

Narrow Motorized Translation Stages

8MT173

Motorized Translation Stages 8MT173 are created on the basis of 7T173 manual translation stages.

Mechanical parameters of the motorized stages are identical to the parameters of manual **7T173**.

Resolution, speed and load capacity all depend on parameters of the motor, translation stages, as well as on the controller and driving mode a user chooses to use.

For vertical (Z axis) mounting we offer angle bracket **2AB173-20** (page 2-7). Angle brackets of custom design can be manufactured on request.

Two mechanical limit switches built into each translation stage used for emergency stop at ends of travel range or to establish a reference position with accuracy of several motor steps (use **E4** option for more accurate zero position setting, see page 8-1).

Motor position can be visually determined with accuracy of one step by reading a scale engraved on dial knob fitted on motor shaft (use **Encoder** for monitoring exact position using PC).

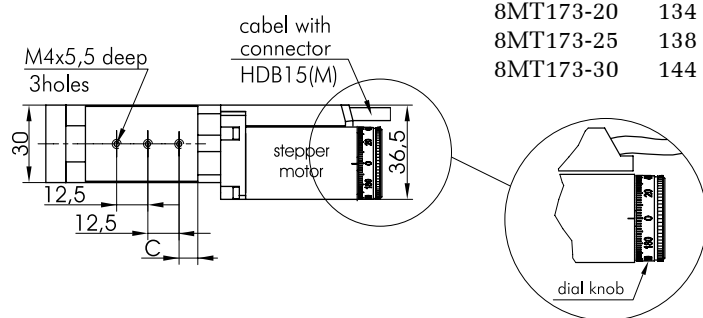
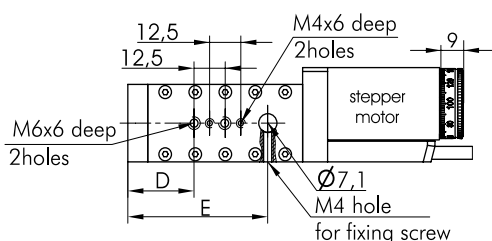
Body and platform of **8MT173** are made of black finished aluminum. Functional parts are made of steel.

- Narrow (30 mm)
- Compact design
- High guide way accuracy
- Lead screw pitch 0.25 mm
- Travel 10, 20, 25, 30 mm
- Optional travel 5, 6, 8 mm and other
- X-Y-Z configurations available

Narrow Motorized Translation Stage with stepper motor

8MT173

Motorized Stages of Higher Speed available on request



8MT173-20

Model	L, mm	A, mm	B, mm	C, mm	D, mm	E, mm
8MT173-10	124	60	45	7.5	21.5	49
8MT173-20	134	70	45	7.5	26.5	56
8MT173-25	138	74	49	11	30.5	60
8MT173-30	144	80	55	11.5	36.5	66

SPECIFICATIONS	8MT173-10	8MT173-20	8MT173-25	8MT173-30
Travel range, mm	10	20	25	30
Lead screw pitch, mm		0.25		
Resolution in full step*, μm		1.25		
Max. speed*, mm/s		5		
Load capacity:				
Horizontal, kg		5		
Vertical, kg		2		
Cable		integrated, 1.6 m length		
Motor connector		HDB15(M)		
Stepper motor		28		
Weight, kg	0.43	0.46	0.47	0.48
Assemblies:				
X-Y		2CP173-20		
Z		2AB173-20		

***Test condition:**

- STANDA controllers;
- Power supply – 36V.

Narrow Motorized Translation Stage with Vacuum compatible stepper motor

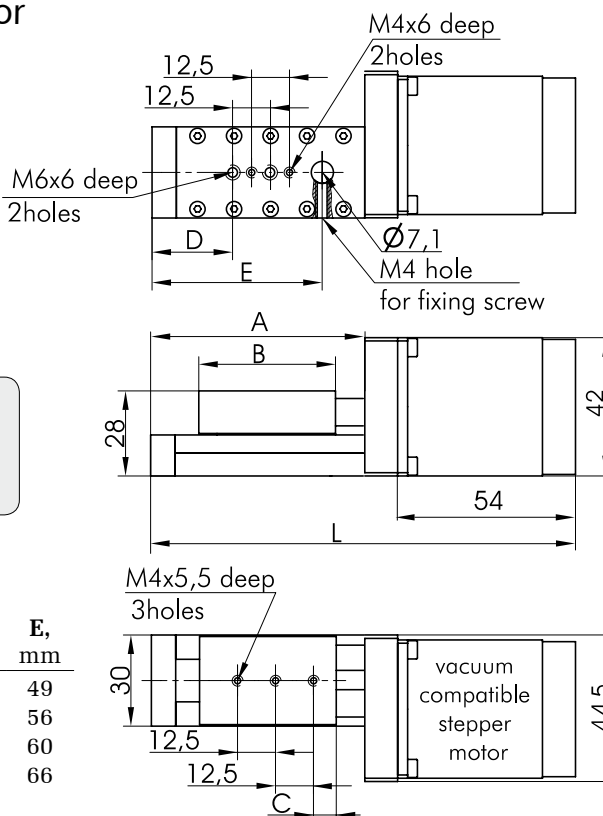
8MT173V



**Vacuum
10⁻⁶ Torr
compatible**

8MT173V-20-VSS42

Model	L, mm	A, mm	B, mm	C, mm	D, mm	E, mm
8MT173V-10-VSS42	124	60	45	7.5	21.5	49
8MT173V-20-VSS42	134	70	45	7.5	26.5	56
8MT173V-25-VSS42	138	74	49	11	30.5	60
8MT173V-30-VSS42	144	80	55	11.5	36.5	66



Many applications require **vacuum compatible stages**. **8MT173V** series stages are equipped with **10⁻⁶ Torr vacuum compatible stepper motor**, all mechanical parts are **lubricated with High vacuum compatible grease**. Aluminum parts are not anodized. Stages are cleaned in vacuum chamber and packed before dispatch, so that it can be immediately placed in vacuum chamber after purchase without spoiling the vacuum. Cleaning and packing not included in price.

SPECIFICATIONS	8MT173V-10-VSS42	8MT173V-20-VSS42	8MT173V-25-VSS42	8MT173V-30-VSS42
Travel range, mm	10	20	25	30
Lead screw pitch, mm			0.25	
Resolution in full step*, µm			1.25	
Max. speed*, mm/s			2.5	
Load capacity:				
Horizontal, kg			3	
Vertical, kg			1	
Fluoroplastic cable		integrated, 2 m length		
Motor connector		HDB15(M)		
Vacuum compatible stepper motor		VSS42		
Weight, kg	0.42	0.48	0.49	0.5
Assemblies:				
X-Y		2CP173V-20		
Z		2AB173V-20		

***Test condition:**

- STANDA controllers;
- Power supply – 36V.

Recommended Controllers

more info on **www.standa.it**

**Stepper,
BLDC and DC Motor
Controller**



8SMC4-USB-B8-1
1 axis Controller in box

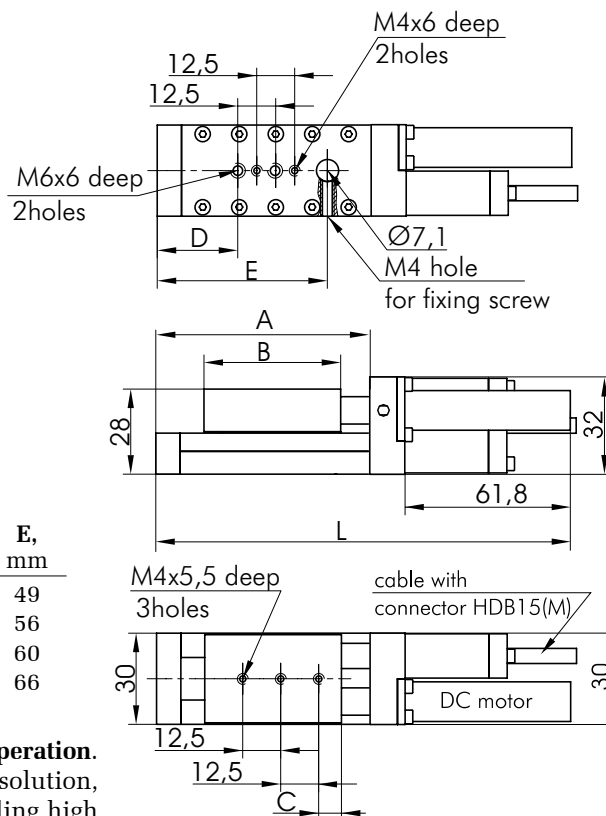
**Stepper,
BLDC and DC Motor
Controller**



8SMC4-USB-B9-2
2 axis Controller in box

Narrow Motorized Translation Stage with DC motor

8MT173-DCE2



Model	L, mm	A, mm	B, mm	C, mm	D, mm	E, mm
8MT173-10DCE2	133.5	60	45	7.5	21.5	49
8MT173-20DCE2	143.5	70	45	7.5	26.5	56
8MT173-25DCE2	147.5	74	49	11	30.5	60
8MT173-30DCE2	153.5	80	55	11.5	36.5	66

DC motor provides **smoother motion** and **closed loop operation**. High number of motor reduction gear provides high resolution, but low speed in turn. Ideal for applications demanding high accuracy, but not sensitive to speed limitations.

SPECIFICATIONS	8MT173-10DCE2	8MT173-20DCE2	8MT173-25DCE2	8MT173-30DCE2
Travel range, mm	10	20	25	30
Lead screw pitch, mm			0.25	
Resolution, μm			0.058	
Minimal incremental motion, μm			0.1	
Bi-directional Repeatability, μm			0.4	
Max. speed, mm/s			0.5	
Load capacity:				
Horizontal, kg			5	
Vertical, kg			1	
Cable		integrated, 1.6 m length		
Motor connector		HDB15(M)		
DC motor		DCE369751		
Weight, kg	0.43	0.46	0.47	0.48
Assemblies:				
X-Y		2CP173-20		
Z		2AB173-20		

Recommended Controllers

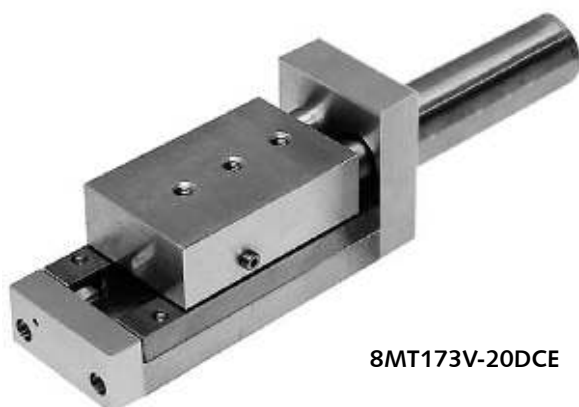
more info on **www.standa.it**

Three Axis Stepper, BLDC and DC Motor Controller 8SMC4-USB-B8-B9 with Power Supply



Narrow Motorized Translation Stage
with Vacuum compatible DC motor

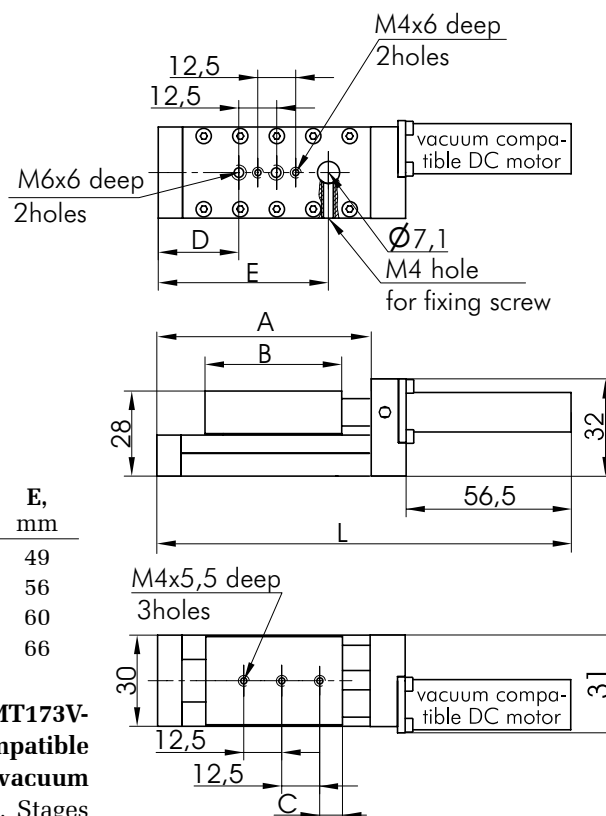
8MT173V-DCE



8MT173V-20DCE

Model	L, mm	A, mm	B, mm	C, mm	D, mm	E, mm
8MT173V-10DCE	128	60	45	7.5	21.5	49
8MT173V-20DCE	138	70	45	7.5	26.5	56
8MT173V-25DCE	142	74	49	11	30.5	60
8MT173V-30DCE	148	80	55	11.5	36.5	66

Many applications require **vacuum compatible stages**. 8MT173V-DCE series stages are equipped with **10⁻⁶ Torr vacuum compatible DC motor**, all mechanical parts are **lubricated with High vacuum compatible grease**. Aluminum parts are not anodized. Stages are cleaned in vacuum chamber and packed before dispatch, so that it can be immediately placed in vacuum chamber after purchase without spoiling the vacuum. Cleaning and packing not included in price.



SPECIFICATIONS	8MT173V-10DCE	8MT173V-20DCE	8MT173V-25DCE	8MT173V-30DCE
Travel range, mm	10	20	25	30
Lead screw pitch, mm			0.25	
Resolution, μm			0.029	
Minimal incremental motion, μm			0.1	
Bi-directional Repeatability, μm			0.4	
Max. speed, mm/s			0.16	
Load capacity:				
Horizontal, kg			5	
Vertical, kg			1	
Fluoroplastic cable		integrated, 2 m length		
Motor connector		HDB15(M)		
Vacuum compatible DC motor		DCE1841		
Weight, kg	0.43	0.46	0.47	0.48
Assemblies:				
X-Y		2CP173V-20		
Z		2AB173V-20		

Recommended Power Supply and Controller

more info on **www.standa.it**



Narrow Motorized Translation Stage with Vacuum compatible stepper motor

8MT30V-50-VSS42

SPECIFICATIONS

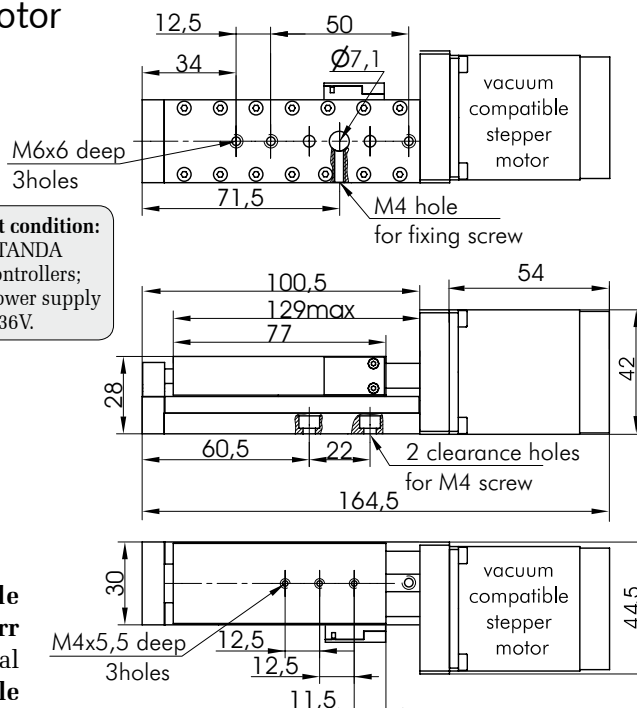
Travel range	50 mm
Lead screw pitch	0.25 mm
Resolution in full step*	1.25 μ m
Max. speed*	2.5 mm/s
Load capacity	
Horizontal	3 kg
Vertical	1 kg
Fluoroplastic cable	integrated, 2 m length
Motor connector	HDB15(M)
Vacuum compatible stepper motor	VSS42
Weight	0.55 kg

Assemblies:

X-Y	2CP173V-50-20
Z	2AB173V-20-50

Many applications require **vacuum compatible stages**. 8MT30V-50 stage is equipped with **10⁻⁶ Torr vacuum compatible stepper motor**, all mechanical parts are **lubricated with High vacuum compatible grease**. Aluminum parts are not anodized. Stages are cleaned in vacuum chamber and packed before dispatch, so that it can be immediately placed in vacuum chamber after purchase without spoiling the vacuum. Cleaning and packing not included in price.

