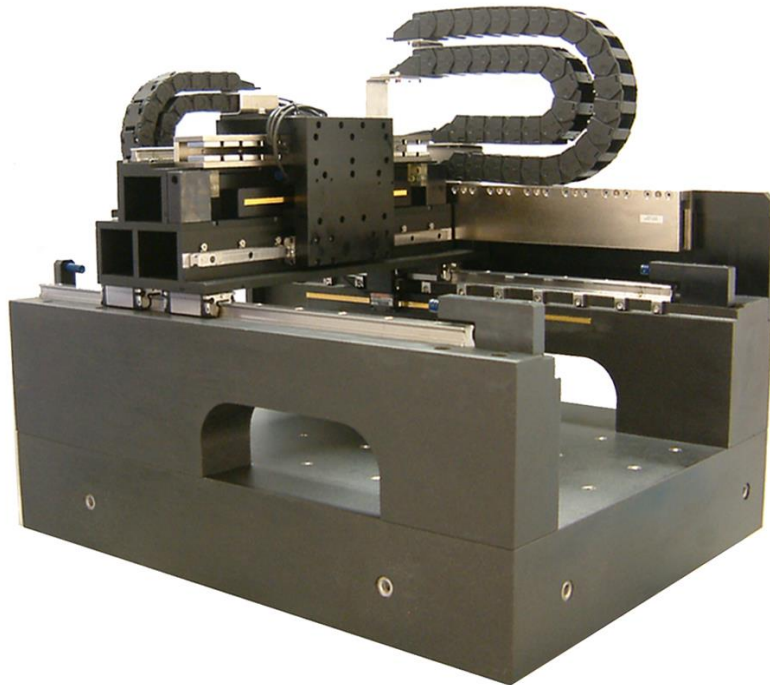


GTD Series

V Granite T-Drive Gantry

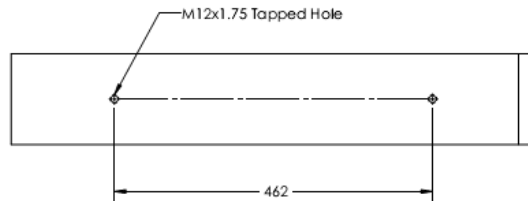
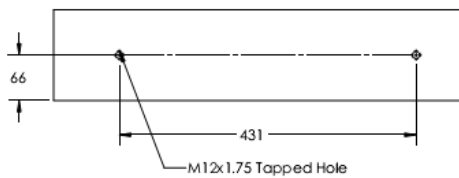
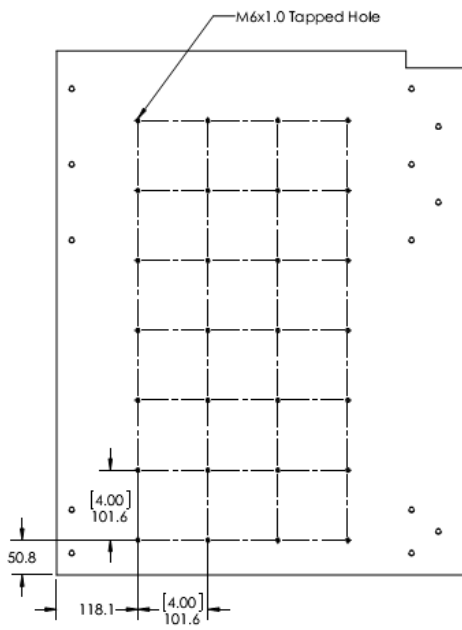
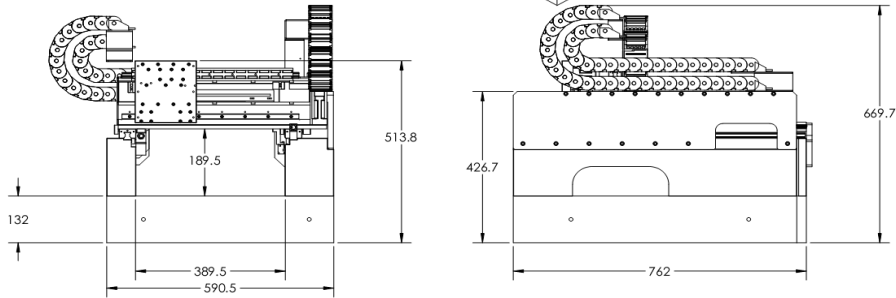
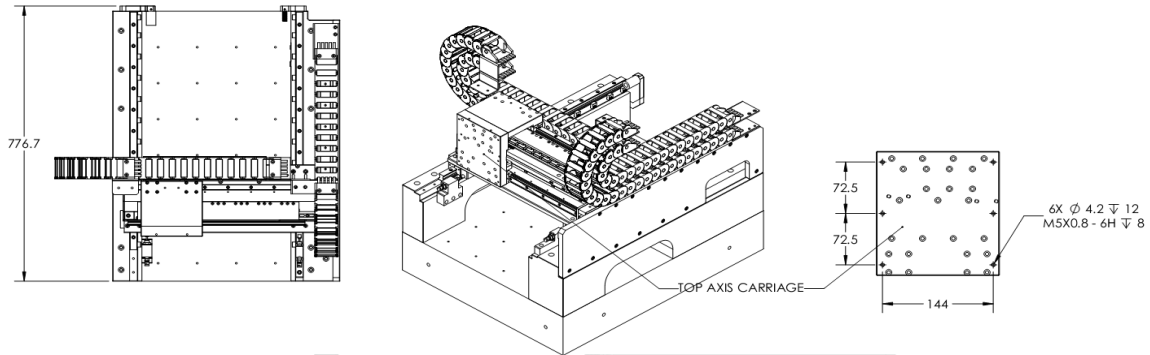


