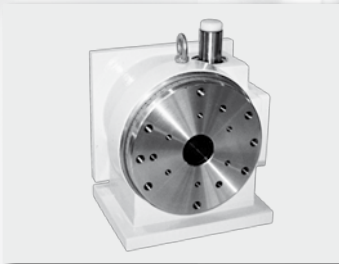


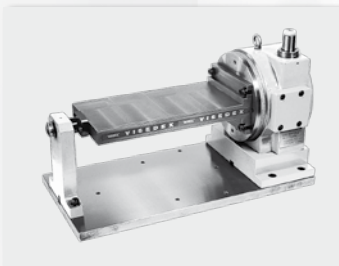
Description and operating instructions

Pag. 15. 3



TOUCHDEX indexing tables

Pag. 15. 8



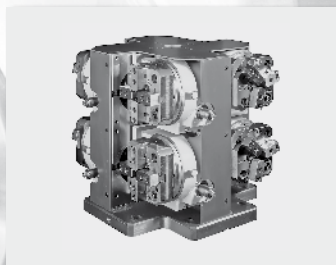
COMBIDEX

Pag. 15. 12



TILTING

Pag. 15. 13



MULTIDEX

Pag. 15. 14

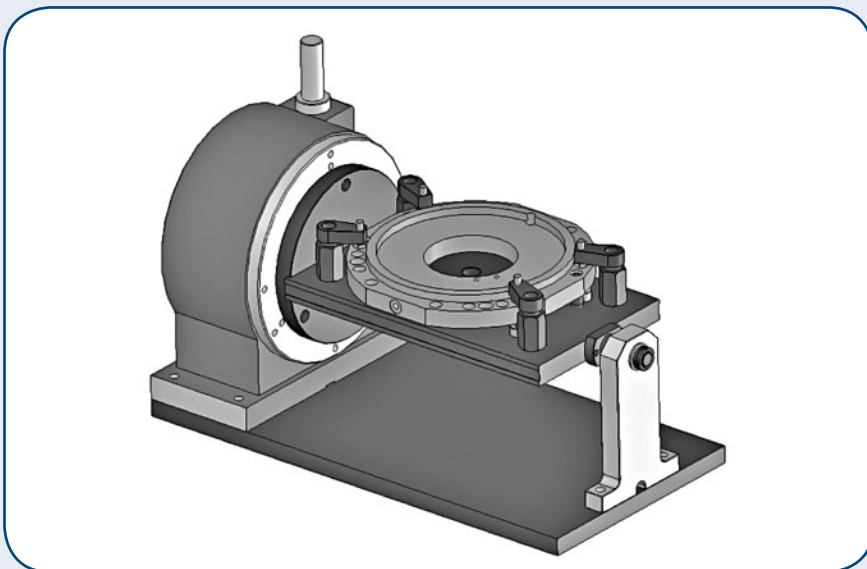
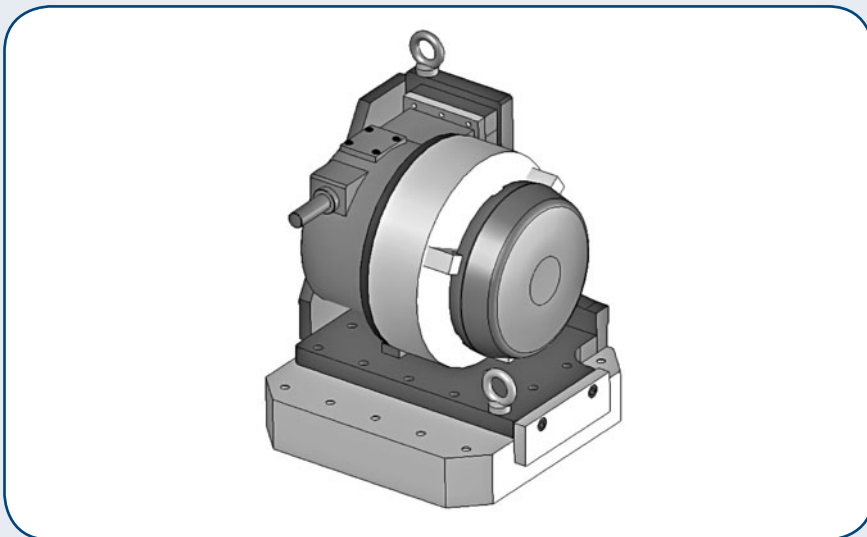
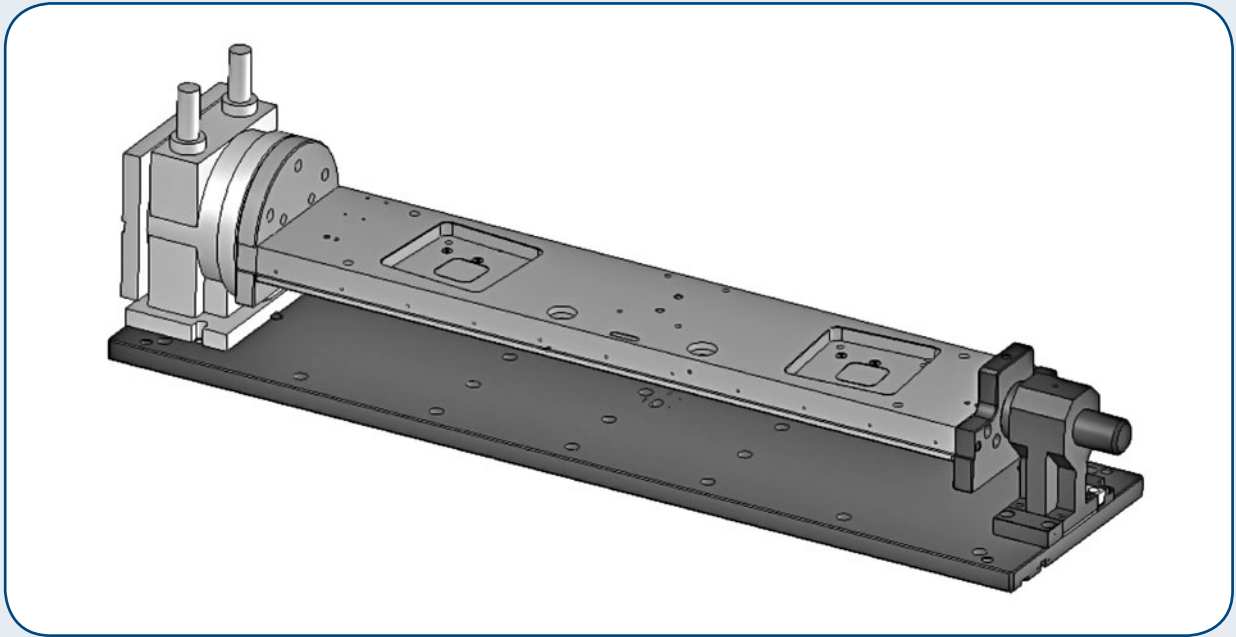


Accessories

Pag. 15. 15

On our website: www.omlspa.it
(in the video section) are available some videos by means
of which we show how TOUCHDEX works.

Examples



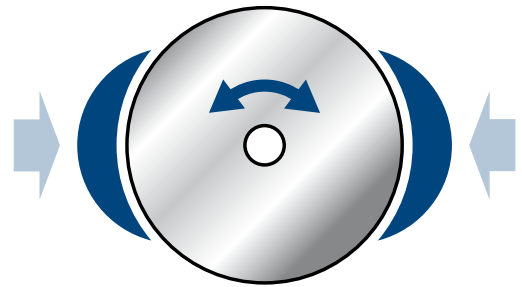
HIGH RIGIDITY AND PRECISION OF THE SYSTEM

TOUCHDEX



Exclusive Mechanical clamping System “LOCKING PIN”

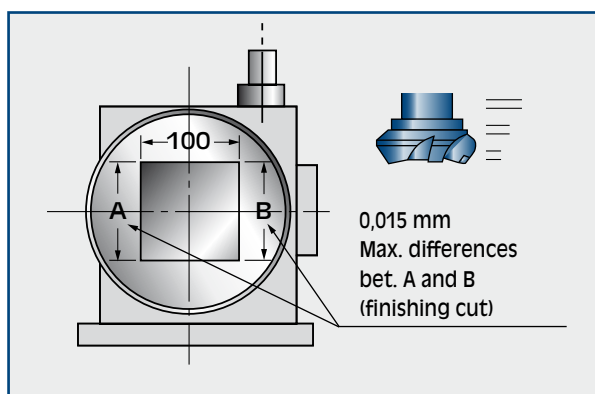
CNC System



Traditional braking jaws system

The exclusive TOUCHDEX system provides a clamping force 2 to 3 times that an ordinary index table thus allowing heavy machining.