***Test condition:**
• STANDA controllers;
• Power supply - 36V.



Stepper, BLDC and DC Motor Controller



8SMC4-USB-B8-1
1 axis Controller in box



8SMC4-USB-B9-2
2 axis Controller in box

Narrow Motorized Translation Stage with DC motor

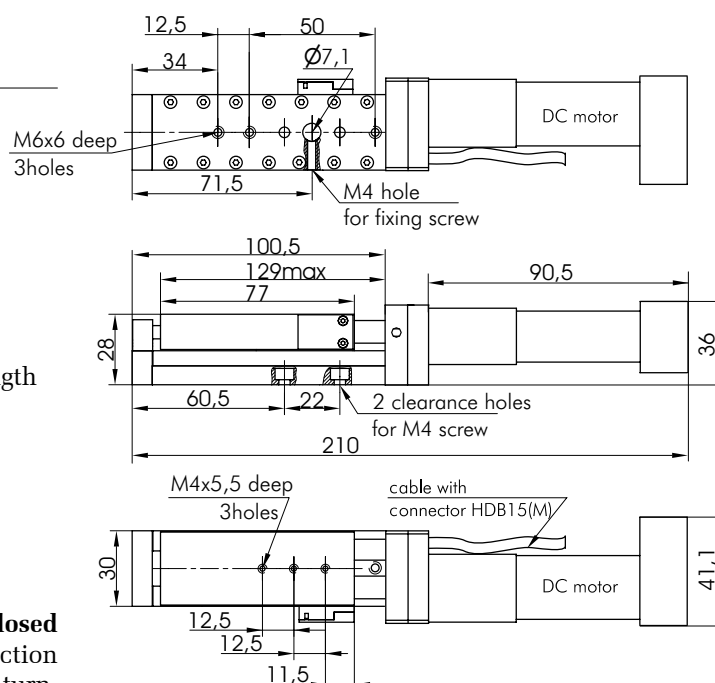
8MT30-50DCE

SPECIFICATIONS

Travel range	50 mm
Lead screw pitch	0.25 mm
Resolution	0.014 μ m
Minimal incremental motion	0.1 μ m
Bi-directional Repeatability	0.4 μ m
Max. speed	7 mm/s
Load capacity	
Horizontal	5 kg
Vertical	1 kg
Cable	integrated, 1.6 m length
Motor connector	HDB15(M)
DC motor	DCE RE25
Weight	0.5 kg

Assemblies:

X-Y	2CP173-50-20
Z	2AB173-20-50



DC motor provides **smoother motion** and **closed loop operation**. High number of motor reduction gear provides high resolution, but low speed in turn. Ideal for applications demanding high accuracy but not sensitive to speed limitations.

Narrow Motorized Translation Stage with Vacuum compatible DC motor

8MT30V-50DCE

SPECIFICATIONS

Travel range	50 mm
Lead screw pitch	0.25 mm
Resolution	0.029 μ m
Minimal incremental motion	0.1 μ m
Bi-directional Repeatability	0.4 μ m
Max. speed	0.5 mm/s

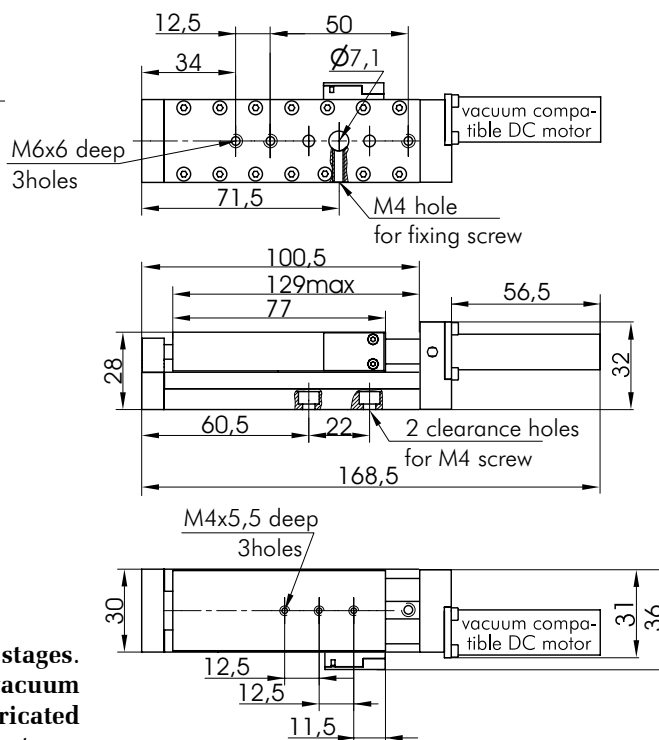
Load capacity	
Horizontal	5 kg
Vertical	1 kg
Fluoroplastic cable	integrated, 2 m length
Motor connector	HDB15(M)
Vacuum compatible	DCE1841

Weight 0.5 kg

Assemblies:

X-Y	2CP173V-50-20
Z	2AB173V-20-50

Many applications require **vacuum compatible stages**. **8MT30V-50DCE** stage is equipped with **10⁻⁶ Torr vacuum compatible DC motor**, all mechanical parts are **lubricated with High vacuum compatible grease**. Aluminum parts are not anodized. Stages are cleaned in vacuum chamber and packed before dispatch, so that it can be immediately placed in vacuum chamber after purchase without spoiling the vacuum. Cleaning and packing not included in price.



Recommended Controllers

more info on **page 8-79**

Stepper, BLDC and DC Motor Controller



Close relation between our customers influenced **Standa** to modify its **8SMC1**. Tens of thousands of **8SMC1 stepper motor controllers** take part in the market.

NEW

With respect to our users, **Standa** has developed the new controller - **8SMC4** with a **modern design** and **increased functionalities** for **photonics** and **industrial applications**.



Medium Width Motorized Translation Stages

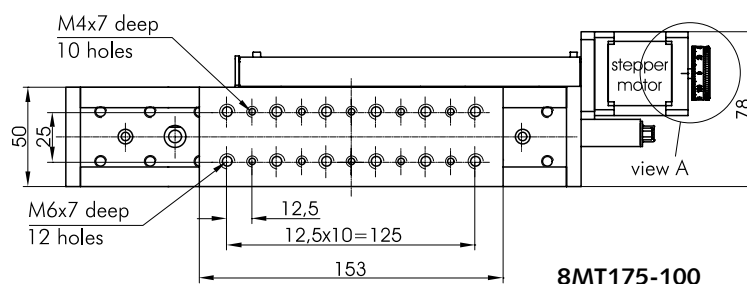
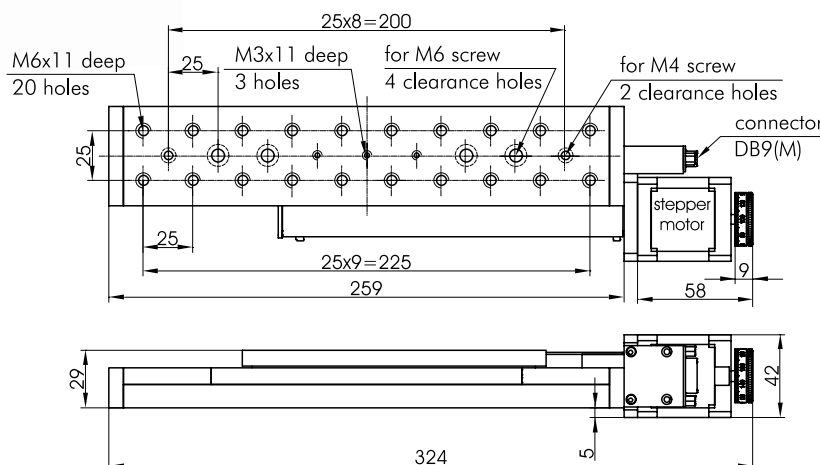
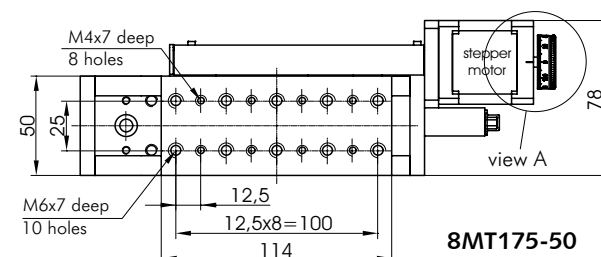
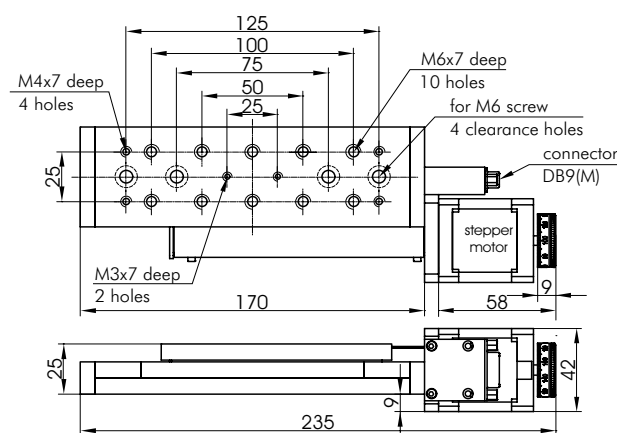
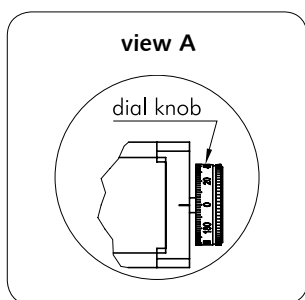
8MT175



8MT175-50

8MT175-150

- Narrow (50 mm)
- Compact design
- High guide way accuracy
- Resolution 0.31 μm (1/8 step)
- Travel 50, 100, 150, 200 mm
- X-Y-Z configurations available



SPECIFICATIONS	8MT175-50	8MT175-100	8MT175-150	8MT175-200
Travel range, mm	50	100	150	200
Lead screw pitch, mm		0.5		
Resolution in full step*, μm		2.5		
Max. speed*, mm/s		10		
Load capacity				
Horizontal, kg		8		
Vertical, kg		3		
Motor connector		DB9(M)		
Stepper motor		4247		
Weight, kg	1	1.5	1.5	1.6
Assemblies:				
X-Y		directly		
Z		2AB175		

*Test condition:

- STANDA controllers;
- Power supply - 36V.

e-mail: sales@standa.it

www.standa.it

Phone: +370-5-2651474 Fax: +370-5-2651483

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8MT175-50XY

In X-Y configuration medium width stages are stacked directly using M6 screws.



2AB175

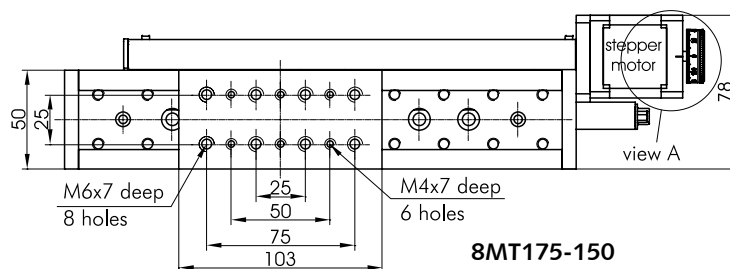
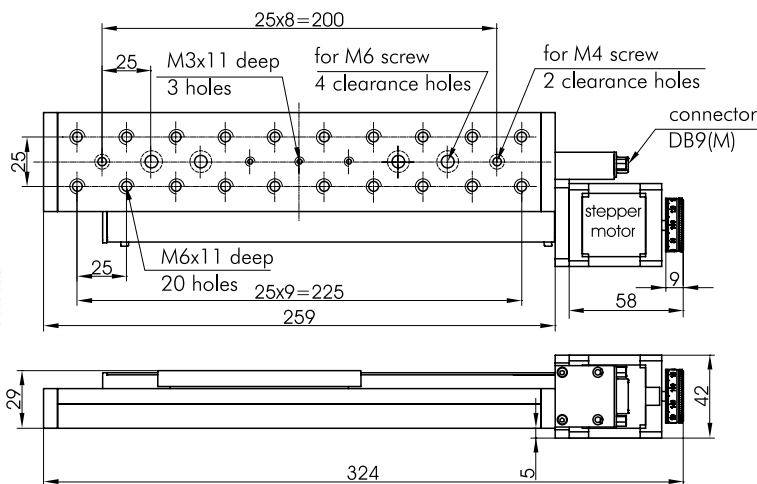
Angle Bracket 2AB175 is used to transform "horizontal" translators into vertical ones.



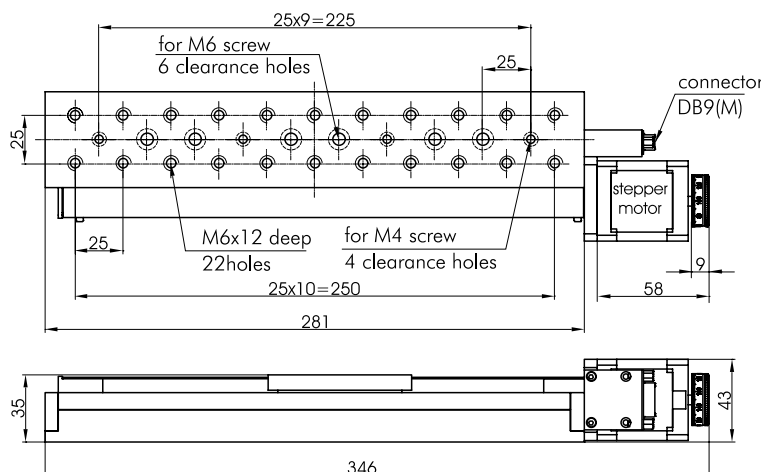
3UBP175

Base Plate 3UBP175 is designed to fix listed translators 8MT175 series to optical tables and other flat surfaces. Fits metric and imperial hole patterns.

Motorized medium width stages have a motor protruding from the **bottom**. To place such stages on flat surfaces you need a base plate 3UBP175 (see 3-8 page).

