

# Positioning system ELBZ R800

## Specifications



### Function:

This linear unit consists of a curved aluminium square profile with hardened steel guide rods. The smallest radius amounts to 800 mm. The carriage which has internal linear ball bearings that can be adjusted free of play is driven along the guide rods by a timing belt. The pulley has maintenance-free ball bearings. Belt tension can be readjusted by a simple tensioning device in one of the end blocks. This device can also be used for symmetrical adjustment of two or more linear units running parallel.

### 11.1 Fitting position: Carriage mounting: Unit mounting: Belt type:

As required.  
Special drilling  
By T-slots or tapped holes in the profile nut, or mounting sets.  
HTD with steel reinforcement, no backlash when changing direction, repeatability  $\pm 0,1$  mm.

### Formula: ELBZ

Driving torque:

$$M_o = \frac{F \cdot P \cdot S}{2000 \cdot \pi} + M_{leer}$$

$$P_o = \frac{M_o \cdot n}{9550}$$

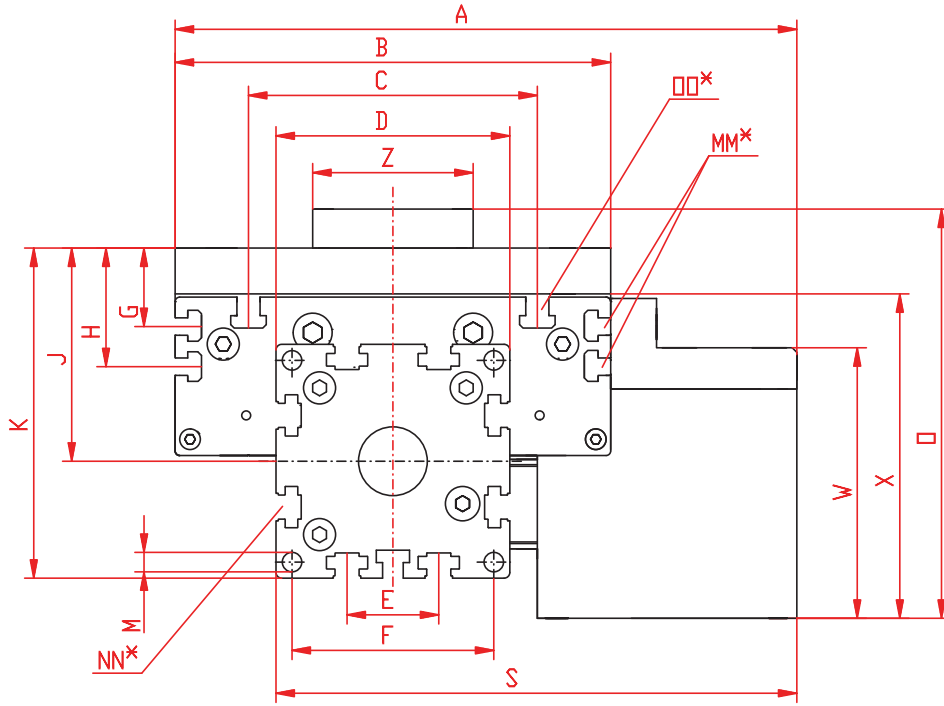
$F$  = force (N)  
 $P$  = pulley action perimeter (mm)  
 $S$  = safety factor 1,2 ... 2  
 $M_{leer}$  = no-load torque (Nm)  
 $n$  = rpm pulley ( $\text{min}^{-1}$ )  
 $M_o$  = driving torque (Nm)  
 $P_o$  = motor power (KW)

$$f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$

$f$  = deflection (mm)  
 $F$  = load (N)  
 $L$  = free length (mm)  
 $E$  = elastic modulus 70000 ( $\text{N}/\text{mm}^2$ )  
 $I$  = second moment of area ( $\text{mm}^4$ )

# Positioning system ELBZ R800

Dimensions (mm)