Example	Face Milling	Drilling	Drilling
Machining S45C Material			
	Δ 80 Face mill 3 mm (depth of cut) 130 mm/min (Feedrate)	Δ 35 Drill 20 mm/min (Feedrate)	Δ 20 Drill 30 mm/min (Feedrate) H = 80 mm
FD-300	Δ 80 Face mill 3 mm (depth of cut) 130 mm/min (Feedrate)	Δ 40 Drill 20 mm/min (Feedrate)	Δ 25 Drill 30 mm/min (Feedrate) H = 90 mm

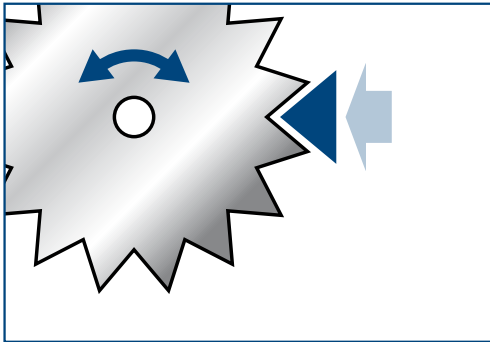


HIGH PRECISION

- Indexing accuracy of less than 30"
- Repeat accuracy ± 3"

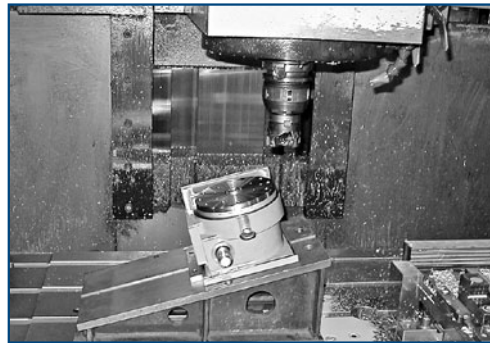
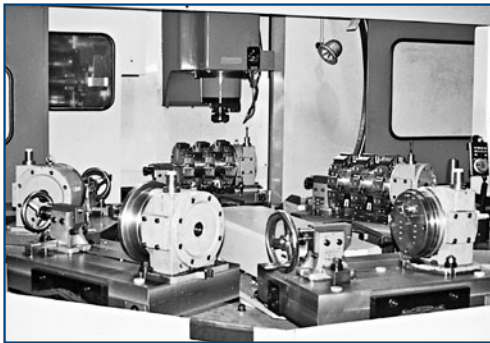
The unique clamping system ensures high accuracy despite locking pin wear, and with 0 backlash for the life of the unit (see example)

VERSATILITY OF THE SYSTEM



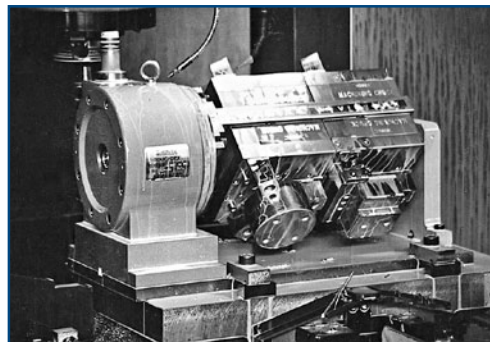
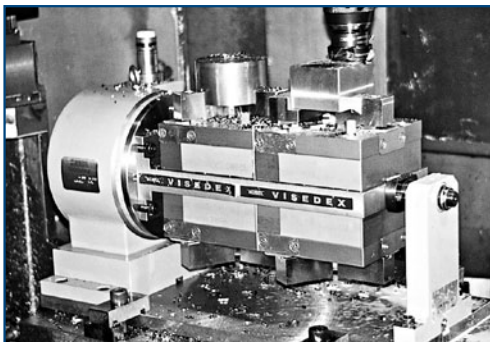
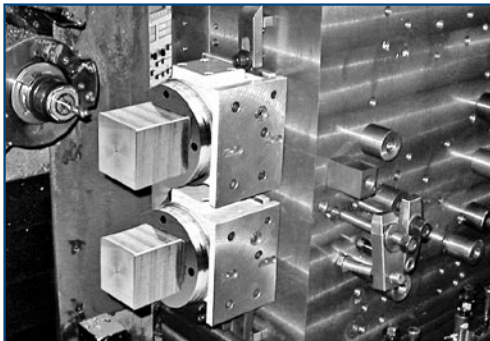
- **Minimum space required**

Since it has no motorized part, it can be installed in a minimum amount of space



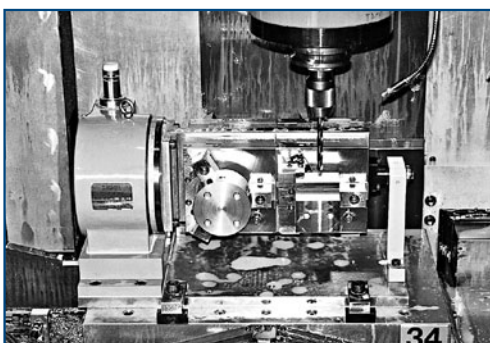
- **Versatility**

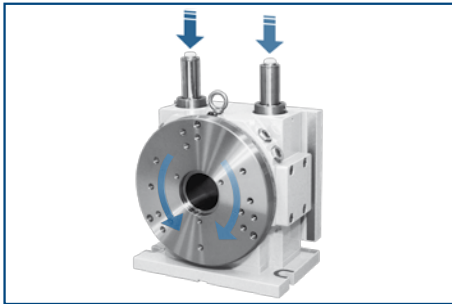
Since it has no electric or pneumatic connections, it can be installed on MULTI-PALLET machining centers either vertical or horizontal with the possibility to create flexible production systems



- **Easily mounted**

As a power control cable is not required the displacement from a machining center to another one is very easy



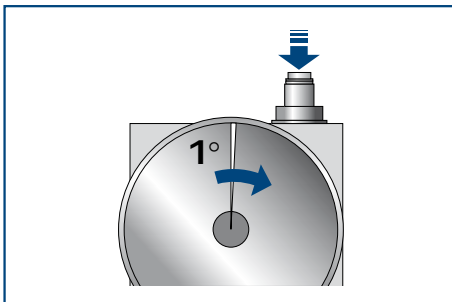
VARIETY OF TOUCHDEX MODELS AVAILABLE**FDR**

Indexing and rotation in TWO directions

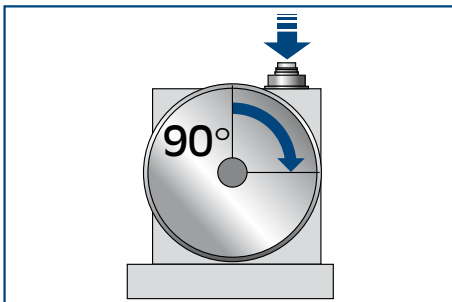
- Left pushbar for counterclockwise
- Right pushbar for clockwise

**FDM**

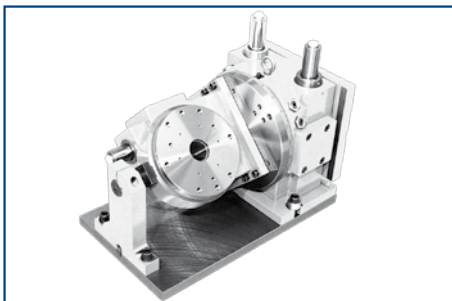
With the adaption for the installation either in horizontal or in vertical

**FD - ... - 360**

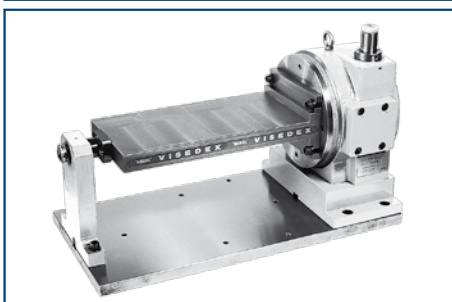
1 deg. Indexing ideal for workpieces of complex shape

**FD - ... - 04**

90 deg. Indexing rotation per stroke. Pressing the pushbar down one rotate the table by 90 deg. Ideal for square workpieces