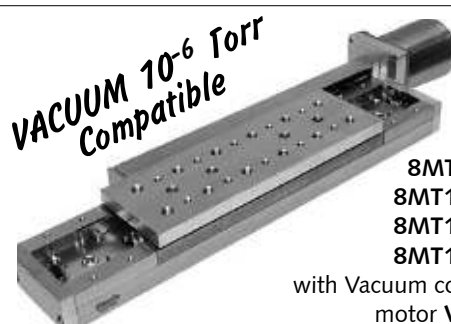


8MT175-150



8MT175-200

**Motorized Stages of Higher Speed
available on request**



8MT175V-50-VSS42
8MT175V-100-VSS42
8MT175V-150-VSS42
8MT175V-200-VSS42

with Vacuum compatible stepper motor VSS42 (page 8-3)

Available with
VACUUM 10⁻⁶ Torr
Compatible DC motor

8MT175V-50-DCE
8MT175V-100-DCE
8MT175V-150-DCE
8MT175V-200-DCE

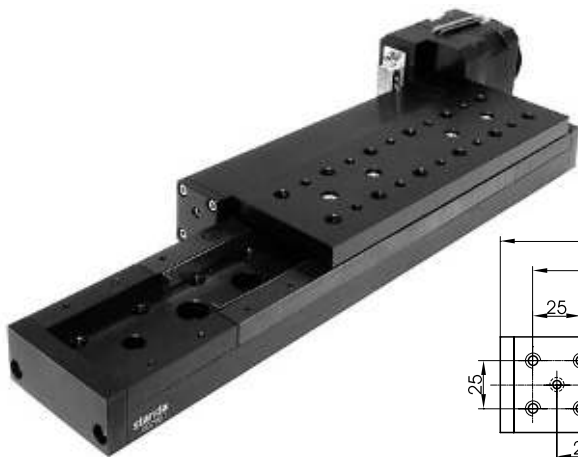
Available with
DC motor

8MT175-50-DCE
8MT175-100-DCE
8MT175-150-DCE
8MT175-200-DCE

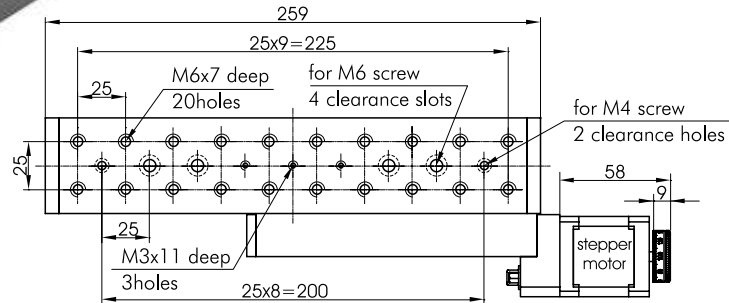


Motorized Translation Stage

8MT177-100



- Narrow
- Compact design
- Resolution 0.125 μm (1/8 step)
- X-Y-Z configurations available
- Motors of other types are available



SPECIFICATIONS

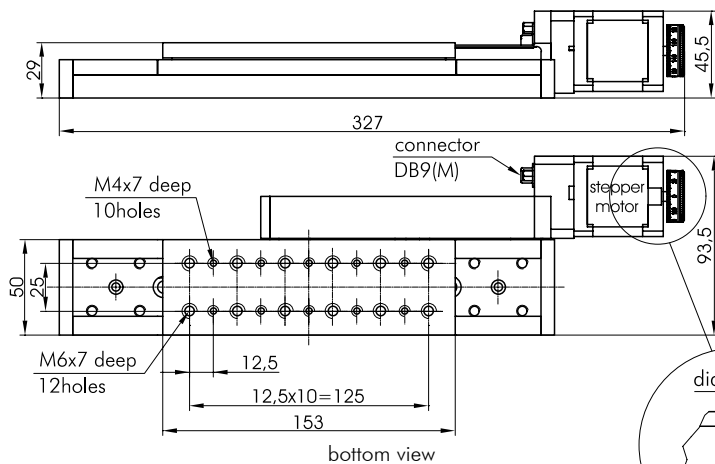
Travel range	100 mm
Lead screw pitch	0.5 mm
Resolution in full step*	1 μm
in 1/8 step*	0.125 μm
Reduction motor/screw	2.5:1
Max. speed*	5 mm/s
Load capacity	
Horizontal	8 kg
Vertical	3 kg
Motor connector	DB9(M)
Stepper motor	4247
Weight	1.5 kg

Assemblies:

X-Y
Z

directly
2AB175

- *Test condition:
- STANDA controllers;
 - Power supply - 36V.

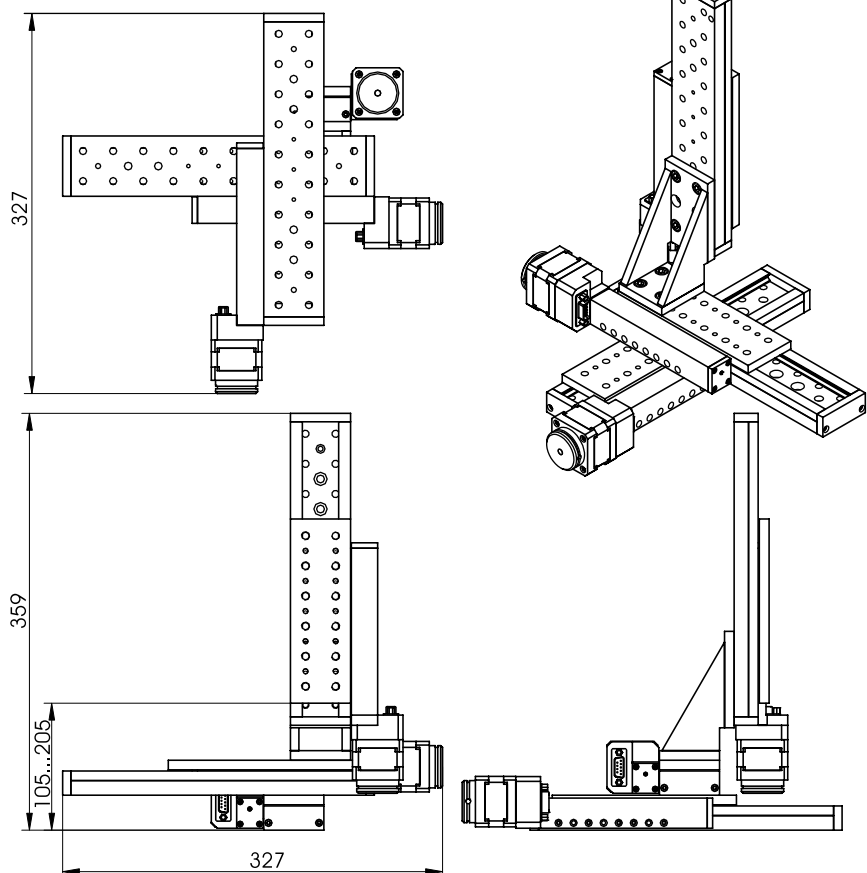


8SMC4-USB-B8-1
1 axis Controller in box

Joystick developed for
manual control of one or
two-axis all Stepper motor
equipped motorizes stages



8JXY-03
Joystick for 8SMC4-USB
controller



8MT177-100XYZ

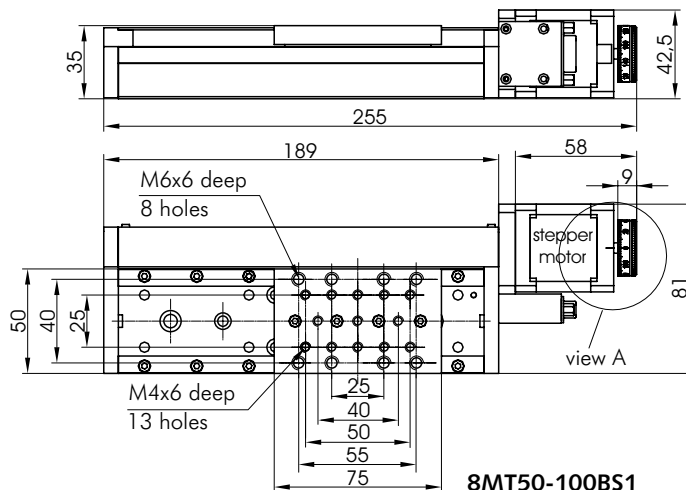
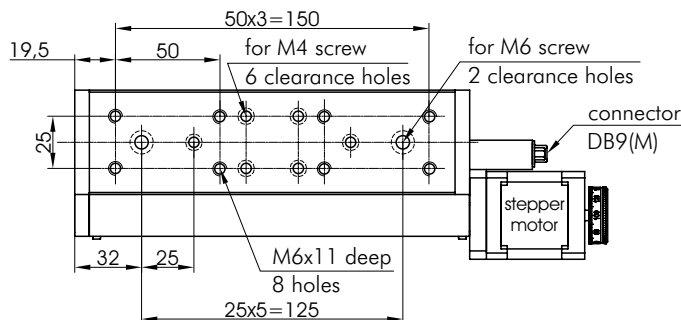
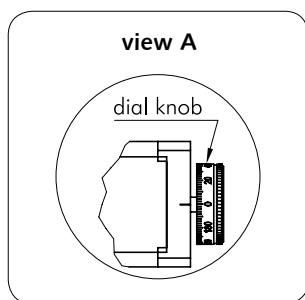
Motorized Translation Stage

8MT50

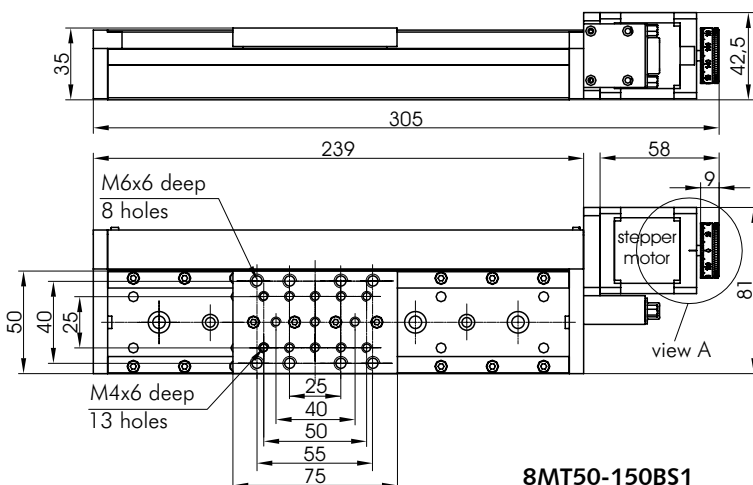
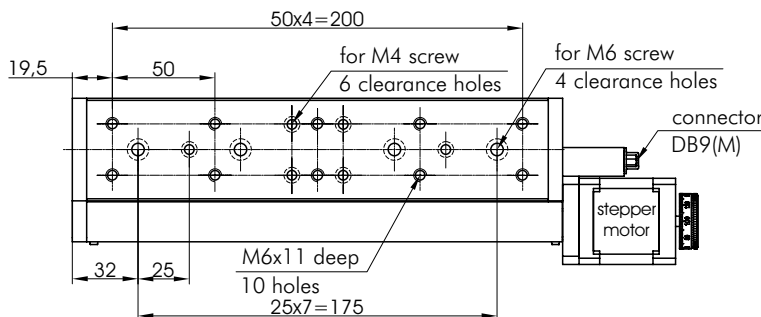


8MT50-200BS1

- Narrow
- Compact design
- High speed
- Heavy load capacity
- X-Y-Z configurations available
- Motors of other types are available



8MT50-100BS1



8MT50-150BS1

SPECIFICATIONS

Travel range

8MT50-100BS1	100 mm
8MT50-150BS1	150 mm
8MT50-200BS1	200 mm

Ball screw pitch

1 mm

Resolution in full step*

5 μ m

Max. speed*

20 mm/s

Load capacity

Horizontal

30 kg

Vertical

8 kg

Motor connector

DB9(M)

Stepper motor

4247

Weight

8MT50-100BS1	1.1 kg
8MT50-150BS1	1.4 kg
8MT50-200BS1	1.65 kg

Assemblies:

X-Y

directly

Z

2AB175

*Test condition:

- STANDA controllers;
- Power supply - 36V.

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e-mail: sales@standa.it

Phone: +370-5-2651474

Fax: +370-5-2651483

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Optical
Tables

1

Brackets
& Rails

2

Base
Mounts &
Accessories

3

Optical
Mounts

4

Optical
Positioners

5

Base
Positioners

Translation &
Rotation
Stages

7

Motorised
Positioners &
Controllers

8

Fine
Adjustment
Screws

9

Opto-
Mechanics &
Sets

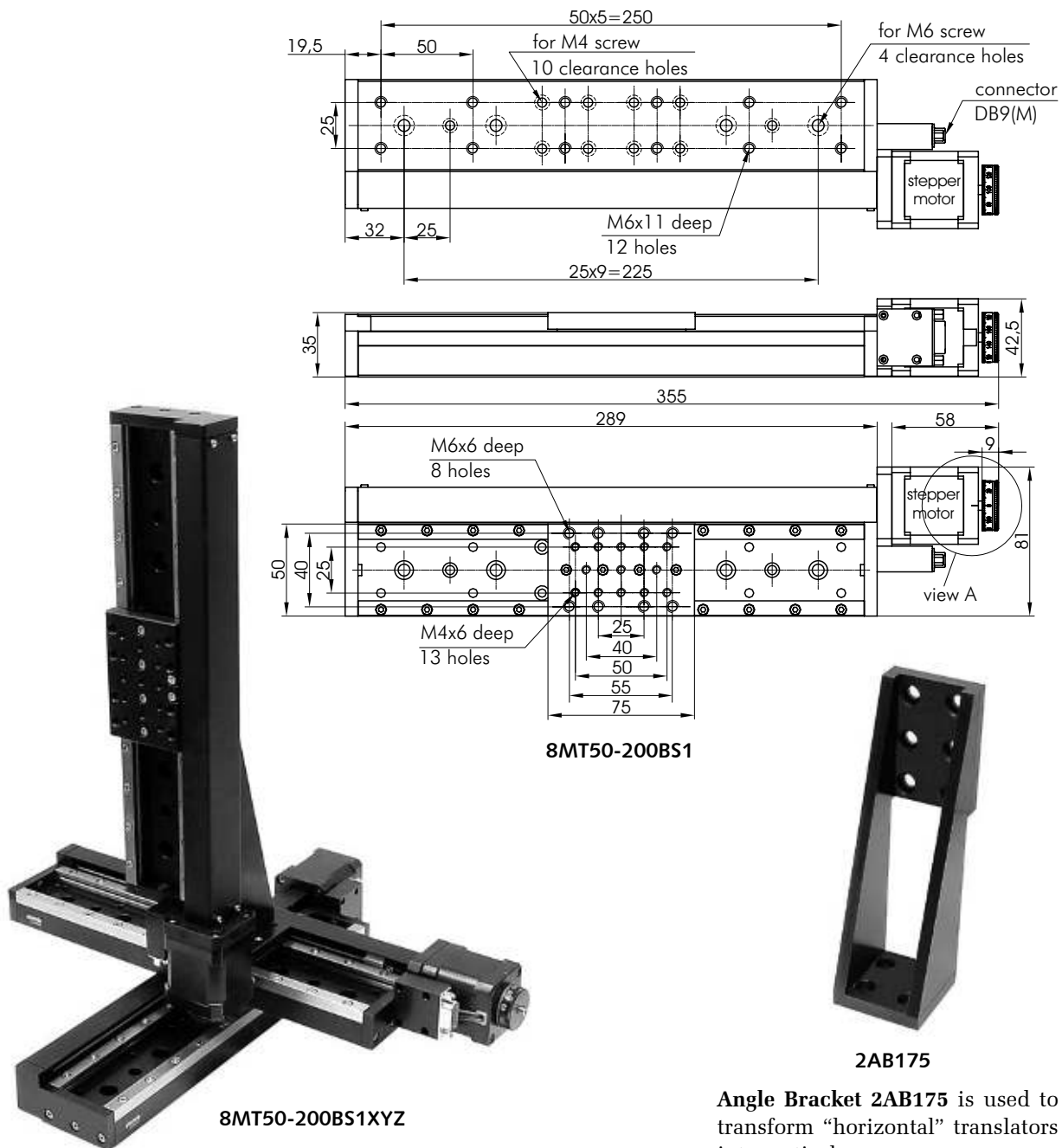
10

Light Test &
Measurement
Instruments

11

Lasers &
Accessories

12



Recommended Controllers

more info on www.standa.it

8SMC4-36

Universal motion controller/driver

Universal motion controller/driver
8SMC4-36 is designed especially to control up to 36 mechatronic systems based on standard **DC**, **Servo**, **Stepper** or **BLDC technologies**. The housing of **8SMC4-36** has 7U height and can be mounted in standard 19 inch industrial cabinets. Up to six **8SMC4-36** systems can be installed in a standard 42U 19 inch cabinet. This allows to have 216 axes per cabinet which saves space and lets avoid cable clutter.



