,45 37,55 40,35 40,35 42,45 49,15 53,55
	wo carbide tipped o	cutting edges, side	e cutting and	plunging		into kind	the front	of drawe wood, w	rs and otl ooden an	her surfac d laminat	es and insid ces. Suitabl ted materia	e for all
Tree and the second sec	CT (cutting edges)										ommend a f	

packing unit = 1, SB packaging

Individually for each router bit, see product parameter

r Besserbohrer® 0000 FA **Classical Bit, Plunge Type, two Flutes** 3131 Excellent AN < [°] D Cutting I. L R1 R2 SØ n max. € 69,15 Art.- No. [mm] 12,7 [mm] 10,5 [mm] 51 51 [mm] 2,5 2,5 [mm] 3,5 3,5 [mm] 6 8 [RPM] 3131.612 20.000 3131.812 12,7 10,5 69,15 20.000

	Two carbide tipped cutting edges, with inner radius. Side cutting and plunging	C. The	For milling moulded grooves and edges. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual feed is allowed
	TCT (cutting edges)		Perfect for ornamenting fronts of wardrobes and drawers. Due to the bit's detailed configuration, a particularly graceful moulding is possible
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packaging

UPM

3137	OOOO Excellent	Ogee Bit, Pl	.für B	Besserbonrer								
P		rtmetall arbide	Art No. 3137.827	D [mm] 27	Cutting I. [mm] 11,2	L [mm 51	< ] [°]	R1 [mm] 6	R2 [mm]	SØ [mm] 8	n max. [RPM] 17.000	€ 73,40
	Two carbide tipped plunging	cutting edges. Sid	de cutting and			v N		en and lan	ninated m		r all kinds o and some p	
	TCT (cutting edges)					D 9		wo radii wi	ithout edg		bes and dra btain partic	
UPM	Individually for each	n router bit, see pr	oduct paramet	ter	F	q	acking unit	t = 1, SB p	ackaging			

3127	COCO Excellent	Beading Bit,		FAMA For Besserbohrer								
	HIM Hartmetali Carbide		Art No. 3127.609 3127.809	D [mm] 9,5 9,5	Cutting I. [mm] 7 7	L [mm] 51 51	< [°]	R1 [mm] 2,5 2,5	R2 [mm]	SØ [mm] 6 8	n max. [RPM] 24.000 24.000	€ 44,00 44,00

M.	Two carbide tipped cutting edges, with inner radius. Side cutting and plunging	C. C. LINE	For milling moulded grooves. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual feed is allowed
	TCT (cutting edges)		Perfect for ornamenting fronts of wardrobes and drawers. Due to the two radii without edges, you obtain particularly pleasing curves without folds
UPM	Individually for each router bit, see product paramter	K	packing unit = 1, SB packaging

3101	OOOO Excellent	OOOO         Flush Trim Bit, two Flutes										FAMA Besserbohrer					
	HM Hartmetal Carbide		Art No. 3101.612 3101.625 3101.895 3101.812 3101.825 3101.819	D [mm] 12,7 12,7 9,52 12,7 12,7 19,05	Cutting I. [mm] 12,7 25,4 25,4 12,7 25,4 25,4 25,4	L [mm] 60 70 70 60 70 70 70	< [°]	R1 [mm]	R2 [mm]	SØ [mm] 6 8 8 8 8 8 8	n max. [RPM] 21.000 21.000 21.000 21.000 21.000 21.000	€ 26,60 33,05 33,05 26,60 33,05 42,00					
NR'	Two carbide tipped With changeable ba side					for kin	matting o	f plastic a d wood, w	nd veneer ooden and	red edges d laminat	ush cutting a s. Suitable fo ted material	or all					
	TCT (cutting edges)					) the the the the	desired o	outline wit Il through	h a plung the board	ing route I (min Ø 1	nicker board r bit undern 14 mm) and	eath					
UPM	Individually for each	n router bit, see p	product parame	ter	F	pac	cking unit	= 1, SB p	ackaging								

3114	OOOC Excelle	) nt Rabbeting I	Rabbeting Bit, two Flutes							FAMA For Fir Besserbohrer					
	1	HMHHAIT	Art No. <u>3114.631</u> 3114.831	D [mm] 31,7 31,7	Cutting I. [mm] 12,7 12,7	L [mm] 51 51	< [°]	R1 [mm]	R2 [mm]	SØ [mm] 6 8	n max. [RPM] 16.000 18.000	€ 59,75 59,75			
D															

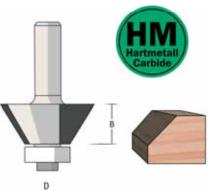
N.	Two carbide tipped side cutting edges with positive angle of cutting edges. With changeable ball bearing guide (Ø 12.7 mm). For depth of rabbets of 9.5 mm	C. The	For producing rabbeted joints of frames, embedding of doors and fronts of drawers, rabbeting of old wooden windows and embedding of insulation glass. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual feed is allowed
	TCT (cutting edges)		Due to the ground front side of the edge very good surfaces of the rabbets are achieved. A rabbet depth of <b>11.1</b> mm can be achieved by mounting the ball bearing guide <b>3119.004</b> (please order separately)
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packaging

3110	COCO Excellent	Combinatio	n: Bevel an	<mark>id Flus</mark> t	<mark>ı Trim B</mark>	it			FA	für B	esserboh	rer®
		artmetall Carbide	Art No. 3110.812 3110.612	D [mm] 12,7 12,7	Cutting I. [mm] 12,7 12,7	L [mm] 41 41	< [°] 30 30	R1 [mm]	R2 [mm]	SØ [mm] 8 6	n max. [RPM] 22.000 20.000	€ 29,90 29,90
	Two carbide tipped a 30 °	side cutting egde	s. Angle of cha	amfering		only: para 30° solid	cutting llel to th by adjus wood, v	and flush e axis, aft sting the n	milling w erwards o nilling dep nd lamina	ith the cu chamferin pth. Suita ted mate	with one ro utting edge v ng with an a ble for all k rials and so	which is ngle of inds of
	TCT (cutting edges)					) to sa	uting se ave toolir		ksteps wit	th the sar	ne tool help	os you
UPM	Individually for each	n router bit, see pr	roduct parame	ter	E	pack	king unit	= 1, SB p	ackaging			

3115	OOOO Excellent	Panel Pilot	Bit with Dri	illing P	oint, on	e Flute			FA	für B	esserboh	rer•
	HM		Art No. 3115.606 3115.806	D [mm] 6,4 6,4	Cutting I. [mm] 19 19	L [mm] 63,5 63,5	< [°]	R1 [mm]	R2 [mm]	SØ [mm] 6 8	n max. [RPM] 28.000 30.000	€ 28,70 28,70
	With one carbide tip carbide tipped drillir		edge and one r	not		work lami	piece. S nated m	uitable fo	r all kinds nd some	of solid	ed edges of a wood, wood Manual and	en and
	TCT (cutting edge)					e.g. and					oduce open wooden ceil	
UPM	Individually for each	ı router bit, see pr	oduct parame	ter		pack	king unit	= 1, SB pa	ackaging			

Cha	mfei	' Bit.	two	Flutes





OOOO Excellent

3118

	D	Cutting I.	L	<	R1	R2	SØ	n max.	
Art No.	[mm]	[mm]	[mm]	[°]	[mm]	[mm]	[mm]	[RPM]	€
3118.645	31,8	12,7	53	45			6	15.000	46,45
3118.845	31,8	12,7	53	45			8	16.000	46,45
3118.836	36	12,7	53	45			8	16.000	46,45

66 Router Bits

	Two carbide tipped side cutting edges parallel to the axis. Angle of cutting edge 45°. With changeable ball bearing guide (Ø 9.5 mm) on front side	C. The	For chamfering and milling edges in different strenghts on all stripes, made of solid wood, wooden and laminated materials and some plastics. Manual feed is allowed
	TCT (cutting edges)		For milling chamfers with an angle of 15° we recommend our bevel trim bit product line 3102
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packaging

3102	OOOO Excellent	Bevel Trim E	Bit, two Flu	ites					FA	.für B	esserbor	rer•
D	Hartmetall		Art No. 3102.615 3102.815	D [mm] 15,9 15,9	Cutting I. [mm] 6,4 6,4	L [mm] 52,4 52,4	< [°] 15 15	R1 [mm]	R2 [mm]	SØ [mm] 6 8	n max. [RPM] 19.000 19.000	€ 27,30 27,30
NR'	Two carbide tipped with changeable baside					for a	II kinds (	of solid w		len and la	of edges. Su aminated m ed	
	TCT (cutting edges)					) of cl		ables), ca			nent use (e.g h a proper a	
UPM	Individually for each	n router bit, see pro	oduct parame	ters	F	pack	king unit	= 1, SB p	ackaging			

3109	OOOO Excellent	Rounding Ov	er Bit, two I	Flutes					FA	für B	esserboh	rer
									2	100		
<u> </u>												_
		IM		D	Cutting I.	L	<	R1	R2	SØ	n max.	
	H	artmetall	Art No. 3109.616	[mm]	[mm] 9,5	[mm 49		[mm] 2	[mm]	[mm]	[RPM] 19.000	€
		Carbide	3109.618	16,7 18,7	9,5	49		2		6 6	19.000	57,50
			3109.625	25,4	12,7	51		6,4		6	17.000	59,50
			3109.628	28,6	12,7	51		8 9,5		6	17.000	61,00
	в		3109.631 3109.816	31,8 16,7	15,9 9,5	55,5 49		9,5		6 8	16.000 19.000	66,45 57,45
$\sim$			3109.818	18,7	9,5	49		3		8	19.000	57,50
1			3109.819 3109.825	20,7	9,5 12,7	49		4		8	18.000	57,50
ALC: NO			3109.825	25,4 28,6	12,7	51 51		6,4 8		8 8	17.000 17.000	59,50 61,00
D			3109.831	31,8	15,9	55,5	5	9,5		8	16.000	66,45
			3109.832	32,7	16	55,5		10		8	16.000	69,55
			<mark>3109.838</mark> 3109.844	38,1 44,5	<u>19,1</u> 22	57 64		12,7 15,9		8	16.000 16.000	<mark>71,20</mark> 84,50
		side cutting edges		able ball	Ø		or producin					
the second be	earing guide (Ø 12	2.7 mm) on front s	ide				or all kinds and some pl					aterials
						ľ	ind some pi	astics. iv		15 0110000	u	
N N					V							
	CT (cutting edges)					F	or producin	g coving	s with belo	w located	l chamfer, v	ve
<b>• ! !</b>	/						ecommend					
						)						
<b>6</b>					1	~						
					11							
	dividually for each	n router bit, see pr	oduct parame	ter	$\leftarrow$	<   F	backing unit	= 1, SB	packaging			
((UPM))												
3119	OOOO Excellent	Beading Bit,	two Flutes						FA	für B	esserbon	irer•
									<u> </u>			
		18.0										
				D	Cutting I.	L	<	R1	R2	sø	n max.	
	Ha	rtmetall	Art No.	[mm]	[mm]	[mm		[mm]		[mm]	[RPM]	€
		Carbide	3119.625	25,4	12,7	51		6,4	• •	6	17.000	59,50
			3119.628 3119.631	28,6 31,8	12,7 15,9	51 55,5		7,9 9,5		6 6	16.000 16.000	61,00 66,45
	-	14	3119.831	19,1	9,5	47,5		9,5 4		8	18.000	57,50
			3119.825	25,4	12,7	51		6,4		8	17.000	59,50
	B		3119.828 3119.831	28,6 31,8	12,7 15,9	51 55,5		7,9 9,5		8	16.000 16.000	61,00 66,45
			3119.838	38,1	19,1	57		9,5 12,7		8	15.000	71,20
		M I		/	- /			,				
D		1 mm										
R						N.		<u></u>				1.1
		side cutting edges all bearing guide (			Ø		or milling o dge. Suitab					
	de	Joanne guide (k	5 5.5 mm) 0ff	it			aminated m					
							allowed					
					X							
U B												
	CT (cutting edges)						f you want t					
					$\left \right\rangle$		ecommend					
							ou can sim or a Ø 12.7		inge the ba	in pearing	s guide Ø 9.	5 mm
					一							
	a											
	dividually for each	n router bit, see pr	oduct parame	ter	$\langle$	Z F	backing unit	= 1, SB	packaging			
(UPM)					4							
					1							
												I

3125	<b>Excellent True Bull Nose Bit, two F</b>	lutes	F	für Besserbohrer	°
HARTMETAL					
Art No. <mark>3125.820</mark>	D Cutting I. L < [mm] [mm] [mm] [° 20,2 32 62,6		R2 SØ [mm] [mr 8	n] [RPM] €	
MAR'	Two carbide tipped side cutting edges parallel to the av	xis		ripes, edges and front of board d wood, wooden and laminated s. Manual feed is allowed	
Ø	TCT (cutting edges)		Boards thinner than 20 mm rabbets. If the boards are th maximum 30 mm) there wi and on top		
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packa	ging	
3123	Excellent Bull Nose Bit (Half Round	d), two Flutes	F	für Besserbohrer	ø
HIM Hartmetal Carbide					
	D Cutting I. L <		R2 50		
Art No. 3123.828	[mm] [mm] [mm] [° 28,2 16 57	4,8	[mm] [mr 8	17.000 70	0,55
	Two carbide tipped side cutting edges with inner radius 4,8 mm. With changeable ball bearing guide (Ø 16 mn front side			ers and edges. Suitable for all n and laminated materials and l is allowed	d
	TCT (cutting edges)		In two work steps you can p edge	oroduce a complete ornamenta	al
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packa	ging	

56 Router Bits

Technical changes or mistakes reserved! All prices are recommended retail prices additionally value added tax.