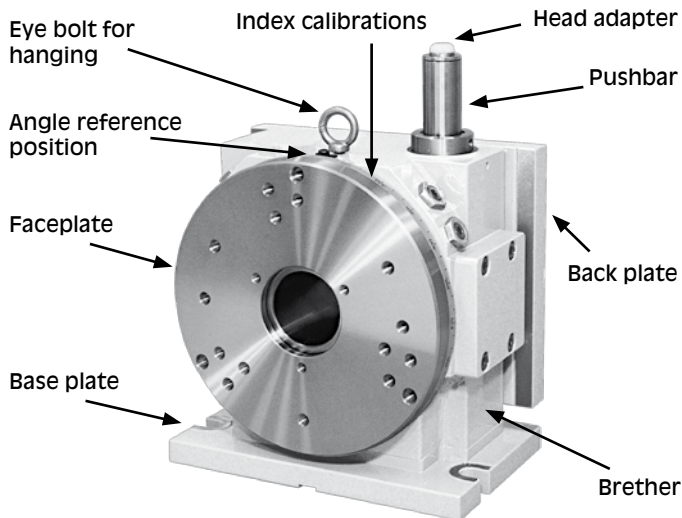
**TILTING 230-150**

Five-face machining. Integrates FDR-230 and FDM-150 for five-face machining on vertical machining centers

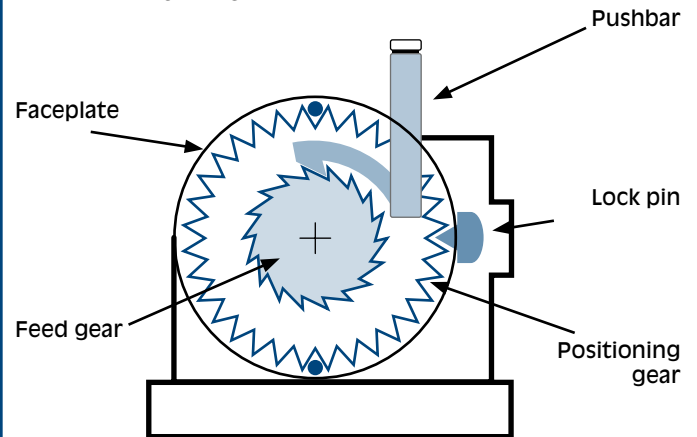
**COMBIDEX**

Integrates subplate and plate for workholding applications

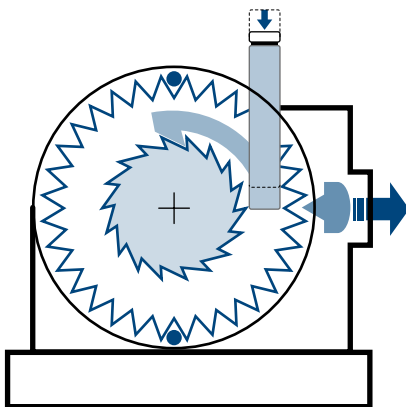
WORKING



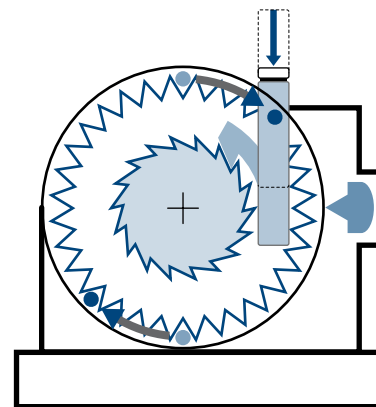
INTERNAL MECHANISM



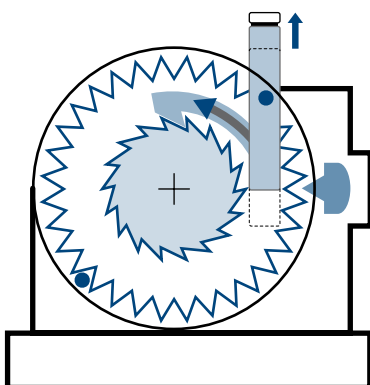
- 1** When the pushbar is pressed down a little, the lock pin retracts due to a grooved cam mechanism.



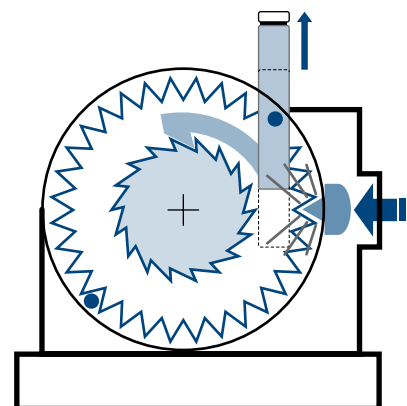
- 2** When pressed down further, the faceplate begins to rotate.



- 3** The pushbar returns, but until a certain position is reached the faceplate and the lock pin continue to be as they were.

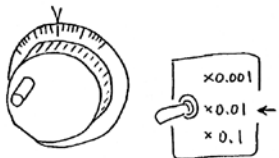


- 4** When the pushbar reaches the top most position, the lock pin engages with the positioning gear and fixes the table.

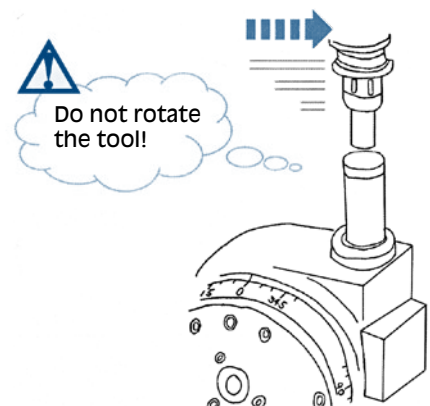


PROGRAMMING

*** POSITION A** Using handle mode.

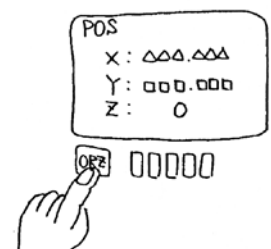


Do not rotate the tool!

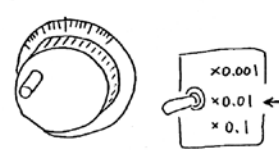


Move the tool over the pushbar, using manual mode.

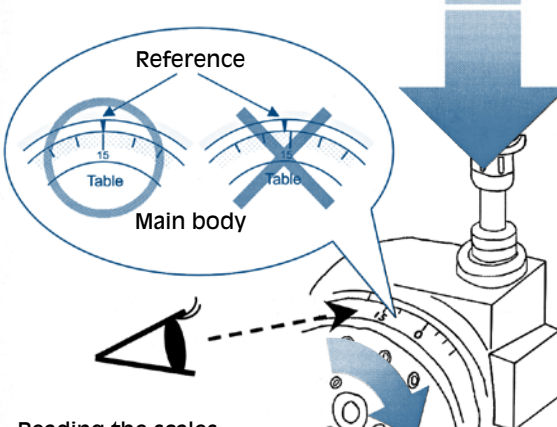
Read and memory Z axis number.



*** POSITION B** Using handle mode.

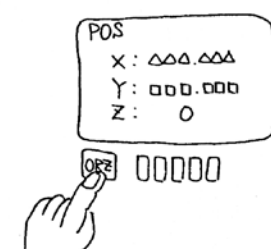


Adjust the indexing as accurately as your eyes can master.

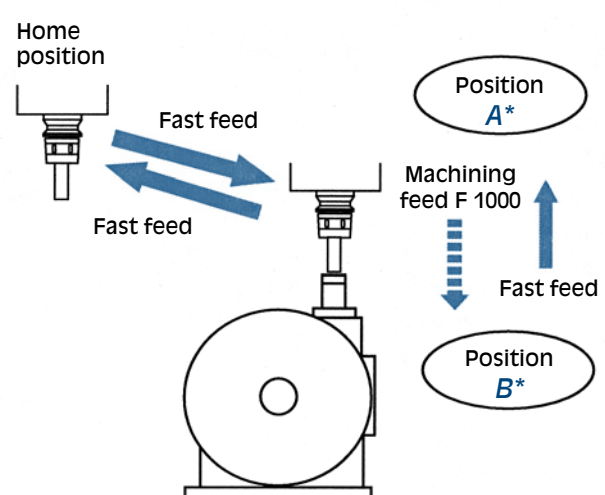


Reading the scales on the side of the table, move the Z axis with manual handle mode until the indexing is completed.

Read and memory Z axis number.



PROGRAM



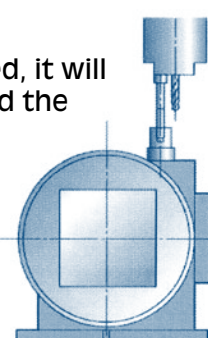
INFORMATION

Regarding the push-in tool

Providing the drill is \varnothing 10 mm or wider and no bending is caused during the pushing down, the tool you are using is appropriate.

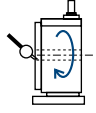

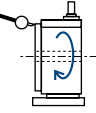

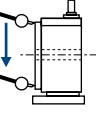

If a tool with a sharp tip is used, it will badly wear down the resin and the resin will have to be replaced.

The main shaft cover can also be used to push down.