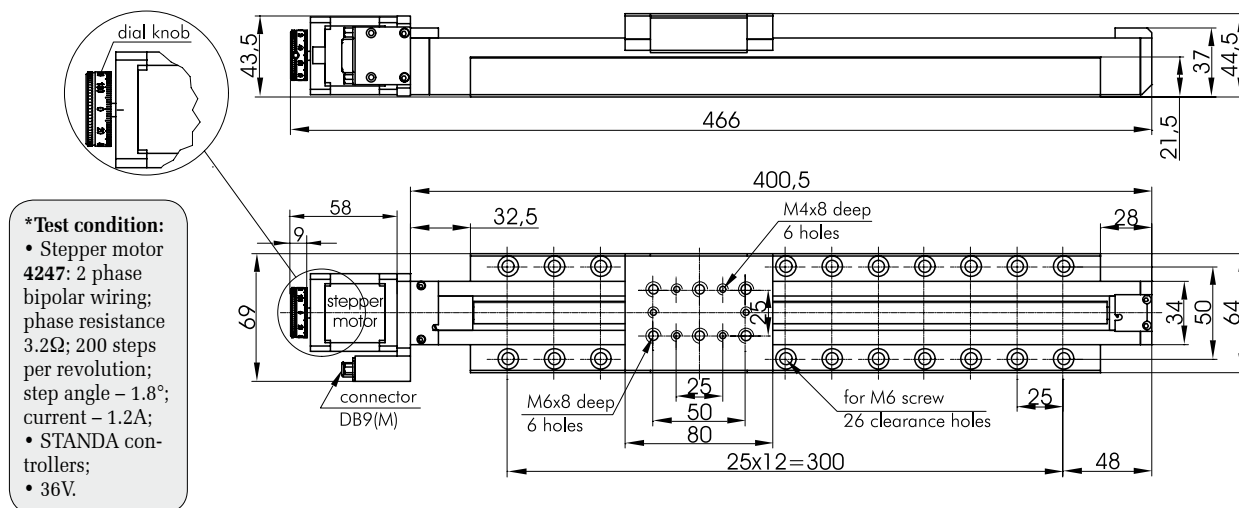
Motorized Delay Line

8MT160-300



- Travel range 300 mm
- Resolution in full step $2.5 \mu\text{m}$ ($0.31 \mu\text{m}$ (1/8 step))
- Steel rail design. Stability and rigidity ensured
- Recirculating ball modules are incorporated in the platform
- Step motor with 200 steps per revolution
- Lead screw pitch 0.5 mm
- Max speed 8mm/s^*
- Horizontal load capacity 10 kg
- Vertical load capacity 3 kg
- Supply voltage – 36V
- Weight 4.28 kg

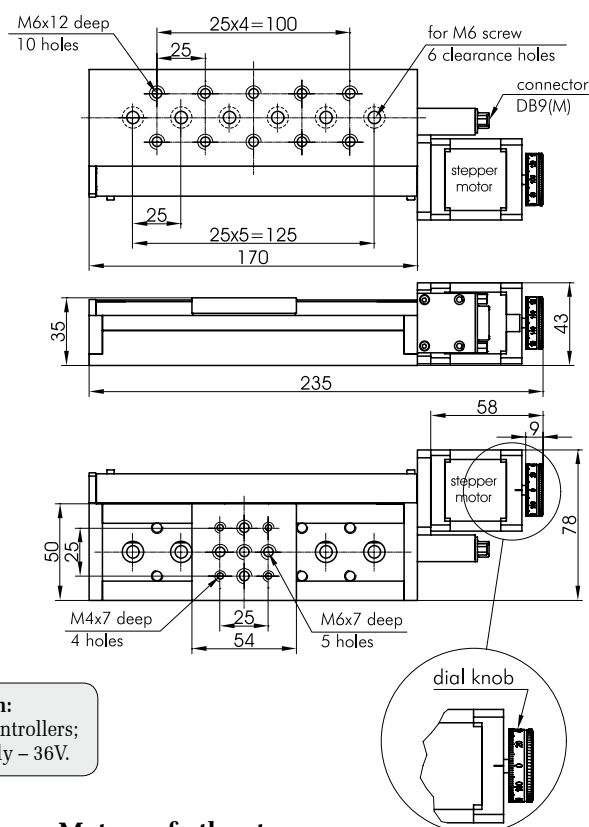
***Test condition:**
 • STANDA controllers;
 • Power supply – 36V.



Motorized Translation Stage

8MT193-100

*Short stage,
Great travel!*



SPECIFICATIONS

Travel range	100 mm
Lead screw pitch	0.5 mm
Resolution in full step*	$2.5 \mu\text{m}$
in 1/8 step*	$0.31 \mu\text{m}$
Max. speed*	10 mm/s
<i>on request we fit alternative motors</i>	
Load capacity	
Horizontal	8 kg
Vertical	3 kg
Motor connector	DB9(M)
Stepper motor	4247
Weight	1.3 kg

***Test condition:**
 • STANDA controllers;
 • Power supply – 36V.

**Motors of other types
are available.**

Motorized Translation Stages

8MT167-25BS1

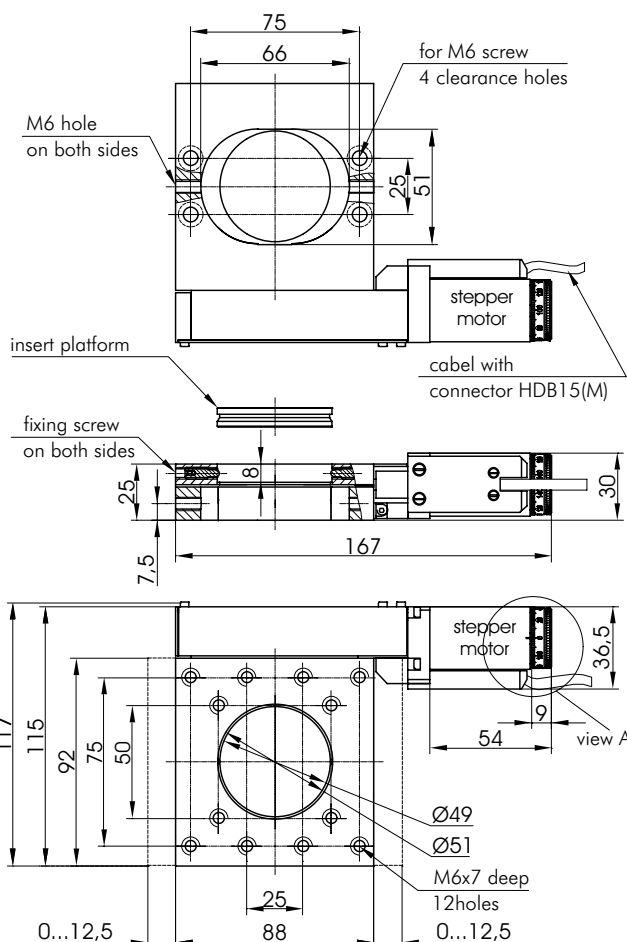
8MT167-25LS



8MT167-25BS1/8MT167-25LS

8MT167-25BS1, unlike the **8MT167-25LS**, is designed for **high-speed movement**. Used ball bearing lead screw makes movement fast and smooth.

The positioner also can be used with microscope on XY axes. As shown in the pictures, the upper plate has a removable insert in the center, the size of which is 2 inches, the base plate is made with slot size of 51 x 76 mm, on the same vertical.



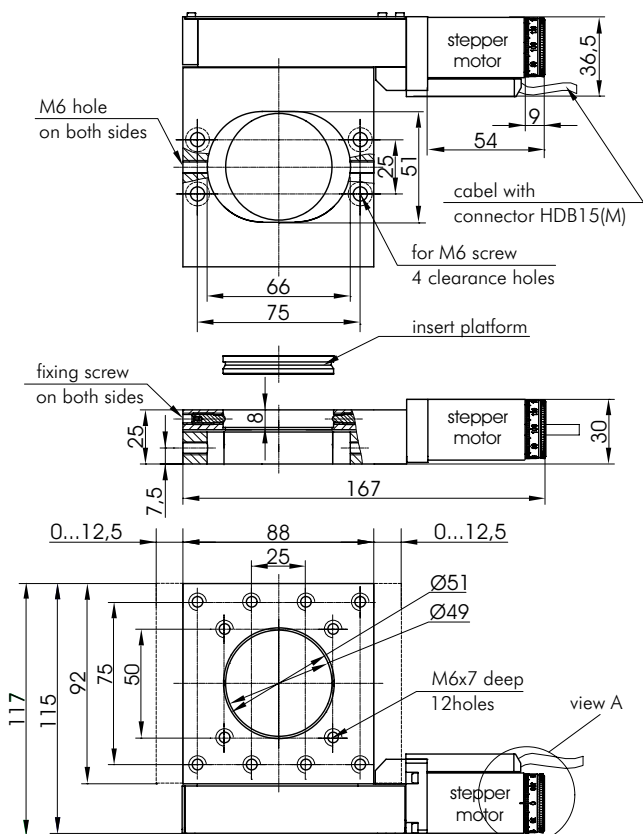
Motorized Translation Stages

8MT167M-25BS1

8MT167M-25LS



8MT167M-25BS1/8MT167M-25LS



"Mirror" version
of
8MT167-25BS1
and
8MT167-25LS

Motorized Translation Stages

8MT167S-25BS1

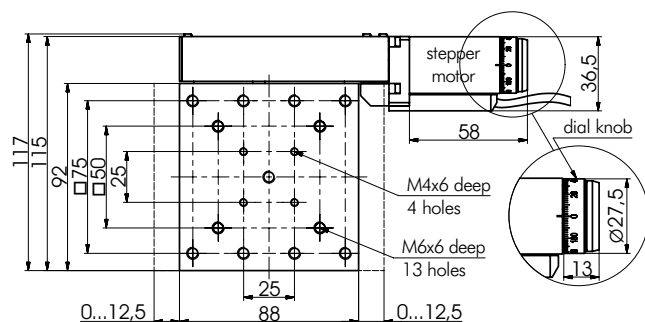
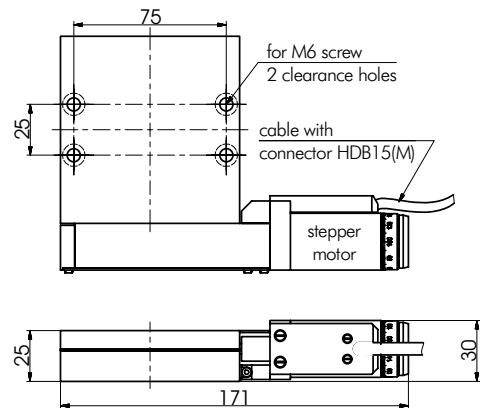
8MT167S-25LS



8MT167S-25BS1/8MT167S-25LS

8MT167S-25 models are made with solid platform. 8MT167S-25BS1, unlike the 8MT167S-25LS, is designed for **high-speed movement**. Used ball bearing lead screw makes movement fast and smooth.

NEW



Motorized Translation Stages

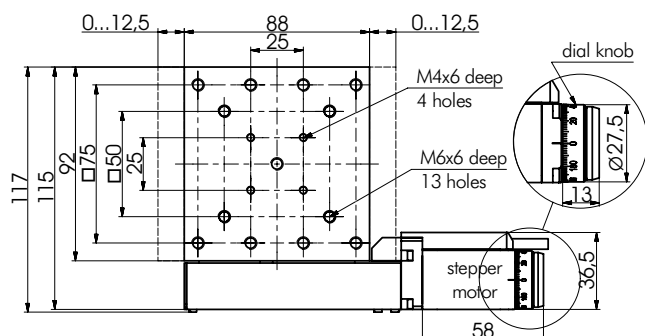
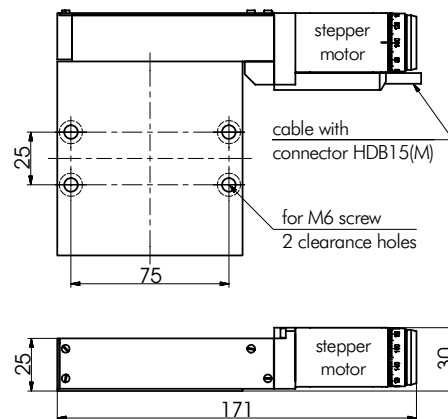
8MT167MS-25BS1

8MT167MS-25LS

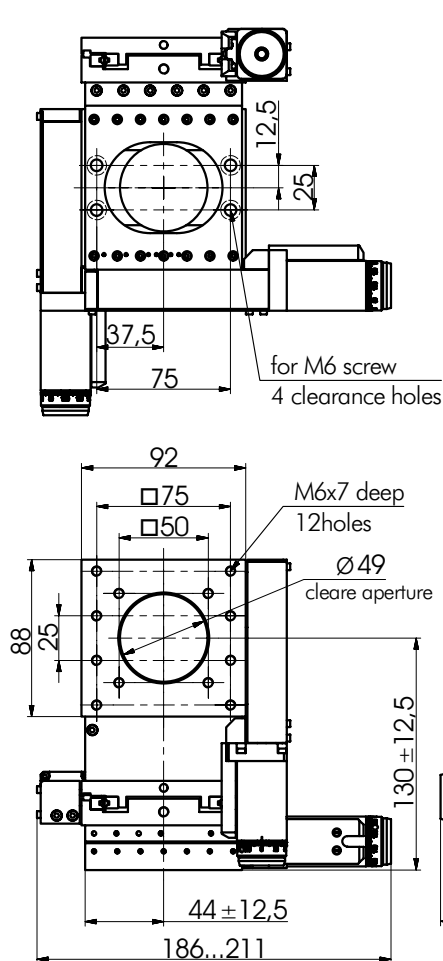


8MT167MS-25BS1/8MT167MS-25LS

NEW

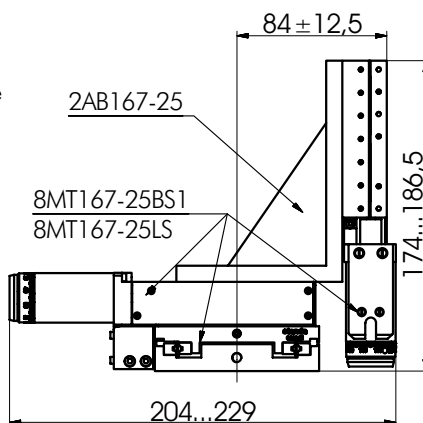


**"Mirror" version
of
8MT167S-25BS1
and
8MT167S-25LS**



Motorized Translation Stages
8MT167-25BS1 or 8MT167-25LS
stacked in XYZ
using 2AB167-25 angle bracket

8MT167-25BS1XYZ
8MT167-25LSXYZ



Angle Bracket
2AB167-25

SPECIFICATIONS

	8MT167-25BS1 8MT167S-25BS1	8MT167-25LS 8MT167S-25LS
Travel range, mm	25	25
Resolution in full step, μm	5	1.25
in 1/8 step, μm	0.625	0.156
Ball screw pitch, mm	1	—
Lead screw pitch, mm	—	0.25
Repeatability, μm	1.5	1
Maximum speed, mm/s	25	6
Maximum load capacity		
Horizontal, kg	30	30
Vertical, kg	7	7
Limit switches	2 pc mechanical	
Type of actuator	—	
Cable	1.6 m length	1.6 m length
Motor connector	HDB15(M)	HDB15(M)
Stepper motor	28	28
Weight, kg	0.8	0.8

Recommended Power Supply and Controller

more info on www.standa.it



Stepper, BLDC and DC Motor
Controller with USB Interface

2 axis Controller in box
8SMC4-USB-B9-2

Assembly kit
5AK-B9-B9

Assembly kit to fix two
or more controller boxes together



Motorized Translation Stages

8MT167-100

Motorized translation stages series 8MT167-100 and 8MT167S-100 is designed to have a low profile large platform with high stability. The large platform also provides more space for mounting optical elements and other equipment.