3124	OOOC Excelle	) nt Bull No	ose Bit (Half	Round), tw	o Flutes		FAI	tir Besserbo	hrer
HArtmetail Carbide	)			B					
Art No. <mark>3124.822</mark>	D [mm] 22,2	Cutting I. [mm] 19,1	L [mm] 47,6	< [°]	R1 [mm] 5,2	R2 [mm]	SØ [mm] 8	n max. [RPM] 18.000	€ 87,35
	Two carbide tip with inner radio		; edges parallel t	o the axis,	C. Sur	For milling half rou stairrails. Suitable laminated materia allowed	for all kinds of	solid wood, wood	len and
	TCT (cutting ed	ges)				Strip should have a want to mill a radiu up to 19 mm thick	us with two rabl		
UPM	Individually for	each router bit,	see product para	ameter		packing unit = 1, S	B packaging		

3112	COOO Excellent	Cove Bit, tw	o Flutes						FA	für B	esserboh	irer°
		rtmetall arbide	Art No. 3112.625 3112.822 3112.825 3112.834	D [mm] 25,4 22,2 25,5 34,9	Cutting I. [mm] 14,3 14,3 14,4 16	L [mm] 55 55 55 54	< [°]	R1 [mm] 7,9 6,4 8 12,7	R2 [mm]	SØ [mm] 6 8 8 8	n max. [RPM] 17.000 18.000 17.000 16.000	€ 61,00 59,50 61,00 71,15

N.	Two carbide tipped side cutting edges parallel to the axis. With changeable ball bearing guide (Ø 9.5 mm) on front side	C. Hur	For milling end strips, fronts of drawers, cabinet doors and all ornamental edges with inner radius. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics. Manual feed is allowed
	TCT (cutting edges)		Ideal in combination with rounding over bit product line 3109 with respective radius 6, 8 and 12,7 mm
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packaging

3148	OOOO Excellent	Finger G	rip Router Bit, tw	o Flutes		FA	ür Besserbo	hrer ·
Hartmetall Carbide	)							
Art No. <mark>3148.819</mark>	D C [mm] 19,1	cutting I. [mm] 19	L < [mm] [°] 55,6	R1 [mm] 4,8	R2 [mm]	SØ [mm] 8	n max. [RPM] 19.000	€ 89,70
	Two carbide tipped	d side cutting e	dges	<b>A</b>	For milling profiles all kinds of solid w and some plastics	vood, wooden an	d laminated ma	table for
Ø	TCT (cutting edges	)						
UPM	Individual for each	router bit, see	product parameter		packing unit = 1, \$	SB packaging		
3113	OOOO Excellent	Roman (	)gee Bit, two Flut	es			ür Besserbo	ohrer•
HM Hartmetall Carbide	)							
Art No. <mark>3113.625</mark> 3113.825	[mm] 25,4 25,4	utting I. [mm] 16 16	L < [mm] [°] 54 54	4	R2 [mm]	SØ [mm] 6 8	n max. [RPM] 17.000 17.000	€ 63,00 63,00
3113.834	34,9 Two carbide tipped bearing guide (Ø 9		57 dges. With changeable It side	6,4 ball	For milling ornam edges, fronts of w and so on. Suitab laminated materia allowed	ardrobes, drawe le for all kinds o	r elements, base f solid wood, wo	eboards oden
	TCT (cutting edges	)			In order to receive free profiles, we re			
UPM	Individually for eac	ch router bit, se	e product parameter		packing unit = 1, \$	SB packaging		

Technical changes or mistakes reserved! All prices are recommended retail prices additionally value added tax.

J

3138	OOOO Excellent	Panell	ing Bit, two F	lutes			FA	tir Besserbo	hrer <sup>®</sup>
HM Hartmetall Carbide	)								
		utting I.	L,	<	R1	R2	sø	n max.	
Art No. <mark>3138.834</mark>	[mm] 34,9	[mm] 17,5	[mm] 55,6	[°]	[mm] 6	[mm] 5	[mm] 8	[RPM] 16.000	€ 90,50
	Two carbide tipped bearing guide (Ø 1			angeable ball	C. C	For milling orname edges, fronts of wa etc. Suitable for al materials and som	ardrobes, drawe	r elements, base wood, wooden la	boards minated
	TCT (cutting edges					Particularly suitab and drawers. Due you receive very co	to the two grou	nd radii without e	
UPM	Individually for eac	ch router bit,	see product para	ameter		packing unit = 1, S	B packaging		

3139	OOOO Exceller	t Classic	: Panel Bit, v	with 2 Flute	S		FAI	ir Besserbo	hrer•
HARTmetall Carbide									
	D	Cutting I.	L	<	R1	R2	SØ	n max.	_
Art No. 3139.628	[mm]	[mm]	[mm] 51	[°]	[mm]	[mm]	[mm]	[RPM]	€ 78,00
3139.628	28,6 28,6	12,7 12,7	51		4,8 4,8		6 8	16.000 16.000	78,00
	Two carbide tipp bearing guide (&	ð 12.7 mm) on		angeable ball	C. C	For milling orname edges, fronts of wa etc. Suitable for all materials and som	rdrobes, drawe kinds of solid v e plastics. Man	r elements, base vood, wooden lar ual feed is allowe	boards ninated
	TCT (cutting edg		see product par	ameter		If you want to cut a recommend our co packing unit = 1, S	ve bit product li		
UPM									

3134	Excellent	Roman	<mark>ı Ogee Bit, t</mark>	wo Flutes				iir Besserbo	hrer <sup>®</sup>
Carbide				D					
Art No.	D C [mm]	utting I. [mm]	L [mm]	< [°]	R1 [mm]	R2 [mm]	SØ [mm]	n max. [RPM]	€
3134.625	25,4	16	54		4	[]	6	17.000	69,
3134.825 3134.834	25,4 34,9	16 20	54 57		4 6,35		8	17.000 16.000	69,7 71,2
	Two carbide tipped bearing guide (Ø 9 TCT (cutting edges	9.5 mm) on fr		angeable ball		For milling orname edges, fronts of wa etc. Suitable for al materials and som	ardrobes, drawe I kinds of solid v ne plastics. Man	r elements, base vood, wooden la ual feed is allow	eboards minated ed
	Individually for eac		see product par	ameter	Ŵ	free profiles, we re	ecommend milli		
UPM									
3121	OOOO Excellent	Ogee F	illet Bit, two	Flutes			FAI	iir Besserbo	hrer•
HM Hartmetal Carbide					₽ ₽				
				D					
Art No.	[mm]	Cutting I. [mm]	L [mm]	< [°]	R1 [mm]	R2 [mm]	SØ [mm]	n max. [RPM]	€
<mark>3121.634</mark> 3121.834	34,9 34,9	13,5 13,5	<mark>52,4</mark> 52,4		4 4	4 4	6 8	16.000 17.000	102,0 102,0
M.	Two carbide tipped changeable ball bo				Contraction of the second seco	For milling decora of furniture, drawe solid wood, woode Manual feed is all	ers and tabletops in laminated ma	s. Suitable for all	kinds o
47	TCT (cutting edges	5)			A	In order to receive in several workste		es, we recommer	nd millin

In order to receive smooth surfaces, we recommend milling in several worksteps

T packing unit = 1, SB packaging

Technical changes or mistakes reserved! All prices are recommended retail prices additionally value added tax.

Individually for each router bit, see product parameter

UPM

**Router Bits** 

3135	OOOC Exceller			FA	äir Besserbo	hrer			
HM Hartmetall Carbide	)				В				
	D	Cutting I.	ĻL.	<	,R1	R2	sø	n max.	0
Art No. 3135.834	[mm] 34,9	[mm] 17,5	[mm] 56	[°]	[mm] 6,4	[mm] 5	[mm] 8	[RPM] 16.000	€ 102,15
M.		ped side cutting Ø 9.5 mm) on fr	; edges. With cha ont side	angeable ball	<b>A</b>	For milling orname edges, fronts of wa Suitable for all kind and some plastics.	rdrobes, drawe Is of solid wood	rs, baseboards e l, laminated ma	etc.
	TCT (cutting ed					In order to receive	commend milli		
UPM	Individually for	each router bit,	see product para	ameter		packing unit = 1, S	B packaging		

3122	COOO Excellen	t Ogee I	Fillet Bit, two	Flutes			FAN	ür Besserbo	ohrer•
HARTmetall Carbide	)		D				-		
	D	Cutting I.	L .	<	R1	R2	sø	n max.	
Art No. 3122.634	[mm] 34,9	[mm] 13,5	[mm] 52,4	[°]	[mm] 4	[mm] 4	[mm] 6	[RPM] 16.000	€ 102,00
3122.834	34,9	13,5	52,4		4	4	8	17.000	102,00
	changeable ball	bearing guide	g edges with two (Ø 9.5 mm) on fr		<b>A</b>	For milling decorat strips, fronts of fur for all kinds of soli plastics. Manual fe	niture, drawers d wood, laminat ed is allowed	and tabletops. S ed materials an	Guitable Id some
	TCT (cutting edg				Ņ	In order to receive in several workster rabbet, we recomm with ball bearing g	os. If you want to nend our ogee f uide Ø 12.7 mm	o cut a profile w illet bit product	ithout
UPM	Individually for e	ach router bit,	, see product para	imeter	F	packing unit = 1, S	B packaging		

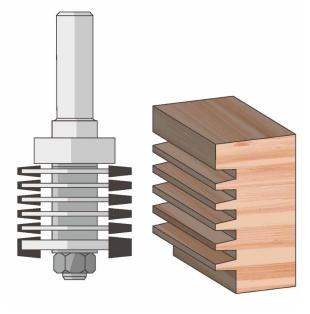
# **Finger Jointer Router Bit Set**

# 3158

Excellent



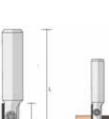




	D	Cutting I.	L	<	R1	R2	sø	n max.	
Art No.	[mm]	[mm]	[mm]	[°]	[mm]	[mm]	[mm]	[RPM]	€
3158.939	39,7						12	15.000	169,20

N.	Consisting of shank with ball bearing guide (Ø 28 mm), spacers, washer, fastening nut and six carbide tipped slotting cutters, side cutting (router bit completely mounted)	C. The	Produce a geometry of slots with this router bit at the front surface of the connecting workpiece. The milled matching part can be glued firmly. Manual feed is allowed
	TCT (slotting cutters)		The created connections are especially solid due to the enhanced glue line and nearly invisible
UPM	Individually for each router bit, see product parameter		packing unit = 1, SB packaging





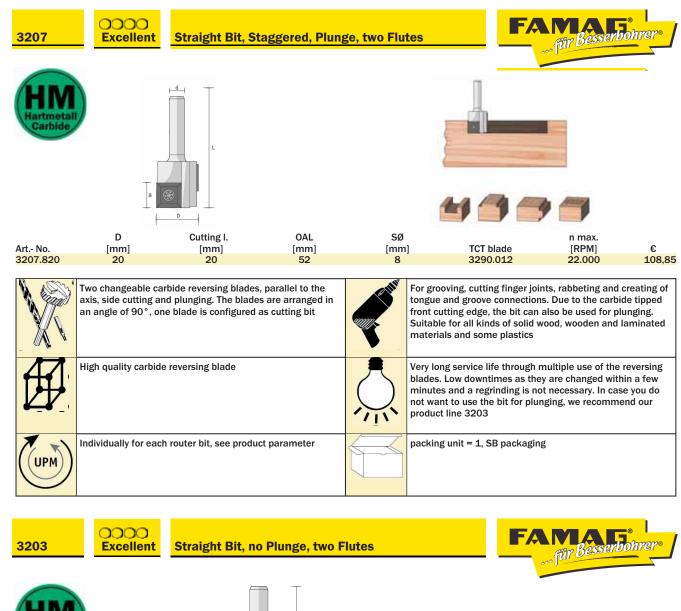
OOOO Excellent

	Т		Hartmetall		D	Cutting I.	OAL	SØ		n max.	
			Carbide	Art No.	[mm]	[mm]	[mm]	[mm]	TCT blade	[RPM]	€
		1770		3217.932	12	30	77	12	3290.930	22.000	96,15
				3217.936	16	30	88	12	3290.130	18.000	96,60
				3217.956	16	50	107	12	3290.050	18.000	115,15
				3217.938	18	30	88	12	3290.130	18.000	97,95
117	T	17		3217.958	18	50	107	12	3290.050	18.000	115,75
423		-		3217.940	20	30	88	12	3290.130	16.000	100,85
	8	0		3217.960	20	50	107	12	3290.050	16.000	122,10
-		10 M	- <u>1</u> # ~								

D

	One changeable carbide reversing blade, parallel to the axis, side cutting and plunging. The blade is configured as cutting bit	Contraction of the second seco	For grooving, cutting finger joints, rabbeting and creating of tongue and groove connections. Due to the carbide tipped front cutting edge, the bit can also be used for plunging. Suitable for all kinds of solid wood, wooden and laminated materials and some plastics
	High quality carbide reversing blade		Very long service life through multiple use of the reversing blades. Low downtimes as they are changed within a few minutes and a regrinding is not necessary. In case you do not want to use the bit for plunging, we recommend our product line 3227
UPM	Individually for every router bit, see parameters of product	F	packing unit = 1, SB packaging

3227	COCO Excellent	Straight Bit, no	o Plunge, two F	lutes	F	, für Bessert	oohrer•
HM Hartmetail Carbide							
	D	Cutting I.	OAL	SØ		n max.	
Art No.	[mm]	[mm]	[mm]	[mm	TCT blade	[RPM]	€
3227,936	16	30	88	12		20.000	118.40
3227.956	16	50	107	12	3290.930	18.000	139,30
3227.958	18	50	107	12	3290.130	18.000	142,80
3227.960	20	50	107	12	3290.130	16.000	148,15
	Two changeable car axis, side cutting	bide reversing blades	s, parallel to the	C. Harr	For grooving, cutting finger tongue and groove connec wood, wooden laminated n Manual and mechanical fe	tion. Suitable for all ki materials and some pl	inds of solid
	High quality carbide	reversing blade		ļ.	Very long service life throu blades. Low downtimes as minutes and a regrinding i	they are changed wit	
UPM	Individually for each	ı router bit, see produ	ct parameter	F	packing unit = 1, SB packa	aging	



HM Hartmetall Carbide		в		4			
	D	Cutting I.	OAL	SØ		n max.	
Art No.	[mm]	[mm]	[mm]	[mm]	TCT blade	[RPM]	€
3203.620	20	12	44	6	3290.012	22.000	89,55
3203.818	18	12	44	8	3290.012	24.000	87,10
3203.820	20	12	44	8	3290.012	24.000	89,55
M.	Two changeable ca axis, side cutting	arbide reversing blades,	, parallel to the	tong woo	grooving, cutting finger join gue and groove connection d, wooden laminated mat nual and mechanical feed a	. Suitable for all kir erials and some pla	nds of solid
	High quality carbid	le reversing blade		blac min	/ long service life through r les. Low downtimes as the utes and a regrinding is no se the bit for plunging, we 17	y are changed with ot necessary. In cas	in a few e you want
UPM	Individually for eac	ch router bit, see produc	ct parameter	pac	king unit = 1, SB packagin	g	

	د Cutting I. (mm)		Sø		n max.	
Art No. [mm] 3201.812 19 3201.830 19 Two change axis, side cu					n max.	
3201.812         19           3201.830         19           Two change axis, side cu	[mm]					
201.830 19 Two changes axis, side cu	12	[mm] 54	[mm]	TCT blade	[RPM]	€ 94,55
Two changes axis, side cu	30	54 72	8	3290.012 3290.030	24.000 24.000	94,55
	able carbide reversing blade: tting. With changeable ball b It side		lar	r chamfering and milling eo minated materials and som owed	dges on all kinds of s le plastics. Manual f	olid wood, eed is
High quality	carbide reversing blade		bla	ry long service life through ades. Low downtimes as the inutes and a regrinding is n	ey are changed with	
UPM Individually	for each router bit, see produ	uct parameter	pa	cking unit = 1, SB packagir	ng	

