

Face Drivers for Soft Turning with Drive Disks

- FSP
- FSPB
- Changeable Parts



Face Drivers FSP/ FSPB

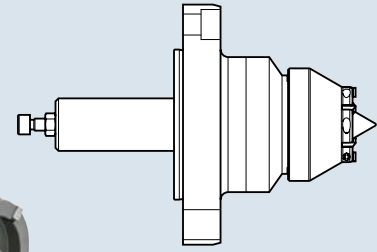
Clamping tools for machining between centers

The entire surface of the work piece can be tooled and finished by clamping with a maximum of torque transmission.

NEIDLEIN face drivers of type FSP/FSPB with drive disks are mechanical clamping systems which are suited for soft/green as well as hard tooling. In application, they feature maximum flexibility and high robustness.

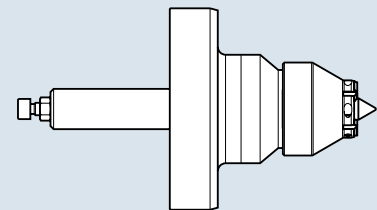
These face drivers are power-operated by the thrust of the tailstock. Work pieces are clamped centrally using a movable center pin. This way different centerings can be adjusted, thus ensuring a constant datum-point at the face end of the work piece.

Type FSP with flange retainer for screw connection



Type FSP is mounted onto machine spindle nose using a flange adapter.

Type FSPB with flange retainer for jaw clamping

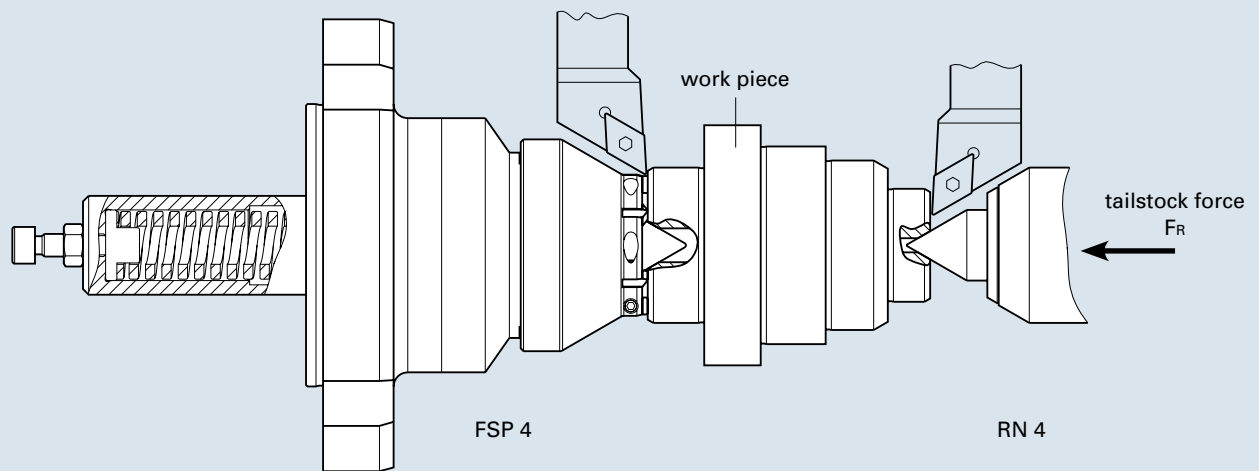


Type FSPB is directly clamped with the chuck using soft jaws.

NEIDLEIN face drivers FSP/FSPB ensure:

- a maximum of torque transmission, thus achieving high metal removing rates
- datum-point at the face end of work piece, stable datum-point in case of different centerings
- compensating drive disk
- high flexibility in the application, wide range of clamping diameters
- fixed center pin in clamped condition
→ fixed clamping point
- maximum deviation of true run-out accuracy 0.01-0.02 mm
- adjustable spring force (depending on weight of work piece)
- low setup costs due to fast change of drive disks and center pins
- cost efficient exchange of parts that are in contact with work piece (changeable carbide inserts)

Type FSP with flange retainer



Clamping principle

The center pin located on the side of the tailstock pushes the work piece against the movable center pin of the face driver. The center pin will draw back until the surface of the work piece bears against the drive disk.

In this state the clamping bolt is clamped over the the power flow, in order to ensure a fixed datum-point throughout the entire tooling process.

The drive disk is "floatingly" suspended, thus balancing out possible planarity defects of the contact surface of the work piece.

