

Face Drivers FFB / FFBH



with drive pins and fixed center pin for high true run accuracy

The entire surface of the workpiece can be completely machined with one single clamping and with a maximum of torque transmission. NEIDLEIN face drivers are mechanical clamping systems, suitable **for turning and hard turning** likewise.

Face drivers of type FFB / FFBH are power-operated on the side of the machine spindle as well as the side of the tailstock. The workpieces are clamped centrically by the fixed center pin. This operation results in high true run-out accuracy.

Drive pins of type FFBH are hydraulically activated and compensated, thus achieving excellent true run-out accuracy.

Type FFB with flange retainer

Type FFB is mounted onto the machine spindle nose using flange-adapter, adjustable for true run-out.



Type FFBH with flange retainer

Type FFBH is mounted onto the machine spindle nose using flange-adapter adjustable for true run-out.



NEIDLEIN face drivers FFB / FFBH with fixed center pin ensure:

- maximum of torque transmission, thus achieving a high rate of metal removing
- datum-point location in the center of the workpiece ensures constant measures of length
- extended service life of drive pins and cutting tools due to vibration-free running
- run-out deviation max.: 0.002 - 0.01 mm
- fixed clamping location
- compensating driving devices/ideal clamping of the workpiece
- easy handling

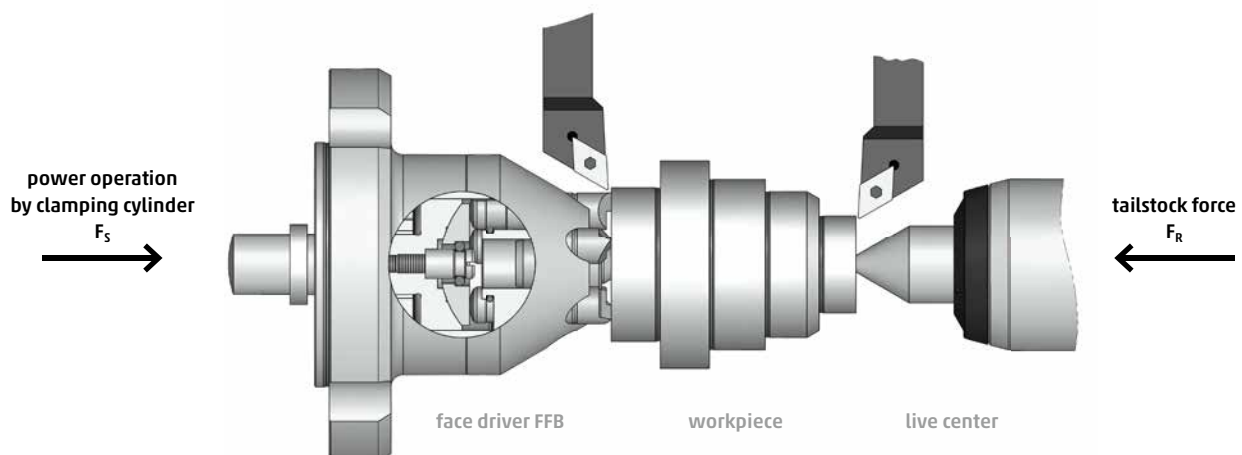
Clamping principle

The center pin located on the side of the tailstock pushes the workpiece against the fixed center pin of the face driver. The motion of the drive pins against the surface of the workpiece is initiated by the clamping cylinder mounted into the machine. The drive pins are "floatingly" suspended, thus compensating irregularities with regard to possible unevenness of the surface of workpieces. The datum-point of workpieces on the machines is determined by the size of the center hole. The entire surface of the workpiece can now be tooled in one single clamping.

