



Standard Linear tables

Series TV

The tables manufactured by Meccanica Besnatese range from small to large-size systems, in compliance with standard instructions. Just as for manufacturing on third parties account, the company is ready to accomplish mass-produced work orders in a limited number up to single units.

The components in use are purchased from the most qualified suppliers to offer customers a top-quality finished product for easy replacement.

The tables included in the catalogue are generally used for positioning and handling light objects and if no high level of accuracy and rigidity is required, they can offer an excellent quality/price ratio.

Precision tables TV small series

DIMENSIONS

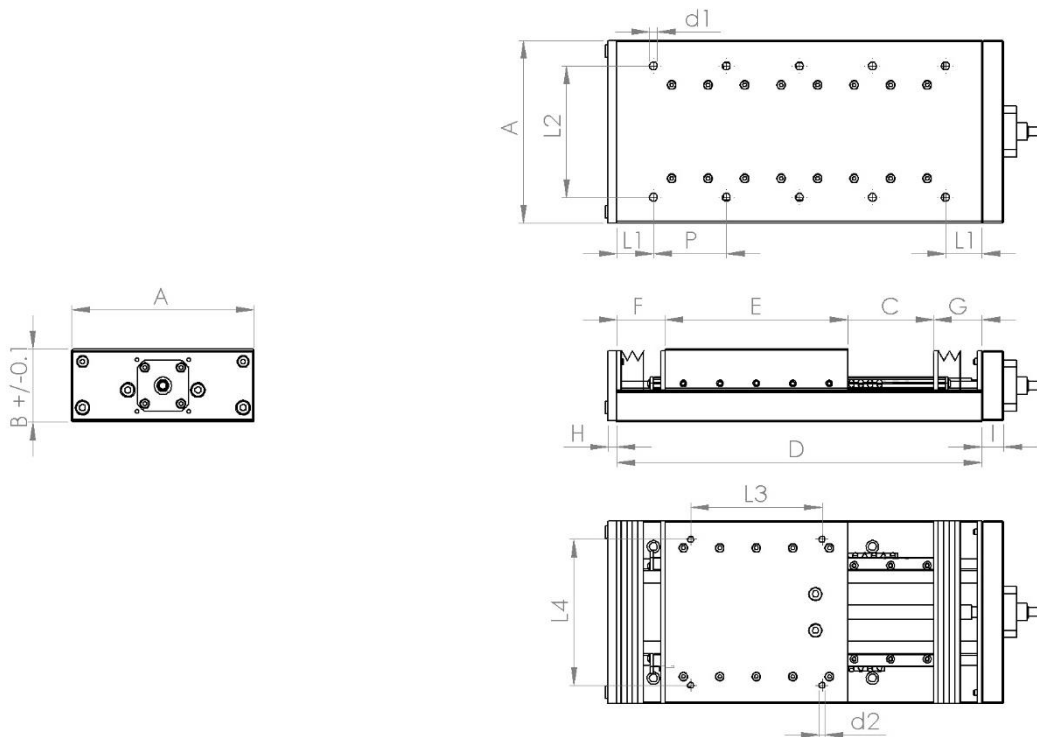


Table	A	B	C	D	E	F-G	H	I	L1	L2	P	d1	L3	L4	d2
TV00 75/50 125/75	52	25	25 50	75 125	50 75	-	6	12	2x12,5 2x25	20	1x50 1x75	4,5	25 50	38	M5
TV0 100/75 150/100	75	32	25 50	100 150	75 100	-	6	17	2x12,5 2x25	32	1x75 1x100	5,5	50 75	52	M5
TV01 150/100 200/100	100	45	50 100	150 200	100	-	6	15	2x37,5 2x62,5	50	1x75	5,5	50	75	M5
TV1 125/250 125/300	125	50	50 100	250 300	125	37,5	6	15	2x25 2x50	90	4x50	5,5	90	100	M5

Values in mm

CONSTRUCTION FEATURES

Table	Screw		Type of guides	Table structure	Protections
	Type	Ø x pitch			
TV00 75/50 125/75	T	6x1	Rollers GR3	Steel with ground surfaces	Without protections
TV0 100/75 150/100	T-RG	8x1			
TV01 150/100 200/100	T-RG/RDS-T	8x1 8x2			
TV1 125/250 125/300	RDS-RT	10x2	Rollers NG4		With bellows

Type of screw:

- RDS pre-loaded ball screws
- RT ground thread screw
- T precision turning
- RG Backlash recovery

Accessories:

- Motor coupling support.
- Emergency stop.
- Creation of customized tables, with single axis or cross movement on specific request.