8MT167S-100 models are made with solid platform.

Movement is produced by stepper or DC motor through reduction gear and lead screw. Reduction gear provides better resolution compared to direct drive stages.

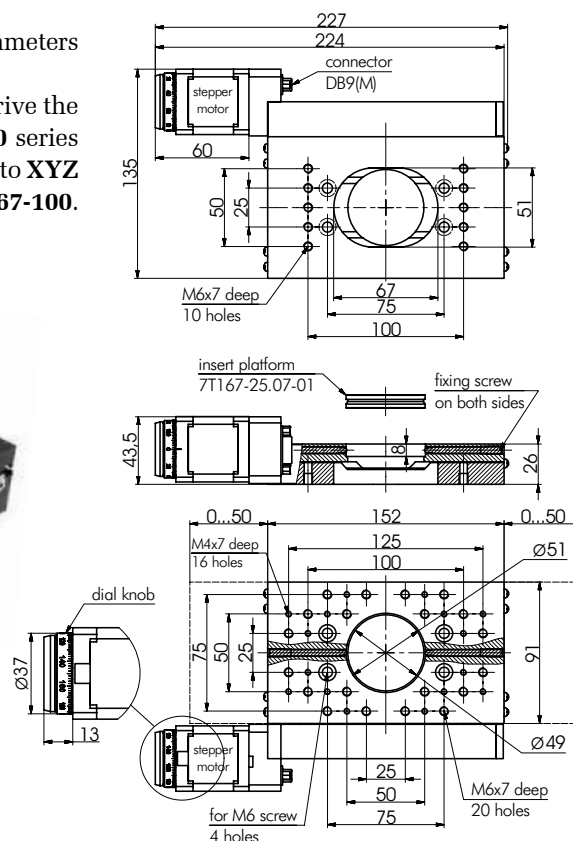
Each unit is supplied with specification of electrical parameters and connection diagram of the motor.

We offer a range of stepper and DC motor controllers to drive the stages, see page 8-23. To assemble stages of **8MT167-100** series into **XY** use connecting plate **2CP167-100**. To assemble into **XYZ** use connecting plate **2CP167-100** and angle bracket **2AB167-100**.



8MT167-100

Motorized Translation Stage 8MT167-100 with stepper motor 4247.

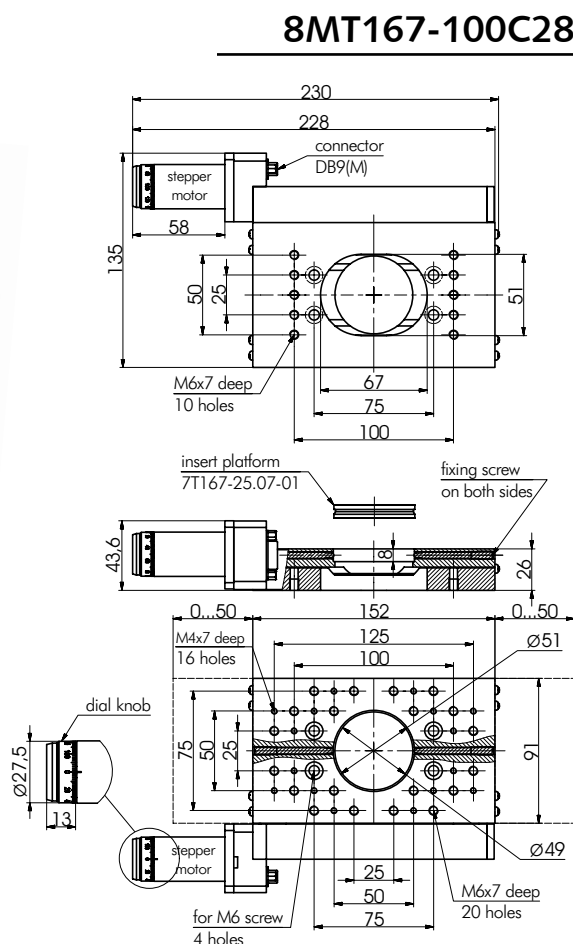


Motorized Translation Stage



8MT167-100C28

Motorized Translation Stage 8MT167-100C28 with stepper motor **28** with connector DB9(M) on motor itself.



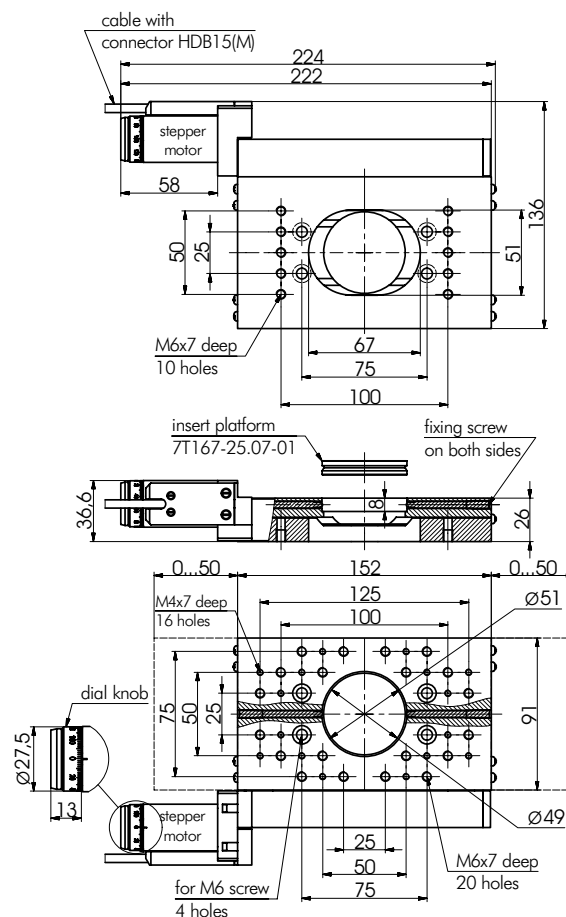
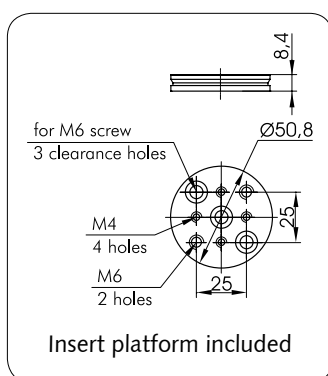
Motorized Translation Stage

8MT167-100-28



8MT167-100-28

Motorized Translation Stage 8MT167-100-28 with stepper motor 28.



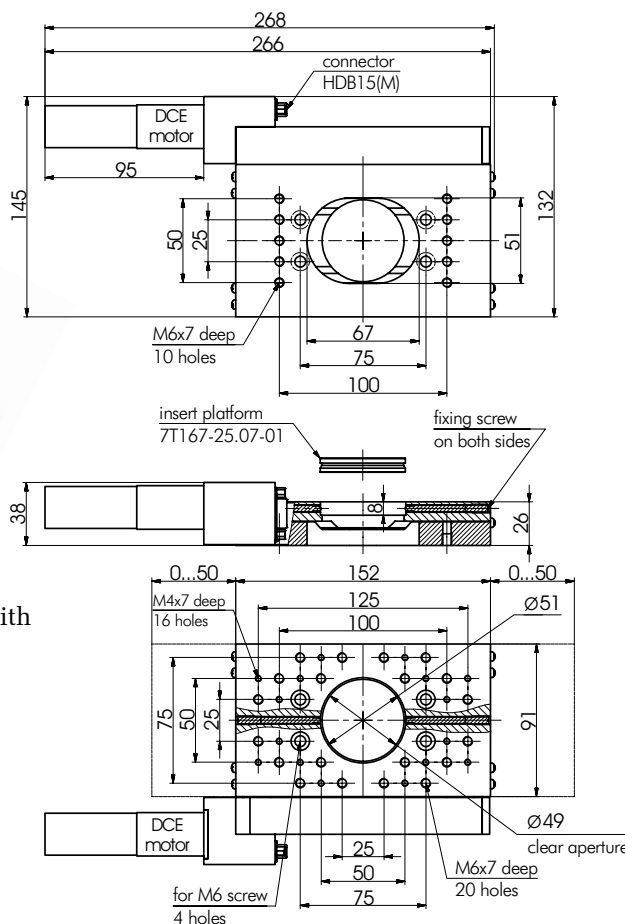
Motorized Translation Stage (DC motor)

8MT167-100DCE2



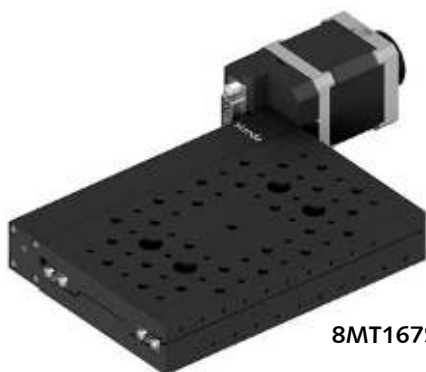
8MT167-100DCE2

Motorized Translation Stage 8MT167-100DCE2 with DC motor DCE RE25.



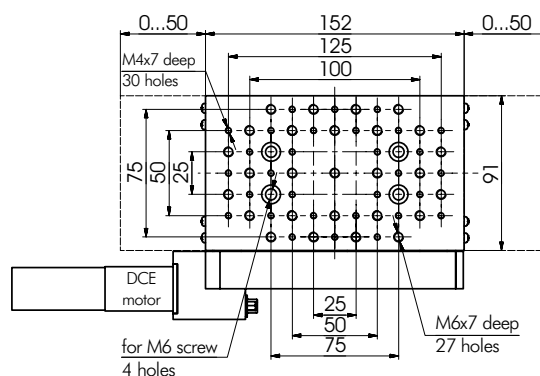
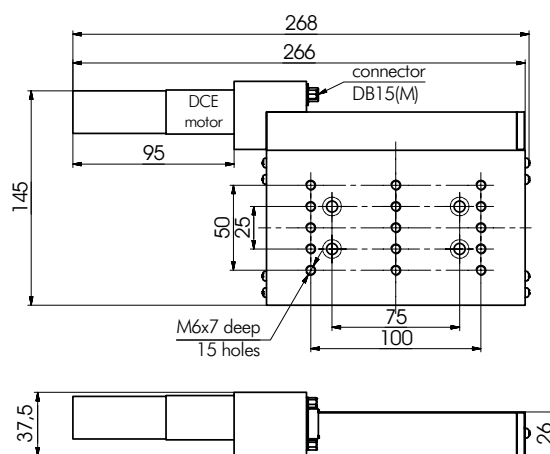
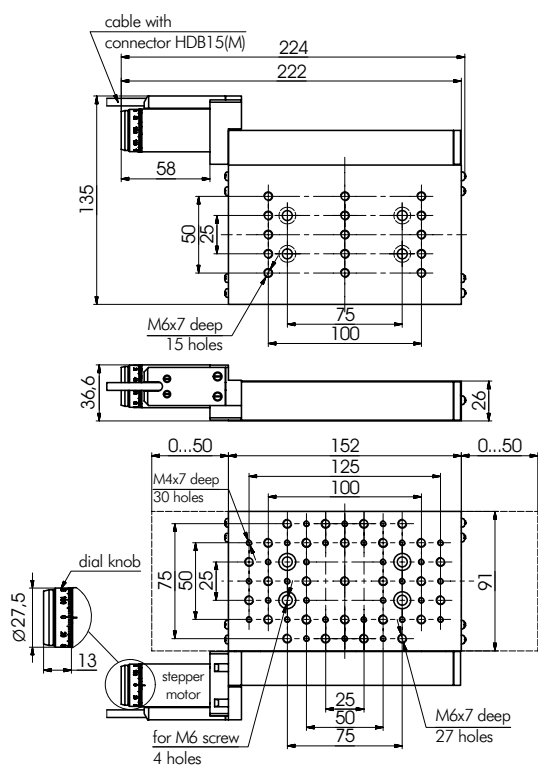
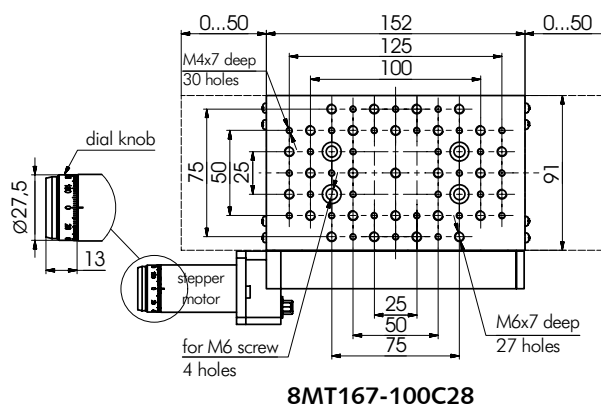
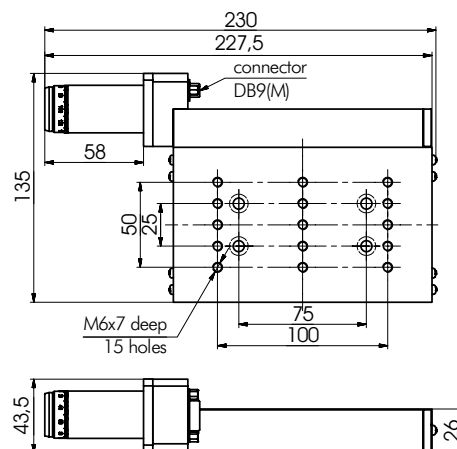
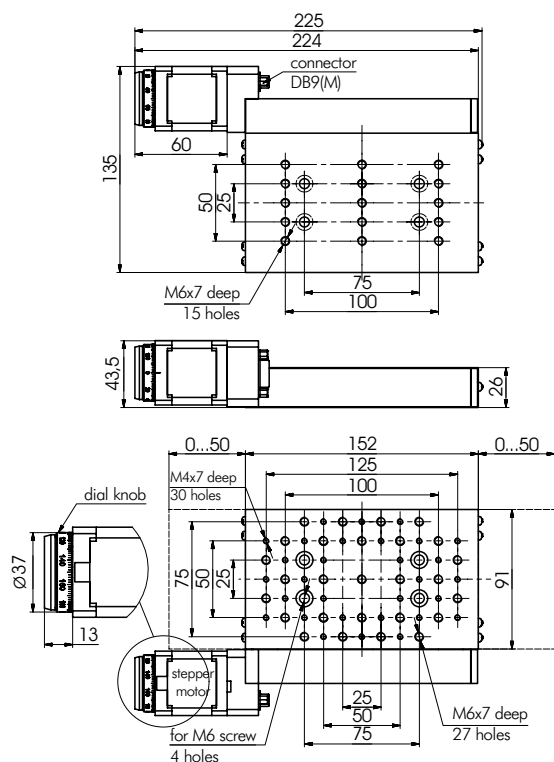
Motorized Translation Stages

8MT167S-100



NEW

*8MT167S-100 models are made
with solid platform*



SPECIFICATIONS	8MT167-100 8MT167S-100	8MT167-100C28 8MT167S-100C28	8MT167-100-28 8MT167S-100-28	8MT167-100DCE2 8MT167S-100DCE2
Travel range, mm	100	100	100	100
Resolution in full step, μm	1	1	1	–
in 1/8 step, μm	0.125	0.125	0.125	–
Lead screw pitch, mm	0.5	0.5	0.5	0.5
Reduction motor/screw	2.5:1	2.5:1	2.5:1	11:1
Bi-direction repeatability, μm	2	2	2	0.8
Minimal incremental motion, μm	–	–	–	0.2
Resolution (calculated), μm	–	–	–	0.023
Maximum speed, mm/s	5	5	5	5.5
Maximum load capacity				
Horizontal, kg	7	7	7	7
Vertical, kg	3	3	3	3
Limit switches	2 pc mechanical			
Cable	1.6 m length			
Motor connector	DB9(M)	DB9(M)	HDB15(M)	HDB15(M)
Stepper motor	4247	28	28	–
DC motor	–	–	–	DCE RE25
Weight, kg	1.4	1.4	1.4	1.5

8MT167-100XYZ



To stack the **8MT167** stages in **X-Y-Z** coordinates you need a connecting plate **2CP167-100** and an angle bracket **2AB167-50**.

