

MTF42 Series Technical Data

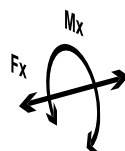
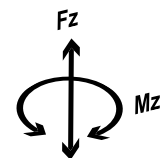
The Matarata MTF Series actuator is the most compact of all the M series actuators and allows for simple integration into many machinery layouts. Available in lengths of up to 6 metres and above, these robustly built actuators offer high dynamic precision, without sacrificing payload or thrust capability. The units are also available with tandem carriages (D Type).

| Technical Data | | | |
|--|-------|-----------------|--------|
| Size | 42x75 | | |
| Max. speed | m/s | 3 | |
| Max. stroke length | mm | 6000 | |
| Min. stroke length | mm | 100 | |
| Pulley drive ratio | mm | 130 | |
| Number of teeth of pulley | 26 | | |
| Tooth belt with Steel Reinforced Polyurethane ATL 5 profile clearance 0. Width = | mm | 12 | |
| Max rpm | rpm | 1400 | |
| Version | H L | | |
| Base weight | Kg | 2.8 | 2.4 |
| Add for 100 mm of stroke | Kg | 0.32 | 0.32 |
| Max. load* | Fx | N | 615 |
| | Fy | N | 1275 |
| | Fz | N | 1275 |
| Moments* | Mx | Nm | 18 9 |
| | My | Nm | 110 55 |
| | Mz | Nm | 110 55 |
| Inertia moment Aluminium profile | Ix | cm ⁴ | 28 |
| Inertia moment Aluminium profile | Iy | cm ⁴ | 37 |
| Repeatability | mm | ± 0.05 | |
| Max. radial load on input shaft | N | 250 | |
| No load torque | Nm | >0.3 | |

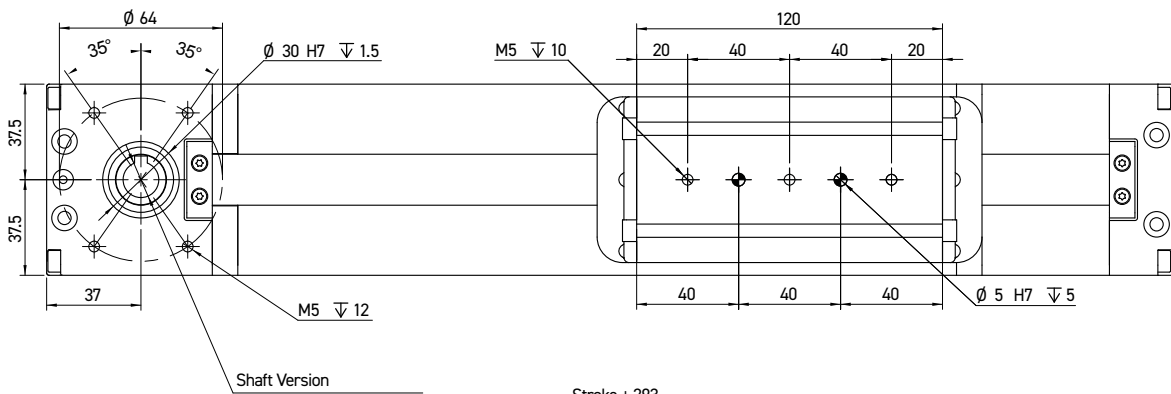
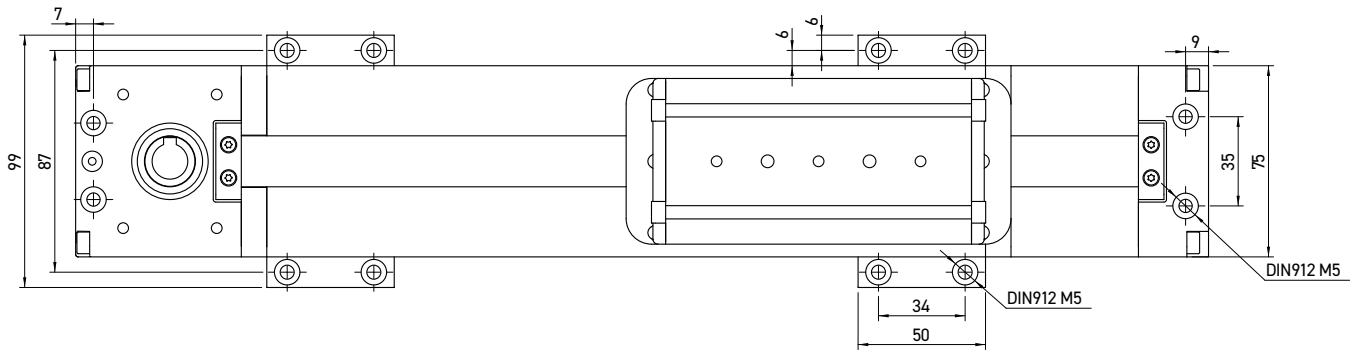
* Max values for dynamic conditions.
Please refer to the following formula when combined loads are applied.