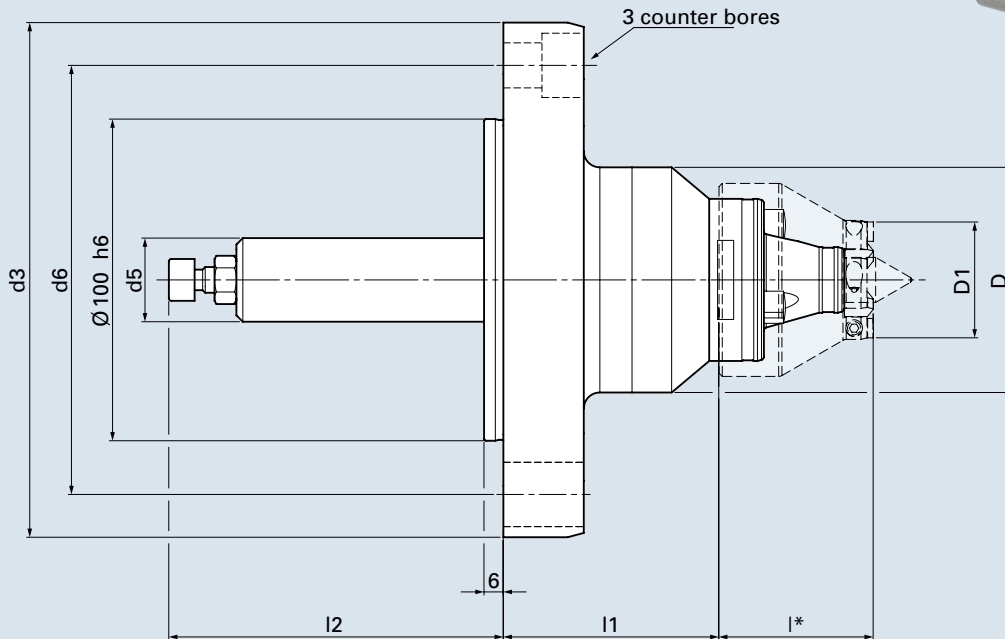
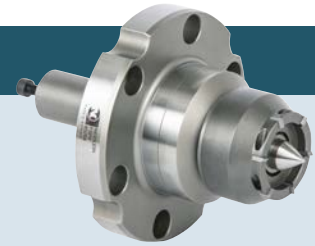
The entire surface of the work piece can now be tooled in one single clamping. See brochure 1.1 page 6 and 7 for data of achievable removal of material and the tailstock thrust requested.

You will find various sizes of face drivers with appropriate standard drive disks and center pins on the following pages.

In case you need special dimensions, we will be glad to design clamping devices suitable for your work pieces.

Technical data – type FSP face driver

For screw connection



l* lengths of drive disk see page 6+7

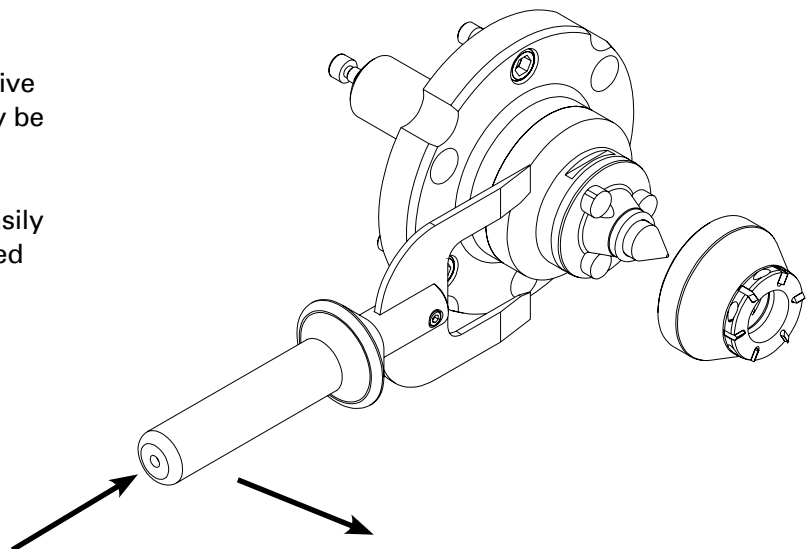
cat. no.	type	D	D1	d3	d5	d6	l1	l2	fixing screws	
									type	pcs
63201	FSP 3	70	9 - 59	160	26	133.4	67	104	M12	3
63203	FSP 4	90	31 - 125	160	35	133.4	70	110	M12	3
63205	FSP 55	182	84 - 290	220	45	171.4	76	170	M16	3