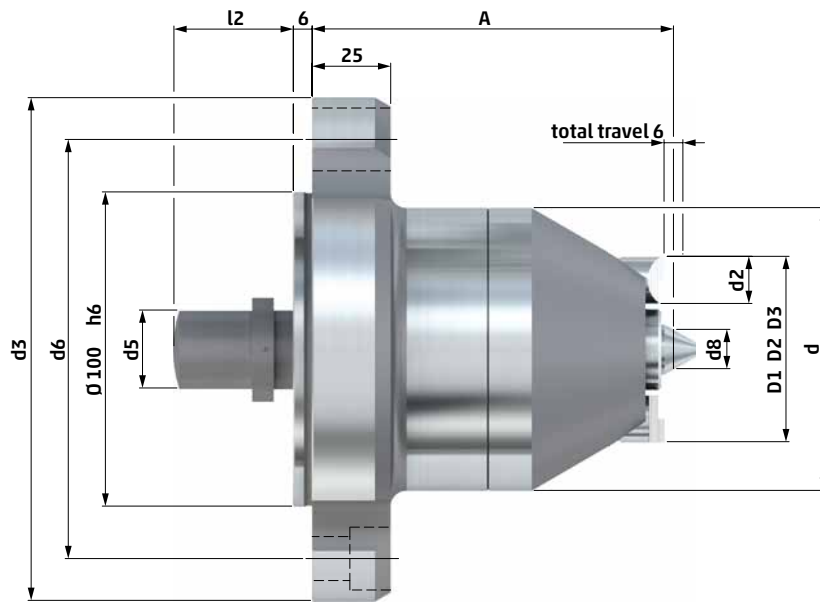
See page 20 - 21 with data for achievable removal of material and the thrust requested. The appropriate standard drive pins and center pins can be found on page 22 - 27 and page 29.

We will be glad to design clamping devices suitable for your workpieces.

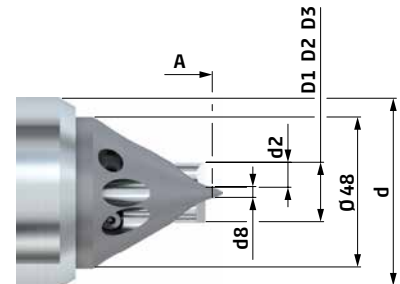
Type FFB / FFBH with flange retainer



Technical data – type FFB face drivers



type FFB 01/0



type FFB	d	center Ø	d2	d3	d5	d6	d8	A	l2	drive pin	fastening screw		clamping Ø			cat. no.
											type	pcs	D1	D2	D3	
01	60	1 - 5	6	160	18	133.4	3.5	115	38	3	M12	3	8	11	17	731 01
0	60	1 - 3	8	160	18	133.4	3	115	38	3	M12	3	6	11	19	731 12
11	42	2 - 6.5	6	160	12	133.4	4.25	115	38	3	M12	3	11	14	20	731 11
1	48	4 - 8.5	8	160	18	133.4	6.25	115	38	3	M12	3	13	18	26	731 02
2	70	4 - 9	10	160	22	133.4	6.5	115	38	3	M12	3	26	31	36	731 03
3	70	6 - 11	10	160	22	133.4	8.5	115	38	3	M12	3	34	39	44	731 04
35	80	4 - 9	15	160	22	133.4	6.5	115	38	3	M12	3	29	39	49	731 13
4	90	10 - 15	15	160	25	133.4	12.5	115	38	5	M12	3	39	49	59	731 05
45	100	10 - 15	15	160	25	133.4	12.5	115	54	5	M12	3	49	59	69	731 06
5	132	10 - 15	20	160	25	133.4	12.5	115	54	5	M12	3	69	84	99	731 07
55	182	10 - 15	20	220	40	171.4	12.5	155	54	5	M16	3	110	125	140	731 08
6	220	10 - 15	20	250	40	210	12.5	171	54	5	M20	3	140	155	170	731 09