$$\frac{F_{yA}}{F_y} + \frac{F_{zA}}{F_z} + \frac{M_{xA}}{M_x} + \frac{M_{yA}}{M_y} + \frac{M_{zA}}{M_z} \leq 1$$

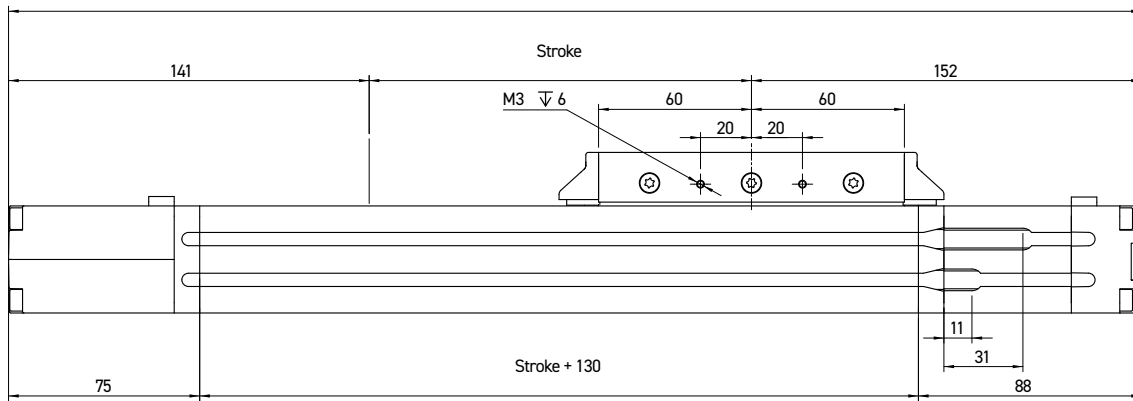
The A letters show the calculated value.



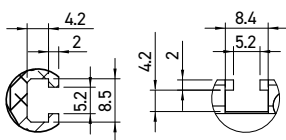
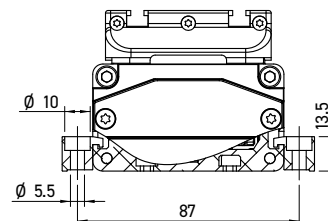
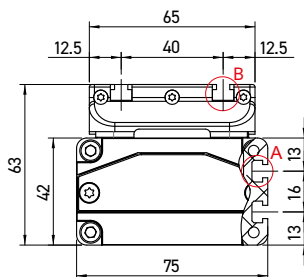
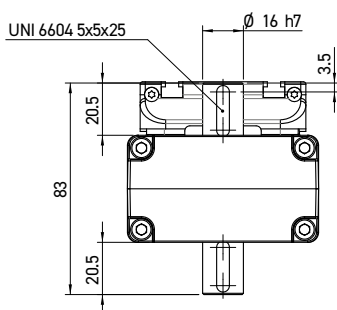
MTF42 Series Dimensions