Precision tables TV small series

MOTOR SUPPORT CONNECTION

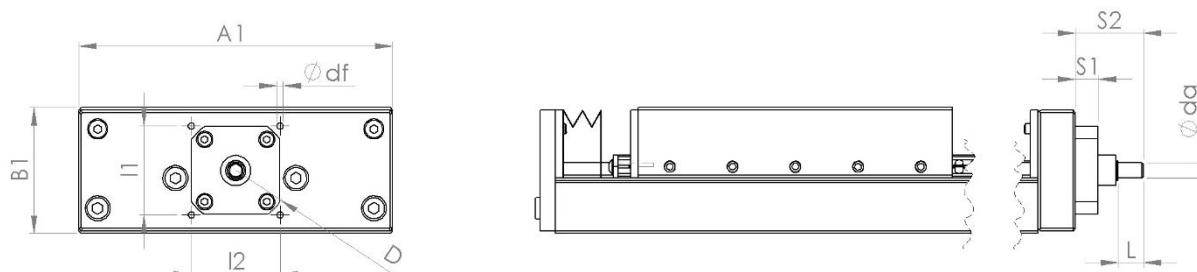


Table	A1	B1	I1	I2	D	S1	S2	df	da	L
TV00 75/50 125/75	51	24	20	24	22	12	36	M2,5	5	15
TV0 100/75 150/100	74	31	26	38	35	7	29	M3	6	12
TV01 150/100 200/100	100	44	35,4	35,4	43	9	27	M3	6	10
TV1 125/250 125/300	125	48	35,4	35,4	43	9	27	M3	6	10

Values in mm

CONSTRUCTION TOLERANCE VALUES

For Meccanica Besnatese the quality of its products is a priority target; we are certified not only ISO 9001, but also ISO 9100 (aeronautical world).

On request we can also check the details with our internal measuring machine.