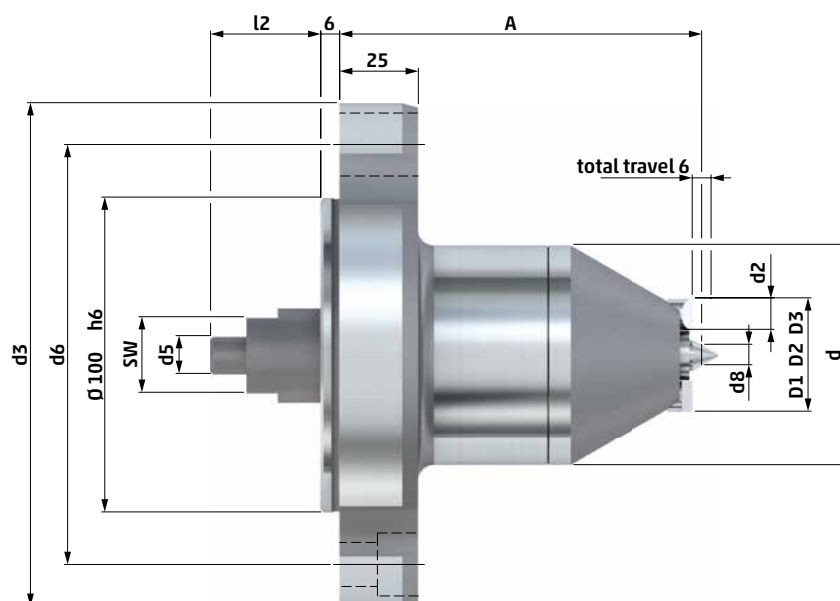
- All face drivers are supplied without drive pins. (drive pins see page 22 - 27)
- Types FFB 01/0 are supplied with center body, all other types without center pin. (center pin see page 29)
- The diameter d8 refers to the standard center pins. (see page 29)
- Further center pins for other center holes upon request. (see page 30)
- Mounting elements for face drivers see page 68 - 73.

It is the purpose of an adjustable flange-adapter to provide stable connection to the machine spindle. We supply these flange adapters for various sizes of spindle noses in standard size (DIN ISO 702-1/DIN 55028) or for spindle noses specific to machine-tool manufacturer. Thus face drivers of type FFB can be used all-purpose on different machines. Driving devices and center pins can be exchanged front view on the machine without any effort.

Upon request and depending on the tooling direction of the machine, the face driver can be equipped optionally with drive pins for counter-clockwise tooling (SR/tooling direction M3), for clockwise tooling (SL/tooling direction M4) or for both tooling directions (NV = bi-directional).

Apart from the clamping diameters enlisted in the table under D1, D2, D3 we can also supply intermediate dimensions upon request. We can as well make extra-large center pins or mushroom centers appropriate to oversized centerings in workpieces. (see page 30)

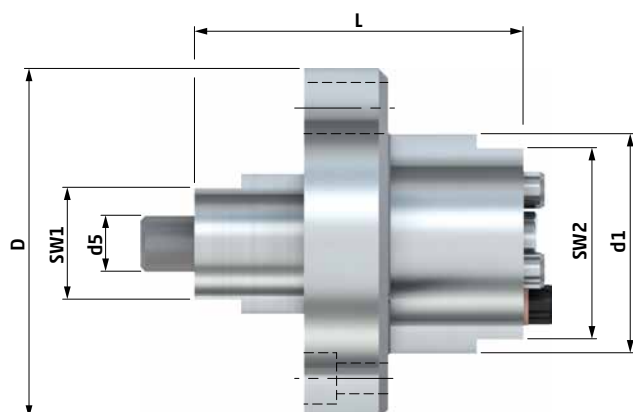
Technical data – type FFBH face drivers



type	d	center Ø	d2	d3	SW	d5	d6	d8	A	l2	drive pin	fastening screw		clamping Ø			cat. no.
FFBH												type	pcs	D1	D2	D3	
1	70	4 - 8.5	8	160	24	12	133.4	6.25	115	35	3	M12	3	13	18	26	631 02
2	70	4 - 9	10	160	24	12	133.4	6.5	115	35	3	M12	3	26	31	36	631 03
3	70	6 - 11	10	160	24	12	133.4	8.5	115	35	3	M12	3	34	39	44	631 04
4	90	10 - 15	15	160	34	12	133.4	12.5	132	35	5	M12	3	39	49	59	631 06
45	100	10 - 15	15	160	34	12	133.4	12.5	132	35	5	M12	3	49	59	69	631 07
5	132	10 - 15	20	160	34	12	133.4	12.5	149	35	5	M12	3	69	84	99	631 08

- All face drivers are supplied without drive pins and without center pins. (changeable parts see page 22 - 27 and page 29)
- The diameter d8 refers to the standard center pins. (see page 28)
- Further center pins for other center holes upon request. (see page 30)
- Mounting elements for face drivers see page 68 - 73.