3202	Excellent	Bevel Trim	Bit, two Flu	tes				F/	für B	esserbol	hrer°
HM			Art No. 3202.645 3202.815 3202.845	D [mm] 27 20 27	Cutting I. [mm] 12 12 12	OAL [mm] 57 55 57	< [°] 45 15 45	SØ [mm] 6 8 8	TCT blade 3290.012 3290.012 3290.012	n max. [RPM] 16.000 24.000	€ 118,45 104,30 118,45

	Two changeable carbide reversing blades, parallel to the axis, side cutting. With changeable ball bearing guide (Ø 15,9 mm) on front side	C. The	For milling profiles, grooves and chamfers on nearly all kinds of solid wood, wooden and laminated materials and plastics, also CORIAN etc.
	High quality carbide reversing blade		Very long service life through multiple use of the reversing blades. Low downtimes as they are changed within a few minutes and a regrinding is not necessary
UPM	Individually for each router bit, see product parameter	K	packing unit = 1, SB packaging







		O-Ø	IØ	Height	
Art No.	Description	[mm]	[mm]	[mm]	€
3191.001	For item: 3112, 3113, 3118, 3134	9,5	3,2	4,0	12,50
3191.002	For item: 3201				
3191.003	For item: 3202				
3191.004	For item: 3119, 3122, 3135	9,5	4,8	3,0	13,85
3191.005	For item: 3157, 3202.615/630/815/830	15,9	6,4	5,0	13,85
3191.006	For item: 3202				
3191.007	For item: 3101, 3102, 3109, 3114, 3121, 3138, 3139	12,7	4,8	5,0	13,85
3191.010	For item: 3123	16,0	5,0	5,0	13,85
3191.114	For item: 3202.645/845	12,7	6,4	5,8	16,10
3191.113	For item: 3201	19	6	6	14,50

N.	Premium ball bearing with attachment screw and spacer (not for reversing blade router bits)	C. HIT	Suitable for all FAMAG router bits and bevel trimming bits with ball bearing guide. Please pay attention whether you order the bearing for using it with a router / bevel trimming bit
			Please use only FAMAG ball bearings for FAMAG router bits
UPM	Individually for each router bit, see product parameter	K	packing unit = 1, SB packaging

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3290	Excellent

# Reversing blade carbide



Hartmotall		Art No.	Description	Cutting I. [mm]	Height [mm]	thickness [mm]	Torx-Schr.	€
Carbide		3290.012	four-toothed	12	12	1,5	3291.040	5,65
-		3290.030	two-toothed	12	30	1,5	3291.040	7,30
	1000	3290.050	four-toothed	12	50	1,5	3291.035	13,95
	100	3290.130	four-toothed	12	30	1,5	3291.035	13,70
and the second se	(alla)	3290.930	four-toothed	9	30	1,5	3291.035	7,20
	And in case of the local division of the loc							

	High quality reversing blades of carbide for the exchange of FAMAG insert cutters	C. T. MIL	Use only the orginal inserts for the FAMAG-insert cutters, that II save time and trouble
	High quality reversing blades of carbide		These reversing blades are specifically designed for the FAMAG cutters with indexable inserts and are simply the best fit
UPM	Individually for every router bit, see parameters of product		packing unit = 1, Rose tube

3195	COCO Excellent	Allen Key and Screv 3191	vs for Ball Bearings Pr	roduct Line	esserbohrer*
				•••••	
Allen key fo	or router bits				
			SW	Wrench size	
Art No.	Description		[Inch]	[mm]	€
3195.332	appropriate for item r 3191.007	number: 3191.004,	3/32"	2,38	5,65
Torx key for	r Flush trimming bits				
				Wrench size	
Art No.	Description			[mm]	€
3295.015	appropriate for al me	ntioned item numbers		T15	7,55
Torx screw	for Flush trimming bits	6			
	0			Wrench size	
Art No.	Description			[mm]	€
3291.035		blade, carbide, 3290.050 /	3290.130 /	M 3,5	3,95
3291.040	suitable for reversing	blade, carbide, 3290.012 /	3290.030	M 4	2,95
12 A B	Wrenches		Salary S	Suitable for all FAMAG ball bearings proc	Juct line 3191

 Wrenches
 Suitable for all FAMAG ball bearings product line 3191

 Image: Suitable for all FAMAG ball bearings product line 3191

 Image: Suitable for all FAMAG ball bearings product line 3191

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# **Drills and Countersinks for Metal** 105

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Twist Drill Bit, HSS-G, Short Version	106
Right-Angle-Driver 90fix	108
Twist Drill, DIN 338, HSS-G Ti Nitrified	109
Twist Drill, DIN 338, HSS-G	110
Twist Drill, DIN 338, HSS-G Co	112
Twist Drill, DIN 340, HSS-G Co	114
Twist Drill, DIN 1869, HSS-G Co	115
Twist Drill, HSS-G, Long Version	117
Drill and Milling Cutter, HSS	118
Twist Drill, Double Sided, HSS-G	118
Countersink, HSS	119
Hole Enlarger, HSS	120
Step Drill, HSS	120









**Drills and Countersinks for Metal** 106

	0-Ø	Shank	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
2596.030	3	C 6,3	38	16	7,10
2596.033	3,3	C 6,3	40	18	7,10
2596.035	3,5	C 6,3	40	18	7,10
2596.040	4	C 6,3	44	20	7,10
2596.042	4,2	C 6,3	46	24	7,30
2596.045	4,5	C 6,3	46	24	7,30
2596.050	5	C 6,3	50	26	7,30
2596.055	5,5	C 6,3	50	26	7,80
2596.060	6	C 6,3	50	26	7,80
2596.065	6,5	C 6,3	50	30	7,80
2596.068	6,8	C 6,3	50	30	7,80
2596.070	7	C 6,3	50	30	7,80
2596.075	7,5	C 6,3	51	32	9,80
2596.080	8	C 6,3	51	32	9,80
2596.085	8,5	C 6,3	53	33	10,60
2596.090	9	C 6,3	53	33	12,00
2596.100	10	C 6,3	54	38	12,00

Sets Art.- No. <mark>2596.805</mark> Description Set of 5 pieces in plastic box Ø 3, 4, 5, 6, 8 mm Set of 9 pieces in wooden case Ø 3, 4, 5, 6, 7, 8, 9, 10 mm and bitholder 2596.508

€ 34,90 66,85

N.	One-piece twist drill bit, fully ground from the solid, short version with hexagonal shank for bit holder $(1/4"; C 6,3)$ , polished section of the surface of the cone $118^\circ$ , blank ground	Contraction of the second seco	For drilling alloyed and not alloyed steel and cast steel up to 900 N/mm², grey and malleable cast iron etc., with a cordless screwdriver. The ground chip flutes guarantee a good chip removal
	HSS-G		It is recommended to use lockable bit holders to avoid the drill bit getting jammed in the drill hole
UPM	Relevant diagram respectively cordless screwdriver	K	packing unit = 1, PE tube



	0-Ø	SØ	OAL	SpL	
Art No.	[mm]	[mm]	[mm]	[mm]	€
2597.030	3	E 6,3	70	35	7,10
2597.033	3,3	E 6,3	70	35	7,10
2597.035	3,5	E 6,3	70	35	7,10
2597.040	4	E 6,3	75	40	7,10
2597.042	4,2	E 6,3	80	45	7,30
2597.045	4,5	E 6,3	80	45	7,30
2597.050	5	E 6,3	86	51	7,30
2597.055	5,5	E 6,3	93	57	7,80
2597.060	6	E 6,3	93	57	7,80
2597.065	6,5	E 6,3	101	63	7,80
2597.068	6,8	E 6,3	101	63	7,80
2597.070	7	E 6,3	109	69	7,80
2597.075	7,5	E 6,3	109	69	9,80
2597.080	8	E 6,3	117	75	9,80
2597.085	8,5	E 6,3	117	75	10,60
2597.090	9	E 6,3	125	81	12,00
2597.100	10	E 6,3	133	87	12,00
2597.110	11	E 6,3	142	94	15,15
2597.120	12	E 6,3	151	101	16,60
2597.130	13	E 6,3	151	101	17,80

**Sets** Art.- No. <mark>2597.805</mark> Description Set of 5 pieces in plastic box Ø 3, 4, 5, 6, 8 mm

€ 34,90

No.	One-piece twist drill bit, fully ground from the solid, long version with hexagonal shank for bit holder $(1/4^{\circ}; E 6,3)$ , polished section of the surface of the cone $118^{\circ}$ , blank ground	C. C	For drilling alloyed and not alloyed steel and cast steel up to 900 N/mm², grey and malleable iron etc., with a cordless screwdriver. The ground chip flutes guarantee a good chip removal
	HSS-G		It is recommended to use lockable bit holders to avoid the drill bit getting jammed in the drill hole
UPM	Relevant diagrams respectively cordless screwdriver	F	packing unit = 1, PE tube



Sets	;
Art	No

3612		
Art No.	Description	€
1598.757	90fix set, for woodworking, in wooden case	88,55
1598.758	90fix set, for metalworking, in wooden case	88,55
1598.612	90fix set 13 pcs, for woodworking, in pouch	116,15

N.	Solid right-angle-driver with aluminium housing and bevel toothed metal gear wheels (ideal transmission of force). Take-up device for all 1/4" bits and drilling tools (e.g. product line 1596) with hexagonal shank. Angle of screwing 90°, exchangeable plastic handle	C. Mar	Professional screwing and drilling "to the last corner" with cordless screwdriver. Maximum transferable torque 50Nm
	aluminium housing		Ideal for screwings with a cordless screwdriver in a small space. Works well in combination with product lines 1596/2596
UPM	Rotation speed of cordless screwdriver max 2000 rpm	F	Packing unit = 1, SB Blister pack





2430

OOOO Excellent

	O-Ø	OAL	Effective L.	PU	
Art No.	[mm]	[mm]	[mm]	[pcs]	€
2430.010	1,0	34	12	1	3,95
2430.015	1,5	40	18	1	3,95
2430.020	2,0	49	24	1	3,95
2430.025	2,5	57	30	1	3,80
2430.030	3,0	61	33	1	4,10
2430.031	3,1	65	36	1	4,50
2430.032	3,2	65	36	1	4,50
2430.033	3,3	65	36	1	4,50
2430.035	3,5	70	39	1	4,45
2430.040	4,0	75	43	1	5,05
2430.041	4,1	75	43	1	5,90
2430.042	4,2	75	43	1	5,90
2430.045	4,5	80	47	1	5,90
2430.048	4,8	86	52	1	5,95
2430.050	5,0	86	52	1	6,20
2430.051	5,1	86	52	1	6,35
2430.052	5,2	86	52	1	6,35
2430.055	5,5	93	57	1	7,30
2430.060	6,0	93	57	1	7,75
2430.065	6,5	101	63	1	8,55
2430.068	6,8	109	69	1	8,85
2430.070	7,0	109	69	1	9,60
2430.075	7,5	109	69	1	10,60
2430.080	8,0	117	75	1	11,10
2430.085	8,5	117	75	1	12,85
2430.090	9,0	125	81	1	13,70
2430.095	9,5	125	81	1	15,05
2430.100	10,0	133	87	1	16,05
2430.105	10,5	133	87	1	17,00
2430.110	11,0	142	94	1	18,60
2430.115	11,5	142	94	1	19,35
2430.120	12,0	151	101	1	20,45
2430.125	12,5	151	101	1	22,50
2430.130	13,0	151	101	1	23,15

N.	Titanium nitrified twist drill, fully ground from the solid, right hand cutting, with spiral type N. Crosswise sharpened acc. to DIN 1412C (from 3,0 mm) 118° for good centering and fast drilling. Tolerance of diameter h8. Professional hard- wearing coating for a long service life	C. Mar	Suitable for highest quality demands of industry and craft. For drilling alloyed and not alloyed steel and cast steel up to 1000 N/mm <sup>2</sup> , grey and malleable cast iron, sintered iron, aluminium, copper and bronze
	HSS-G Ti-nitrified		Amazing service life due to highest quality coating - at a real fair price. Also regrinding doesn't affect the service life of the tool, thanks to the high quality material
UPM	Relevant diagrams	K	packing unit = 1, PE tube