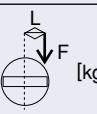


“TOUCHDEX”

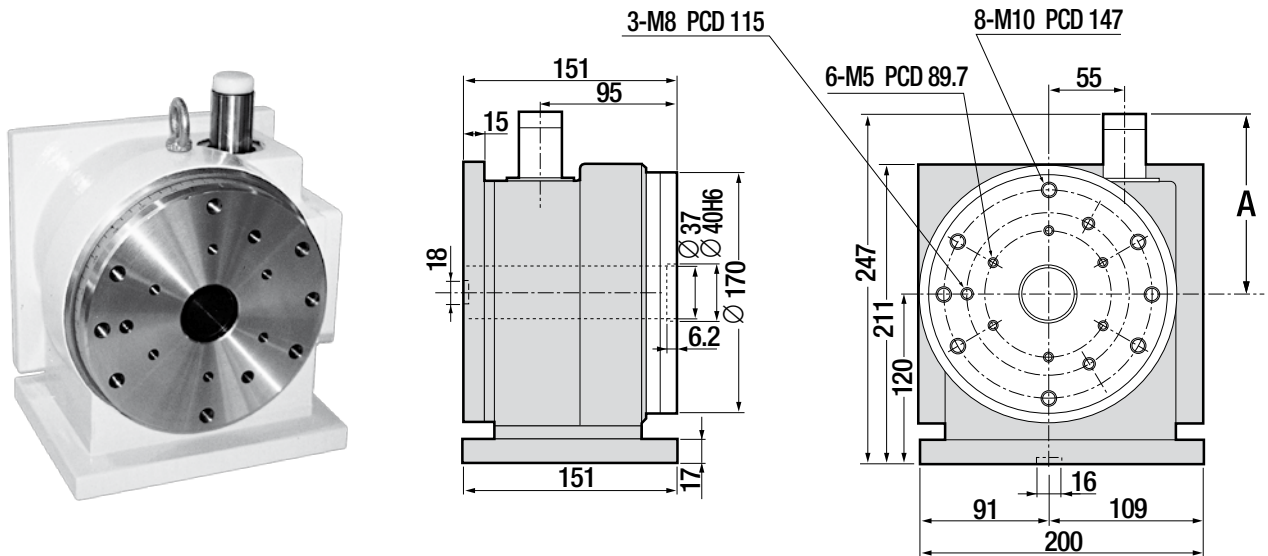
TOLERANCES

Inspecting item	Tollerances	Measurement Method (FD)	Measurement Method (FDM)
Table Center Hole Run-out	0.01 mm		
Table Surface Run-out (15 mm inside table periphery)	0.01 mm		
Table Surface Squareness (15 mm inside table periphery)	0.03 mm		

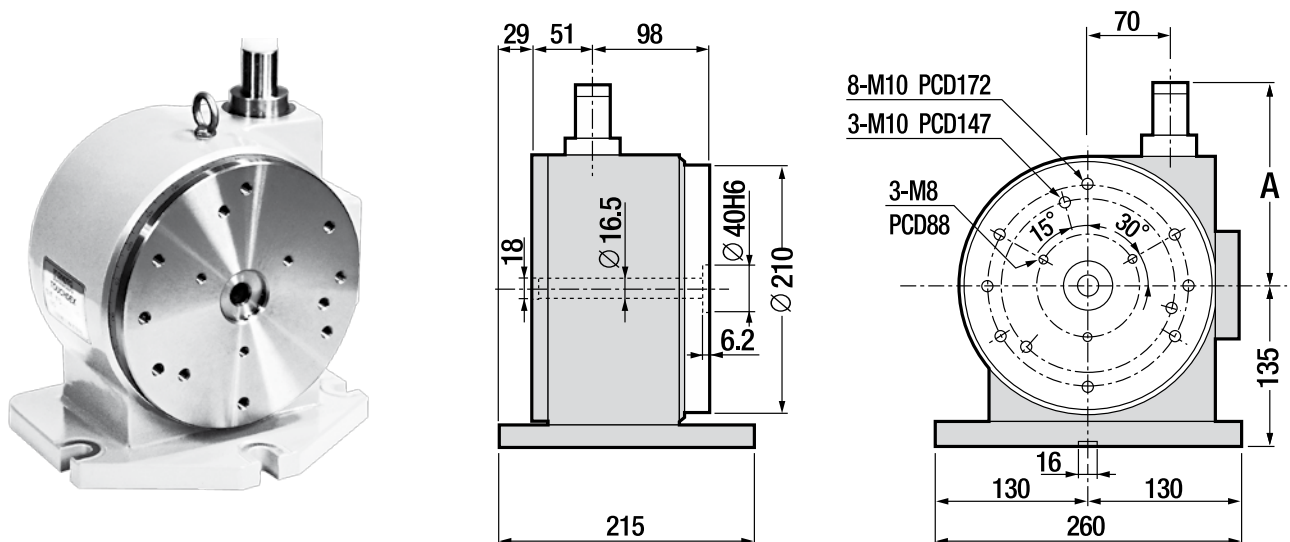
SPECIFICATION

Model		FDM-150	FD-200-04	FD-200-360
Table Diameter	mm	170	210	210
Spindle Bore Diameter	mm	37	16.5	16.5
Center Height	mm	120	135	135
Table Indexing Angles at Full Pushbar Stroke	deg.	45	90	15
Min. Indexing Angles	deg.	5	5	1
Full Pushbar Stroke	mm	38	78	35
Approx. Pushbar Load	N [kgf]	295 [30]	784 [80]	588 [60]
Loadings	Vertical use  kg	200	250	250
	Horizontal use  kg	300	350	350
Allowable Unbalanced weight (differences in load at table periphery)	$W_1 - W_2$  kg	4	4	4
Allowable load (Table clamped)	$F \times L$  N/m [kgf/m]	588 [60]	1030 [105]	1030 [105]
Accuracy	sec	30	30	30
Repeatability	sec	±3	±3	±3
Weight	kg	30	38	37

Code	Model	Indexing Angles		Pushbar Stroke mm	A mm
		Min	Max		
51 99 13 01	FDM-150	5°	45°	38	127

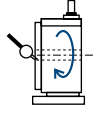

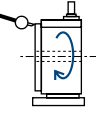

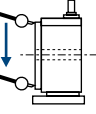



Code	Model	Indexing Angles		Pushbar Stroke mm	A mm
		Min	Max		
51 99 13 02	FD-200-04	5°	90°	78	208
51 99 13 03	FD-200-360	1°	15°	35	162



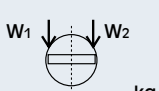
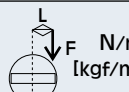


“TOUCHDEX”

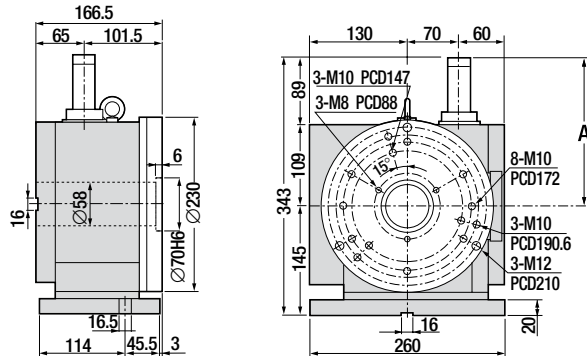
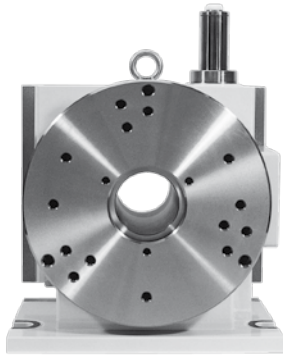
TOLERANCES

Inspecting item	Tollerances	Measurement Method (FD)	Measurement Method (FDM)
Table Center Hole Run-out	0.01 mm		
Table Surface Run-out (15 mm inside table periphery)	0.01 mm		
Table Surface Squareness (15 mm inside table periphery)	0.03 mm		

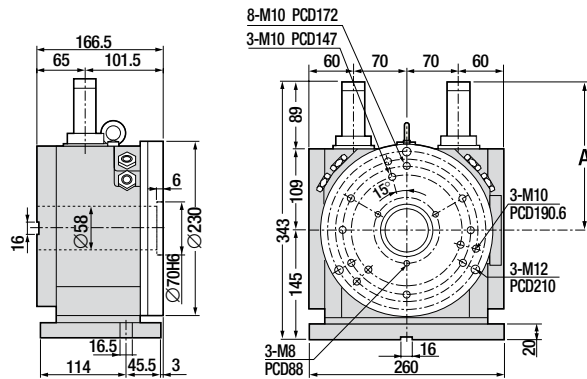
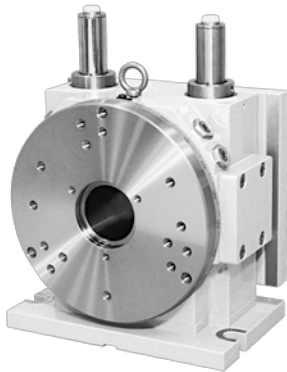
SPECIFICATION