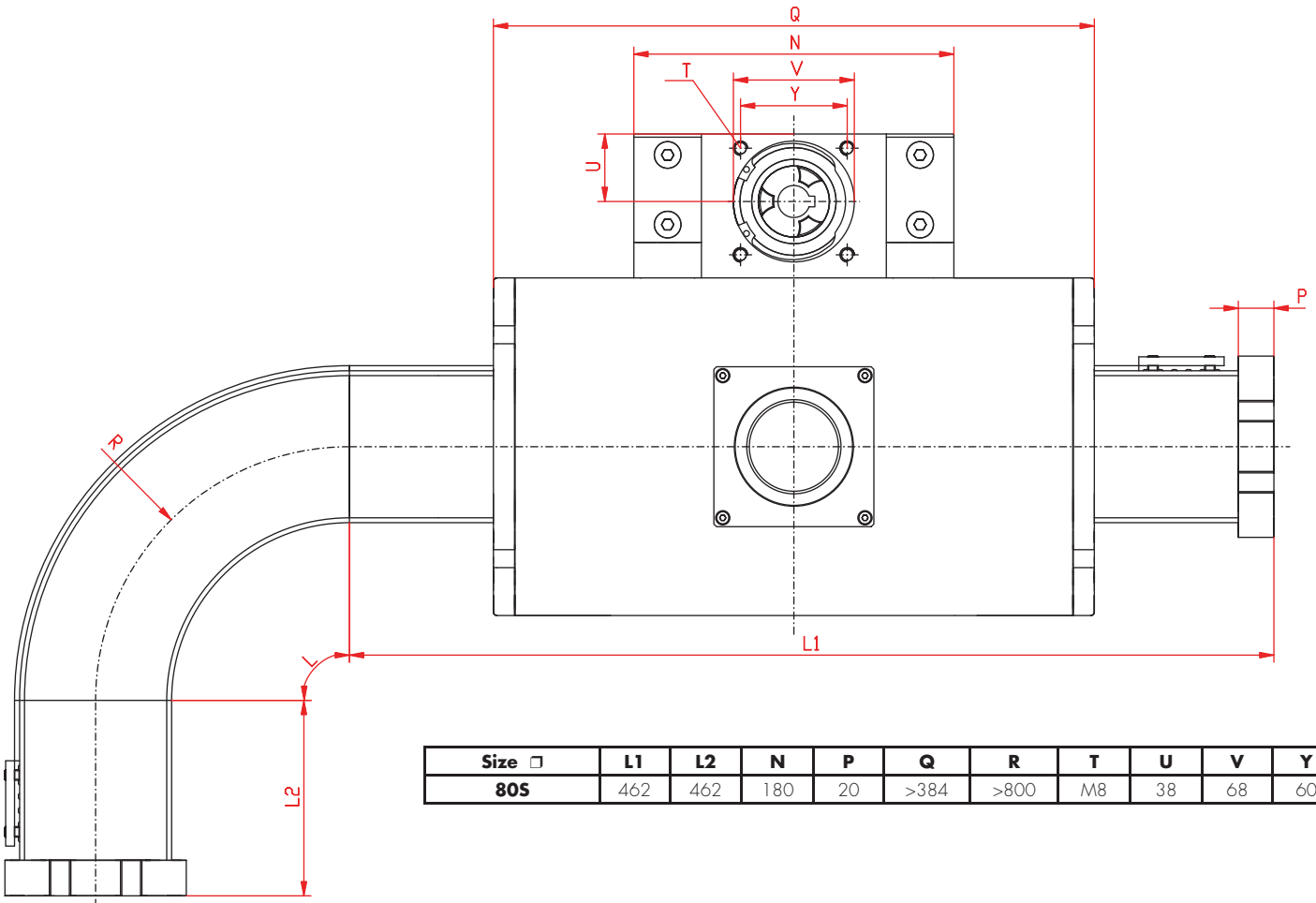


\*For slide nuts refer to chapter 2.2 page 2

$V = Q + 100 \text{ mm}$

W = servicing position

Size □	A	B	C	D	E	F	G	H	J	K	M	O	S	MM for	NN for	OO for	W	X	Z
80S	271	190	126	102	40	88	34,5	52	94	145	8,5	183	228	M6	M10	M10	118	137,5	74



Size □	L1	L2	N	P	Q	R	T	U	V	Y
80S	462	462	180	20	>384	>800	M8	38	68	60