Art. No.[mm][mm][mm][pes] $6$ 2410.0101.034121012410.0111.136141012410.0121.238161012410.0131.338161012410.0141.440181012410.0151.540181012410.0161.643201012410.0171.746221012410.0202.049241012410.0212.149241012410.0222.253271012410.0242.457301012410.0242.457301012410.0252.557301012410.0262.661331012410.0272.761331012410.0282.861331012410.0243.365361012410.0313.165361012410.0323.265361012410.0333.061331012410.0343.470391012410.0353.570391012410.0343.47039101 <t< th=""><th></th><th>0-Ø</th><th>OAL</th><th>Effective L.</th><th>PU</th><th></th></t<>		0-Ø	OAL	Effective L.	PU	
2410.0101.034121012410.0111.136141012410.0121.238161012410.0131.338161012410.0151.540181012410.0161.643201012410.0161.643201012410.0161.644221012410.0181.846221012410.0191.946221012410.0212.149241012410.0222.253271012410.0242.457301012410.0252.557301012410.0262.657301012410.0272.657301012410.0282.557301012410.0292.961331012410.0303.061331012410.0313.165361012410.0323.570391012410.0333.470391012410.0343.470391012410.0353.570391012410.0363.670391012410	Art - No					£
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		10	24			1,25
2410.012       1.2       38       16       10       1         2410.013       1.3       38       16       10       1         2410.015       1.5       40       18       10       1         2410.016       1.6       43       20       10       1         2410.017       1.7       43       20       10       1         2410.018       1.8       46       22       10       1         2410.019       1.9       46       22       10       1         2410.020       2.0       49       24       10       1         2410.021       2.1       49       24       10       1         2410.022       2.2       53       27       10       1         2410.024       2.4       57       30       10       1         2410.025       2.5       57       30       10       1         2410.026       2.6       57       30       10       1         2410.026       2.6       57       30       10       1         2410.026       2.6       57       30       10       1         2410.031		1 1				1,25
$\begin{array}{c c c c c c c c c c c c c c c c c c c $						1,25
2410.014       1.4       40       18       10       1         2410.015       1.5       40       18       10       1         2410.016       1.6       43       20       10       1         2410.017       1.7       43       20       10       1         2410.018       1.8       46       22       10       1         2410.020       2.0       49       24       10       1         2410.021       2.1       49       24       10       1         2410.022       2.2       53       27       10       1         2410.024       2.4       57       30       10       1         2410.025       2.5       57       30       10       1         2410.026       2.6       57       30       10       1         2410.026       2.6       57       30       10       1         2410.028       2.8       61       33       10       1         2410.028       2.8       61       33       10       1         2410.030       3.0       65       36       10       1         2410.032		1.2				1,25
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		1.0				1,25
2410.016       1.6       43       20       10       1         2410.017       1.7       43       20       10       1         2410.018       1.8       46       22       10       1         2410.019       1.9       46       22       10       1         2410.020       2.0       49       24       10       1         2410.021       2.1       49       24       10       1         2410.022       2.2       53       27       10       1         2410.023       2.3       53       27       10       1         2410.024       2.4       57       30       10       1         2410.025       2.5       57       30       10       1         2410.026       2.6       57       30       10       1         2410.027       2.7       61       33       10       1         2410.029       2.9       61       33       10       1         2410.029       2.9       61       33       10       1         2410.031       3.1       65       36       10       1         2410.033						1,25
2410.0171.74.3201012410.0181.846221012410.0202.049241012410.0212.149241012410.0222.253271012410.0232.353271012410.0242.457301012410.0252.557301012410.0262.657301012410.0262.657301012410.0272.761331012410.0282.861331012410.0292.961331012410.0303.065361012410.0323.265361012410.0353.570391012410.0353.570391012410.0353.570391012410.0363.670391012410.0363.875431012410.0373.770391012410.0383.875431012410.0393.975431012410.0344.380471012410.0355.38652101241		1,5		20		1,25
2410.0181.846221012410.0202.049241012410.0212.149241012410.0222.253271012410.0232.353271012410.0252.557301012410.0252.557301012410.0262.657301012410.0262.657331012410.0272.761331012410.0282.861331012410.0292.961331012410.0203.065361012410.0313.165361012410.0333.365361012410.0343.470391012410.0353.570391012410.0363.675431012410.0373.775431012410.0383.875431012410.0444.480471012410.0454.580471012410.0444.480471012410.0454.580471012410.0444.480471012410						1,25
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		1.0		20		1,25
2410.020       2.0       49       24       10       1         2410.021       2.1       49       24       10       1         2410.023       2.3       53       27       10       1         2410.024       2.4       57       30       10       1         2410.025       2.5       57       30       10       1         2410.026       2.6       57       30       10       1         2410.027       2.7       61       33       10       1         2410.028       2.8       61       33       10       1         2410.029       2.9       61       33       10       1         2410.030       3.0       65       36       10       1         2410.032       3.2       65       36       10       1         2410.033       3.3       65       36       10       1         2410.034       3.4       70       39       10       1         2410.035       3.5       70       39       10       1         2410.036       3.6       70       39       10       1         2410.037						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		1,9				1,25 1,25
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2,0				1,25
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2,1	49			1,25 1,25
2410.024 $2,4$ $57$ $30$ $10$ $1$ $2410.025$ $2,5$ $57$ $30$ $10$ $11$ $2410.026$ $2,6$ $57$ $30$ $10$ $11$ $2410.028$ $2,8$ $61$ $33$ $10$ $11$ $2410.028$ $2,9$ $61$ $33$ $10$ $11$ $2410.030$ $3,0$ $61$ $33$ $10$ $11$ $2410.031$ $3,1$ $65$ $36$ $10$ $11$ $2410.032$ $3,2$ $65$ $36$ $10$ $11$ $2410.033$ $3,3$ $65$ $36$ $10$ $11$ $2410.034$ $3,4$ $70$ $39$ $10$ $11$ $2410.035$ $3,5$ $70$ $39$ $10$ $11$ $2410.036$ $3,6$ $70$ $39$ $10$ $11$ $2410.036$ $3,6$ $70$ $39$ $10$ $11$ $2410.038$ $3,8$ $75$ $43$ $10$ $11$ $2410.038$ $3,8$ $75$ $43$ $10$ $11$ $2410.043$ $4,3$ $80$ $47$ $10$ $11$ $2410.043$ $4,3$ $80$ $47$ $10$ $11$ $2410.043$ $4,5$ $80$ $47$ $10$ $11$ $2410.044$ $4,6$ $80$ $47$ $10$ $11$ $2410.045$ $4,6$ $80$ $47$ $10$ $11$ $2410.045$ $4,6$ $80$ $47$ $10$ $11$ $2410.046$ $4,6$ $80$ $47$ <		2,2				1,25
2410.026 $2,5$ $57$ $30$ $10$ $1$ $2410.026$ $2,6$ $57$ $30$ $10$ $11$ $2410.027$ $2,7$ $61$ $33$ $10$ $11$ $2410.028$ $2,8$ $61$ $33$ $10$ $11$ $2410.029$ $2,9$ $61$ $33$ $10$ $11$ $2410.030$ $3,0$ $61$ $33$ $10$ $11$ $2410.031$ $3,1$ $65$ $36$ $10$ $11$ $2410.032$ $3,2$ $65$ $36$ $10$ $11$ $2410.033$ $3,3$ $65$ $36$ $10$ $11$ $2410.034$ $3,4$ $70$ $39$ $10$ $11$ $2410.036$ $3,6$ $70$ $39$ $10$ $11$ $2410.036$ $3,6$ $70$ $39$ $10$ $11$ $2410.038$ $3,8$ $75$ $43$ $10$ $11$ $2410.039$ $3,9$ $75$ $43$ $10$ $11$ $2410.034$ $4,3$ $80$ $47$ $10$ $11$ $2410.040$ $4,0$ $75$ $43$ $10$ $11$ $2410.044$ $4,4$ $80$ $47$ $10$ $11$ $2410.045$ $4,5$ $80$ $47$ $10$ $11$ $2410.045$ $4,6$ $80$ $47$ $10$ $11$ $2410.045$ $4,6$ $80$ $47$ $10$ $11$ $2410.045$ $4,6$ $80$ $47$ $10$ $11$ $2410.045$ $4,6$ $80$ $47$ <		2,3		21		1,25
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2,4				1,25
2410.027 $2.7$ $61$ $33$ $10$ $1$ $2410.028$ $2.8$ $61$ $33$ $10$ $1$ $2410.029$ $2.9$ $61$ $33$ $10$ $1$ $2410.030$ $3.0$ $61$ $33$ $10$ $1$ $2410.031$ $3.1$ $65$ $36$ $10$ $1$ $2410.032$ $3.2$ $65$ $36$ $10$ $1$ $2410.033$ $3.3$ $65$ $36$ $10$ $1$ $2410.034$ $3.4$ $70$ $39$ $10$ $1$ $2410.036$ $3.6$ $70$ $39$ $10$ $1$ $2410.036$ $3.6$ $70$ $39$ $10$ $1$ $2410.038$ $3.8$ $75$ $43$ $10$ $1$ $2410.038$ $3.8$ $75$ $43$ $10$ $1$ $2410.039$ $3.9$ $75$ $43$ $10$ $1$ $2410.040$ $4.0$ $75$ $43$ $10$ $1$ $2410.041$ $4.1$ $75$ $43$ $10$ $1$ $2410.042$ $4.2$ $75$ $43$ $10$ $1$ $2410.043$ $4.3$ $80$ $47$ $10$ $1$ $2410.044$ $4.4$ $80$ $47$ $10$ $1$ $2410.045$ $4.5$ $86$ $52$ $10$ $1$ $2410.048$ $4.8$ $86$ $52$ $10$ $1$ $2410.051$ $5.1$ $86$ $52$ $10$ $1$ $2410.051$ $5.1$ $86$ $52$ $10$ $1$ <		2,5	57			1,25
2410.028 $2.8$ $61$ $33$ $10$ $1$ $2410.029$ $2.9$ $61$ $33$ $10$ $1$ $2410.030$ $3.0$ $61$ $33$ $10$ $1$ $2410.031$ $3.1$ $65$ $36$ $10$ $1$ $2410.032$ $3.2$ $65$ $36$ $10$ $1$ $2410.033$ $3.3$ $65$ $36$ $10$ $1$ $2410.034$ $3.4$ $70$ $39$ $10$ $1$ $2410.035$ $3.5$ $70$ $39$ $10$ $1$ $2410.036$ $3.6$ $70$ $39$ $10$ $1$ $2410.036$ $3.6$ $70$ $39$ $10$ $1$ $2410.037$ $3.7$ $70$ $39$ $10$ $1$ $2410.038$ $3.8$ $75$ $43$ $10$ $1$ $2410.040$ $4.0$ $75$ $43$ $10$ $1$ $2410.041$ $4.1$ $75$ $43$ $10$ $1$ $2410.042$ $4.2$ $75$ $43$ $10$ $1$ $2410.043$ $4.3$ $80$ $47$ $10$ $1$ $2410.045$ $4.5$ $80$ $47$ $10$ $1$ $2410.046$ $4.6$ $80$ $47$ $10$ $1$ $2410.045$ $4.5$ $86$ $52$ $10$ $1$ $2410.046$ $4.6$ $80$ $47$ $10$ $1$ $2410.045$ $5.0$ $86$ $52$ $10$ $1$ $2410.045$ $5.6$ $93$ $57$ $10$ $2$ <		2,6		30		1,30
2410.029 $2.9$ $61$ $33$ $10$ $1$ $2410.030$ $3.0$ $61$ $33$ $10$ $1$ $2410.031$ $3.1$ $65$ $36$ $10$ $1$ $2410.032$ $3.2$ $65$ $36$ $10$ $1$ $2410.033$ $3.3$ $65$ $36$ $10$ $1$ $2410.034$ $3.4$ $70$ $39$ $10$ $1$ $2410.035$ $3.5$ $70$ $39$ $10$ $1$ $2410.036$ $3.6$ $70$ $39$ $10$ $1$ $2410.036$ $3.6$ $70$ $39$ $10$ $1$ $2410.036$ $3.6$ $75$ $43$ $10$ $1$ $2410.038$ $3.8$ $75$ $43$ $10$ $1$ $2410.040$ $4.0$ $75$ $43$ $10$ $1$ $2410.041$ $4.1$ $75$ $43$ $10$ $1$ $2410.042$ $4.2$ $75$ $43$ $10$ $1$ $2410.043$ $4.3$ $80$ $47$ $10$ $1$ $2410.044$ $4.4$ $80$ $47$ $10$ $1$ $2410.045$ $4.5$ $86$ $52$ $10$ $1$ $2410.044$ $4.8$ $86$ $52$ $10$ $1$ $2410.050$ $5.0$ $86$ $52$ $10$ $1$ $2410.051$ $5.1$ $86$ $52$ $10$ $1$ $2410.054$ $5.4$ $93$ $57$ $10$ $2$ $2410.055$ $5.5$ $93$ $57$ $10$ $2$ <						1,30
2410.030       3,0       61       33       10       1         2410.031       3,1       65       36       10       1         2410.032       3,2       65       36       10       1         2410.033       3,3       65       36       10       1         2410.034       3,4       70       39       10       1         2410.035       3,5       70       39       10       1         2410.036       3,6       70       39       10       1         2410.037       3,7       70       39       10       1         2410.038       3,8       75       43       10       1         2410.040       4,0       75       43       10       1         2410.040       4,0       75       43       10       1         2410.041       4,1       75       43       10       1         2410.042       4,2       75       43       10       1         2410.043       4,3       80       47       10       1         2410.043       4,3       80       47       10       1         2410.044		2,8				1,30
2410.031 $3,1$ $65$ $36$ $10$ $1$ $2410.032$ $3,2$ $65$ $36$ $10$ $1$ $2410.033$ $3,3$ $65$ $36$ $10$ $1$ $2410.034$ $3,4$ $70$ $39$ $10$ $1$ $2410.035$ $3,5$ $70$ $39$ $10$ $1$ $2410.036$ $3,6$ $70$ $39$ $10$ $1$ $2410.036$ $3,6$ $70$ $39$ $10$ $1$ $2410.038$ $3,8$ $75$ $43$ $10$ $1$ $2410.039$ $3,9$ $75$ $43$ $10$ $1$ $2410.040$ $4,0$ $75$ $43$ $10$ $1$ $2410.041$ $4,1$ $75$ $43$ $10$ $1$ $2410.042$ $4,2$ $75$ $43$ $10$ $1$ $2410.043$ $4,3$ $80$ $47$ $10$ $1$ $2410.042$ $4,5$ $80$ $47$ $10$ $1$ $2410.045$ $4,5$ $80$ $47$ $10$ $1$ $2410.045$ $4,6$ $80$ $47$ $10$ $1$ $2410.045$ $4,6$ $86$ $52$ $10$ $1$ $2410.048$ $4,8$ $86$ $52$ $10$ $1$ $2410.051$ $5,1$ $86$ $52$ $10$ $1$ $2410.052$ $5,2$ $86$ $52$ $10$ $1$ $2410.054$ $5,4$ $93$ $57$ $10$ $2$ $2410.055$ $5,6$ $93$ $57$ $10$ $2$ <		2,9		33		1,30
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						1,30
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		3,1	65			1,30
2410.034 $3.4$ $70$ $39$ $10$ $1$ $2410.035$ $3.5$ $70$ $39$ $10$ $1$ $2410.036$ $3.6$ $70$ $39$ $10$ $1$ $2410.037$ $3.7$ $70$ $39$ $10$ $1$ $2410.038$ $3.8$ $75$ $43$ $10$ $1$ $2410.039$ $3.9$ $75$ $43$ $10$ $1$ $2410.040$ $4.0$ $75$ $43$ $10$ $1$ $2410.041$ $4.1$ $75$ $43$ $10$ $1$ $2410.042$ $4.2$ $75$ $43$ $10$ $1$ $2410.043$ $4.3$ $80$ $47$ $10$ $1$ $2410.043$ $4.3$ $80$ $47$ $10$ $1$ $2410.045$ $4.5$ $80$ $47$ $10$ $1$ $2410.045$ $4.5$ $80$ $47$ $10$ $1$ $2410.045$ $4.6$ $80$ $47$ $10$ $1$ $2410.046$ $4.6$ $80$ $47$ $10$ $1$ $2410.047$ $4.7$ $86$ $52$ $10$ $1$ $2410.048$ $4.8$ $86$ $52$ $10$ $1$ $2410.051$ $5.1$ $86$ $52$ $10$ $1$ $2410.052$ $5.2$ $86$ $52$ $10$ $1$ $2410.054$ $5.4$ $93$ $57$ $10$ $2$ $2410.055$ $5.5$ $93$ $57$ $10$ $2$ $2410.054$ $5.8$ $93$ $57$ $10$ $2$ <						1,30
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		3,3				1,30
2410.036 $3,6$ $70$ $39$ $10$ $1$ $2410.037$ $3,7$ $70$ $39$ $10$ $1$ $2410.038$ $3,8$ $75$ $43$ $10$ $1$ $2410.039$ $3,9$ $75$ $43$ $10$ $1$ $2410.040$ $4,0$ $75$ $43$ $10$ $1$ $2410.041$ $4,1$ $75$ $43$ $10$ $1$ $2410.041$ $4,1$ $75$ $43$ $10$ $1$ $2410.042$ $4,2$ $75$ $43$ $10$ $1$ $2410.043$ $4,3$ $80$ $47$ $10$ $1$ $2410.044$ $4,4$ $80$ $47$ $10$ $1$ $2410.045$ $4,5$ $80$ $47$ $10$ $1$ $2410.045$ $4,6$ $80$ $47$ $10$ $1$ $2410.046$ $4,6$ $80$ $47$ $10$ $1$ $2410.046$ $4,6$ $86$ $52$ $10$ $1$ $2410.048$ $4,8$ $86$ $52$ $10$ $1$ $2410.051$ $5,1$ $86$ $52$ $10$ $1$ $2410.052$ $5,2$ $86$ $52$ $10$ $2$ $2410.054$ $5,4$ $93$ $57$ $10$ $2$ $2410.055$ $5,5$ $93$ $57$ $10$ $2$ $2410.054$ $5,6$ $93$ $57$ $10$ $2$ $2410.054$ $5,6$ $93$ $57$ $10$ $2$ $2410.054$ $5,6$ $93$ $57$ $10$ $2$ <						1,30
2410.037 $3,7$ $70$ $39$ $10$ $1$ $2410.038$ $3,8$ $75$ $43$ $10$ $1$ $2410.039$ $3,9$ $75$ $43$ $10$ $1$ $2410.040$ $4,0$ $75$ $43$ $10$ $1$ $2410.041$ $4,1$ $75$ $43$ $10$ $1$ $2410.042$ $4,2$ $75$ $43$ $10$ $1$ $2410.043$ $4,3$ $80$ $47$ $10$ $1$ $2410.043$ $4,3$ $80$ $47$ $10$ $1$ $2410.044$ $4,4$ $80$ $47$ $10$ $1$ $2410.045$ $4,5$ $80$ $47$ $10$ $1$ $2410.046$ $4,6$ $80$ $47$ $10$ $1$ $2410.046$ $4,8$ $86$ $52$ $10$ $1$ $2410.048$ $4,8$ $86$ $52$ $10$ $1$ $2410.048$ $4,8$ $86$ $52$ $10$ $1$ $2410.051$ $5,1$ $86$ $52$ $10$ $1$ $2410.051$ $5,1$ $86$ $52$ $10$ $1$ $2410.054$ $5,4$ $93$ $57$ $10$ $2$ $2410.055$ $5,5$ $93$ $57$ $10$ $2$ $2410.056$ $5,6$ $93$ $57$ $10$ $2$ $2410.058$ $5,8$ $93$ $57$ $10$ $2$ $2410.059$ $5,9$ $93$ $57$ $10$ $2$ $2410.059$ $5,9$ $93$ $57$ $10$ $2$ <		3,5		39		1,30
2410.038 $3.8$ $75$ $43$ $10$ $1$ $2410.039$ $3.9$ $75$ $43$ $10$ $1$ $2410.040$ $4.0$ $75$ $43$ $10$ $1$ $2410.041$ $4.1$ $75$ $43$ $10$ $1$ $2410.042$ $4.2$ $75$ $43$ $10$ $1$ $2410.043$ $4.3$ $80$ $47$ $10$ $1$ $2410.043$ $4.5$ $80$ $47$ $10$ $1$ $2410.045$ $4.5$ $80$ $47$ $10$ $1$ $2410.045$ $4.6$ $80$ $47$ $10$ $1$ $2410.045$ $4.6$ $80$ $47$ $10$ $1$ $2410.046$ $4.6$ $80$ $47$ $10$ $1$ $2410.047$ $4.7$ $86$ $52$ $10$ $1$ $2410.048$ $4.8$ $86$ $52$ $10$ $1$ $2410.050$ $5.0$ $86$ $52$ $10$ $1$ $2410.051$ $5.1$ $86$ $52$ $10$ $1$ $2410.052$ $5.2$ $86$ $52$ $10$ $1$ $2410.054$ $5.4$ $93$ $57$ $10$ $2$ $2410.056$ $5.6$ $93$ $57$ $10$ $2$ $2410.058$ $5.8$ $93$ $57$ $10$ $2$ $2410.058$ $5.9$ $93$ $57$ $10$ $2$ $2410.059$ $5.9$ $93$ $57$ $10$ $2$ $2410.059$ $5.9$ $93$ $57$ $10$ $2$ <		3,6		39		1,40
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		3,7				1,45
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		3,8				1,50
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		3,9	75			1,50
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			75	43		1,50
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			75			1,65
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		4,2				1,65
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		4,3				1,65
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						1,65
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		4,5				1,75
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		4,6				1,75
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		4,7				1,75
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						1,75
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		4,9				1,80
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		5,0				1,80
2410.0535,386521022410.0545,493571022410.0555,593571022410.0565,693571022410.0575,793571022410.0585,893571022410.0595,99357102		5,1		52		1,85
2410.0545,493571022410.0555,593571022410.0565,693571022410.0575,793571022410.0585,893571022410.0595,99357102		5,2				1,85
2410.0555,593571022410.0565,693571022410.0575,793571022410.0585,893571022410.0595,99357102		5,3				2,15
2410.0565,693571022410.0575,793571022410.0585,893571022410.0595,99357102						2,15
2410.0575,793571022410.0585,893571022410.0595,99357102		5,5		57		2,15
2410.058         5,8         93         57         10         2           2410.059         5,9         93         57         10         2		5,6		57		2,15
2410.059 5.9 93 57 10 2		5,7		57		2,15
2410.059 5,9 93 57 10 2		5,8				2,25
		5,9	93	57		2,25
2410.060 6,0 93 57 10 2				57		2,15
2410.061 6,1 101 63 10 2	2410.061	6,1	101	63	10	2,40