Model		FDM-230	FDM 230-360	FDR-230	FDR 230-360	FD-300	FD 300-360	FDMK 340	FDMK 340-360
Table Diameter	mm	230	230	230	230	310	310	340	340
Spindle Bore Diameter	mm	58	58	58	58	52	52	100	100
Center Height	mm	145	145	145	145	185	185	200	200
Table Indexing Angles at Full Pushbar Stroke	deg.	45	45	45	45	45	45	45	45
Min. Indexing Angles	deg.	5	1	5	1	5	1	5	1
Full Pushbar Stroke	mm	56	56	56	56	75	75	83	83
Approx. Pushbar Load	N [kgf]	784 [80]	784 [80]	1470 [150]	1470 [150]	1078 [110]	1078 [110]	1764 [180]	1764 [180]
Loadings	Vertical use  kg	250	250	250	250	350	350	350	350
	Horizontal use  kg	350	350	350	350	500	500	500	500
Allowable Unbalanced weight (differences in load at table periphery)	W ₁ - W ₂  kg	4	4	20	20	4	4	20	20
Allowable load (Table clamped)	F x L  N/m [kgf/m]	1127 [115]	1127 [115]	1127 [115]	1127 [115]	2280 [232.5]	2280 [232.5]	2280 [233]	2280 [233]
Accuracy	sec	30	30	30	30	30	30	30	30
Repeatability	sec	±3	±3	±3	±3	±3	±3	±3	±3
Weight	kg	42	42	48	48	80	80	98	98

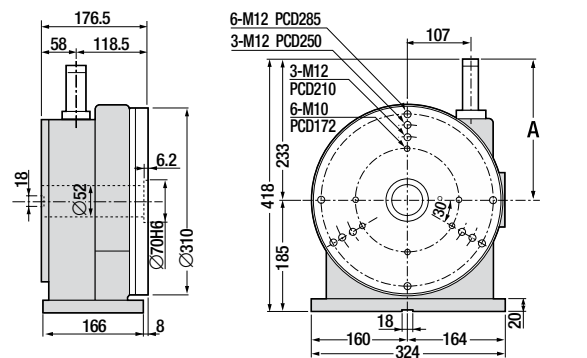
Code	Model	Indexing Angles		Pushbar Stroke mm	A mm
		Min	Max		
51 99 13 04	FDM-230	5°	45°	56	198
51 99 13 05	FDM-230-360	1°	45°	56	198



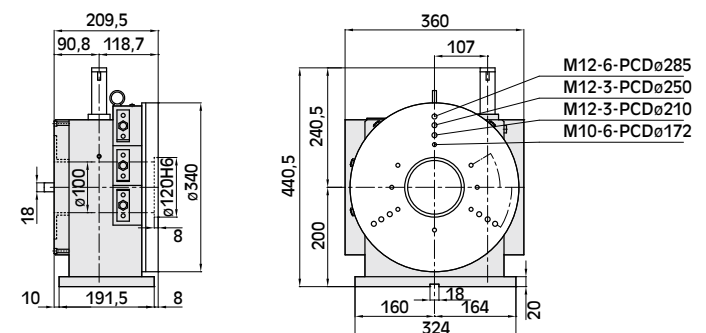
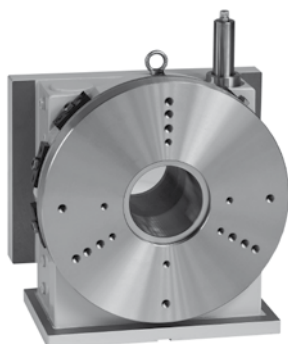
Code	Model	Indexing Angles		Pushbar Stroke mm	A mm
		Min	Max		
51 99 13 06	FDR-230	5°	45°	56	198
51 99 13 60	FDR-230-360	1°	45°	56	198



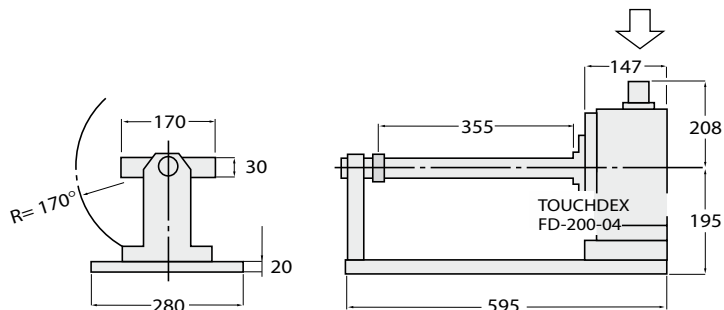
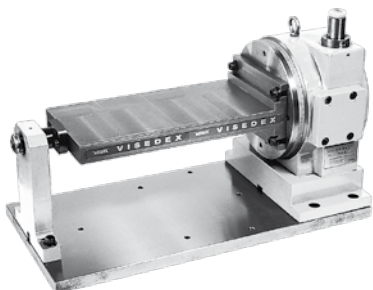
Code	Model	Indexing Angles		Pushbar Stroke mm	A mm
		Min	Max		
51 99 13 07	FD-300	5°	45°	75	233
51 99 13 08	FD-300-360	1°	45°	75	233



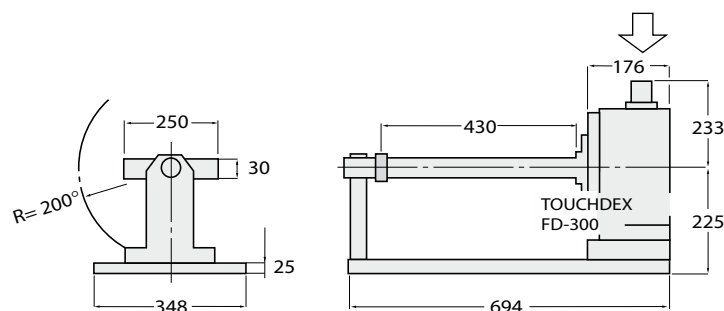
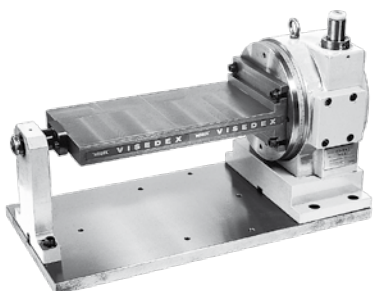
Code	Model	Indexing Angles		Pushbar Stroke mm	A mm
		Min	Max		
51 99 13 18	FDMK-340	5°	45°	83	240,5
51 99 13 19	FDMK-340-360	1°	45°	83	240,5



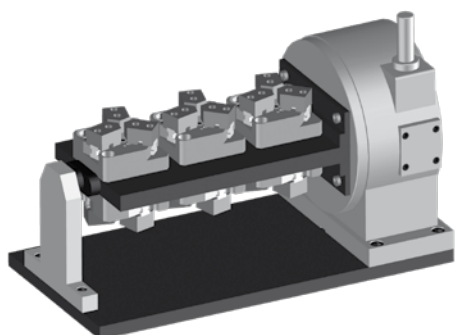
Code	Model	Indexing Angles		Pushbar Stroke mm	A mm
		Min	Max		
51 99 13 11	FDV-201-04	5°	90°	78	208



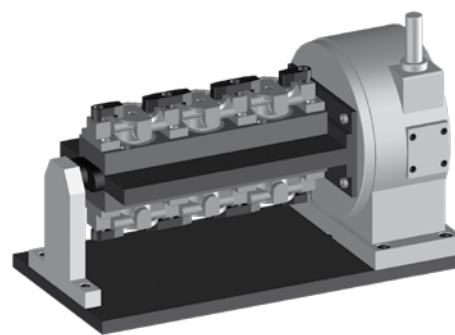
Code	Model	Indexing Angles		Pushbar Stroke mm	A mm
		Min	Max		
51 99 13 12	FDV-301	5°	45°	75	233