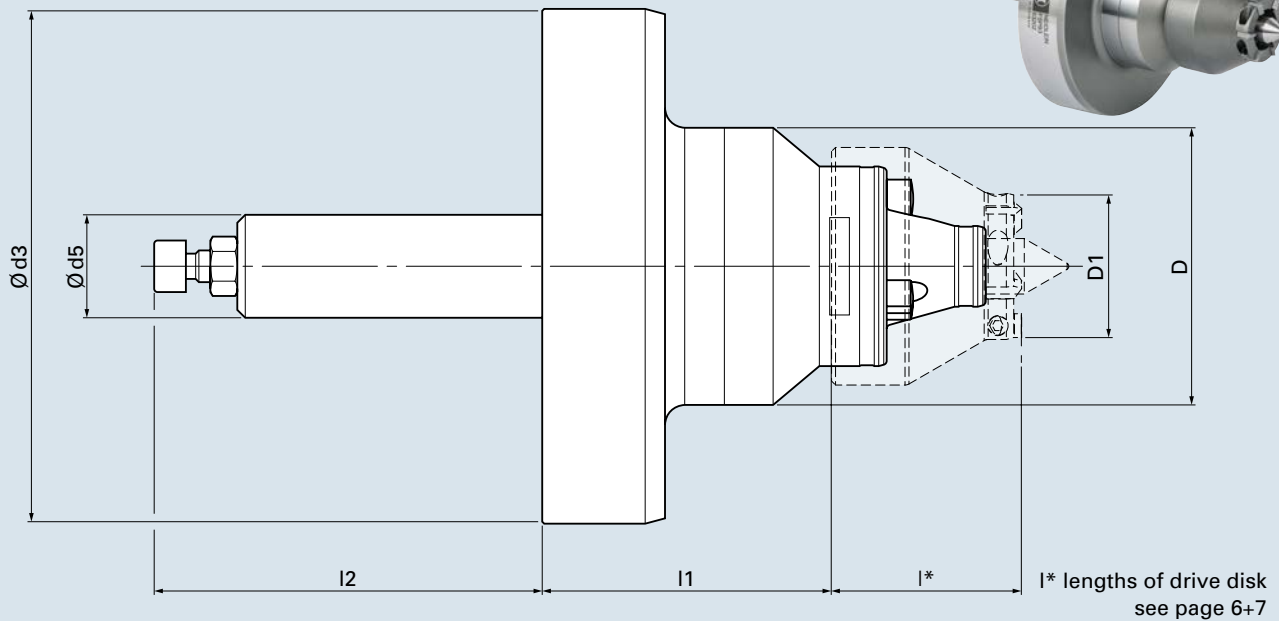
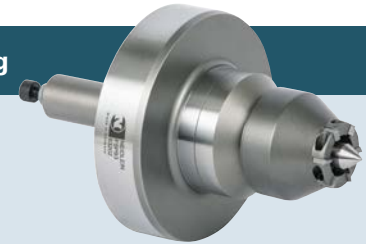
- Face drivers for turning and milling upon request.
- All face drivers are provided without drive disk and without center pin. (changeable parts see page 6-8)
- Mounting elements for face drivers see brochure 2.0

Removal of drive disks

In order to easily and quickly change the drive disks, the removal lever shown at right may be used.

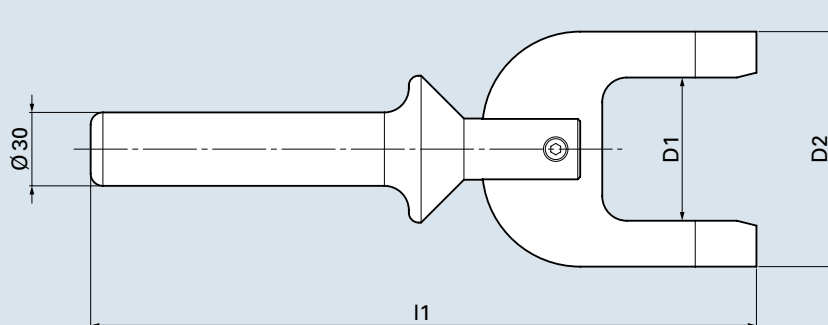
The removal lever is placed laterally and easily inserted. Thus the drive disk can be loosened through a tilting movement.