Technical data– type FFBH hydraulic unit



type	SW1	d5	L	d1	SW2	D	cat. no.
FFBH							
1	24	12	70,5	47	41	75	631 02 HE
2	24	12	70,5	47	41	75	
3	24	12	70,5	47	41	75	
4	34	12	70,5	65	59	93	631 06 HE
45	34	12	70,5	65	59	93	
5	34	12	70,5	87	81	131	631 08 HE

The general explanatory notes for this face driver FFBH can be obtained from the sheet "technical data – type FFB". For safe and smooth operation of face driver we recommend exchange of hydraulic unit after 1500 operating hours.

Furthermore, we offer the option for professional maintenance of the exchanged hydraulic units in our production plant.



Drive Pins FSB / SB / FFB · Chisel SL / SR / NV

**for torque transmission onto the workpiece
for soft / green tooling**

Type FSB / SB / FFB · chisel SL / SR / NV



SR

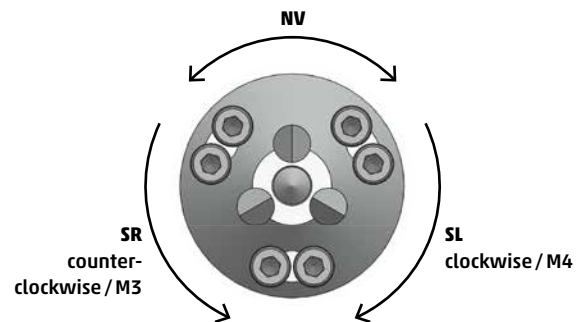


SL

SR

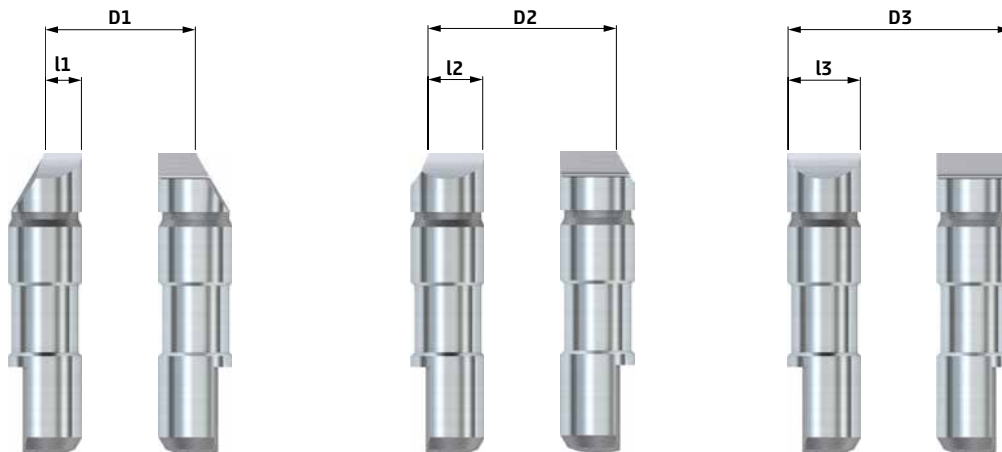
NV

view from tailstock onto the face driver



Technical data – type FSB / SB / FFB · chisel SL / SR / NV

types 01 and 11 with chisel SL and SR are double chiselled



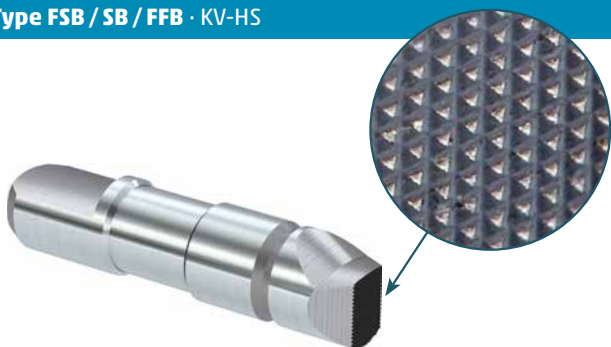
for type FSB / SB / FFB	clamping Ø			chisel length			TYPE CHISEL SL for tooling direction M4	TYPE CHISEL SR for tooling direction M3	TYPE CHISEL NV for tooling direction M4 and M3
	D1	D2	D3	L1	L2	L3	cat. no.	cat. no.	cat. no.
01	8			1.5			736 104	736 101	736 107
		11			3		736 105	736 102	736 108
			17			6	736 106	736 103	736 109
0	6			1.5			736 04	736 01	736 07
		11			4		736 05	736 02	736 08
			19			8	736 06	736 03	736 09
1	13			1.5			736 13	736 10	736 16
		18			4		736 14	736 11	736 17
			26			8	736 15	736 12	736 18
11	11			1.5			736 76	736 73	736 79
		14			3		736 77	736 74	736 80
			20			6	736 78	736 75	736 81
2	26			5			736 22	736 19	736 25
		31			7.5		736 23	736 20	736 26
			36			10	736 24	736 21	736 27
3	34			5			736 31	736 28	736 34
		39			7.5		736 32	736 29	736 35
			44			10	736 33	736 30	736 36
35	29			5			736 85	736 82	736 88
		39			5		736 86	736 83	736 89
			49			5	736 87	736 84	736 90
4	39			5			736 40	736 37	736 43
		49			7.5		736 41	736 38	736 44