Examples

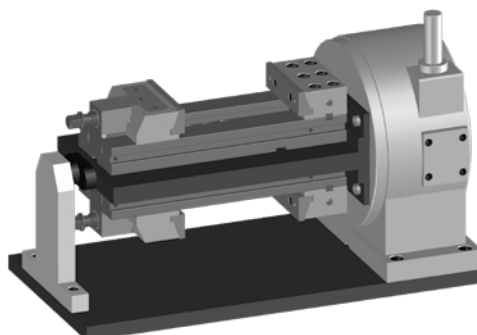


With SC square chuck



With clamping devices

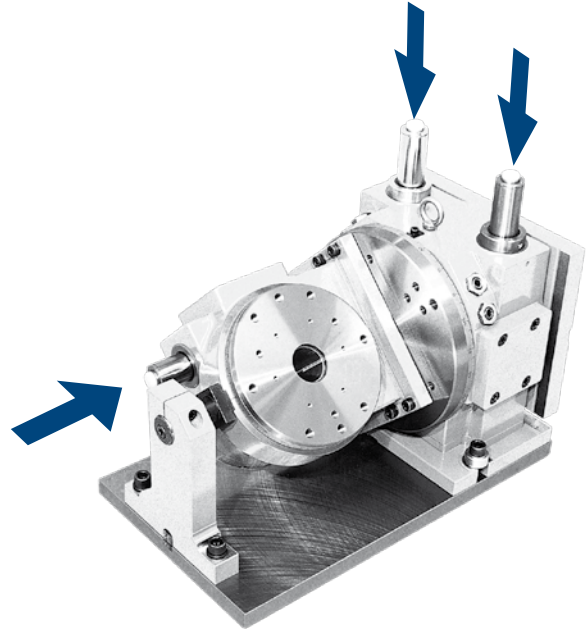
With TC-t clamping system



Code	Model	
51 99 13 13	TILTING 230-150	

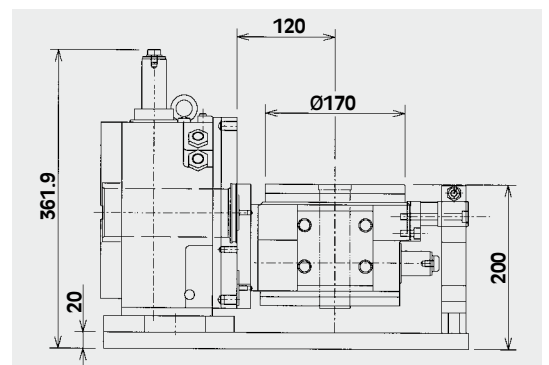
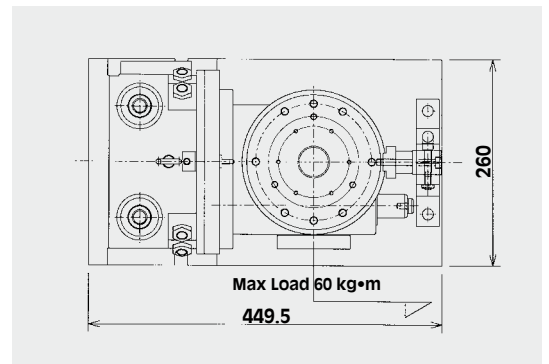
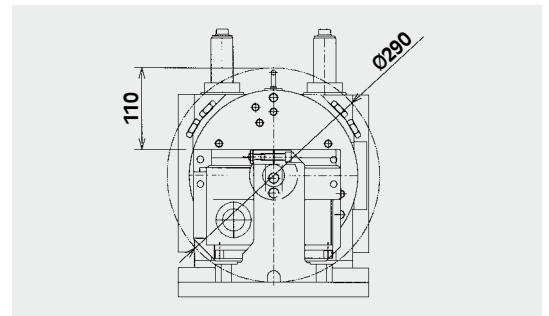
Integrates FDR-230 and FDM-150 for five-face machining on vertical machining centers.

- Table inclination and rotation adjusted automatically with the pushbar of TOUCHDEX.
- Minimum indexing angle in both inclination and rotation of 5°.
- Extremely compact footprint - 450 x 260 mm.



SPECIFICATION

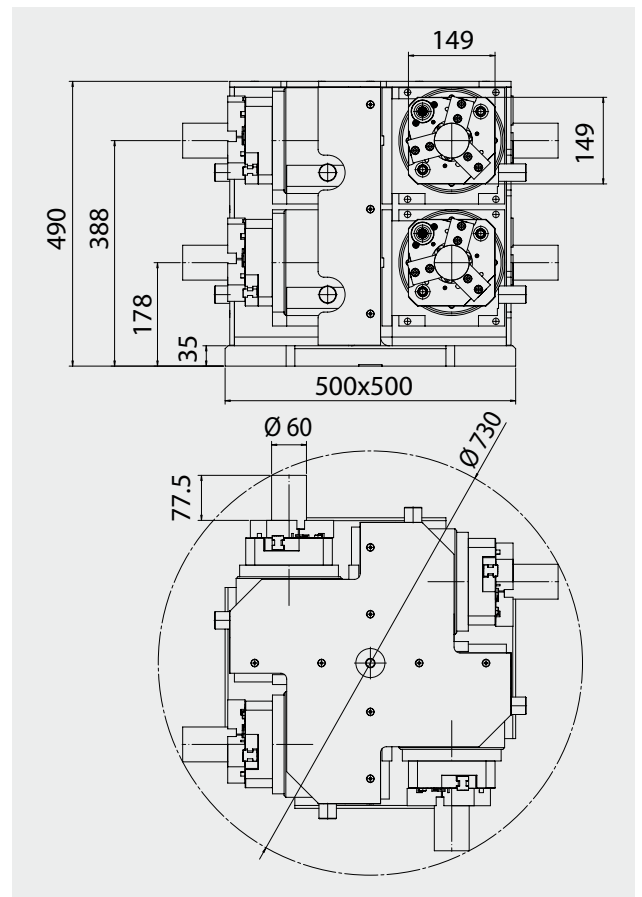
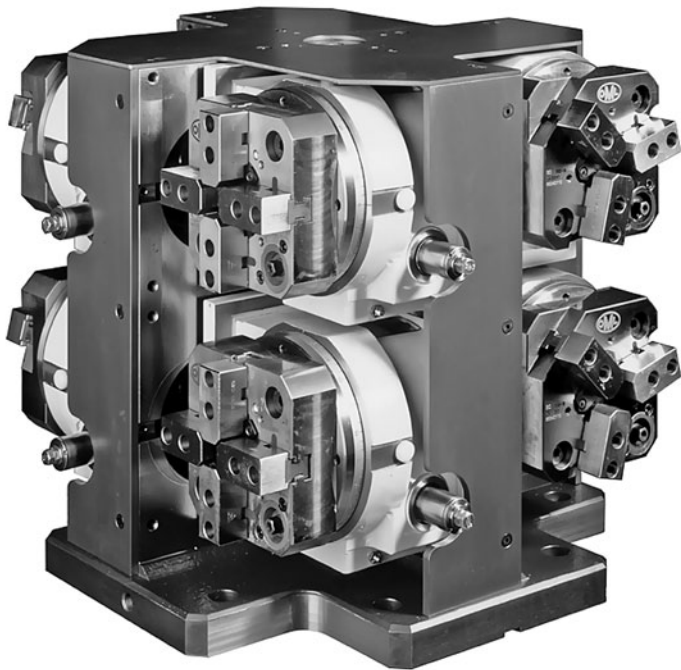
Model		TILTING 230-150	
Table Diameter	mm	170	
Spindle Bore Diameter	mm	37	
Center Height (90° Tilted)	mm	165	
Table surface height (0 deg. tilted)	mm	200	
Full Pushbar Stroke (Tilting)	mm	56	
Full Pushbar Stroke (Rotation)	mm	38	
Approx. Pushbar Load (Tilting)	N [kgf]	1470 [150]	
Approx. Pushbar Load (Rotation)	N [kgf]	295 [30]	
Loadings (0° to 90°)	kg	70	
Allowable load (Table clamped)	 $F \times L$ N·m [kgf·m]	588 [60]	
	 $F \times L$ N·m [kgf·m]	625 [63.75]	
Accuracy (Tilting)	sec	30	
Accuracy (Rotation)	sec	30	
Repeatability (Tilting)	sec	±3	
Repeatability (Rotation)	sec	±3	
Weight	kg	98	



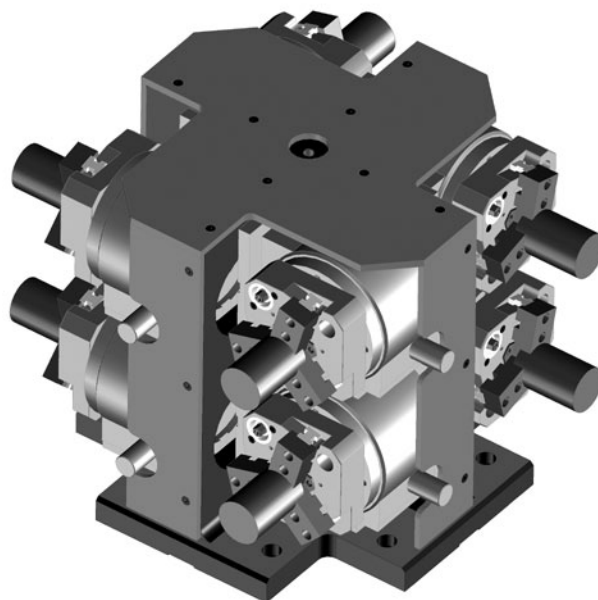
* A counterweight may be required for balance when machining bar-shaped workpieces etc mounted significantly off-center on the TOUCHDEX.