Table	Trolley levelness	Value (μm)
TV00		10
TV0		10
TV01		15
TV1		15

Table	Trolley side movement parall.	Value (μm)
TV00		4
TV0		6
TV01		8
TV1		10

Table	Trolley surface movement parall.	Value (μm)
TV00		4
TV0		6
TV01		8
TV1		10

Precision tables TV large series

DIMENSIONS

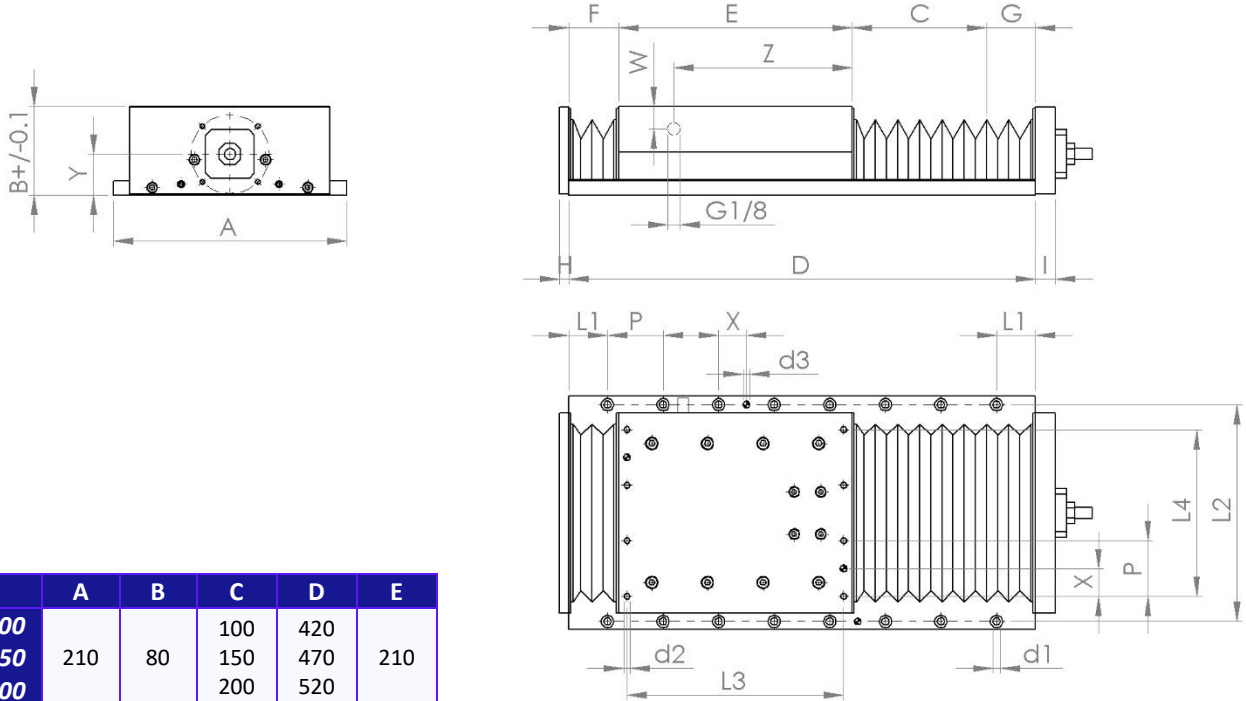


Table	A	B	C	D	E
TV2N C100			100	420	
C150	210	80	150	470	210
C200			200	520	
TV3N C100			100	500	
C150	260	85	150	550	260
C200			200	600	

Table	F-G	H	I	L1	L2	P	d1	L3	L4	d2	X	W	Z	Y	d3
TV2N C100				2X35											
C150	45	8	18	2X60	195	7X50	6,6	195	150	M6	25	32	150	37	6H7
C200				2X85											
TV3N C100				2X50											
C150	60	8	18	2X75	240	4X100	8,5	240	200	M8	50	29	160	41	8H7
C200				2X100											

Values in mm

CONSTRUCTION FEATURES

Type of screw:

RDS pre-loaded ball screws
RT ground thread screw

Accessories:

Motor coupling support.
Emergency stop.
Centralized lubrication system for mechanical components.
Sliding guides with anti-friction material.
Creation of customized tables, single axis or cross movement upon specific request.

Table	Screw		Type of guides	Table structure	Protections
	Type	Ø x pitch			
TV2N C100 C150 C200	RDS-RT	16x5	Rollers MV6	Steel with ground surfaces	With bellows
TV3N C100 C150 C200	RDS-RT	20x5	Rollers MV9		

Precision tables TV large series

MOTOR SUPPORT CONNECTION

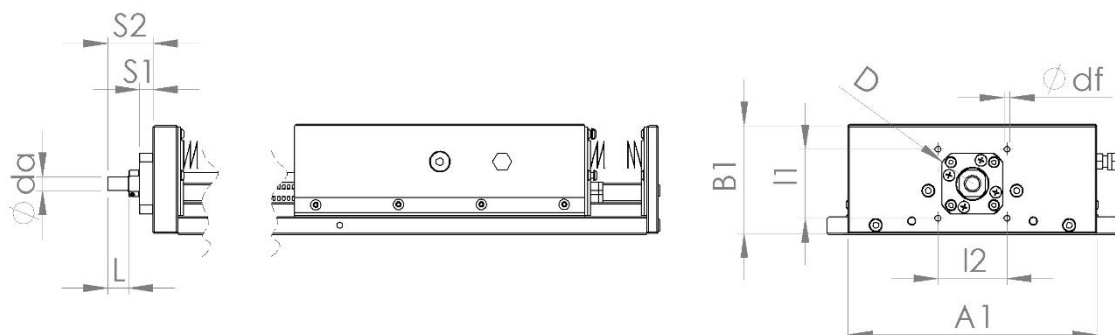


Table	A1	B1	I1	I2	D	S1	S2	df	da	L
TV2N C100	180	78	50	50	54	10	33	M5	10	15
C150										
C200										
TV3N C100	220	83	60	60	63	15	49	M6	12	20
C150										
C200										

Values in mm

CONSTRUCTION TOLERANCE VALUES

For Meccanica Besnatese the quality of its products is a priority target; we are certified not only ISO 9001, but also ISO 9100 (aeronautical world). On request we can also check the details with our internal measuring machine.

Table	Trolley levelness	Value (μm)
TV2N		25
TV3N		30

Tavola	Trolley side movement parall.	Value (μm)
TV2N		15
TV3N		15

Tavola	Trolley surface movement parall.	Value (μm)
TV2N		15
TV3N		15

Precision tables TV series

ADMISSIBLE LOADS AND MOMENTS

The TV series tables are used to create positioning systems, for general use in the automation sector and also for light mechanical processing.