Stroke + 293



Stroke + 130



View A

View B



Female Shaft F2



Down mount M6L

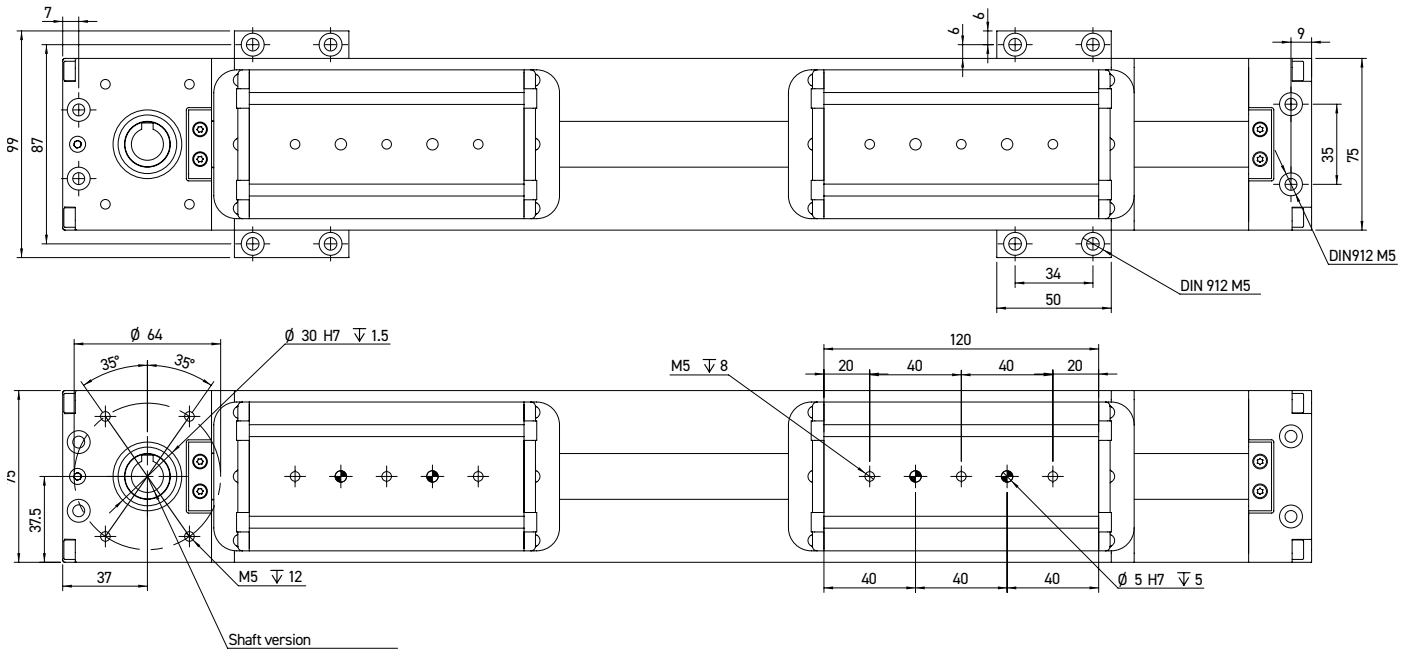


Dual mount D6

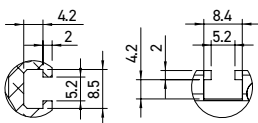
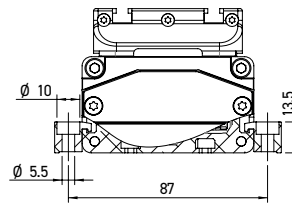
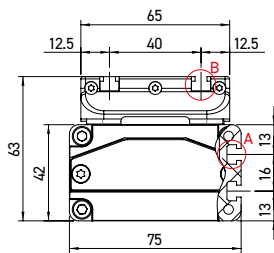
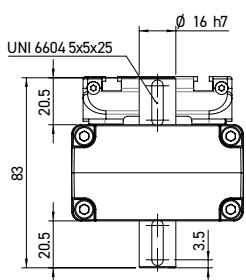
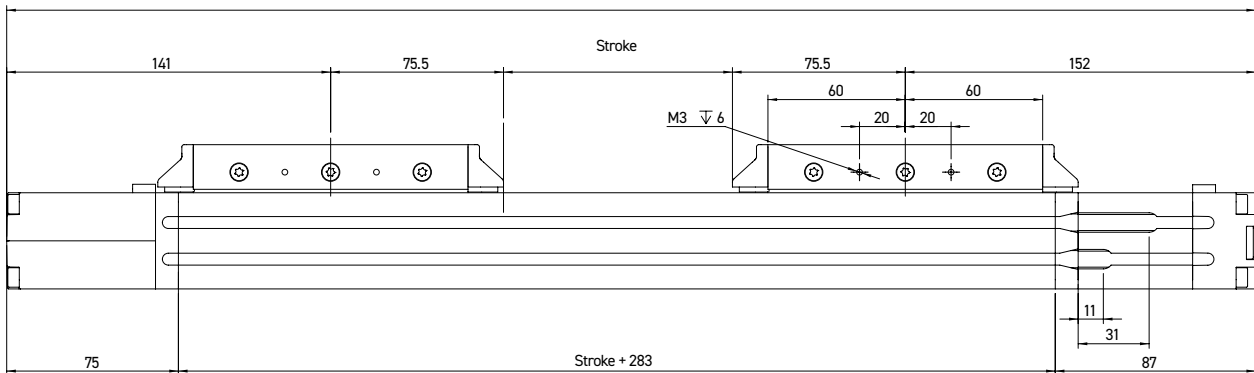