			59			7.5	736 42	736 39	736 45
45	49			5			736 94	736 91	736 97
		59			7.5		736 95	736 92	736 98
			69			7.5	736 96	736 93	736 99
5	69			5			736 49	736 46	736 52
		84			10		736 50	736 47	736 53
			99			10	736 51	736 48	736 54
55	110			5			736 58	736 55	736 61
		125			10		736 59	736 56	736 62
			140			10	736 60	736 57	736 63
6	140			5			736 67	736 64	736 70
		155			10		736 68	736 65	736 71
			170			10	736 69	736 66	736 72
7	180			5			736 114	736 111	736 117
		195			15		736 115	736 112	736 118
			210			20	736 116	736 113	736 119
75	230			5			736 344	736 341	736 347
		245			15		736 345	736 342	736 348
			260			20	736 346	736 343	736 349
8	270			10			736 373	736 370	736 376
		290			20		736 374	736 371	736 377
			310			30	736 375	736 372	736 378
85	320			10			736 364	736 361	736 367
		340			20		736 365	736 362	736 368
			360			30	736 366	736 363	736 369



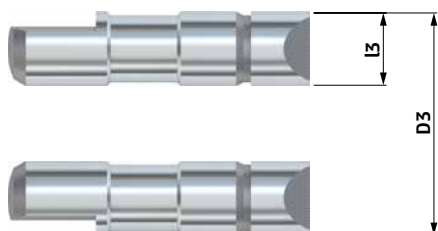
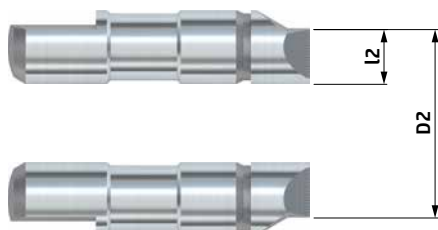
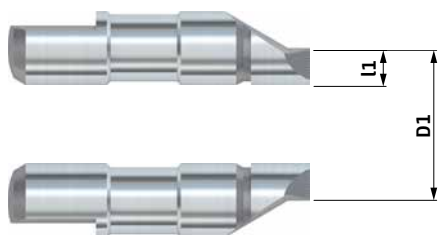
Drive Pins FSB / SB / FFB · KV-HS

cross serrated and coated for hard turning operation
for torque transmission onto the workpiece
for hard tooling

Type FSB / SB / FFB · KV-HS



Technical data – type FSB / SB / FFB · KV-HS



for type FSB / SB / FFB	clamping Ø			chisel length			cat. no.
	D1	D2	D3	l1	l2	l3	
01	8			1.5			736 200
		11			3		736 201
			17			6	736 202
0	6			1.5			736 203
		11			4		736 204
			19			8	736 205
1	13			1.5			736 209
		18			4		736 210
			26			8	736 211
11	11			1.5			736 206
		14			3		736 207
			20			6	736 208
2	26			5			736 212
		31			7.5		736 213
			36			10	736 214
3	34			5			736 215
		39			7.5		736 216
			44			10	736 217
35	29			5			736 218
		39			10		736 219
			49			15	736 220
4	39			5			736 221
		49			10		736 222
			59			15	736 223
45	49			5			736 224
		59			10		736 225
			69			15	736 226
5	69			5			736 227
		84			12.5		736 228
			99			20	736 229
55	110			5			736 230
		125			12.5		736 231
			140			20	736 232
6	140			5			736 233
		155			12.5		736 234
			170			20	736 235

■ Further clamping Ø of drive pins upon request.