Technical data – type FSPB face driver
For jaw clamping


cat. no.	type	D	D1	d3	d5	l1	l2
63202	FSPB 3	70	9 - 59	130	26	73	98
63204	FSPB 4	90	31 - 125	130	35	76	104

- Face drivers for turning and milling upon request.
- All face drivers are provided without drive disk and without center pin. (changeable parts see page 6-8)

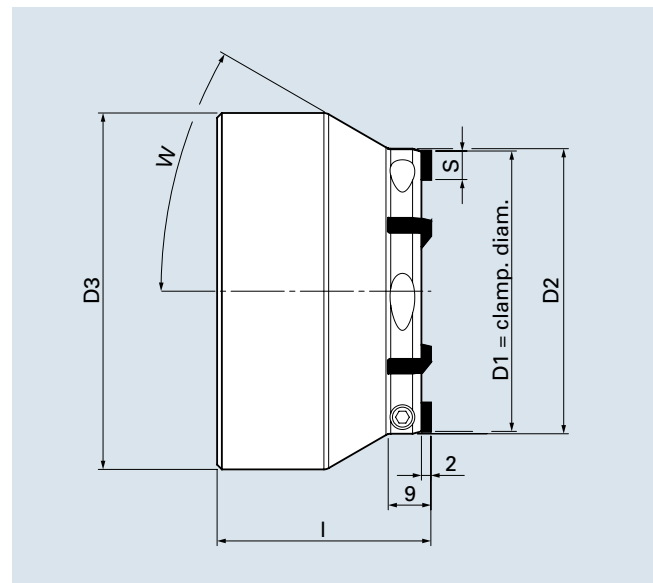
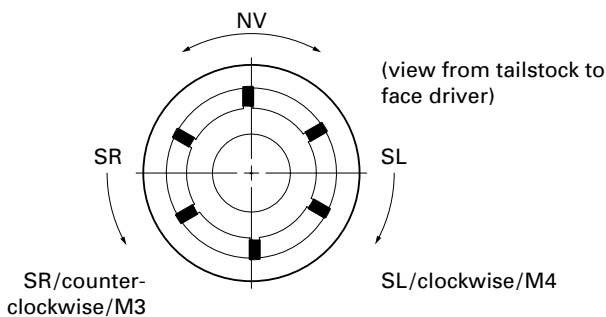
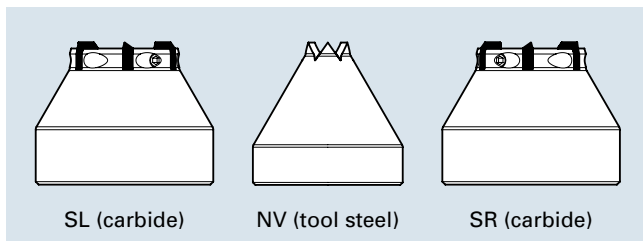
Technical data – removal lever for drive disks


cat. no.	type	D1	D2	l1
63220	FSP / FSPB 3	44.5	80	262
63221	FSP / FSPB 4	58.5	96	272
63222	FSP 55	130.5	190	310

Drive Disks Chisel NV/SL/SR

Type FSP/FSPB chisel NV/SL/SR

Drive disks with changeable carbide inserts or made of tool steel for torque transmission onto the work piece for the purpose of soft/green tooling.



Drive disks FSP/FSPB 3

cat. no.	D1	D2	D3	I	W	number of chisels	S	FR (N)	
NV									
73800	9	9	60	57	45°	6 (tool steel)	1.5	2700	
73801	11	11	60	57	40°	6 (tool steel)	2.0	3600	
73802	14	14	60	57	35°	6 (tool steel)	2.5	4500	
73803	18	18	60	57	30°	6 (tool steel)	3.0	5400	
SL SR									
73804	73824	22	24	60	57	30°	5 (carbide)	4	6000
73805	73825	26	28	60	53	30°	5 (carbide)	4	6000
73806	73826	31	33	60	48	30°	6 (carbide)	4	7200
73807	73827	36	37	60	48	30°	5 (carbide)	6	9000
73808	73828	39	40	60	48	30°	5 (carbide)	6	9000
73809	73829	44	45	60	48	30°	6 (carbide)	6	10800
73810	73830	49	50	60	48	30°	6 (carbide)	6	10800
73811	73831	59	60	60	48		6 (carbide)	6	10800

- All drive disks of carbide version will be provided with the respective carbide inserts.
- Drive disks for turning and milling upon request.
- Additional clamping diameters of drive disks upon request.



Drive disks FSP/FSPB 4

cat. no.		D1	D2	D3	I	W	Number of chisels	S	FR (N)
SL	SR								
73840	73860	31	33	75	50	45°	6 (carbide)	4	7200
73841	73861	36	38	75	50	38°	6 (carbide)	4	7200
73842	73862	39	41	75	45	45°	6 (carbide)	4	7200
73843	73863	44	45	75	45	38°	6 (carbide)	6	10800
73844	73864	49	50	75	45	30°	6 (carbide)	6	10800
73845	73865	59	60	75	45	30°	6 (carbide)	6	10800
73846	73866	69	70	75	45	30°	6 (carbide)	6	10800
73847	73867	84	85	75	45		6 (carbide)	6	10800
73848	73868	99	100	75	45		6 (carbide)	6	10800
73849	73869	110	111	75	45		7 (carbide)	6	12600
73850	73870	125	126	75	45		7 (carbide)	6	12600

- All drive disks are provided with the respective carbide inserts.
- Drive disks for turning and milling upon request.
- Additional clamping diameters of drive disks upon request.