Up mount M6R

MTF42D Series Dimensions



Stroke + 444

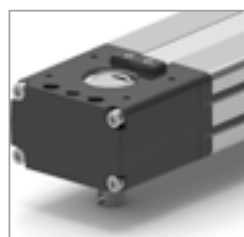


View A

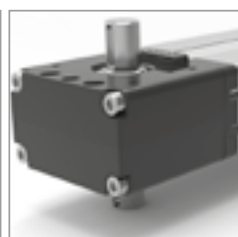
View B



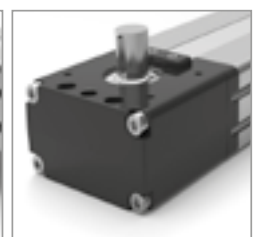
Female Shaft F2



Down mount M6L



Dual mount D6



Up mount M6R

MTF42 Series Order Example

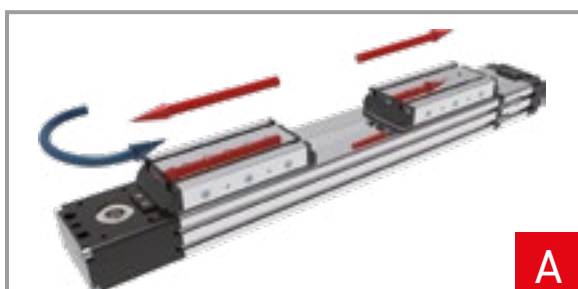
Code: **MTF** **42** **D** - **L** - **A** - **2100** - **F2**
 Options: 1 2 3 4 5 6 7

| Options | Selection | |
|--|---|---------------------|
| 1 Series | MTF | |
| 2 Size | 42 | |
| 3 Carriage Type | D : Double Carriage | _ : Single Carriage |
| 4 Runner Block | L : Single Runner Block H : Double Runner Block | |
| 5 ^{**} Runner Block Direction of Movement | A, B | N/A |
| 6 Stroke | 0-6000 mm | |
| 7 [*] Shaft Versions | F2 F4 M6L M6R D6 | |

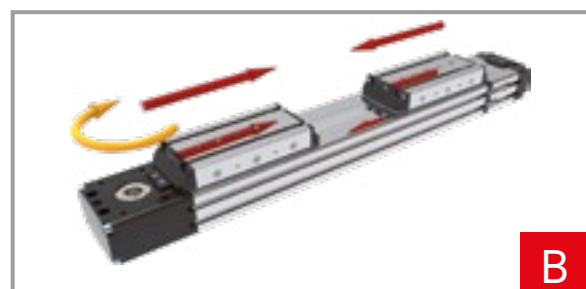
* Shaft Version Codes

| | | | | | |
|----|-----------------------------------|-----|-----------------------------------|----|--------------------------|
| F2 | Female shaft Ø12 mm with keyshaft | M6L | Male shaft Ø16 mm downwards mount | D6 | Double male shaft Ø16 mm |
| F4 | Female shaft Ø14 mm with keyshaft | M6R | Male shaft Ø16 mm upwards mount | | |