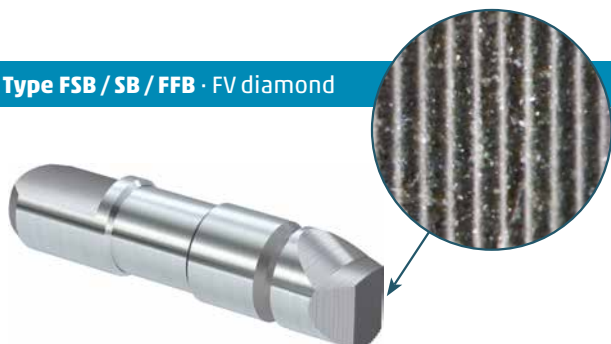


Drive Pins FSB / SB / FFB · FV Diamond

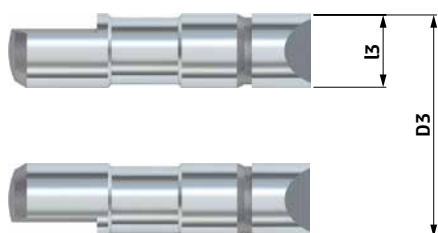
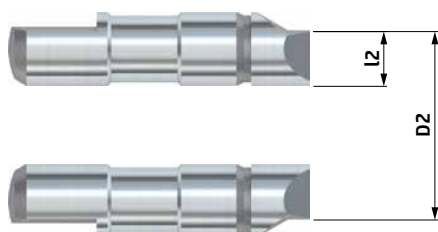
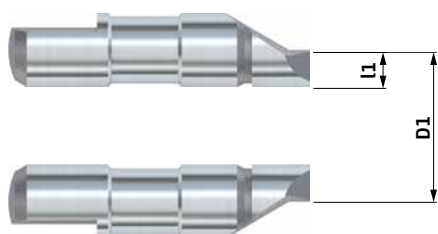
serrated and diamond embedded
for torque transmission onto the workpiece
for hard tooling

for higher friction coefficient and higher tool life of drive pin

Type FSB / SB / FFB · FV diamond



Technical data – type FSB / SB / FFB · FV diamond



for type	clamping Ø			chisel length			cat. no.
FSB / SB / FFB	D1	D2	D3	l1	l2	l3	
01	8			1.5			736 400
	11				3		736 401
		17				6	736 402
0	6			1.5			736 403
	11				4		736 404
		19				8	736 405
1	13			1.5			736 409
	18				4		736 410
		26				8	736 411
11	11			1.5			736 406
	14				3		736 407
		20				6	736 408
2	26			5			736 412
	31				7.5		736 413
		36				10	736 414
3	34			5			736 415
	39				7.5		736 416
		44				10	736 417
35	29			5			736 418
	39				10		736 419
		49				15	736 420
4	39			5			736 421
	49				10		736 422
		59				15	736 423
45	49			5			736 424
	59				10		736 425
		69				15	736 426
5	69			5			736 427
	84				12.5		736 428
		99				20	736 429
55	110			5			736 430
	125				12.5		736 431
		140				20	736 432
6	140			5			736 433
	155				12.5		736 434
		170				20	736 435

■ Further clamping Ø of drive pins upon request.



Drive Pins FSB / SB / FFB · Chisel Carbide

full carbide / carbide inserts

for torque transmission onto the workpiece

for tooling of high-tensile-strength materials

Type FSB / SB / FFB · chisel carbide

model B / SR



MODEL A



SL

SR

NV

MODEL B



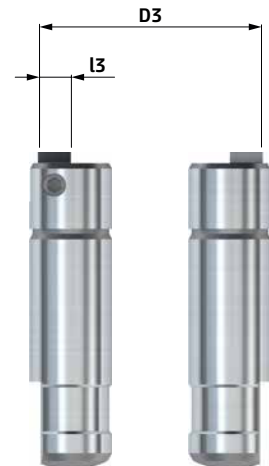
SL

SR

Technical data – type FSB / SB / FFB · chisel carbide

type 01 - 3 made of full carbide, model A

type 35 - 6 with carbide inserts, model B



MODEL A**TYPE CHISEL SL**
for tooling
direction M4**TYPE CHISEL SR**
for tooling
direction M3**TYPE CHISEL NV**
for tooling
direction M4 and M3