"MULTIDEX"

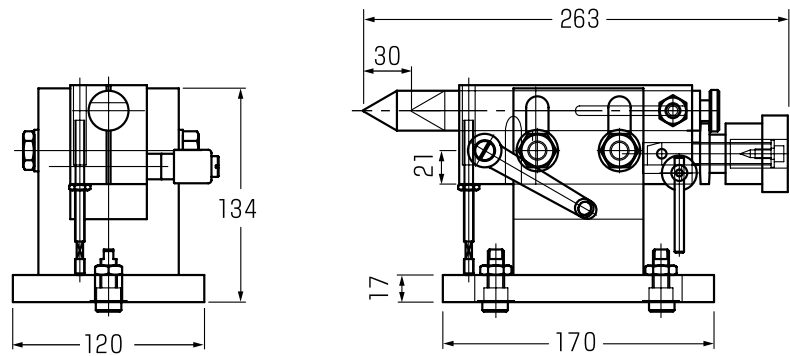
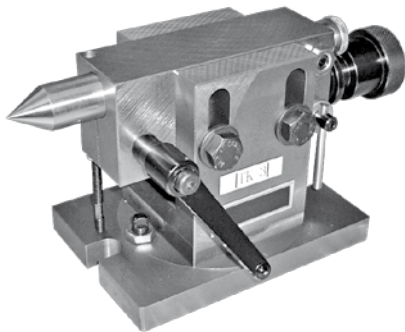
"4 AXIS" CLAMPING EQUIPMENT for horizontal machining centers integrated with automatic mechanical indexing tables "TOUCHDEX" for the working of the workpieces on the 5 faces.



Code	Model
33 58 98 01	MULTIDEX FDM 150 with SC3/150
33 58 98 02	MULTIDEX FDM 150 with SC4/150

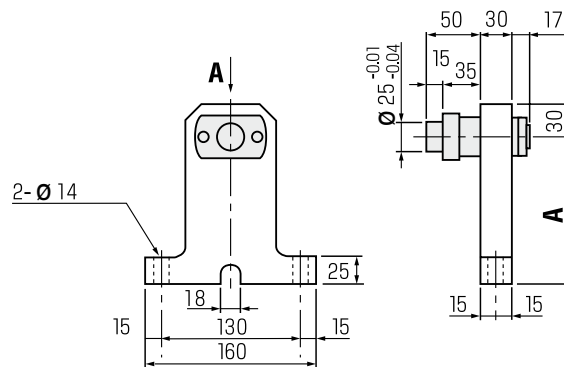
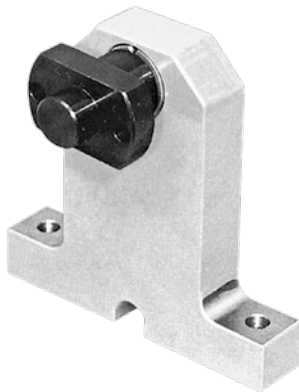


TAIL STOCK TK3



Code	For model
51 99 13 21	FDM-150 / FD-200-04 / FD-200-360 / FDM-230 FDM-230-360 / FDR-230

END SUPPORT



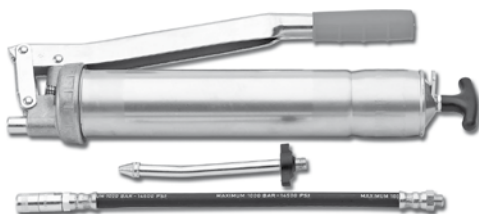
Code	Model	A (mm)
51 99 13 23	FES-120	120
51 99 13 24	FES-135	135
51 99 13 25	FES-145	145
51 99 13 26	FES-175	175
51 99 13 27	FES-185	185
51 99 13 28	FES-200	200

K67



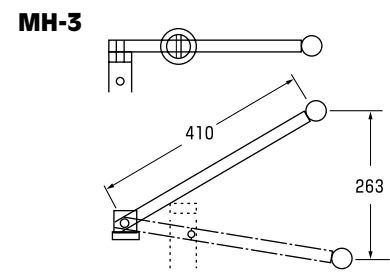
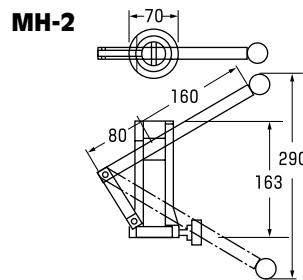
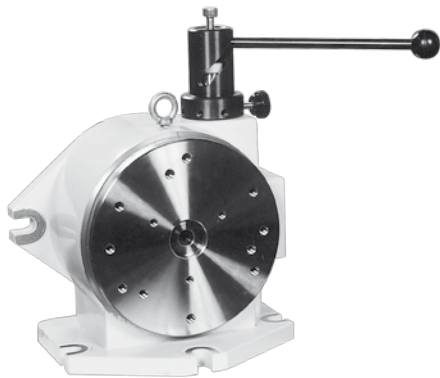
Code		
10 73 12 23	Cartridge 14 Oz	Grease K67
10 73 12 24	Can 1000 g	Grease K67

GREASING SET



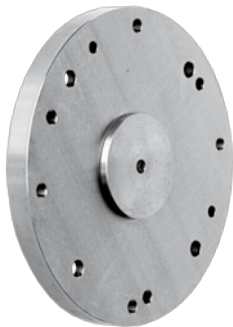
Code
08 37 26

MANUAL HANDLE



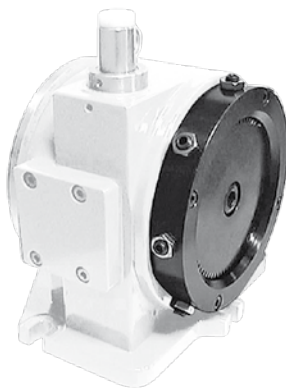
Code	Model	Stroke (mm)
51 99 13 30	MH-1	35
51 99 13 31	MH-2	88
51 99 13 32	MH-3	38

MOUNTING FLANGE FOR MANUAL CHUCK



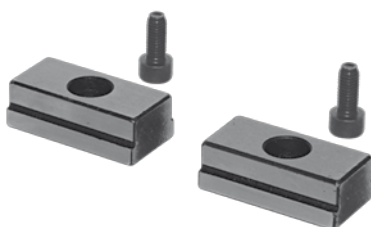
Code	For model	For chuck	D (mm)
51 99 13 41	FDM-150	SGSF 160-42	170
51 99 13 42	FD-200-04 / FD-200-360 FDM-230 / FDM-230-360 / FDR-230	SGSF 200-55	210
51 99 13 43	FD-300 / FD-300-360	SGSF 315-103	310

BRAKE RING



Code	Model	For
51 99 13 44	KH-150	FDM-150
51 99 13 45	KH-200	FDM-200
51 99 13 46	KH-300	FDM-300

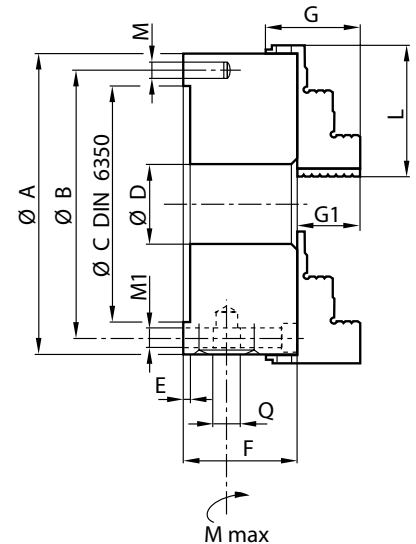
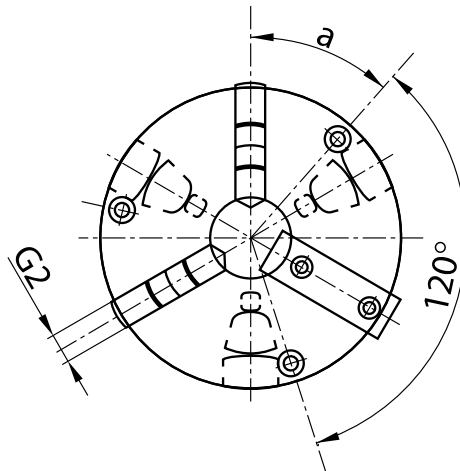
PAIR OF KEYS