** Figure 1 For D Type Only

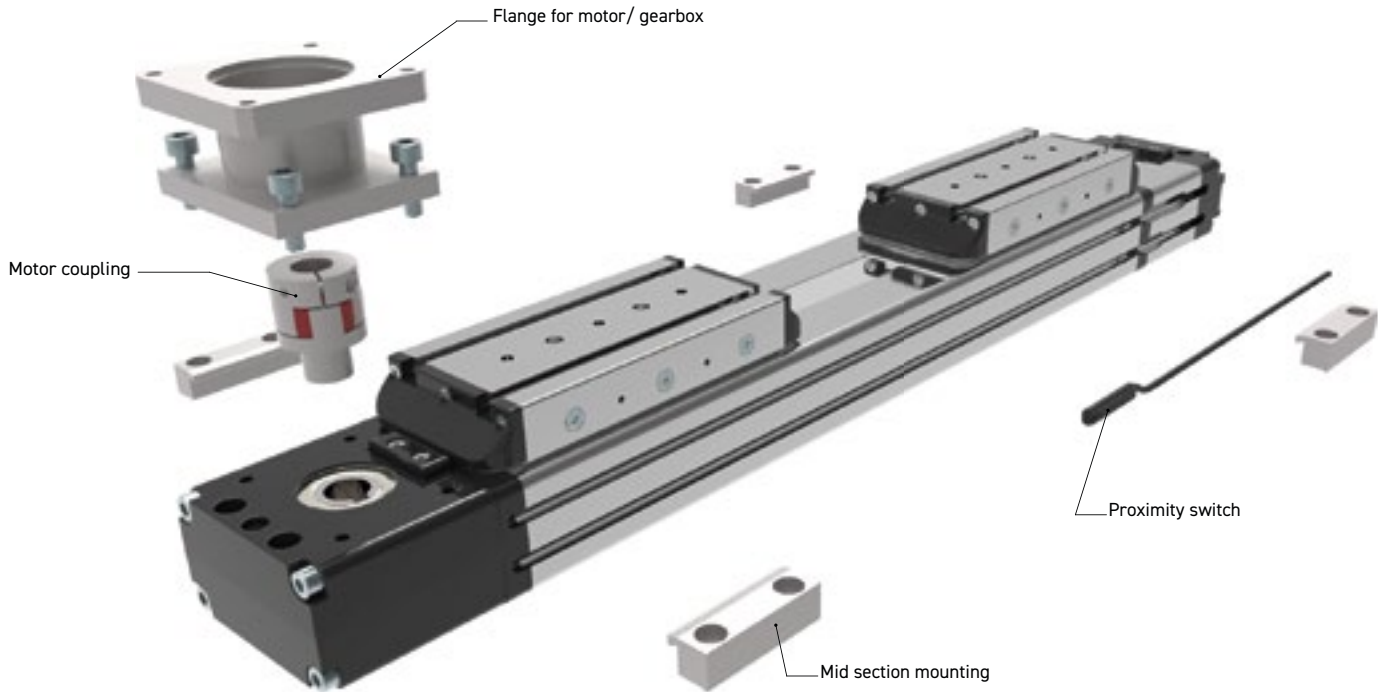


A

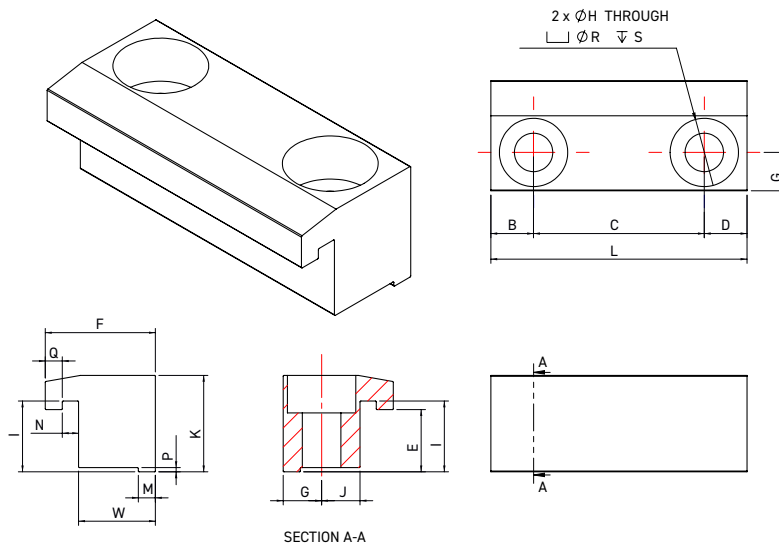


B

MTF42 Series Accessories



Mid Section Mounting

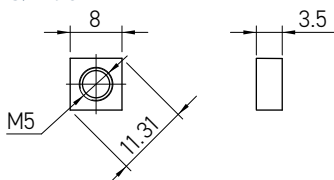


| Linear Unit | Dimensions (mm) | | | | | | | | | | | | | | | $\varnothing H$ | $\varnothing R$ | ∇S | Code |
|-------------|-----------------|----|---|-----|----|---|------|---|------|----|---|-----|-----|-----|----|-----------------|-----------------|------------|----------|
| | B | C | D | E | F | G | I | J | K | L | M | N | P | Q | W | | | | |
| MTF 42 | 8 | 34 | 8 | 9.5 | 16 | 6 | 10.5 | 6 | 13.6 | 50 | 2 | 2.5 | 0.5 | 1.5 | 12 | 5.5 | 10 | 5.4 | C4AA003L |

Slot Nuts

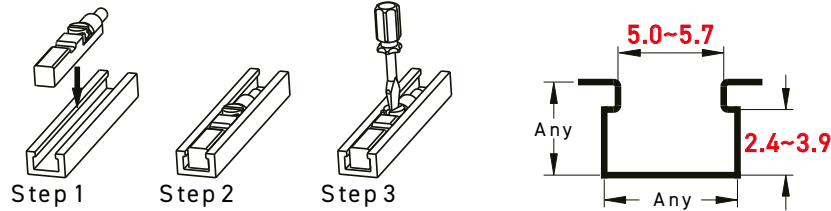
Square Nuts

DQM05



| Code | Nut Type | MTF 42 |
|-------|-----------------|--------|
| DQM05 | Square Nut - M5 | X |

Magnetic Field Sensor



| Characteristic | AL39-R | AL39-S |
|--------------------------|--|---|
| Switching Logic | SPST Normally Open | Solid State Output, Normally Open |
| Sensor Type | Reed Switch | NPN/PNP Automatic Detection |