for type FSB / SB / FFB	clamping Ø D3	length l3	cat. no.	cat. no.	cat. no.
01	17	6	736 500	736 518	736 536
0	19	8	736 501	736 519	736 537
1	26	8	736 502	736 520	736 538
11	20	6	736 503	736 521	736 539
2	36	10	736 504	736 522	736 540
3	44	10	736 505	736 523	736 541

MODEL B

for type FSB / SB / FFB	clamping Ø D1 D3	length l3	cat. no.	cat. no.
35	34	6	736 506	736 524
	46	6	736 507	736 525
4	44	6	736 508	736 526
	56	6	736 509	736 527
45	54	6	736 510	736 528
	66	6	736 511	736 529
5	75	6	736 512	736 530
	95	6	736 513	736 531
55	116	6	736 514	736 532
	136	6	736 515	736 533
6	146	6	736 516	736 534
	166	6	736 517	736 535

- Drive Pins are supplied with carbide insert.
- Further clamping-Ø of drive pins upon request.

Changeable inserts for type 35 - 6, model B

changeable parts	cat. no.
carbide insert	736 550
set screw for fastening of carbide insert	736 551



Center Pins FFB / FFBH

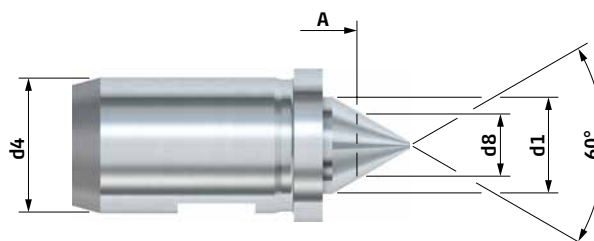
for face drivers FFB / FFBH with fixed center pin

Type FFB / FFBH · tool steel or carbide

Technical data - type FFB / FFBH · tool steel or carbide



with carbide
insert

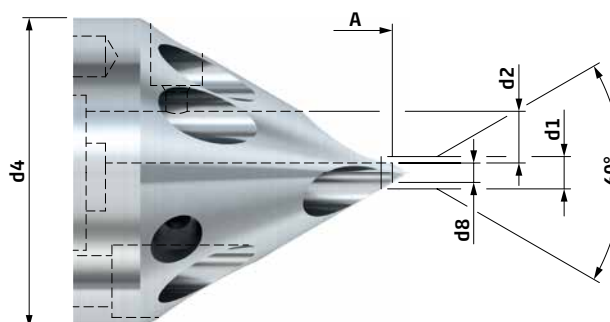


A overhang dimension of face driver
to centre d8 (see page 18-19)

center body type FSB / SB 01 / 0



center body type FSB / SB 01 / 0



TYPE
TOOL STEEL

TYPE
CARBIDE

for type FFB / FFBH	d1	d2	d4	center Ø	d8	cat. no.
01	5	6	48	1 - 5	3.5	734 01
0	3	8	48	1 - 3	3	734 101
11	7.8	-	6	2 - 6.5	4.25	734 11
1	9.8	-	8	4 - 8.5	6.25	734 02
2	10	-	14	4 - 9	6.5	734 03
3	12	-	18	6 - 11	8.5	734 04
35	10	-	14	4 - 9	6.5	734 12
4	16	-	20	10 - 15	12.5	734 05
45	16	-	28	10 - 15	12.5	734 06
5	16	-	35	10 - 15	12.5	734 07
55	16	-	35	10 - 15	12.5	734 08
6	16	-	35	10 - 15	12.5	734 09

cat. no.
734 43
734 44
734 33
734 34
734 35
734 36
734 37
734 38
734 39
73440
734 41
734 42

- Further center pins for other center holes upon request.
- Center pins of type FFB / FFBH 01 / 0 (type carbide) are just carbide coated on the 60° centering.