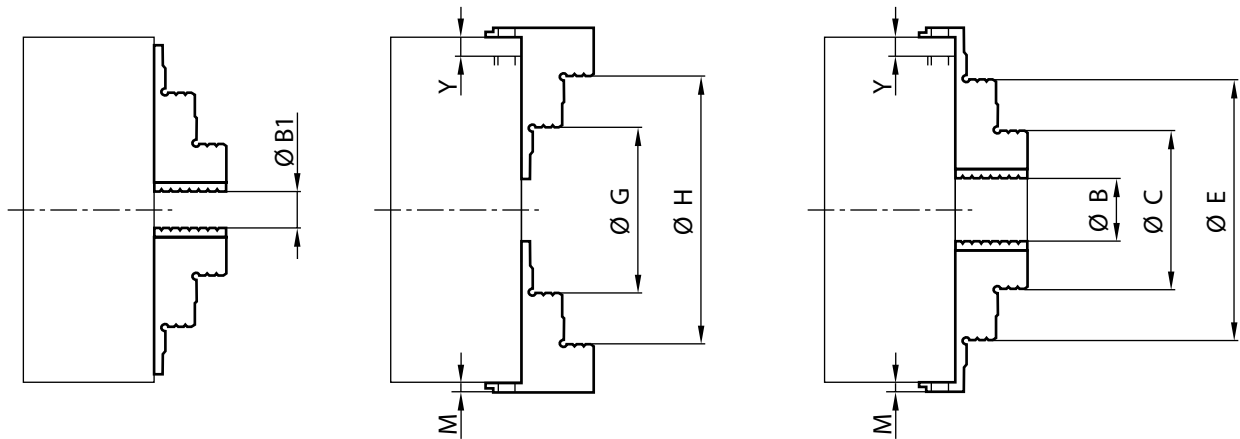
Code	mm
51 99 13 51	16 x 14
51 99 13 52	16 x 16
51 99 13 53	16 x 18
51 99 13 54	18 x 14
51 99 13 55	18 x 16
51 99 13 56	18 x 18

SGSF MANUAL CHUCK (frontal mounting)

SMW self-centering manual chuck, steel body



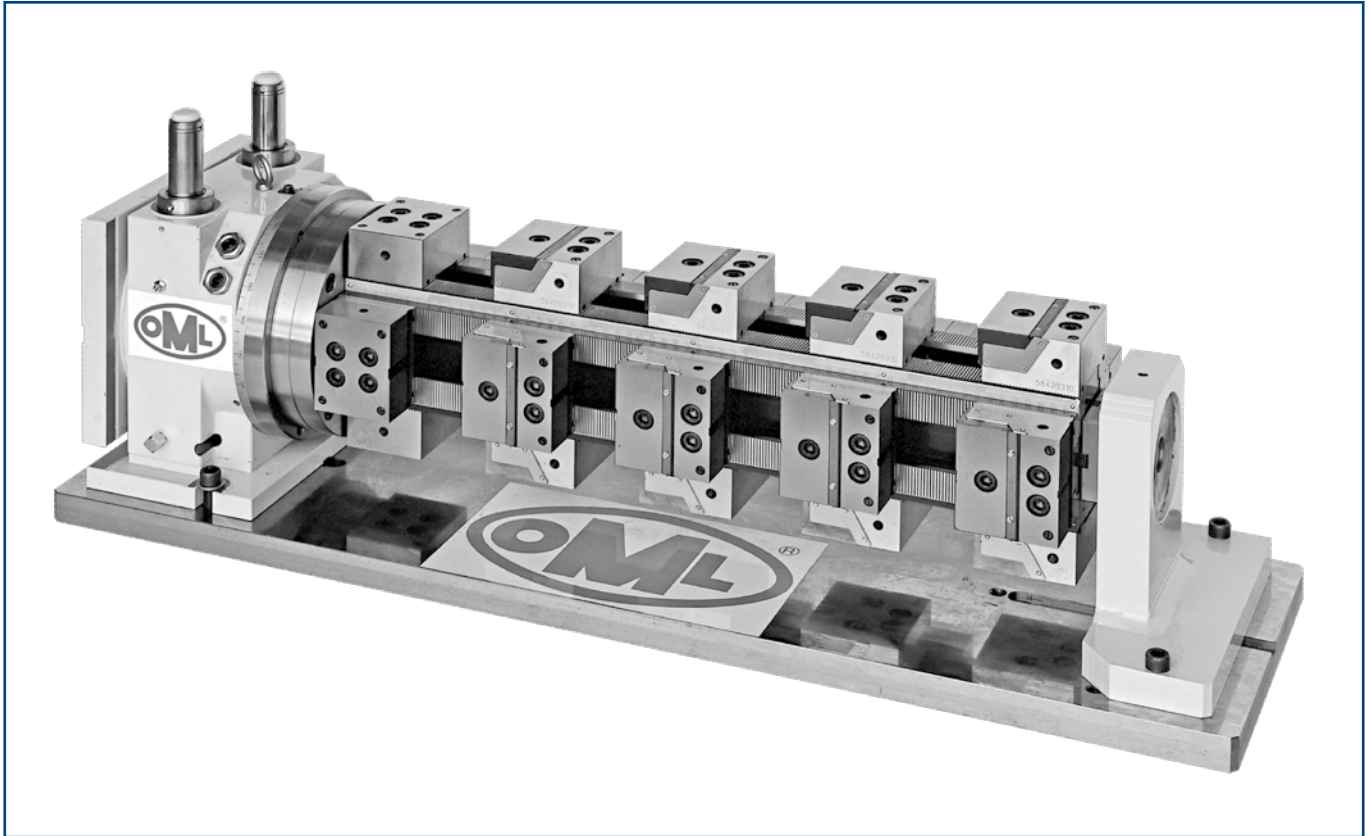
Code		33 03 12 16	33 03 12 20	33 03 12 31
Chuck		SGSF 160-42	SGSF 200-55	SGSF 315-103
Attachement DIN 6350	Dim.	FL125	FL160	FL260
	A mm	160	200	315
	B mm	140	176	286
H6	C mm	125	160	260
	D mm	42	55	103
	E mm	4	4	5
	F mm	68	78	96,2
	G mm	53	54	73
	G ₁ mm	32	29	41
	G ₂ mm	20	25	32
	L mm	70	85	125
Front mounting	M ₁ mm	3xM10	3xM10	3xM16
	Q mm	11	11	14
	a °	102°	42°	42°
Max speed	giri/min.	4500	4000	2800
Torque M max	N•m	120	160	200
Weight (w. jaws)	kg	11,2	20	50
Moment of inertia	kgm ²	0,036	0,1	0,60



Chuck		SGSF 160-42	SGSF 200-55	SGSF 315-103
Suggested clamping diameters at max. clamping force				
Monoblock jaws	B mm	19-56	22-75	58-115
	G mm	64-101	78-130	129-199
	H mm	113-150	146-198	226-296
	C mm	57-94	68-121	128-184
	E mm	109-146	136-189	212-281
	Y mm	0	4	9
	M mm	18	22	25
Min. clamping diameters with clamping force reduced by 40%				
	B ₁ mm	3	4	10
No. of scroll teeth		2	3	5
No. of meshing scroll teeth for safety clamping		2	3	5

- For max. speed and max. clamping, all teeth shall be meshing.
- For meshing teeth control towards outside dimension (M) toward inside dimension (Y).
- For features exceeding these limits ±16 mm on diameter, shall be reduced by 25%.
- **ATTENTION: CLAMPING DIAMETERS HAVE BEEN CALCULATED WITH A.M. MESHING TEETH.**

Chuck		SGSF 160-42	SGSF 200-55	SGSF 315-103
Accessories		Codes		
Set-3 GRC		03 65 16 30	03 65 20 30	03 65 31 30
Set-3 Soft jaws		03 60 16 30	03 60 20 30	03 60 31 30
Set-3 ins. jaws		03 55 16 30	03 55 20 30	03 55 31 30
Set-3 Outs. jaws		03 56 16 30	03 56 20 30	03 56 31 30
Set-3 Rev. jaws		03 63 16 30	03 63 20 30	03 63 31 30
Key		02 71 17 00		02 71 31 00



The example shows:

- TOUCHDEX table
- Column CIVI 2000 (General catalogue OML group 6)
- Moveable jaws set CIVI 2000 (General catalogue OML group 6)



The example shows:

- TOUCHDEX table with manual chuck