The admissible loads indicated in the tables, both as regards the guiding system and the thrust load on the screw, are to be considered as maximum theoretical values.

For a correct use of the tables, with regard to precision, rigidity, durability and safety of the system, the application of appropriate safety factors is necessary.

For special applications, our technical department is always available for advice, clarifications and necessary verification calculations.

SCREWS - FEATURES AND ADMISSIBLE LOADS

Table	Static axial load (N)	Dynamic axial load (N)	Axial clearance (µm)	Accuracy degree (µm)	Mechanical repeatability (µm)
TV00	50	20	20	IT7	20
TV0	120	50	0		10
TV01	1300	700		0 / Light preload	IT5
TV1	2900	1500			
TV2N	18570	13680	IT3 (Upon request)		
TV3N	22390	15080			

SPEED

Although the guides are allowed a maximum speed of up to 40-50 m / min, these values are never reached, considering the short stroke of the tables, the necessary accelerations and the reduced lead screw pitch.

From the point of view of speed, the limiting organ is the screw, from which the allowed values descend:

Max speed rotation of screw (n) 2400 rpm,

Pitch screw (p) in mm.

Linear speed of table =

$$\frac{n \times p}{60} \text{ (mm/s)}$$

LUBRIFICATION

Screws and guides are adequately lubricated upon assembly; guideway oil and grease for RDS screws. However, it is necessary to periodically check the conditions of the system and, if necessary, restore the initial conditions.

The TV2N / TV3N tables have a centralized oil system, to ensure perfect and constant lubrication of the mechanical parts and scrapers on the moving carriage to prevent the infiltration of harmful agents.

Precision tables TV series

APPLICABLE LOADS

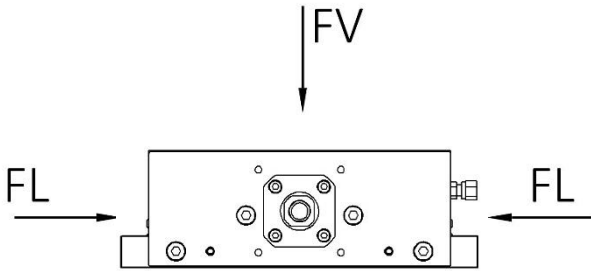


Table	FV = FL	
	Static	Dynamic
TV00 75/50 125/75	1040 1560	620 930
TV0 100/75 150/100	1560 2340	930 1400
TV01	10200	6100
TV1	13600	8150
TV2N	32667	19067
TV3N	60000	35000

Values in N

APPLICABLE MOMENTS

Table	MT		ML = MR	
	Static	Dynamic	Static	Dynamic
TV00 75/50 125/75	26 39	15 23	11 18	6,5 11
TV0 100/75 150/100	70 105	42 63	18 23	11 13,5
TV01	612	367	143	86
TV1	1020	612	187	112
TV2N	1796	1077	588	352
TV3N	3900	2337	1500	900

Values in Nm

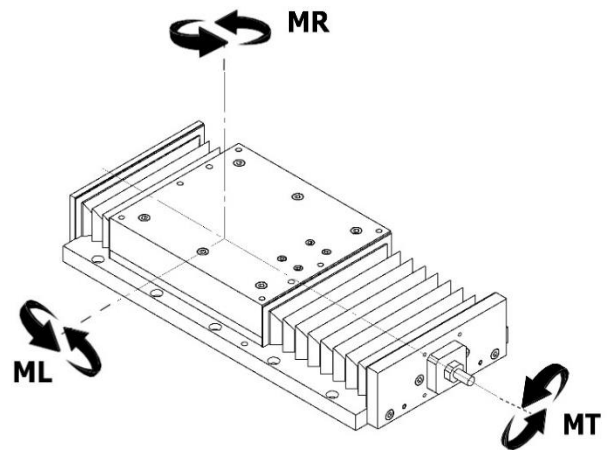


TABLE WEIGHT

Table	Total weight (Kg)
TV00 75/50 125/75	0,6 1,1
TV0 100/75 150/100	1,5 2,2
TV01 150/100 200/100	3,8 4,2
TV1 125/250 125/300	5,2 6

Accessories and motor excluded

Table	Total weight (Kg)
TV2N C100 C150 C200	26,5 28 29,5
TV3N C100 C150 C200	47 50 53

Accessories and motor excluded



Company certified according to
EN 9100:2018, AS9100D, JISQ 9100:2016
ISO 9001:2015



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