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Art No.	[mm]	[mm]	[mm]	[pcs]	€
2410.062	6,2	101	63	10	2,40
2410.063	6,3	101	63	10	2,45
2410.064	6,4	101	63	10	2,45
2410.065	6,5	101	63	10	2,45
2410.066	6,6	101	63	10	2,80
2410.067	6,7	101	63	10	2,80
2410.068	6,8	109	69	10	2,75
2410.069	6,9	109	69	10	3,10
2410.070	7,0	109	69	10	2,90
2410.071	7,1	109	69	10	3,30
2410.072	7,2	109	69	10	3,30
2410.073	7,3	109	69	10	3,30
2410.074	7,4	109	69	10	3,30
2410.075	7,5	109	69	10	3,15
2410.076	7,6	117	75	10	3,65
2410.077	7,7	117	75	10	3,65
2410.078	7,8	117	75	10	3,65
2410.079	7,9	117	75	10	3,65
2410.080	8,0	117	75	10	3,65
2410.081	8,1	117	75	10	3,90
2410.082	8,2	117	75	10	3,90
2410.083	8,3	117	75	10	4,25
2410.084	8,4	117	75	10	4,25
2410.085	8,5	117	75	5	4,10
2410.086	8,6	125	81	5	4,65
2410.087	8,7	125	81	5	4,65
2410.088	8,8	125	81	5	4,65
2410.089	8,9	125	81	5	4,65
2410.090	9,0	125	81	5	4,45
2410.091	9,1	125	81	5	4,95
2410.092	9,2	125	81	5	4,95
2410.093	9,3	125	81	5	4,95
2410.094	9,4	125	81	5	4,95
2410.095	9,5	125	81	5	5,10
2410.096	9,6	133	87	5	5,70
2410.097	9,7	133	87	5	5,70
2410.098	9,8	133	87	5	5,70
2410.099	9,9	133	87	5	5,70
2410.100	10,0	133	87	5	5,50
2410.102	10,2	133	87	5	6,95
2410.105	10,5	133	87	5	6,95
2410.110	11,0	142	94	5	7,75
2410.115	11,5	142	94	5	8,55
2410.120	12,0	151	101	5	9,50
2410.125	12,5	151	101	5	10,65
2410.130	13,0	151	101	5	11,75

ArtNo. Description €
2410.805 Set of 5 pcs. Ø 3, 4, 5, 6, 8 mm, in PVC box 11,60
2410.519 Set of 19 pcs. Ø 1 - 10 mm, 0,5 mm rising, in Rose box 54,40
2410.525 Set of 25 pcs. Ø 1 - 13 mm, 0,5 mm rising, in rose box 81,40

N.	Twist drill HSS-G acc. to DIN 338, fully ground from the solid, right hand cutting, spiral type N, tolerance of diameter h 8. Polished section of the surface of the cone $118^{\circ}$ , blank ground	C. The	Suitable for highest quality demands of industry and craft. For drilling alloyed and not alloyed steel and cast steel up to 900 N/mm², grey and malleable cast iron, spheroidale graphite iron, sintered iron, German silver, graphite etc.
	HSS-G		Professional quality for high quality demands. For even higher quality demands, e.g. high-grade steel V2A, we recommend our product line 2420 made of cobalt alloyed HSS, with a special spiral and crosswise grinding
UPM	Relevant diagrams		packing unit = 10, in PE box., from Ø 8,5 mm packing unit = 5, in PE box (price unit = per piece in a packing unit)



		0-Ø	OAL	Effective I	L. PU	
Art No.	Description	[mm]	[mm]	[mm]	[pcs]	€
2420.015	End of Series	1,5	40	18	10	2,20
2420.016	End of Series	1,6	43	20	10	2,25
2420.017	End of Series	1,7	43	20	10	2,25
2420.018	End of Series	1,8	46	22	10	2,25
2420.020	End of Series	2,0	49	24	10	2,20
2420.021	End of Series	2,1	49	24	10	2,30
2420.022	End of Series	2,2	53	27	10	2,30
2420.023	End of Series	2,3	53	27	10	2,30
2420.024	End of Series	2,4	57	30	10	2,30
2420.025	End of Series	2,5	57	30	10	2,30
2420.026	End of Series	2,6	57	30	10	2,45
2420.027	End of Series	2,7	61	33	10	2,45
2420.028	End of Series	2,8	61	33	10	2,45
2420.030		3,0	61	33	10	2,45
2420.031	End of Series	3,1	65	36	10	2,75
2420.032	End of Series	3,2	65	36	10	2,75
2420.033	End of Series	3,3	65	36	10	2,75
2420.034	End of Series	3,4	70	39	10	2,75
2420.035		3,5	70	39	10	2,90
2420.036	End of Series	3,6	70	39	10	2,90
2420.037	End of Series	3,7	70	39	10	2,90
2420.038	End of Series	3,8	75	43	10	2,90
2420.039	End of Series	3,9	75	43	10	2,90
2420.040		4,0	75	43	10	3,25
2420.041	End of Series	4,1	75	43	10	3,25
2420.042	End of Series	4,2	75	43	10	3,25
2420.043	End of Series	4,3	80	47	10	3,25
2420.044	End of Series	4,4	80	47	10	3,25
2420.045		4,5	80	47	10	3,65
2420.046	End of Series	4,6	80	47	10	3,75
2420.047	End of Series	4,7	80	47	10	3,75
2420.049	End of Series	4,9	86	52	10	3,75
2420.050		5,0	86	52	10	3,95
2420.051	End of Series	5,1	86	52	10	4,20
2420.052	End of Series	5,2	86	52	10	4,20
2420.053	End of Series	5,3	86	52	10	4,20
2420.054	End of Series	5,4	93	57	10	4,20
2420.055	End of Series	5,5	93	57	10	4,25
2420.056	End of Series	5,6	93	57	10	4,75
2420.057	End of Series	5,7	93	57	10	4,75
2420.058	End of Series	5,8	93	57	10	4,75
2420.059	End of Series	5,9	93 93	57 57	10 10	4,75
2420.060	End of Series	6,0				4,95
2420.061 2420.062	End of Series End of Series	6,1 6,2	101 101	63 63	10 10	5,25 5,25
2420.062	End of Series	6,3	101	63	10	
2420.063	End of Series	6,3	101	63	10	5,25 5,25
2420.064	End of Series	6,5	101	63	10	5,25 5,25
2420.065	End of Series	6,6	101	63	10	6,20
2420.060	End of Series	6,7	101	63	10	6,20
2420.067	End of Series	6,9	101	69	10	6,20
2420.009	End of Series	7,0	109	69	10	6,20
2420.070	End of Series	7,1	109	69	10	6,55
2420.071	Life of Oches	7,1	105	05	10	0,00

		0-Ø	OAL	Effective L.	PU	
Art No.	Description	[mm]	[mm]	[mm]	[pcs]	€
2420.072	End of Series	7,2	109	69	10	6,55
2420.074	End of Series	7,4	109	69	10	6,55
2420.075	End of Series	7,5	109	69	10	6,55
2420.076	End of Series	7,6	117	75	10	7,40
2420.077	End of Series	7,7	117	75	10	7,40
2420.078	End of Series	7,8	117	75	10	7,40
2420.079	End of Series	7,9	117	75	10	7,40
2420.080	End of Series	8,0	117	75	10	7,60
2420.081	End of Series	8,1	117	75	10	8,45
2420.082	End of Series	8,2	117	75	10	8,45
2420.083	End of Series	8,3	117	75	10	8,45
2420.084	End of Series	8,4	117	75	10	8,45
2420.085	End of Series	8,5	117	75	5	8,45
2420.086	End of Series	8,6	125	81	5	9,10
2420.087	End of Series	8,7	125	81	5	9,10
2420.088	End of Series	8,8	125	81	5	9,10
2420.089	End of Series	8,9	125	81	5	9,10
2420.090	End of Series	9,0	125	81	5	9,10
2420.091	End of Series	9,1	125	81	5	10,25
2420.092	End of Series	9,2	125	81	5	10,25
2420.093	End of Series	9,3	125	81	5	10,25
2420.094	End of Series	9,4	125	81	5	10,25
2420.095	End of Series	9,5	125	81	5	10,25
2420.096	End of Series	9,6	133	87	5	11,25
2420.097	End of Series	9,7	133	87	5	11,25
2420.098	End of Series	9,8	133	87	5	11,25
2420.099	End of Series	9,9	133	87	5	11,25
2420.100	End of Series	10,0	133	87	5	11,25
2420.102	End of Series	10,2	133	87	5	17,65
2420.105	End of Series	10,5	133	87	5	17,65
2420.110	End of Series	11,0	142	94	5	17,65
2420.115	End of Series	11,5	142	94	5	20,85
2420.120	End of Series	12,0	151	101	5	20,85
2420.125	End of Series	12,5	151	101	5	24,55
2420.130	End of Series	13,0	151	101	5	24,55