Motorized Stages of Higher Speed available on request

Motors of other types are available

Recommended Controller

Three Axis Stepper, BLDC and DC Motor
Controller **8SMC4-USB-B8-B9**
with **Power Supply**



8MT167-100DCE2



8MT167-100

more info on www.standa.it

Motorized Translation Stage

8MT200-100

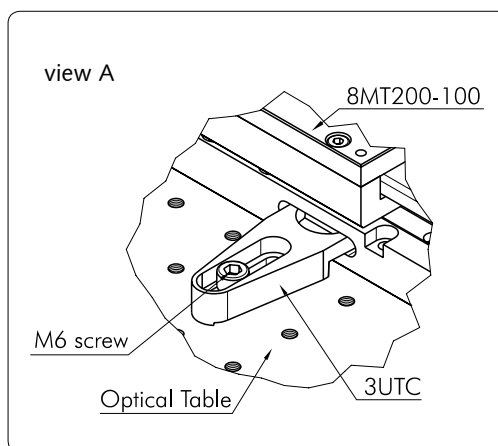
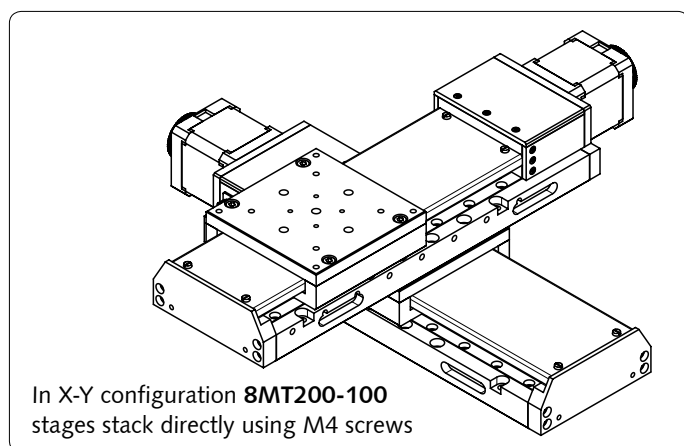
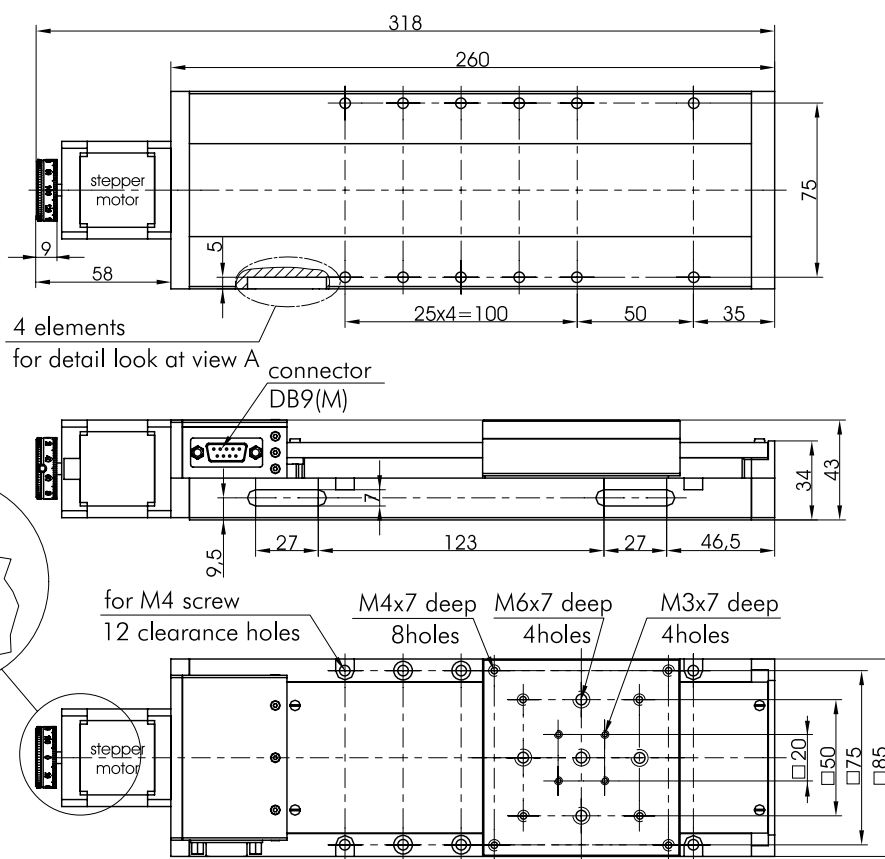


SPECIFICATIONS

Travel range	100 mm
Lead screw pitch	0.5 mm
Resolution in full step*	2.5 μ m
in 1/8 step*	0.31 μ m
Max. speed*	10 mm/s
<i>on request we fit alternative motors</i>	
Load capacity	
Horizontal	40 kg
Vertical	6 kg
Motor connector	DB9(M)
Stepper motor	4247
Weight	2.2 kg

***Test condition:**
 • STANDA controllers;
 • Power supply – 36V.

**Motors of other types
are available**



Motorized Translation Stage with SM system

8MT200-100SM



SPECIFICATIONS

Travel range	100 mm
Lead screw pitch	0.5 mm
Encoder resolution	4000
counts/rev	
Minimal incremental motion	0.125 μ m
Max. speed	25 mm/s
Load capacity	
Horizontal	40 kg
Vertical	6 kg
Cable*	2 m
Motor	SM
Weight	2.5 kg

The **SM system** is a complete, compact and user-friendly integrated control system that features a brushless DC servo motor, motion controller, encoder and amplifier.

It is a decentralized drive system. It is a fully integrated motor system that includes a Brushless D.C. Servo-Motor (BLDC), Motion Controller, Drive-Electronics, Position Feedback Encoder and Fully Programmable Points of I/O (Inputs/Outputs). All these components are placed inside one integral frame or housing.

Each decentralized drive system is fully programmable as a stand-alone system or as part of a network fieldbus - Profibus, DeviceNet or RS232, RS485.

The integration of motor, controller and drive reduces complexity in an application and significantly increases reliability. The command set and firmware enables the **SM system** to perform a wide range of motion controls, arithmetic and conditional logic functions. The unit is a highly capable, stand-alone, complete motion control system that is easy to implement and use.

The **SM system** has more features than most full-size controls:

- Brushless DC servo motor
- S-232 & RS-485
- Stand alone capability
- Torque to 2000+ oz. in. / 15 NM
- Network up to 100 Servida Motors
- 4kHz PID
- Speeds 0 - 10,000 RPM
- CE marked & UL registered
- Expandable and programmable I/O expandable to 800 inputs and 800 outputs
- On-the-fly parameter changes
- Position Mode
- Velocity Mode
- Torque Mode
- Infinite Ratio Gearing
- Electronic Gearing/ Following Mode
- Step & Direction Mode
- Limit switch inputs
- Closed loop on external encoder
- Single voltage input
- Standard NEMA mount
- 32k user EEPROM
- Software current limit
- Thermal protection
- Easy Windows Software
- Contouring mode from host PC

*Cable supplied with **8MT200-100SM** consists of power cable and RS232 communication cable and includes connector to computer RS232 (DSUB9), connector to motor (DSUB 7W2) and power connector (SOCKET DC 2.1/5.5 mm for Cable).

8MT200-100SM consists of DC servo motor, motion controller, encoder and amplifier.



Power supply PUP120-17

36 V; 3.34 A
167 x 65 x 37 mm
640 g
Mini-DIN male 4-pin power connector

**REQUIRES
only
POWER
SUPPLY!!!**

Motorized Translation Stage with DC motor

8MT200-100DCE



SPECIFICATIONS

Travel range	100 mm
Lead screw pitch	0.5 mm
Resolution	0.028 μm
Minimal incremental motion	0.2 μm
Max. speed	13 mm/s
Load capacity	
Horizontal	30 kg
Vertical	5 kg
Motor connector	HDB15(M)
DC motor	DCE RE25
Weight	2.2 kg

ORDERING INFORMATION

8MT200-100

Motorized Translation Stage with stepper motor **4247**

8MT200-100DCE

Motorized Translation Stage with **DC motor DCE336548**

8MT200-100SM

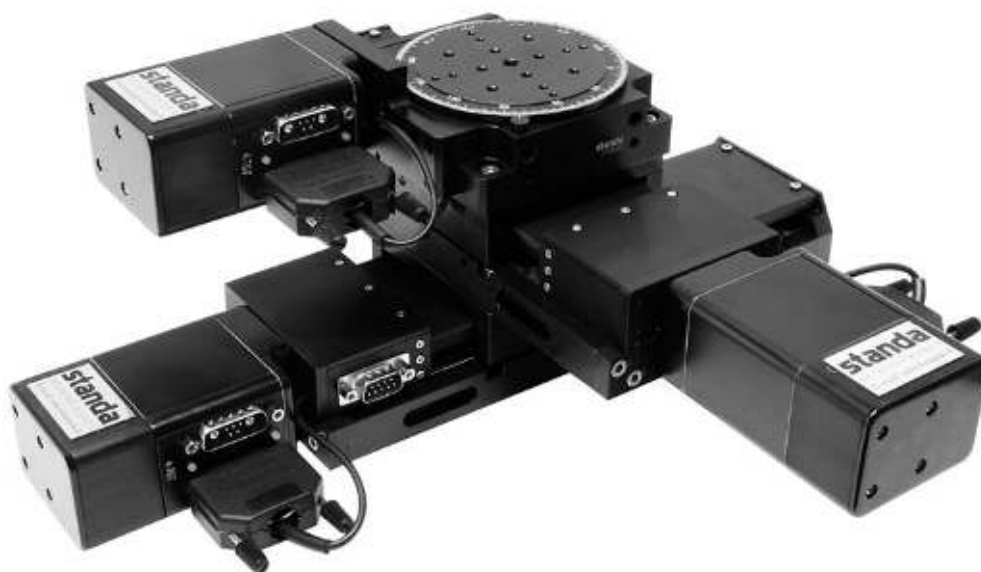
Motorized Translation Stage with **SM system**

8MT200-100SM-XY-8MR191-SM

3 Axis Motorized Translation-Rotation System

SPECIFICATIONS

Translation xy	100x100 mm
	8MT200-100SMXY
Rotation z	360°
	8MR191-SM
Load capacity	5 kg on rotation stage



Optical
Tables

1

Brackets
& Rails

2

Base
Mounts &
Accessories

3

Optical
Mounts

4

Optical
Positioners

5

Base
Positioners

6

Translation &
Rotation
Stages

7

Motorised
Positioners &
Controllers

8

Fine
Adjustment
Screws

9

Opto-
Mechanics &
Sets

10

Light Test &
Measurement
Instruments

11

Lasers &
Accessories

12



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standa

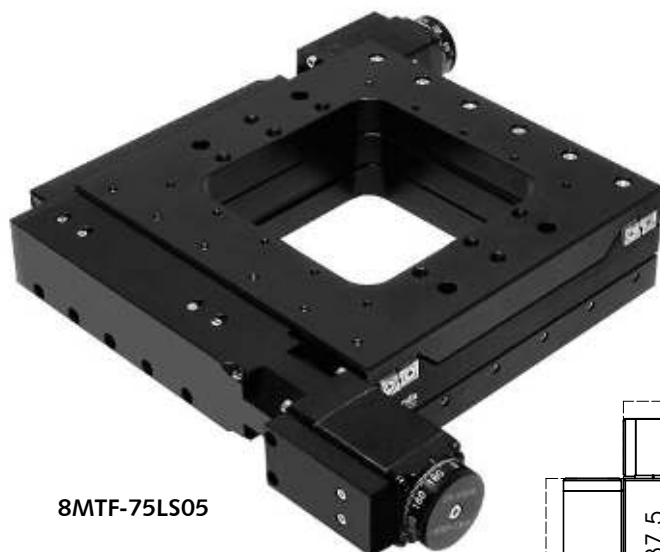


Motorized XY Scanning Stage

8MTF

- Travel range 75x75 mm (3") or 102x102 mm (4")
- Accepts linear encoders
- RS232 and USB controll
- For image analysys

- Suitable for most major brand Microscopes and Macroviewers
- Custom support brackets available for various microscope types



