

**MOTORIZED ROTARY TABLE
DATA SHEET**

TGV200-H012

The TGV200-H012 rotary table guarantees an extremely high accurate movement matched with high load capacity.

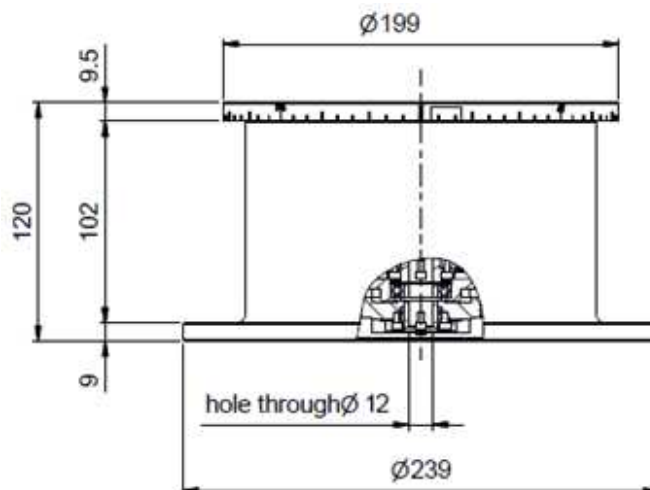
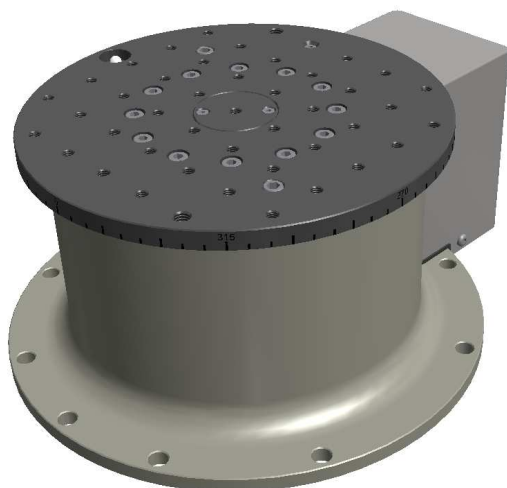
The stage is entirely made of steel while the tabletop is made of stainless steel AISI 420.

The innovative combined axial-radial rolling bearings ensure high stiffness both in axial and radial direction.

These characteristics guarantee that the device has high rigidity and accuracy as well a low sensitivity to temperature variations. Main features are: drive system with no backlash, high feedback resolution encoder, micrometer run-out and positioning errors.

Applications: measuring devices, tomography, laser micromachining, semiconductor handling.

The TGV200-H012 rotary table is designed for both vertical and horizontal applications. **



MAIN FEATURES	UM	
bearing technology		axial-radial rolling bearings
gear technology		no backlash
tabletop material		hardened AISI420

MAIN DIMENSIONS AND MASSES	UM	
tabletop diameter	D_p	mm Ø 199
base diameter	D_B	mm Ø 239
total height	H	mm 120
hollow shaft-through hole diameter	d_a	mm 12
total mass	m	kg 13.5
rotary parts inertia	J	kg·mm ² 18500

PERFORMANCES	UM	
max axial payload	L_a	N 1000
axial stiffness	k_a	N/µm 1700
radial stiffness	k_r	N/µm 2200
tilt stiffness	k_t	Nm/mrad 2500
axial run-out error ⁽³⁾	e_a	µm ≤ +/-0.2
radial run-out error ⁽³⁾	e_r	µm ≤ +/-0.4
wobble error ⁽³⁾	e_w	µrad ≤ +/-8
tabletop/ base parallelism	e_p	µm ≤ 10.0
maximum speed	$n_{L,max}$	rpm 24
continuous torque at the rotary table	T_{ct}	Nm 29
maximum torque at the rotary table	T_{pt}	Nm 38
gear ratio	τ	1:300

MOTOR	UM	
motor type		DC brush
power source voltage	u_n	V 60
nominal speed	n_n	rpm 7160
no load speed	n_{co}	rpm 7690
continuous torque	$T_{c,m}$	Nm 0.132
stall torque	$T_{s,m}$	Nm 2.05
continuous current	$I_{c,m}$	A 1.84
peak current	$I_{p,m}$	A 27.7
no load current	I_{co}	A 0.06
efficiency	η	0.9
torque constant	$k_{T,m}$	Nm/A 0.0741
speed constant	$k_{v,m}$	rpm/V 129
electrical resistance	R	Ω 2.16
electrical inductance	L	mH 0.776