| Operating Voltage | 5~240V DC/AC | 5~30V DC |
| Switching Current | 100 mA Max. | 100 mA Max. |
| Switching Rating | 10 W Max. | 3 W Max. |
| Current Consumption | — | 7.5 mA Max. @ 24V |
| Voltage Drop | 2.5V Max. @ 100mA DC | 1 V Max. @ 200 mA DC |
| Leakage Current | — | 0.01 mA Max. |
| Indicator | Red LED | Red LED |
| Cable | 2.9 , 2C, Grey Oil Resistat PUR | 2.9 , 3C, Black Oil Resistat PUR |
| Sensitivity | 35 ~ 45 Gauss | 40 ~ 800 Gauss |
| Switching Frequency | 200 Hz | 5000 Hz |
| Temperature range | -10 ~ 70°C | -10 ~ 70°C |
| Shock | 30 G | 50 G |
| Vibration | 9 G | 9 G |
| Enclosure Classification | IP 65 (EN60529) | IP 65 (EN60529) |
| Protection Circuit | — | Power Reverse Polarity; Surge Suppression |
| CE Certificate NO. | E8N 11 0 4 53334 005 | — |
| 3C Certificate NO. | No. : 2 004010305127433 | — |
| CNEx Certificate NO. | CNEx16.2333X(ExnCIICT6GC) | — |
| Connect Diagram | | |
| | <p>AL-39R AL-39R-QD8 AL-39R-QD12 AL-39R-EZ2M</p> | <p>M8, M12, EZ QUICK CONNECT OR (IEC61076-2-101)</p> <p>2 wire QD wiring 3 wire QD wiring</p> <p>M83M M83M </p> <p>M124M M124M </p> <p>EZ2M EZ3M </p> |