8MTF-75LS05

Stepper, BLDC and DC Motor Controller with USB Interface



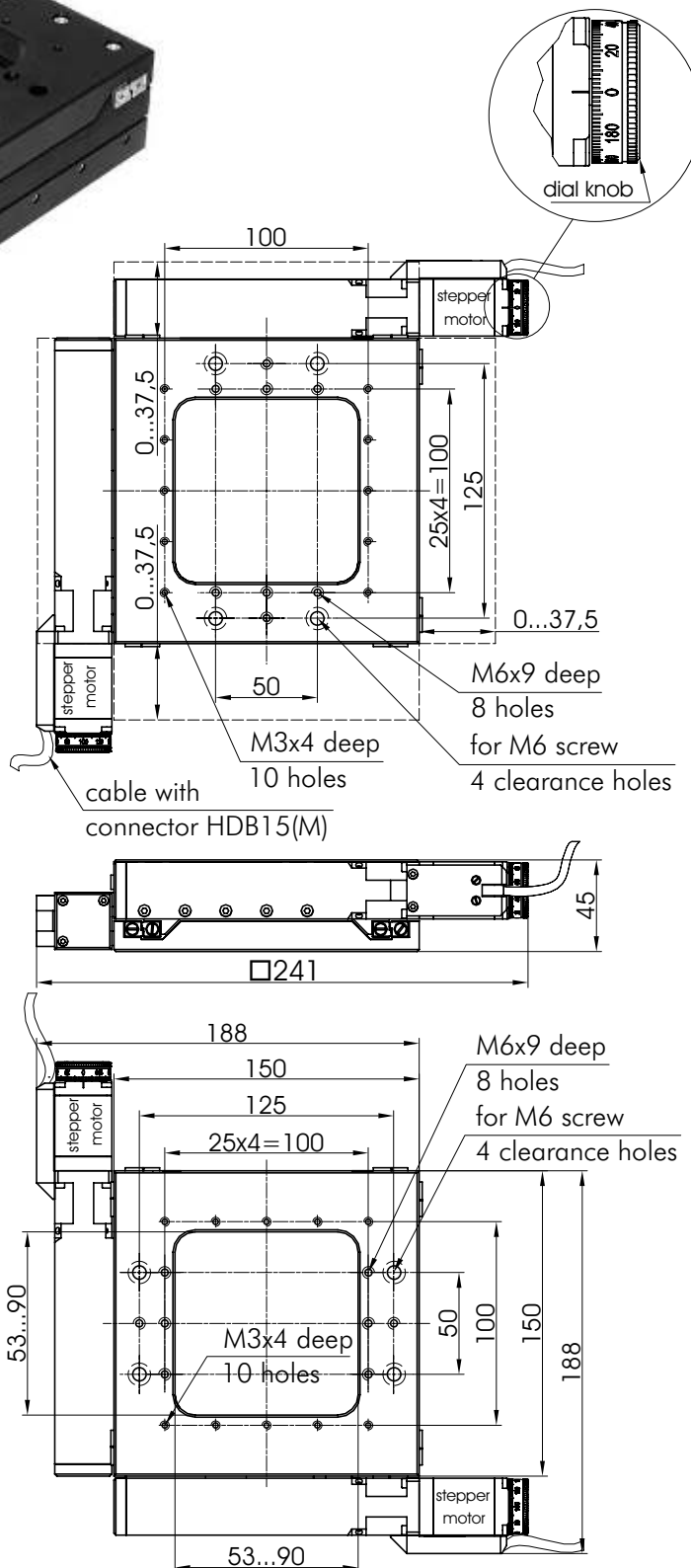
8SMC4-USB-B9-2
2 axis Controller in box

Assembly kit to fix two or more controller boxes together

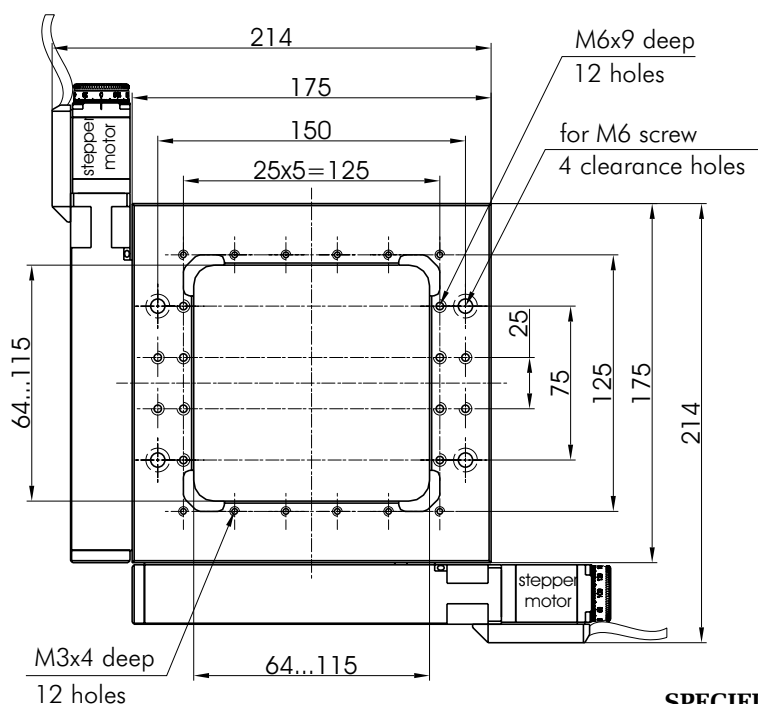
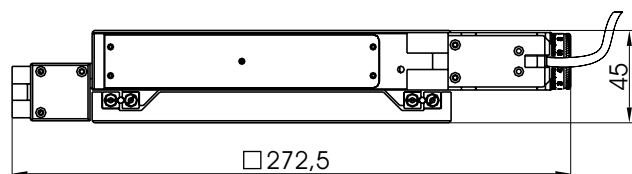
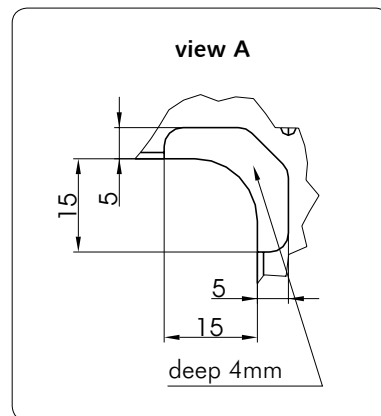
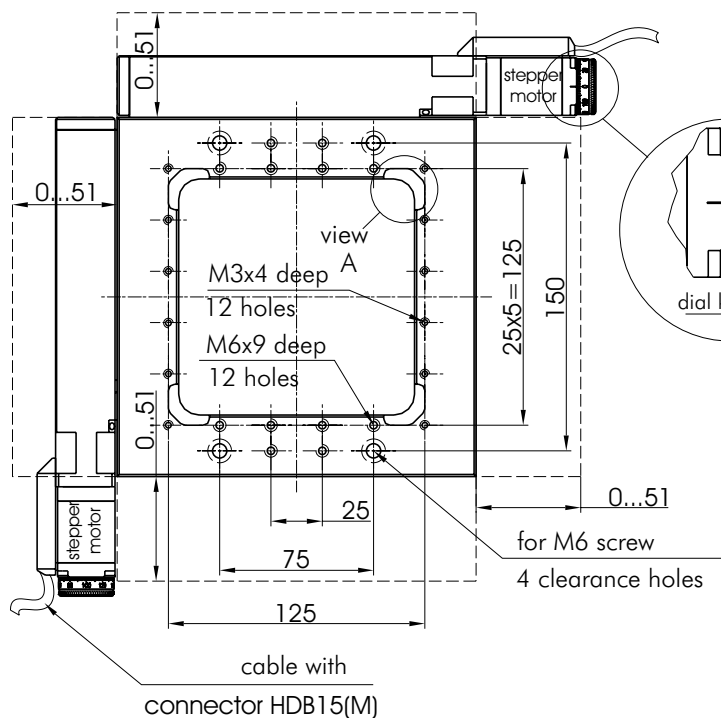


5AK-B9-B9
Assembly kit

more info on
www.standa.it



8MTF-75LS05



8MTF-102LS05

Joystick developed for manual control of one or two-axis all Stepper motor equipped motorizes stages



8JXY-03

Joystick for 8SMC4-USB controller

***Test condition:**

- STANDA controllers;
- Power supply – 36V.

SPECIFICATIONS

Travel range	75x75 mm (3") 102x102 mm (4")
Lead screw pitch	0.5 mm
Resolution in full step*	2.5 μ m
in 1/8 step*	0.31 μ m
Max. speed*	10 mm/s
Load capacity	
Horizontal	50 kg
Vertical	6 kg
Cable	integrated, 1.6 m length
Motor connector	HDB15(M)
Stepper motor	28

ORDERING INFORMATION

8MTF-75LS05	Travel range 75x75 mm (3")
8MTF-102LS05	Travel range 102x102 mm (4")

Long-Travel Motorized Linear Stages

8MT195 series



8MT195X-340-2.5

SPECIFICATIONS

Travel range	340..2840 mm
Ball screw pitch	2.5/4/5/10 mm
Resolution in full step*	12.5 μ m
in 1/8 step*	1.57 μ m
Max. speed*	40 mm/s
<i>on request we fit alternative motors</i>	
Load capacity	
Horizontal	40 kg
Vertical	10 kg
Motor connector	DB9(M)
Stepper motor	
8MT195X	5918
8MT195Z	5918-B

8MT195 series stages are designed to provide **high-speed** movement. Standard motors allow moving loads up to 40 kg. Load capacity can be increased using more powerful motors. This stage provides moderate resolution and accuracy. **8MT195** series stages are supplied equipped with **3P195** platform, **3BP195** bases plates (2 pc) and appropriate amount of **3SN195** inserts.

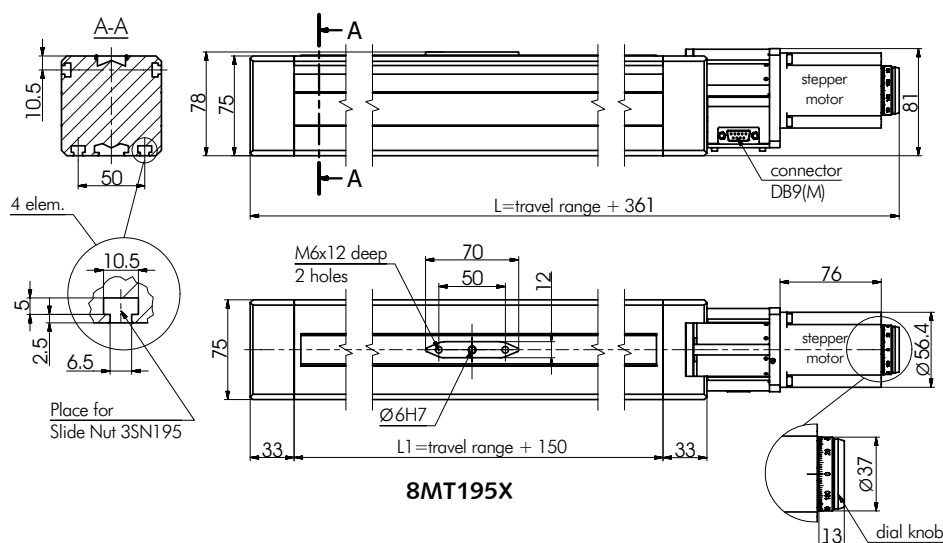
*Test condition:

- Ball screw pitch - 2.5 mm
- Stepper motor: 2 phase bipolar wiring; phase resistance 2.4 Ω ; 200 steps per revolution; step angle - 1.8°; current - 1.5 A;
- STANDA controllers;
- 36 V.

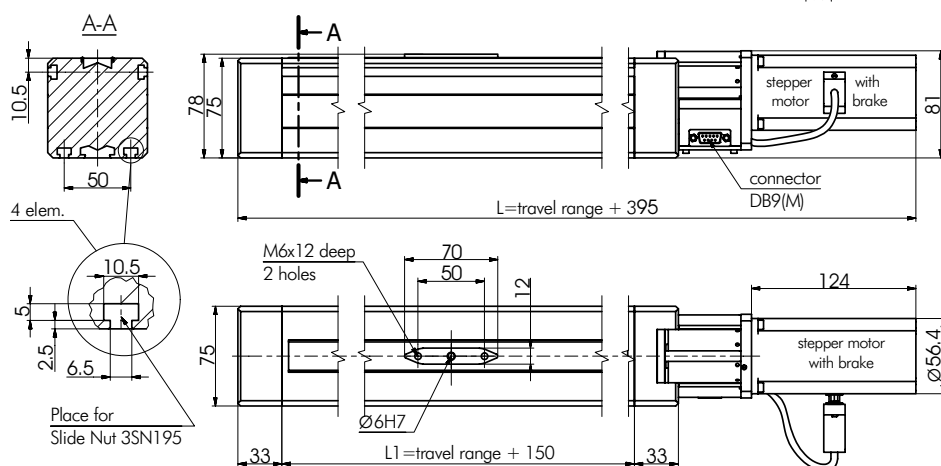
Resolution and speed of **8MT195** series stages can be varied choosing appropriate ball screw pitch. Several standard options are available and should be specified upon ordering.

For applications requiring travel over 500 mm we suggest using **8MT295X** series stages (**X**) paired with **8MT195X** series stages (**Y**) to make **XY** assemblies.

For applications requiring vertical **Z** axis movement, we suggest using stages with brake mounted on motor, to prevent carrier sliding down when motor current is turned off. Ordering code of **Z** stages is **8MT195Z**, see ordering information on the **8-31** page.



8MT195X



8MT195Z

Long-Travel Motorized Linear Stages

8MT295 series



8MT295X-340-5

SPECIFICATIONS

Travel range	340..2840 mm
Ball screw pitch	2.5/4/5/10 mm
Resolution in full step*	12.5 μ m
in 1/8 step*	1.57 μ m
Max. speed*	40 mm/s
<i>on request we fit alternative motors</i>	
Load capacity	
Horizontal	60 kg
Vertical	10 kg
Motor connector	DB9(M)
Stepper motor	
8MT295X	5918
8MT295Z	5918-B

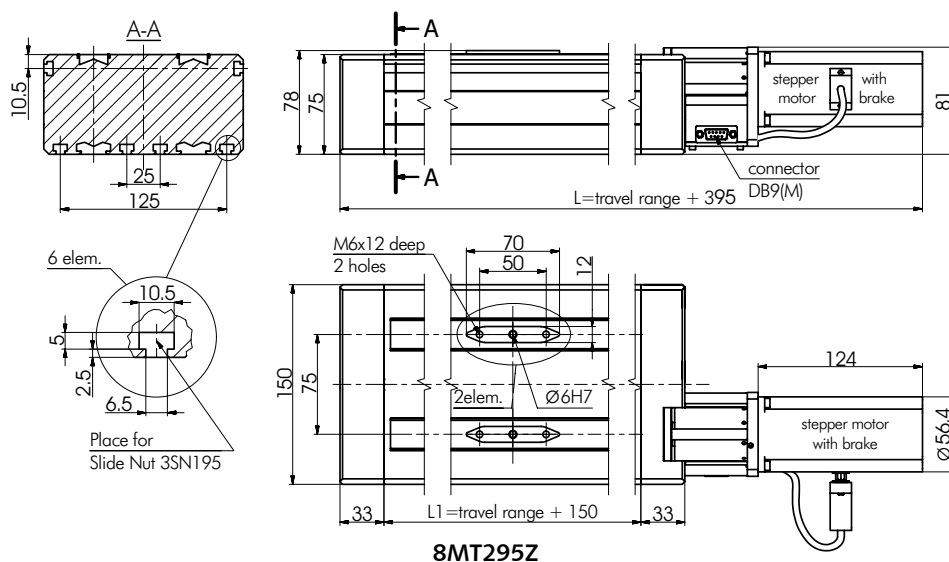
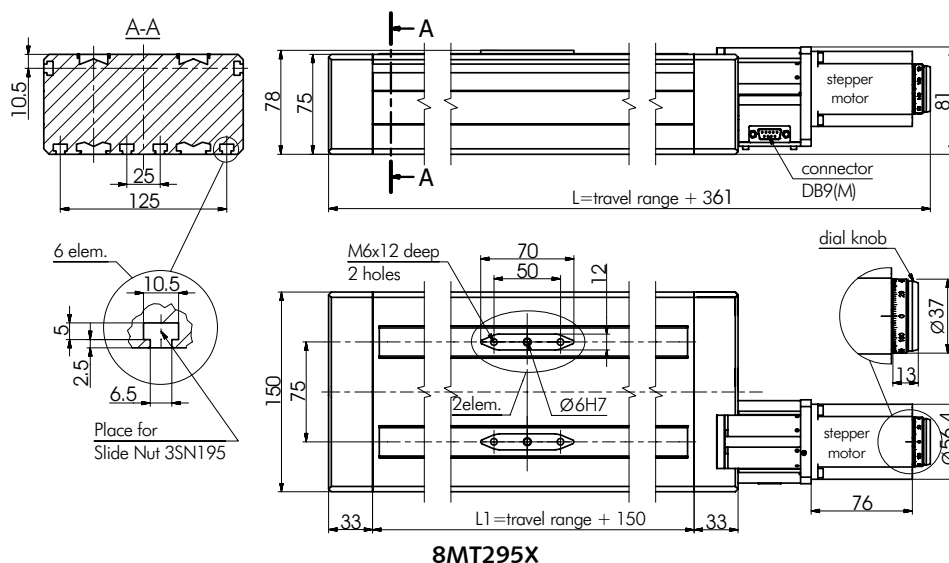
*Test condition:

- Ball screw pitch - 2.5 mm
- Stepper motor: 2 phase bipolar wiring; phase resistance 2.4 Ω ; 200 steps per revolution; step angle - 1.8°; current - 1.5 A;
- STANDA controllers;
- 36 V.