	Twist drill, made of cobalt alloyed HSS, acc. to DIN 338, fully ground from the solid. Fitted with a special spiral for good chip removal and greasing materials. Crosswise sharpened acc. to DIN 1412C, point angle 135°, tolerance of diameter h8	C. C. C.	For extraordinary demands of industry, craft and household. Very well suitable for drilling stainless steel V2A, V4A and steel with higher content of alloy and/or higher stability over 1300 N/mm <sup>2</sup> . Furthermore applicable for heat resistant, non-corroding and acid resistant steel, special alloy, malleable and cast iron, bronze, weld seams, chromium-nickel steel, aluminium, brass and all sorts of plastics
	HSS-G Co		Optimally suitable for strongest demands. We also offer a long version product line 2450 (acc. to DIN 340). For sheet metal working we recommend product line 2440 with spiral type N
UPM	Relevant diagrams	F	packing unit = 10, PE box., from Ø 8,5 mm packing unit = 5, PE box (price unit = per piece in a packing unit)

#### 2450





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		0-Ø	OAL	Effective L.	PU	
Art No.	Description	[mm]	[mm]	[mm]	[pcs]	€
2450.020		2,0	85	56	10	3,50
2450.025		2,5	95	62	10	3,85
2450.030		3,0	100	66	10	4,05
2450.031	End of Series	3,1	106	69	10	4,65
2450.032	End of Series	3,2	106	69	10	4,65
2450.033	End of Series	3,3	112	73	10	4,65
2450.035		3,5	112	73	10	4,65
2450.040		4,0	119	78	10	5,05
2450.041	End of Series	4,1	119	78	10	6,45
2450.042	End of Series	4,2	119	78	10	6,45
2450.045	End of Series	4,5	126	82	10	6,45
2450.048	End of Series	4,8	132	87	10	7,55
<b>2450.050</b>		5,0	132	87	10	7,55
2450.051	End of Series	5,1	132	87	10	7,55
2450.052	End of Series	5,2	132	87	10	8,70
2450.053	End of Series	5,3	132	87	10	8,70
2450.055	End of Series	5,5	139	91	10	8,70
2450.057	End of Series	5,7	139	91	10	9,80
2450.058	End of Series	5,8	139	91	10	9,80
2450.060		6,0	139	91	10	9,80
2450.065		6,5	148	97	10	12,05
2450.068	End of Series	6,8	156	102	10	13,95
2450.070	End of Series	7,0	156	102	10	13,95
2450.075	End of Series	7,5	156	102	10	15,35
2450.080		8,0	165	109	10	15,35
2450.085	End of Series	8,5	165	109	5	18,15
2450.090	End of Series	9,0	175	115	5	18,90
2450.095	End of Series	9,5	175	115	5	20,10
2450.100		10,0	184	121	5	22,80
2450.102	End of Series	10,2	184	121	5	30,70
2450.105		10,5	184	121	5	30,70
2450.110	End of Series	11,0	195	128	5	30,70
2450.115	End of Series	11,5	195	128	5	35,95
2450.120	End of Series	12,0	205	134	5	35,95
2450.125	End of Series	12,5	205	134	5	44,10
2450.130	End of Series	13,0	205	134	5	44,10
		,				,

	Twist drill made of cobalt alloyed HSS-G, acc. to DIN 340, fully ground from the solid, long version, special spiral form, for a good chip removal when drilling deep holes and for greasing materials. Crosswise sharpened acc to. DIN 1412C, point angle 135°, tolerance of diameter h8	C. The	For extraordinary demands of industry, craft and household. Very good for drilling stainless steel V2A; V4A and steel with higher content of alloy. Furthermore suitable for heat resistant, non-corroding and acid resisting steel, special alloy, malleable and cast iron, bronze, weld seams, chromium-nickel steel, aluminium, brass etc.
Ø	HSS-G Co alloyed		Specially suitable for hardest demands, in a practical long version
UPM	Relevant diagrams	F	packing unit = 1, PE box., from Ø 8,5 mm packing unit = 5, PE box (price unit = per piece in a packing unit)



	0-Ø	OAL	Effective L.	PU	
Art No.	[mm]	[mm]	[mm]	[pcs]	€
2461.020	2,0	125	85	1	11,95
2461.025	2,5	140	95	1	11,95
2461.030	3,0	150	100	1	14,65
2461.035	3,5	165	115	1	16,20
2461.040	4,0	175	120	1	16,50
2461.045	4,5	185	125	1	19,15
2461.050	5,0	195	135	1	21,60
2461.055	5,5	205	140	1	22,55
2461.060	6,0	205	140	1	25,80
2461.065	6,5	215	150	1	30,55
2461.070	7,0	225	155	1	31,85
2461.075	7,5	225	155	1	34,90
2461.080	8,0	240	165	1	38,60
2461.085	8,5	240	165	1	43,55
2461.090	9,0	250	175	1	46,75
2461.095	9,5	250	175	1	49,45
2461.100	10,0	265	185	1	53,60
2461.105	10,5	265	185	1	54,85
2461.110	11,0	280	195	1	59,80
2461.115	11,5	280	195	1	67,00
2461.120	12,0	295	205	1	73,40
2461.125	12,5	295	205	1	77,50
2461.130	13,0	295	205	1	81,20

	Special twist drill made of cobalt alloyed HSS, acc. to DIN 1869, fully ground of the solid, extra long version, right hand cutting. Profile crosswise sharpened 135°	C. The second	Solid special drill for drilling extremly deep holes under difficult conditions, e.g. poorly chip removal. Suitable for drilling cast iron and steel up to 1300 N/mm <sup>2</sup>
Ø	HSS-G Co		Specially suitable for hardest quality demands. For an even longer version take a look at our product line 2599
UPM	Relevant diagrams	K	packing unit = 1, PE tube





#### OAL 150 mm 0-Ø SØ OAL Effective L. PU Art.- No. <mark>2599.103</mark> [mm] 150 150 [mm] 100 € 11,25 12,40 13,10 13,90 18,05 18,05 19,15 20,95 23,70 [mm] [pcs] [mm] 1 1 3 3 2599.104 4 4 100 2599.105 2599.106 150 150 150 5 5 6 100 100 100 100 100 100 1 1 6 2599.107 7 7 1 1 1 1 8 9 10 11 2599.108 2599.109 8 9 150 150 2599.110 2599.111 150 150 10 11

#### 0AL 250 mm

	0-Ø	SØ	OAL	Effective L.	PU	
Art No.	[mm]	[mm]	[mm]	[mm]	[pcs]	€
2599.203	3	3	250	200	1	15,15
2599.204	4	4	250	200	1	17,85
2599.205	5	5	250	200	1	20,35
2599.206	6	6	250	200	1	22,80
2599.207	7	7	250	200	1	29,40
2599.208	8	8	250	200	1	29,40
2599.209	9	9	250	200	1	32,80
2599.210	10	10	250	200	1	35,70
2599.211	11	11	250	200	1	41,15
2599.212	12	12	250	200	1	45,30
2599.213	13	13	250	200	1	48,10
2599.214	14	13	250	200	1	52,05
2599.215	15	13	250	200	1	59,75
2599.216	16	13	250	200	1	65,85
2599.218	18	13	250	200	1	97,30
2599.220	20	13	250	200	1	123,55
2599.222	22	13	250	200	1	150,30
2599.224	24	13	250	200	1	179,85
2599.225	25	13	250	200	1	196,85

0AL 315 mm						
	0-Ø	SØ	OAL	Effective L.	PU	
Art No.	[mm]	[mm]	[mm]	[mm]	[pcs]	€
2599.303	3	3	315	250	1	19,70
2599.304	4	4	315	250	1	23,25
2599.305	5	5	315	250	1	26,50
2599.306	6	6	315	250	1	29,65
2599.307	7	7	315	250	1	38,25
2599.308	8	8	315	250	1	38,25
2599.309	9	9	315	250	1	42,60
2599.310	10	10	315	250	1	46,45
2599.311	11	11	315	250	1	53,40
2599.312	12	12	315	250	1	58,95
2599.313	13	13	315	250	1	62,50
2599.314	14	13	315	250	1	68,80
2599.315	15	13	315	250	1	80,05
2599.316	16	13	315	250	1	93,25

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#### OAL 400 mm

		O-Ø	SØ	OAL	Effective L.	PU	
Art No.	Description	[mm]	[mm]	[mm]	[mm]	[pcs]	€
2599.403	End Of Series	3	3	400	300	1	25,60
2599.404	End Of Series	4	4	400	300	1	30,25
2599.405	End Of Series	5	5	400	300	1	34,40
2599.406	End Of Series	6	6	400	300	1	38,55
2599.407	End Of Series	7	7	400	300	1	49,65
2599.408	End Of Series	8	8	400	300	1	49,65
2599.409	End Of Series	9	9	400	300	1	55,40
2599.410	End Of Series	10	10	400	300	1	60,30
2599.411	End Of Series	11	11	400	300	1	69,35
2599.412	End Of Series	12	12	400	300	1	76,60
2599.413	End Of Series	13	13	400	300	1	81,25
2599.414	End Of Series	14	13	400	300	1	89,40
2599.415	End Of Series	15	13	400	300	1	104,05
2599.416	End Of Series	16	13	400	300	1	121,15

#### OAL 460 mm

	O-Ø	SØ	OAL	Effective L.	PU	
Art No.	[mm]	[mm]	[mm]	[mm]	[pcs]	€
2599.603	3	3	460	380	1	49,90
2599.604	4	4	460	380	1	49,90
2599.605	5	5	460	380	1	49,90
2599.606	6	6	460	380	1	58,60
2599.607	7	7	460	380	1	67,85
2599.608	8	8	460	380	1	67,85
2599.609	9	9	460	380	1	78,70
2599.610	10	10	460	380	1	78,70
2599.611	11	11	460	380	1	84,80
2599.612	12	12	460	380	1	77,65
2599.613	13	13	460	380	1	103,55
2599.614	14	14	460	380	1	117,95
2599.615	15	15	460	380	1	132,95
2599.616	16	16	460	380	1	151,95

	Twist drill made of HSS, fully ground from the solid, long version, cylindrical, special spiral for good chip removal when drilling deep holes and for greasing materials. Profile crosswise sharpened acc. to DIN 1412C, point angle 135°. Tolerance of diameter h8	C. HIN	Suitable for highest quality demands of industry and craft. For drilling alloyed and not alloyed steel and cast steel up to 900 N/mm², grey and malleable cast iron, spheroidale graphite iron, sintered iron, German silver, graphite and so on
	HSS-G		Specially suitable for highest quality demands, here available in four lengths at a very fair price
UPM	Relevant diagrams	K	packing unit = 1, SB in Rose tube

2440 Profi Twist Drill, I	Double Sideo	d, HSS-G			für Besserb	ohrer
		0.0	0.41	Effective I	DU	_
		0-Ø	OAL	Effective L.	PU	0
HSS	Art No.	[mm]	[mm]	[mm]	[pcs]	€ 2,90
	2440.025 2440.030	2,5 3,0	43 46	10 12	1	3,05
Qualitat	2440.030	3,0	49	12	1	3,05
quanty	2440.031	3,2	49	12	1	3,25
	2440.032	3,3	49	12	1	3,40
	2440.035	3,5	52	12	1	3,40
	2440.040	4,0	55	12	1	3,75
	2440.041	4,1	55	12	1	3,55
	2440.042	4,2	55	12	1	3,75
	2440.045	4,5	58	12	1	3,60
	2440.048	4,8	62	14	1	3,80
	2440.050	5,0	62	14	1	4,15
	2440.051	5,1	62	14	1	4,15
	2440.052	5,2	66	14	1	4,25
	2440.055	5,5	66	16	1	3,95
	2440.060	6,0	66	19	1	4,35
version, right hand cutting, spiral type sharpened, 118°. Tolerance of diame         HSS-G         UPM         approx. 2500 rpm, power drill		ound	plastic plate:	eel, brass, zinc, copposite s table for roofers and = 1, PE tube		
3535 Drill and Mi	Art No. 3535.006 3535.008	0-Ø [mm] 6 8	[n	5Ø 1m] 6 8	OAL [mm] 90 90	e 13,95 20,35
		ø8 HSS				

	Milling cutter with twist drill head (ground point angle 118°) and chip flutes with roughing teeth	C. The second	For drilling and milling outlines with one tool. Suitable for wood, plasterboard, plastics and - limited - nonferrous metals
Ø	HSS		Especially recommandable for use with hand drill, not suitable for use with steel
UPM	approx. 2500 rpm, basis wood	F	packing unit = 1, PE tube

3540 Classic	Countersink, HSS		F	für Bessert	oohrer •
HSS Qualităt Quality	Art No. 3540.012 3540.016 3540.020	0-Ø [mm] 12 16 20	SØ [mm] 8 8 8	OAL [mm] 46 47 47	€ 13,90 17,45 25,80
8.20,000-1000					
Countersink three	e edged, countersinking angle 90°	<b>E</b>	Countersinking and debui surface performance with		to the high
HSS			Easy regrinding		

packing unit = 1, PE tube

approx. 500 rpm, basis St 37

UPM

3541	OO Classic	Special Co	untersink with La	teral Hole, I	HSS	FAMA für Besserbo	ohrer®
HSS Qualität Quality			Art No. 3541.001 3541.002 3541.003 3541.004	0-Ø [mm] 2-5 5-10 10-15 15-20	SØ [mm] 6 8 10 12	OAL [mm] 45 48 65 85	€ 16,60 19,30 33,85 59,25
		-	-20x90" HSS-Co5	80			
	countersink with bo		e with one edge and		Countersinking in a nonferrous metals a	II metals, specially good results and hard wood	s with
	HSS				Easy handling thank "chattering"	<s contact="" large="" surface,<="" td="" the="" to=""><td>no</td></s>	no
UPM	approx. 500 rpm				packing unit = 1, PE	E tube	

3690 Classic Hole En	larger, HSS			<b>A MA</b> <i>iir Besserb</i>	ohrer
HSS Qualität Quality	Art No. 3690.001 3690.002 3690.003	0-Ø [mm] 3 - 14 6 - 20 16 - 30	SØ [mm] 6 8 10	OAL [mm] 62 70 75	€ 25,80 29,40 53,30
8 4 14- 14- 18-	SSH 02-9 #				
Two edged hole cutter for metal	sheet	<b>A</b>	Stageless drilling of large holes of thin-walled mate		of existing
HSS			Suitable for sheet steel 0 non-ferrous metals 0,1 - 9		
approx. 1000 rpm, basis non-fer	rous metal		packing unit = 1, PE tube		