MOTOR ENCODER	UM	
technology		optical incremental
resolution	puls/rev	1024
accuracy	arcsec	+/-163
power source voltage	V	5
output signal		1 Vpp

TABLE ENCODER ⁽¹⁾	UM	
technology		Magnetic incremental
resolution	puls/rev	2048
accuracy	arcsec	+/- 6.0
power source voltage	V	5
output signal		1 Vpp

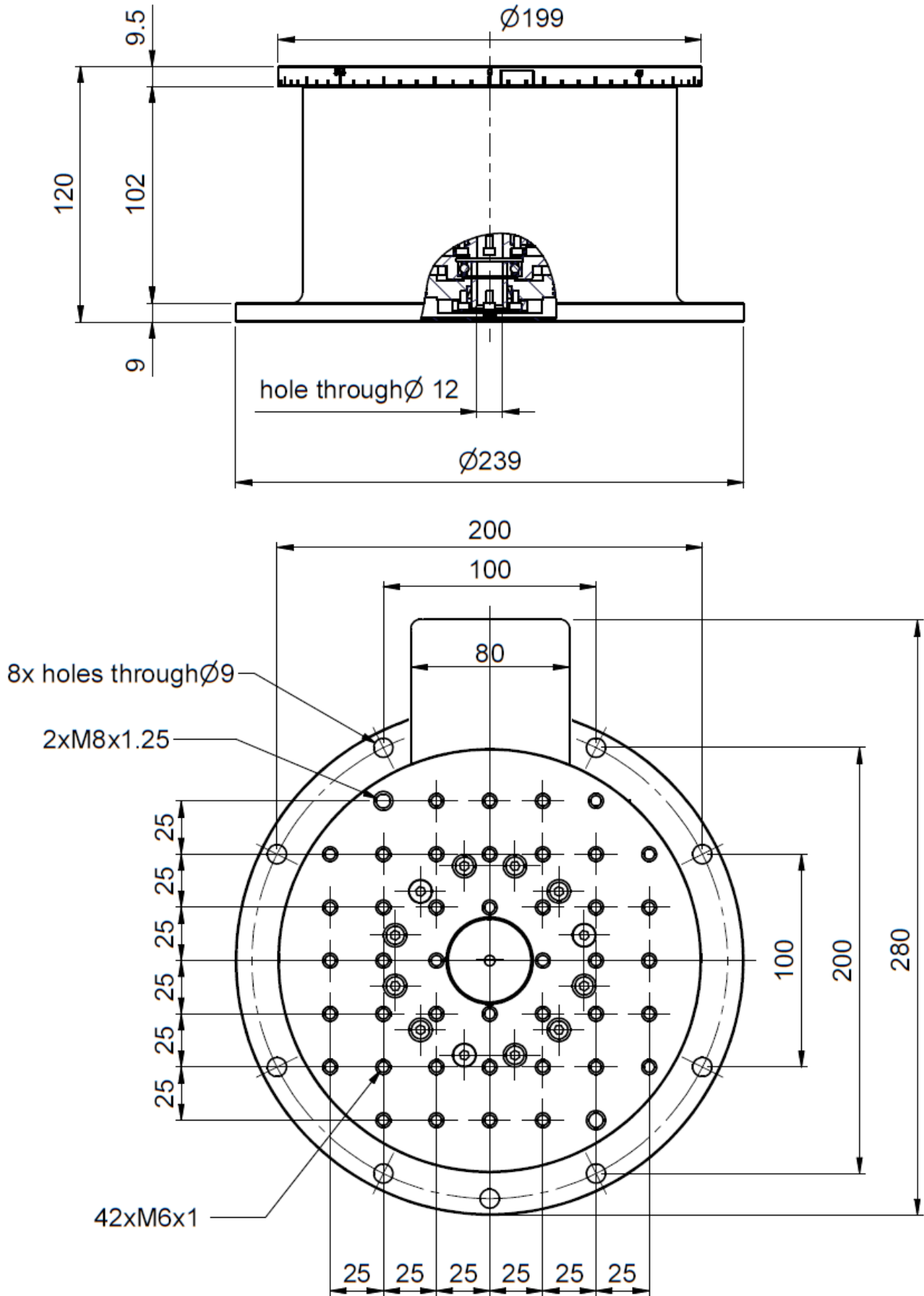
(1) Different types of encoder on demand

(2) The values here mentioned refer to standard electric drives, optional: possibility of mapping and thus compensating the errors.

(3) The values here refers to no payload .

** Configuration, data and performances here indicated refer to a roatry stage designed for a vertical axis.

Outline drawing



CODE	DESCRIPTION
WF21300001000	TGV200-H012-IDF.B--S--200-C-00