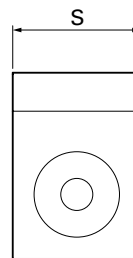
Drive disks FSP 55

cat. no.		D1	D2	D3	I	W	Number of chisels	S	FR (N)
SL	SR								
73880	73900	84	85	160	69	45°	6 (carbide)	6	10800
73881	73901	99	100	160	69	38°	6 (carbide)	6	10800
73882	73902	110	111	160	69	30°	7 (carbide)	6	12600
73883	73903	125	126	160	69	30°	7 (carbide)	6	12600
73884	73904	140	141	160	69	30°	8 (carbide)	6	14400
73885	73905	155	156	160	69	30°	8 (carbide)	6	14400
73886	73906	170	171	160	69		8 (carbide)	6	14400
73887	73907	195	196	160	69		8 (carbide)	6	14400
73888	73908	230	231	160	69		7 (carbide)	10	21000
73889	73909	260	261	160	69		8 (carbide)	10	24000
73890	73910	290	291	160	69		8 (carbide)	10	24000

Changeable inserts for drive disks FSP/FSPB

Carbide inserts

cat. no.	machining direction	for type	S
736548	SL / SR	FSP / FSPB 3, 4	4
736550	SL / SR	FSP / FSPB 3, 4, 55	6
736552	SL / SR	FSP 55	10



Set screw for fixing carbide inserts

cat. no.	thread	for carbide inserts with S =
736549	M4	4
736551	M5	6/10

Information for changing the drive disks

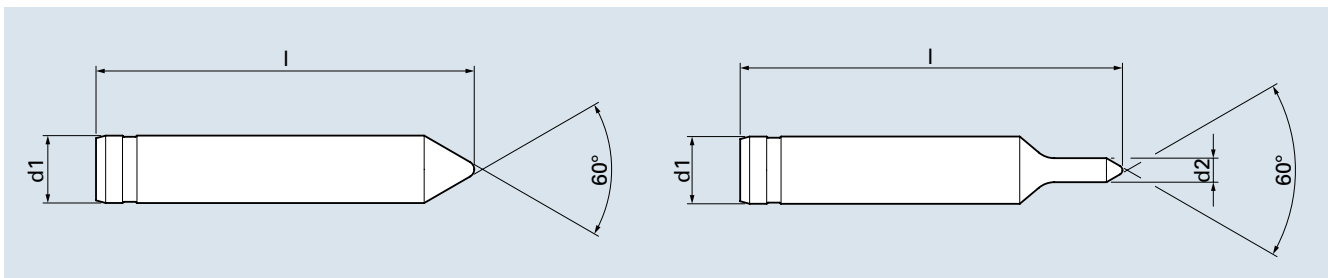
In order to exclude the risk of injury, we recommend to use suitable gloves for changing drive disks. We can provide a mounting aid upon request.

The drive disks can be pulled off head side. We recommend the use of a removal lever in order to reduce the force required and provide increased safety (page 5).

Center Pins FSP/FSPB

for face drivers FSP/FSPB
with movable center pin

Type FSP/FSPB center pin



cat. no.	type	d1	center Ø	for clamp. Ø	d2	l
73550	FSP/FSPB 3	14	3 - 5	9	5	79.5
73551	FSP/FSPB 3	14	3 - 6	11	6	80.5
73552	FSP/FSPB 3	14	3 - 7	14	7	81.5
73553	FSP/FSPB 3	14	3 - 10	18	10	84.5
73554	FSP/FSPB 3	14	3 - 11	22	11	85.5
73555	FSP/FSPB 3	14	3 - 10	26		81
73556	FSP/FSPB 3	14	3 - 10	31 - 59		76
73557	FSP/FSPB 3	14	7 - 14	31 - 59		78.5
73570	FSP/FSPB 4	20	3 - 13	31 - 36		80.5
73571	FSP/FSPB 4	20	3 - 13	39 - 125		75.5
73572	FSP/FSPB 4	20	10 - 20	39 - 125		80
73580	FSP 55	35	10 - 20	84 - 290		113
73581	FSP 55	35	18 - 28	84 - 290		118
73582	FSP 55	35	25 - 35	84 - 290		123