3692	OO Classic	Step Drill, HSS			FAMA fir Besserb	ohrer
HSS Qualität Quality		Art No. 3692.012 3692.020 3692.030	0-Ø [mm] 4 - 12 4 - 20 6 - 30	SØ [mm] 6 8 10	OAL [mm] 69 73 95	€ 45,05 58,60 85,90



	Two edged hole cutter for metal sheet, cylindrical gradation, chip groove with scale of diameter	THE REAL PROPERTY IN O THE REAL PR	For working without pre-drilling and burring by the next grade at the same time
	HSS		Also suitable for thinnest sheet metals. No pre-drilling necessary, burr-free working without "chattering"
UPM	approx. 1000 rpm, basis non-ferrous metal	K	packing unit = 1, PE tube

# Hand Tools 121

FAMAE

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A

	000
2000/	Profi

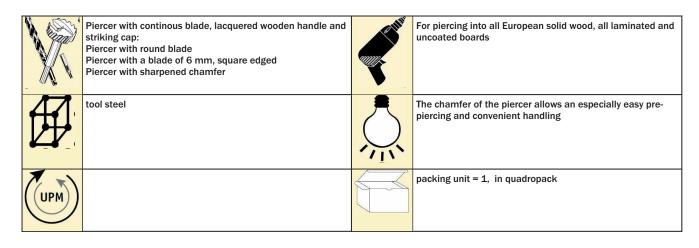
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Piercer



	Art No. 2000.100
2 miles	Piercer with roun
	2001.100
	Piercer with shar

FICICEI WILLI CUI	Itillious blaue			
	Ø	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	€
2000.100	6	180	100	9,30
Piercer with rou	ind blade			
	Ø	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	€
2001.100	6	180	100	10,45
Piercer with sha	arpened chamfer			
	Ø	OAL	Effective L.	
Art No.	[mm]	[mm]	[mm]	€
2006.100	6	150	70	10,85



Piercer with continious blade

1895	OOO Profi	Set of Cutting Tools fo	r Wooden Thre	eads		für Besserb	ohrer
			Ø	Ø	Core	lead/1"	
		Art No.	[mm]	[Inch]	[mm]	[mm]	€
		1895.013	13	1/2	11	8	331,50
		1895.016	16	5/8	14	7	334,40
		1895.019	19	3/4	16	6	348,25
		1895.022	22	7/8	18	5,5	388,15
		1895.025	25	1	21	5	489,65
1		1895.028	28	11/8	23	4,5	561,30
-	7	1895.032	32	11/4	26	4	638,90



	Set of two pcs with die stock and screw tap	Contraction of the second seco	For cutting internal and external threads in wooden workpieces like chair legs, nutcrackers etc.
	Tool steel		Suitable for all kinds of solid wood
UPM	By hand	K	packing unit = 1, cardboard



**Dowel sharpener** 





	Ø	OAL	SØ	
Art No.	[mm]	[mm]	[mm]	€
2009.020	4-20	80	8	50,80
2009.030	6-30	100	10	77,95

	Dowel sharpener with one edge and parallel shank. Inner angle approx. 55°	Contraction of the second seco	For sharpening of all dowels so that they can easily be put into the drill holes
	Tool steel		Dowels must not be lead by hand to the drilliing machine
UPM	500 - 1000 rpm, basis beech wood		packing unit = 1, SB packaging in PE tube

3533	OOO Profi	Countersin	k with Handle		FAPA Besserbohren	p®
			Countersink with plastic handle	Ø		
		IAE O	Art No.	و [mm]	•	2
	FAIN		3533.012	12		6,25
			3533.016	16		6,50
			Countersink with wooden handle	ø		
		Cond Hall Summer Carl	Art No.	[mm]	€	2
â		CORPORT OF CONTRACT	3533.112	12		6,45
			3533.116	16		6,80

	Countersink with five edged 90° countersink, with either wooden or plastic handle	C. Harris	For fast countersinking by hand in all solid woods and board materials
	Tool steel		The wooden grip lies particularly comfortable in your hand
UPM	By hand		packing unit = 1, SB on punch card



OO Classic



		Ø	
Art No.	Description	[mm]	€
3685.006	PU = 1 (contains10 pcs.)	6	6,20
3685.008	PU = 1 (contains10 pcs.)	8	6,30
3685.010	PU = 1 (contains10 pcs.)	10	7,15

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	Conventional dowel marker with centre point, accurately fitting	Contraction of the second seco	For exact marking of blind dowel holes in all kinds of wood and uncoated boards
	Steel		The good dimensioned tip guarantees a perfect working
UPM			packing unit = 1 (10 pcs. in PE tube)

2152	OO Classic	Gimlet	FAMA For Besserbohrer
		0	

		O-Ø	OAL	
Art No.	Description	[mm]	[mm]	€
2152.002	PU = 1 (contains 10 pcs.)	2	115	33,00
2152.003	PU = 1 (contains 10 pcs.)	3	125	33,00
2152.004	PU = 1 (contains 10 pcs.)	4	140	37,00
2152.005	PU = 1 (contains 10 pcs.)	5	145	41,50
2152.006	PU = 1 (contains 10 pcs.)	6	155	63,00

Sets

Sets		
Art No.	Description	€
2152.503	3 pcs. Set on Rose plastic clip Ø 3, 4, 5 mm	9,85
2152.505	5 pcs. Set on Rose plastic clip Ø 2, 3, 4, 5, 6 mm	17,35

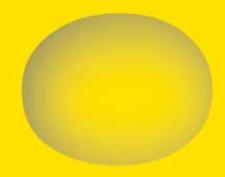
	Classical gimlet in solid version, black, with lug	C. Sur	For manual pre-drilling of holes by hand in all sorts of wood
	Tool steel		We recommend piercing with a pricker 2006.100 for hard wood
UPM	show what you can!		Packing unit = 10 pcs. SB packaging, sets in Rose quattro packaging



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Quality products presented in an optimal way Speed diagram **Quality classification** Article index **General terms and conditions** Custom-made tools Service and contact







### 1410 Auger Bit Lewis tool steel

#### Three Basis holder (Deep, Medium, Standard)

Standard	1.	2.	3.	4.	5.	6.	7.	8.	€
1410.4									
Ø in mm	10	12	14	16	18	20	22	24	
Qty.	2 pcs.								
€	42,30	43,40	51,20	57,60	61,20	66,90	83,50	90,80	496,90 €
Medium	1.	2.	3.	4.	5.	6.	7.	8.	€
1410.3									
Ø in mm	6	8	10	12	14	16	18	20	
Qty.	2 pcs.								
€	32,00	32,00	32,00	35,10	37,70	42,90	45,20	52,50	309,40 €
Deep	1.	2.	3.	4.	5.	6.	7.	8.	€
1410.2									
Ø in mm	6	8	10	12	14	16	18	20	
Qty.	2 pcs.								
€	24,80	24,80	24,80	25,90	28,30	30,20	33,20	36,70	228,70€
							Total		1.035,00 €



www.famag.com



### 1410 Auger Bit Lewis tool steel

Six Basis holder (2 x Deep, Medium, Standard)

Standard	1.	2.	3.	4.	5.	6.	7.	8.	1.	2.	3.	4.	5.	6.
1410.4														
, EØØ	6	8	10	12	14	16	18	20	22	24	26	28	30	32
i m.	2 pcs.													
Q	42t30	42t30	42t30	43t40	51t20	57t60	61t20	66ty0	83t50	y0t80	102ty0	114t20	116ty0	151t50
Medium	1.	2.	3.	4.	5.	6.	7.	8.	1.	2.	3.	4.	5.	6.
1410.3														
, EØØ	6	8	10	12	14	16	18	20	22	24	26	28	30	32
i m.	2 pcs.													
Q	32t00	32t00	32t00	35t10	37t70	42ty0	45t20	52t50	63t00	64t70	72ty0	81t10	87t40	120t70
Deep	1.	2.	3.	4.	5.	6.	7.	8.	1.	2.	3.	4.	5.	6.
1410.2														
, EØØ	6	8	10	12	14	16	18	20	22	24	26	28	30	32
im	2 pcs.													
Q	24t80	24t80	24t80	25ty0	28t30	30t20	33t20	36t70	43t70	47t30	54t50	60ty0	66ty0	86t40



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2.454,60 €

#### 1594 Brad Point Drill bit MIX

#### One Smartdisplay (3 x 8)

Standard	1.	2.	3.	4.	5.	6.	7.	8.	
3500.									
9 60 i i	3	4	5	6	8	10	12	13	
nno	2 pcs.								
,	5t00	5t60	6t10	6t30	7t30	8t70	11t70	13t80	64t50,
Medium	1.	2.	3.	4.	5.	6.	7.	8.	1
1593.									
9 6Ø i i	3	4	5	6	7	8	10	12	
n m2	2 pcs.								
,	36t00	36t00	37t40	40t20	44t00	44t00	55t40	62t30	355t30 ,
Deep	1.	2.	3.	4.	5.	6.	7.	8.	1
1594.									
9 60 i i	3	4	5	6	8	10	12	13	
nnQ	2 pcs.								
1	11t50	12t40	13t10	13t70	18t50	25t60	3yt60	42t60	177t00 ,
							Total		596,80 €

Pantak. FAMAG Holzspiralbohrer -FAMAE Holzspiralbohrer W 12.07 100 (III) C.C.C. alle alle **a** 1 alls after FAMAS \*\*\*\*\* Holzspiralbohrer 1.7 and)= and a come / Par -tam at

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FAMA For Besserbohrer



#### 1594 Brad Point Drill bit - Vario Mix

#### One Smartdisplay (3 x 8)

Standard	1.	2.	3.	4.	5.	6.	7.	8.	€
1594.									
Ø in mm	2	2,5	3	3,5	4	4,5	5	5,5	
Qty.	2 pcs.								
€	14,40	14,40	11,50	12,40	12,40	13,10	13,10	13,70	105,00 €
Medium	1.	2.	3.	4.	5.	6.	7.	8.	€
1594.									
Ø in mm	6	6,5	7	8	9	10	11	12	
Qty.	2 pcs.								
€	13,70	16,10	16,80	18,50	22,50	25,60	33,20	39,60	186,00 €
Deep	1.	2.	3.	4.	5.	6.	7.	8.	€
1594.									
Ø in mm	12,5	13	14	15	16	18	20	Vario	
Qty.	2 pcs.								
€	48,10	42,60	64,00	75,40	84,60	106,10	133,40	71,30	625,50 €
							Total		916,50€





#### One Smartdisplay (3 x 6)

Standard	1.	2.	3.	4.	5.	6.	S
3500.							
, 09E0ØØ	3	4	5	6	7	18	
i m.0	20 pc.						
S	5088	5068	6018	6038	t C388	7028	CBy CB8Cs
Medium	1.	2.	3.	4.	5.	6.	S
2100.							
, 09£00/Ø	3	4	5	6	7	18	
i m:0	20 pc.						
S	26018	26018	26018	26018	32058	32058	016yQ480s
Deep	1.	2.	3.	4.	5.	6.	S
1775.							
, 09£00/Ø	18	13	16	28	25	38	
i mm00	20 pc.						
S	31018	33058	34078	37Qy8	4t 088	55058	Q248Q780s
					Tota	449,20 €	



FA MA For Besserbohrer



One Display (Deep, Medium, Standard)

Standard	1.	2.	3.	4.	5.	6.	7.	€
1622.								
Ø in mm	15	16	17	18	19	20	22	
Qty.	2 pcs.							
€	44,00	44,00	47,90	47,90	57,50	47,90	51,80	341,00€
Medium	1.	2.	3.	4.	5.	6.	7.	€
1622.								
Ø in mm	23	24	25	26	28	30	32	
Qty.	2 pcs.							
€	53,40	53,40	55,30	55,30	64,00	64,00	64,00	409,40 €
Deep	1.	2.	3.	4.	5.	6.	7.	€
1622.								
Ø in mm	34	35	40	45	50	55	60	
Qty.	2 pcs.							
€	77,60	77,60	90,20	118,10	131,00	192,00	198,30	884,80€
						T	otal	1.635,20 €



All prices are recommended retail prices additionally value added tax.



FAMA For Besserbohrer



#### **1663 + 1624** Bormax MIX

#### One Display (3x7)

Standard	1.	2.	3.	4.	5.	6.	7.	€
1663 <u>.</u>								
Ø in mm	15	20	25	30	35	40	50	
Qty.	2 pcs.	2 pcs.						
€	119,00	122,20	125,50	128,80	134,80	160,00	236,60	1.026,90€
Medium	1.	2.	3.	4.	5.	6.	7.	€
1624.								
Ø in mm	15	16	16,2	18	20	22	25	
Qty.	2 pcs.	2 pcs.						
€	61,90	61,90	66,00	66,00	66,00	70,20	73,50	465,50€
Deep	1.	2.	3.	4.	5.	6.	7.	€
1624.								
Ø in mm	30	35	40	45	50	Pre Drill	Brad point.	
Qty.	2 pcs.	4 pcs.	4pcs.					
€	82,10	95,80	108,50	138,30	149,20	53,60	44,00	671,50€
						Tota	al	2.163,90 €



#### 1624 Bormax 2.0 prima

#### Two small Displays (2x7)

Upper	1.	2.	3.	4.	5.	6.	7.	€
1624.								
Ø in mm	15	16	16,2	18	20	22	25	
Qty.	2 pcs.	2 pcs.						
€	61,90	61,90	66,00	66,00	66,00	70,20	73,50	465,50€
Lower	1.	2.	3.	4.	5.	6.	7.	€
1624.								
Ø in mm	30	35	40	45	50	Pre Drill	Brad point.	
Qty.	2 pcs.	4 pcs.	4 pcs.					
€	82,10	95,80	108,50	138,30	149,20	53,60	44,00	671,50€
						To	tal	1.137,00 €



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FAMA For Besserbohrer



#### 1622 Bormax 2.0

One small Display (1x7)

Standard	1.	2.	3.	4.	5.	6.	7.	€
1622.								
Ø in mm	15	20	25	30	35	40	50	
Qty.	2 pcs.							
€	44,00	47,90	55,30	64,00	77,60	90,20	131,00	510,00€
						Tota	al	510,00 €



### 1624 Bormax 2.0 prima

One small Display (1x7)

Standard	1.	2.	3.	4.	5.	6.	7.	€
1624.								
Ø in mm	15	20	25	30	35	40	50	
Qty.	2 pcs.							
€	61,90	66,00	73,50	82,10	95,80	108,50	149,20	637,00€
						Tota	al	637,00 €



#### 1663 TCT Bormax<sup>3</sup>

One small Display (1x7)