8MT295 series stages are designed to provide **high-speed** movement. Standard motors allow moving loads up to 60 kg. Load capacity can be increased using more powerful motors. This stage provides moderate resolution and accuracy. **8MT295** series stages are supplied equipped with **3P295** platform, **3BP295** bases plates (2 pc) and appropriate amount of **3SN195** inserts.

Resolution and speed of **8MT295** series stages can be varied choosing appropriate ball screw pitch. Several standard options are available and should be specified upon ordering.

For applications requiring vertical **Z** axis movement, we suggest using stages with brake mounted on motor, to prevent carrier sliding down when motor current is turned off. Ordering code of **Z** stages is **8MT295Z**, see ordering information on the **8-31** page.



ORDERING INFORMATION

8MTN95A-TTT-P

Series of Motorized linear stage 8MT195 8MT295 Stage for Horizontal or Vertical movement X – stage for horizontal movement in X or Y axes Z – stage for vertical movement in Z axis	Ball screw pitch 2.5/4/5/10 mm Travel range* 340..2840 mm
---	---

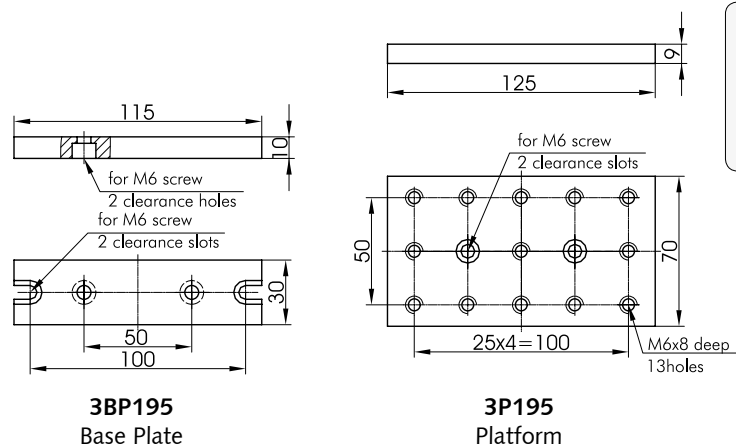
Examples of codes	travel range*	ball screw pitch
8MT195X-340-2.5	340 mm	2.5 mm
8MT195Z-540-4	540 mm	4 mm
8MT195X-740-5	740 mm	5 mm
8MT195Z-840-10	840 mm	10 mm
8MT295X-340-2.5	340 mm	2.5 mm
8MT295Z-540-4	540 mm	4 mm
8MT295X-740-5	740 mm	5 mm
8MT295Z-840-10	840 mm	10 mm

* - standart travel range with 100 mm-grid space available on request

For applications requiring travel over 500 mm we suggest using **8MT295X** series stages (**X**) paired with **8MT195X** series stages (**Y**) to make **XY** assemblies.

For applications requiring vertical **Z** axis movement, we suggest using stages with brake mounted on motor, to prevent carrier sliding down when motor current is turned off. Ordering code of **Z** stages is **8MT195Z**.

ACCESSORIES for 8MT195 series stages



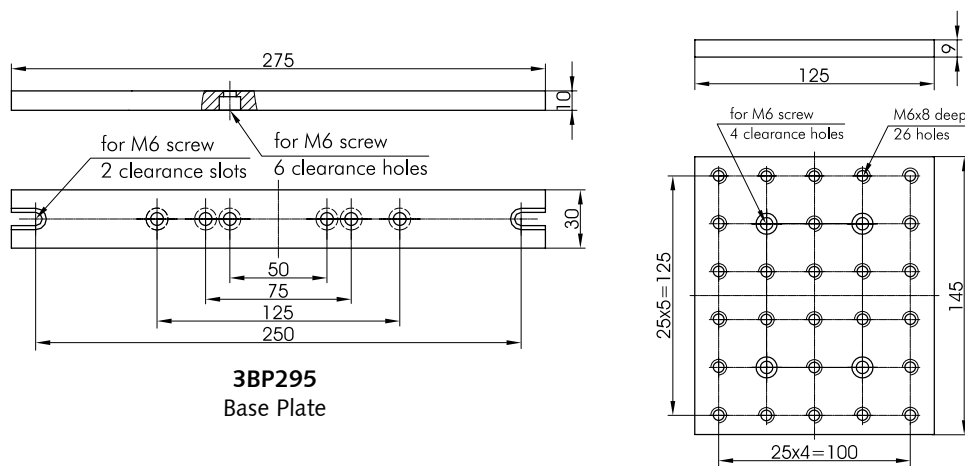
Ordering information for accessories**

3BP195	Base Plate	** – included in standard package and to be ordered only as extra units
3P195	Platform	
3SN195	Slide Nut	



3SN195
Slide Nut

ACCESSORIES for 8MT295 series stages



Ordering information for accessories**

3BP295	Base Plate	** – included in standard package and to be ordered only as extra units
3P295	Platform	
3SN195	Slide Nut	

3BP295
Platform



3SN195
Slide Nut

Motorized YZ Translation Stage

8MTP116



SPECIFICATIONS

Tilt y	$\pm 2^\circ$
Rotation z	$\pm 2,5^\circ$
Resolution	
in full step	1,25 μm
in 1/8 step	0,156 μm
Lead screw pitch	0.25 mm
Repeatability	1 μm
Maximum load capacity	10 kg
Type of actuator	8CMA28-10
Cable	1.2 m length cable included
Motor connector	DB15(M)
Weight	1,3 kg



Manual Multi-Axis Tilt platform
6TP116



Motorized Actuator
8CMA28-10



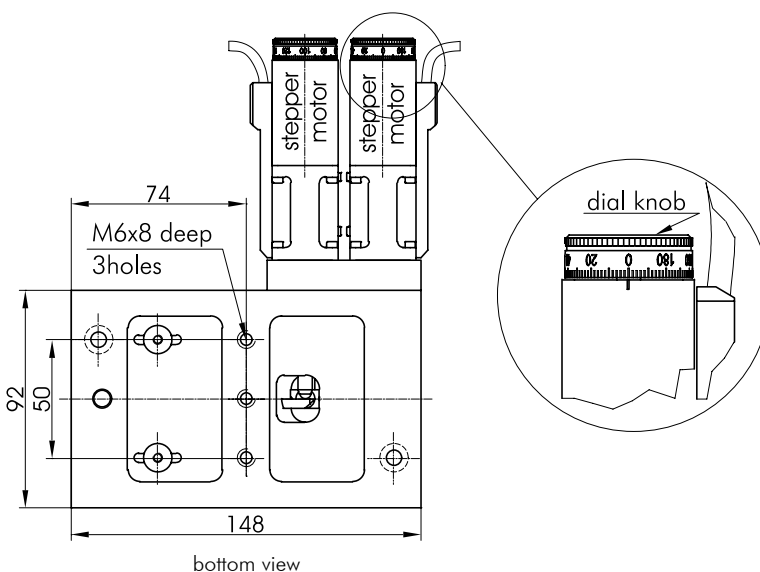
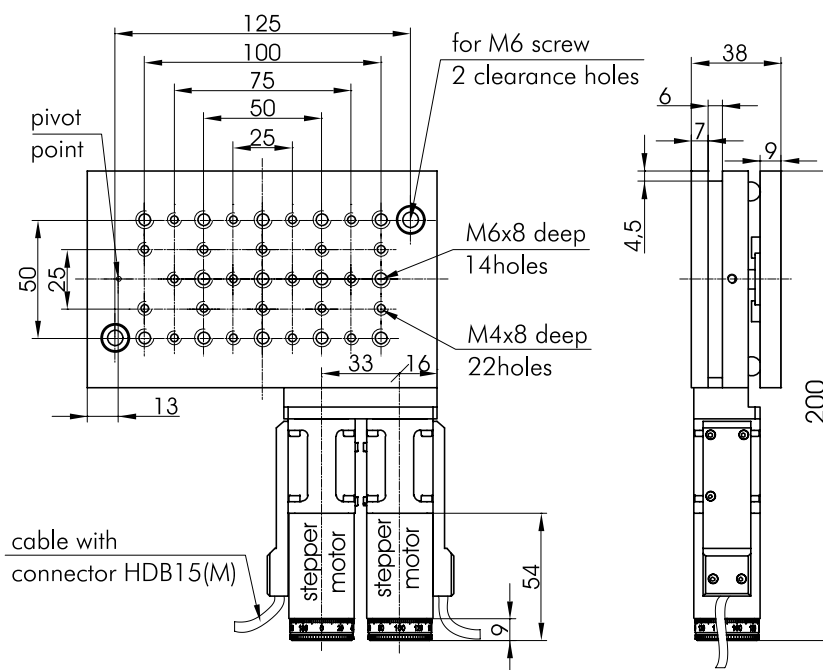
Stepper, BLDC and
DC Motor Controller
with USB Interface

2 axis Controller in box
8SMC4-USB-B9-2



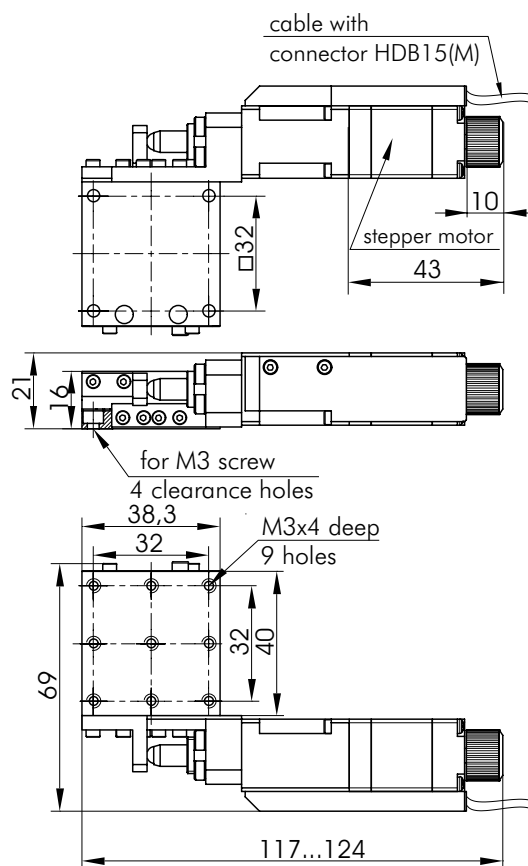
Assembly kit to fix two
or more controller boxes
together

Assembly kit
5AK-B9-B9



Motorized Translation Stage

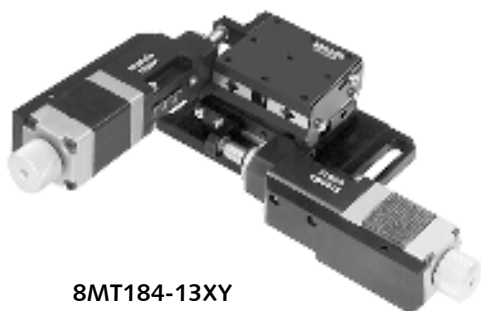
8MT184-13



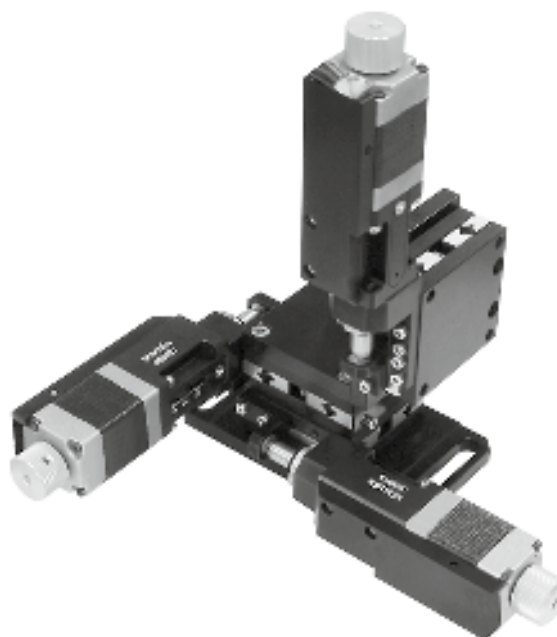
- Compact design
- Precise movement
- 13 mm travel range
- X-Y-Z direct stacking
- Stacks directly with stages of 174 series
- Motorized Actuator 8CMA06-13/15
- Lockable
- Black anodized aluminium
- Angle bracket 2AB174 for vertical mounting



3UBP-04
Universal base plate
for stacking the translation
stages to STANDA optical
tables or to another stages



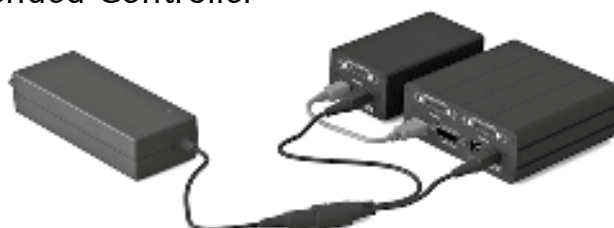
8MT184-13XY



8MT184-13XYZ

Recommended Controller

Three Axis Stepper, BLDC and DC Motor
Controller 8SMC4-USB-B8-B9
with Power Supply

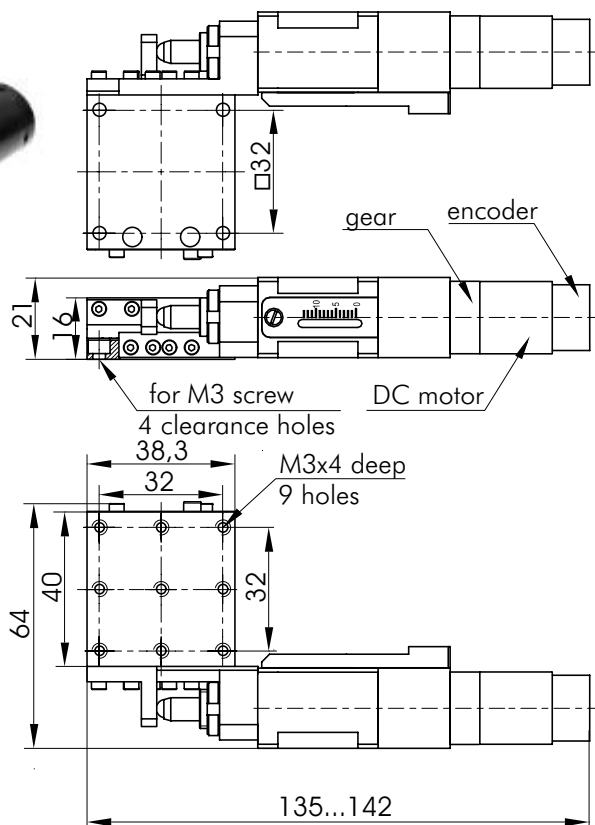


Motorized Translation Stage

8MT184-13DC



- Compact design
- Precise movement
- 13 mm travel range
- X-Y-Z direct stacking
- Stacks directly with stages of 174 series
- Motorized Actuator 8CMA16DC-13/15
- Lockable
- Black anodized aluminium
- Angle bracket 2AB174 for vertical mounting



**Available Motorized Translation Stage
with VACUUM 10^{-6} Torr Compatible DC motor
8MT184V-13DC**

Motorized Optical Mount

8MUP21-2



SPECIFICATIONS

Travel range	4 mm
Resolution	<1 arcsec
Tilt range	9°(about two axes)
Speed (Standa SMC1-USBh controller)	from 1 arcsec/sec to 1°/sec
Type of actuator	8CMA20-8/15
Optocoupler end limit switches	2 per actuator
Cable	1.2 m length cable included
Motor connector	HDB15(M)
Recommended controllers	8SMC4-USBh