- Direct drive, no cogging, zero backlash linear motor
- Linear encoder options of 0.1 μ m, 0.5 μ m and 1.0 μ m
- High accelerations (up to 10m/s²) and speeds (up to 5m/s)
- Smooth motion at low speeds (low velocity ripple)
- Precise homing through encoder index pulse

Motor Parameter

Specifications	Model	GTD		
	Drive Type	T-Drive		
	Axis	Top		Bottom
	Motor	AUM3-S2	AUM3-S2	AUM4-S2
Performance Parameters	Unit	Series	Parallel	Series
Continuous Force, coil @100°C	N	57		110
Peak Force	N	289		624
Motor Constant	N/SqRt(W)	10.2		15.8
Continuous Power	W	30.5		48.7
Peak Power	W	796.0		1555
Electrical Cycle	mm	60		60.0
Max Bus Voltage	V	330		330.0
Max Coil Temperature	°C	125		125.0
Thermal Dissipation Constant	W/°C	0.41		0.65
Continuous Current	Arms	1.8	3.6	2.3
Peak Current	Arms	9.2	18.4	13.0
Force Constant	N/Arms	31.4	15.7	48.0
Back EMF Constant	Vpeak/(m/s)	25.6	12.8	39.2
Inductance	mH	6.26	1.57	7.00
Terminal Resistance @25°C	Ohms	9.40	2.35	9.20
Electrical Time Constant	ms	0.67	0.67	0.76
Mechanical Parameters				
Coil Mass	Kg	0.45		0.56
Coil Length	mm	121		121.0

Dimension Drawing



Effective Stroke

Model	Drive Type	Axis	Effective Stroke	Sensor Position	Hard Stopper Position
			(mm)	(mm)	(mm)
GTD	T-Drive	Top	200	202	210
		Bottom	400	402	408

Note that granite mass is approx. 240 Kg.

Performance Parameter

Specification Parameter	Unit	GTD400X200
Straightness	μm	±3μm/25mm NTE±10μm for FS
Flatness		±3μm/25mm NTE±10μm for FS
Repeatability (1μm resolution)		±3μm (40μm scale pitch)
Repeatability (0.5μm resolution)		±1.5μm (20μm scale pitch)
Repeatability (0.1μm resolution)		±1μm (20μm scale pitch)
Repeatability (Analogue)		±5 counts
X-Y Orthogonality		Arc-sec

Part Numbering (Rapid Delivery Series)

GTD	Stroke	Drive	Top Axis Motor Model	Bottom Axis Motor Model	Sensor Type	¹ Motor Cable (m)	Encoder Option (type)	Encoder Resolution (micron, μ)	Rail
	400X200	T	AUM3-S/P-S2	AUM4-S/P-S2	J K	1.0-5.0	RE, MII	0.1 0.5 1.0	T B

1. Motor cable is the length of cable measured after the bottom axis cable chain.

Example: GTD400X200-T-AUM3-S-S2-AUM4-S-S2-J-3.0-RE-0.5-T