Standard	1.	2.	3.	4.	5.	6.	7.	e
1663.								
Ø in mm	15	20	25	30	35	40	50	
Qty.	2 pcs.							
€	119,00	122,20	125,50	128,80	134,80	160,00	236,60	1.026,90€
						Tot	al	1.026,90 €

#### 1664 TCT Bormax<sup>3</sup> prima

#### One small Display (1x7)

Standard	1.	2.	3.	4.	5.	6.	7.	€
1664								
Ø in mm	15	20	25	30	35	40	50	
Qty.	2 pcs.							
€	136,80	139,90	143,30	146,60	152,60	177,80	254,40	1.151,40 €



#### 3100 TCT Router bits

One small basis holder (1x6)

Standard	1.	2.	3.	4.	5.	6.	€
3100.							
Ø in mm	3109.825	3101.825	3107.820	3105.890	3104.812	3118.845	
Qty. €	1 pcs. 59,50	1 pcs. 33,05	1 pcs. 41,65	1 pcs. 31,75	1 pcs. 31,75	1 pcs. 46,45	244,15€
C	39,30	55,05	41,05	51,75	,	, i	,
					Tota		244,15 €



All prices are recommended retail prices additionally value added tax.



für Besserbohrer

FAM



#### One Display (3x6)

Standard	1.	2.	3.	4.	5.	6.	€
3100.							
Ø in mm	3107.804	3107.806	3107.810	3107.816	3107.820	3107.825	
Qty.	1 pcs.						
€	25,30	25,85	32,10	36,75	41,65	45,35	207,00€
Medium	1.	2.	3.	4.	5.	6.	€
3100.							
Ø in mm	3107.663	3107.673	3157.625	3101.812	3101.825	3114.831	
Qty.	1 pcs.						
€	31,30	51,75	47,50	26,60	33,05	59,75	249,95€
Deep	1.	2.	3.	4.	5.	6.	€
3100.							
Ø in mm	3109.819	3109.828	3109.831	3109.838	3118.845	3104.812	
Qty.	1 pcs.						
€	57,50	61,00	66,45	71,20	46,45	31,75	334,35€
					Total		791,30 €



FAMASerbohrer

#### **1599 + 1591** Brad Point Drill Bit Mix

#### One Display (3x8)

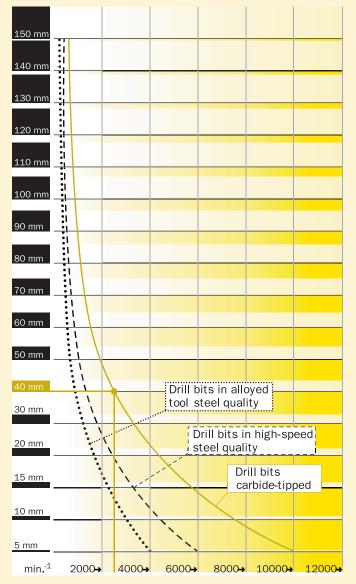
Standard	1.	2.	3.	4.	5.	6.	7.	8.	€
1599.1 (L150	mm)								
Ø in mm	3	4	5	6	7	8	9	10	
Qty.	2 pcs.								
€	24,80	24,80	26,20	27,80	36,10	36,10	38,30	41,90	256,00€
Medium	1.	2.	3.	4.	5.	6.	7.	8.	€
1599.2 (L 250)	mm)								
Ø in mm	3	4	5	6	8	10	12	14	
Qty.	2 pcs.								
€	35,70	35,70	40,70	45,60	58,80	71,40	90,60	104,10	482,60€
Deep	1.	2.	3.	4.	5.	6.	7.	8.	€
1591.									
Ø in mm	3	4	5	6	8	10	12	14	
Qty.	2 pcs.								
€	9,10	9,30	9,90	10,30	12,00	14,10	21,30	30,00	116,00€
							Total		854,60 €



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FAMA For Besserbohrer





We recommend to select the tool according the material you want to work on. Here are some tips:

#### Drill bits in alloyed tool steel quality: .....

Best application in soft woods like spruce, pine and poplar. An exception is the TS-Bormax® drill bit, it can not only be used for soft wood but also for European hardwood and board materials. Good results can also be achieved in soft and medium-hard plastics.

#### Drill bits in high-speed steel quality: \_\_\_\_\_

Good application in all soft woods and many hard woods as well as MDF.

#### **Drill bits carbide-tipped:**

Less suitable for soft woods (exception CT-Bormax<sup>3</sup>) but ideal for hard woods and exotic hard woods. Very good results in board materials as well as veneer- and plasticcoated panels. Furthermore suitable for drilling in hard plastics.

Please choose the tool material from the three characteristics. The intersection of the graph with the corresponding diameter of the drill bit shows the recommended rpm. Please do not exceed the recommended rpm, because this will have a negative impact on the drilling quality and the service life of the tool.

#### Example:

For TCT-cylinder boring bit (e.g. product line 1662) Ø 40 mm, the recommendation is an rpm of 2.500.



Different applications require different qualities. In order to make it easier for you, we divide our tools into four main quality categories. A non-professional with the task to drill three holes in poplar wood certainly needs a different tool than for example the furniture industry with its mass production, where thousands of holes have to be drilled in beech wood. Our aim is to meet both requirements with our product range. Therefore the home handy-man should be very satisfied with the result of a 30-mm drill a Forstner bit of the quality level "classic" achieves in soft wood.

Please let you guide by our quality classification or call us: We will be glad to advise you!

#### ○ quality level Hobby:

reasonable quality tools for the non-professional segment

#### OO quality level Classic:

for the quality-conscious user

#### OOO quality level Profi:

professional tools for the craftsman with high demanding requirements on tool and application

#### OOOO quality level Excellent:

wear-resistant tools of the highest quality level, even for extreme conditions of use

## **Information blocks**



Subtle distinction

X

Tool material

Description of the tool design

Recommended rpm and specific example for the most common diameters in the corresponding field of application

Description of application

Practical advice and specialty of the tool

Packaging unit and information on individual packaging

### **Abbreviations**

OØ	outer diameter
Ø	inner diameter
SØ	shank diameter
L	length of shaft/shank length
OAL	overall length
MC/HS	main cutters
EL	effective length
SPL	spiral length
W	weight
т	teeth
R	radius
$\angle$	degrees
Cutting I.	cutting length
max rpm	maximum acceptable rpm
L1	length of first step (step drill bit)
L2	length of second step (step drill bit)
D1	core diameter
Lead/1"	no. of threads
PU	packing unit

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We only make regular deliveries to resellers and/or commercial consumers. The following General Terms and Conditions therefore apply to this group of persons (entrepreneurs) and legal persons under public law or special public assets within the meaning of § 310 (1) of the German Civil Code (BGB). All our offers and purchase and delivery contracts concluded with us are based solely on our General Terms and Conditions. Any deviations from these General Terms and Conditions require our express written approval.

#### I. Scope of supply

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The scope of supply shall be based on our written order confirmation. A deviation from the scope of supply (especially for custom-made articles) shall be permitted as long as there is no major difference from the agreed scope of supply and the deviations are reasonable for the customer. Partial deliveries shall be permitted if they do not lead to any disadvantages regarding use of the goods. During the delivery period, we shall reserve the right to make design and shape changes, which are due to an improvement in the state of the art or to legal requirements, provided the changes in the delivery item are minor and they are reasonable for the customer.

#### II. Delivery terms/Passing of risk in the case of shipment

(1) When the net value of the goods is less than € 250,- we shall deliver ex works, excluding freight, postage and packing. In the case of small orders with a net goods value less than € 50,- we shall reserve the right to calculate a minimum quantity surcharge. When the net value of the goods exceeds € 250,- we shall deliver from Germany free destination (receiving station) or free German frontier, including freight, postage, packing (excluding carriage and local delivery charges, as well as costs for incidental charges such as couriers, express delivery, cash on delivery, etc., which shall be calculated separately). This shall not include drill rigs, soil augers and accessories, which shall always be delivered ex works, excluding freight, postage and packing. This provision shall also apply to other goods with a heavier weight and larger dimensions, which do not form part of our normal drill and tool product range. When the net value of the goods is more than  $\in$  1,500,we shall deliver FOB German airport or port.

(2) In the case of deliveries from our depots, we shall levy a reasonable surcharge for prior carriage charges and warehouse service (maximum 5% of the net goods value). Packaging shall become the property of the customer and shall be charged by our company. Postage and packing costs shall be invoiced separately.

(3) The dispatch method shall be chosen at our best discretion. When the goods are sent to the customer, but at the latest when they leave the factory/warehouse, risk of accidental loss or accidental deterioration of the goods shall pass to the customer, irrespective of whether delivery is effected by our company or a third party commissioned by us, and irrespective of who pays the freight costs. Transport insurance shall only be provided at the express request of the customer and in return for payment. Transport damage shall be reported immediately to the carrier.

(4) <u>In the case of direct delivery to thierd parties (for</u> example to the customer of the customer) we charge a service fee of 7.50 euros per order plus shipping costs.

(5) <u>In the case of an express delivery</u>, the order must be submitted by 12:30 hrs to guarantee the same day delivery.

#### **III.** Prices and price changes

(1) All prices shall be shown in Euro per unit (piece, set, etc.) plus statutory VAT.

(2) Price changes after conclusion of the contract shall be permitted if a period of more than three months has elapsed between the date of conclusion of the contract and the agreed delivery date. If wages, material costs, sales costs or market cost prices then rise before completion of the delivery, we shall be entitled to increase the price by a reason-able amount based on the cost increases.

#### **IV. Payment terms**

Our invoices shall become due for payment within 10 days less 2% discount or in 30 days after delivery without any deductions. Invoices under  $\in$  50,– shall become due for payment immediately without any deductions. If the customer fails to pay on time, default interest amounting to 8% above the basic interest rate shall become due in accordance with § 247 of the German Civil Code (BGB). We shall expressly reserve the right to enforce a claim for further damage. Payments made by cheque or bill of exchange shall only be considered as made when honoured.

#### V. Reservation of title

(1) We shall reserve title to the supplied goods until all claims from the delivery contract have been paid in full. If the customer infringes the contract, in particular by delays in payment, we shall be entitled to recover the goods after issuing a warning. The customer shall be obliged to return the goods in this case. Assertion of the reservation of title and recovery of the delivery items by us shall not be regarded as withdrawal from the contract.

(2) The customer shall be entitled to resell the delivery items in the ordinary course of business. However, the customer shall now assign to us all claims amounting to the purchase price (including VAT) agreed between our company and the customer, which accrue to the



customer through resale of the goods, i.e. irrespective of whether the delivery items are resold without processing or after processing. The customer shall be empowered to collect this claim after its assignment. Our authority to personally collect the claims shall not be affected as long as the customer duly complies with his payment obligations and is not in default of payment. If this is the case, however, we may request the customer to stipulate the assigned claims and their debtors, provide all the information required for collection, hand over the related documents and inform the debtors (third parties) about assignment.

(3) We shall reserve the right to withdraw from the contract or terminate our obligation to perform if we become aware of a currently existing or future poor financial situation of the customer.

#### **VI. Warranty**

(1) Warranty claims by the customer shall presuppose that he has duly complied with his obligation to inspect the goods and notify defects in accordance with § 377 of the German Commercial Code (HGB).

(2) Defect claims by the customer shall become statutebarred in 12 months after acceptance of the delivery item. The above provisions shall not apply if longer periods are legally prescribed in § 438 (1) No. 2, § 479 (1) and § 634a (1) of the German Civil Code (BGB). Our permission shall be obtained before goods are returned at any time.

(3) If, despite all care being taken by our company, the delivered goods contain a defect which already existed at the time that risk was passed, we shall have the choice of either reworking the goods or delivering replacement goods subject to receiving notification of the defect in good time. We shall always be given the opportunity to effect supplementary performance within a reasonable period of time. Recourse claims shall remain unaffected by the above provision without restriction.

(4) If we are unable to rectify a defect covered by our warranty obligation or if additional rework attempts are unreasonable for the customer, the customer may request – irrespective of any compensation claims – withdrawal from the contract or a reduction in the purchase price instead of rework.

(5) Defect claims shall not arise if there is only a slight deviation from the agreed state of the goods or if their usability is only slightly impaired. Defect claims shall also not arise in the case of natural wear or tear and with damage which occurs after passing of risk due to incorrect or negligent handling, excessive force or special external influences which are not covered by the contract.

(6) Claims by the customer in connection with expenses required for the purpose of supplementary performance, especially transport costs, travelling expenses, labour costs or material costs, shall be excluded if the expenses increase because the goods supplied by our company were brought later to a place other than the customer's branch, unless the movement of the goods corresponds to their intended use.

(7) Recourse claims by the customer against our company shall only arise if the customer has not concluded any agreements over and beyond legally compelling defect claims with his customer. Subparagraph 6 shall apply analogously to the amount of the customer's recourse claim.

(8) Unless the claims relate to death, physical injury or damage to health, our liability shall only extend to cases of intent and gross negligence. This provision shall also apply to compensation claims for damages in tort and to actions by our subcontractors and vicarious agents.

#### VII. Place of performance and place of jurisdiction

The place of performance and place of jurisdiction for all participating contracting parties shall be Remscheid. Ger-man law shall apply to the exclusion of the UN Convention on the International Sale of Goods, even if the customer's head office is outside Germany.

#### **VIII. Miscellaneous**

If individual clauses of these General Terms and Conditions are or become invalid, or if they contain a loophole, the validity of the other clauses shall not be affected.





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Go ahead and describe the exact application – together we will come to a solution. This can either be a combination of standard tools or a special custom-made tool, which will be designed according to your individual requirements.

If it is possible to fulfil your task by one of our standard tools, quick help can be provided because most of our 4,500 quality tools are available on stock. If not, we dedicate ourselves with all our competence to the realization of custom-made products, special requests and extraordinary requirements. In this case the delivery time will take a little bit longer depending on the extent and effort. A sketch, a pattern or a drawing always leads to a better understanding and simplifies production process. An important parameter that determines the price is the quantity. This also applies to the realization of changes in shaft, special shafts and measurements concerning our standard tools.

By the way, auger bits can be produced up to a diameter of 80 mm on our CNC-machines. With our latest machine even a spiral length up to 2,500 mm is possible.

For step drill bits we prepared an enquiry form concerning the series of articles No. 1887 on page 59. Please do not forget to state the desired quantity here as well!

Our specialists support you with regard to all technical questions. Just call us, we will be glad to advise you!

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**Right-Angle-Driver** Art.-No.: 1598.750 on page 55

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Interior: A pair of diagonal staggered metal teeth for perfekt power transmission up to 50 Nm!

NEW



Construction depth: 40 mm construction depth allows to drill/ screw in inaccsessible areas

A strong magnet supports the holder for the ¼ inch bits









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