

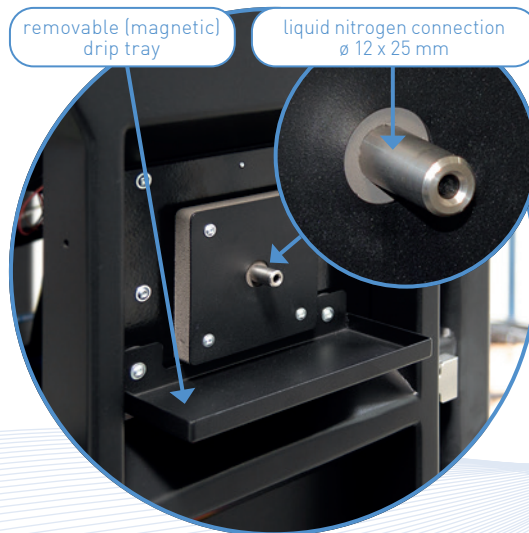
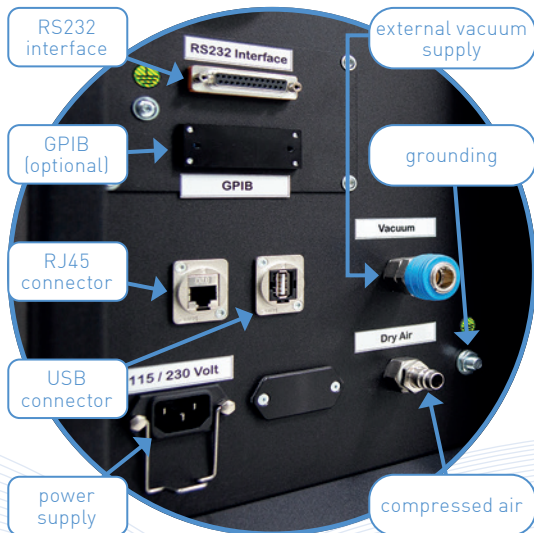
	technical specifications	comments / measurements
system dimensions (w x d x h)	1,140 mm x 1,740 mm x 1,930 mm [44.8" x 68.5" x 76"]	
system weight	680 kg (1,500 lbs)	max. floor load: 200 kg (440 lbs) castors // weight incl. crate: 950 kg (2,100 lbs)
facility requirements – electric	EU: 230 V / 13 A / 50 Hz single phase (CEE 7/7) * US: handler 120 V / 13 A / 60 Hz (Nema 5-15) chiller 120 V / 11 A / 60 Hz (Nema 5-15)	* cable included – in case a different plug is required, please contact esmo semicon handler works with US or EU power supply without having to change any settings – this does not apply to the chiller option though EU version without external power supply – US option with second power supply
facility requirements – pneumatic	compressed air: (CDA) clean, dry, oil-free air, min. 6 bar (87 PSI) · max. consumption: 40 NL/min hot test operations 170 NL/min LN2 cold test operations incl. chamber purge	40 NL/min for hot test 50 NL/min for cold test with electric chiller 80 NL/min for cold test with LN2 heat exchanger (50 to 80 NL/min depending on performance requirements) 90 NL/min chamber purge (only with cold test)
facility requirements – vacuum	200 mbar (3 PSI) (absolute value) *	* only applies to talos without vacuum generator option – in case a vacuum generator option has been installed, no external vacuum supply will be provided
facility requirements – LN2	1.5 bar (22 PSI) to 3 bar (44 PSI) typical consumption (steady state): 3 l/h peak consumption: 8.5 l/h	only applies to LN2 heat exchanger option in case LN2 support pressure requirements exceed 3 bar (44 PSI), please contact esmo semicon beforehand
handling materials	from min. 2.5 mm x 2.5 mm x 0.5 mm to max. 70 mm x 70 mm x 10 mm	1 mm x 1 mm x 0.4 mm (with vision alignment option)
input/output interfaces	8 standard trays (low-/high-profile JEDEC trays) or 8 loading tubes / 8 unloading tubes, max. device length for tube option: 17 mm, input/output/bin configurations optional	max. tube size: 21 mm x 12 mm x 530 mm (w x h x l) for tubes sizes longer than 460 mm, a special front door will be required
human/machine interface (HMI)	15.6" multi-touch panel with esmo-customized HMI	
tester interface	RS232 · TCPIP · GPIB optional	
x/y/z/theta handling system	4-axis portal plus extra contacting z-axis with thermal head	
handler parallelism	single-/dual-site contacting	in special cases a higher parallelism option may be possible – please contact esmo semicon for clarification
max. permanent contact force z1 "handling axis"	115 N (12 kgf)	
max. permanent contact force z2 "temperature axis"	450 N (46 kgf)	800 N (82 kgf) on request (optional)
index time (with pre-centering)	10 s	temperature change or soak time not included typ. soak time 5 to 10 s for devices with a thickness of up to 1.5 mm
thermal performance min. plunger temperature	-56 °C with electrical chiller option -68 °C with dual electrical chiller option -72 °C with LN2 heat exchanger option	typ. junction temperature -40 °C with electrical chiller option // -50 °C with dual electrical chiller option // -55 °C with LN2 heat exchanger option → plus optional plunger microchamber about 5 °C lower, i.e. up to -60 °C cooling airflow: 50 l/min electrical, 70 l/min dual electrical, 80 l/min LN2
thermal performance max. plunger temperature	+190 °C	with an optional plunger microchamber a junction temperature of up to +175 °C can be achieved

# talos

## technical specifications



	technical specifications	comments / measurements
thermal performance stability	±0.5 °C long-time test (heatsink)	junction temperature accuracy depending on calibration and setup (optimum calibration stability = accuracy)
max. noise level	< 65 dB	
underlying standard	CE	
additional features	please refer to options matrix	
tray loading option		
loading	JEDEC standard trays	JEDEC high-profile trays on request
weight	7.3 kg (16 lbs)	
dimensions	677 mm x 710 mm x 12 mm	
jamming rate (ambient/hot/cold)	1 error per 8 h or less	one (1) jamming error at a maximum every eight (8) hours (esmo semicon internal QA acceptance criteria)
tube loading option		
weight	loader: 5.3 kg (11.7 lbs) · unloader: 4.6 kg (10.1 lbs)	
compatibility	compatible with tape loading + dual-tray plate options	
capacity	max. 8 input tubes · max. 8 output tubes · free input/output/bin configurations	
handling materials (mm)	max. tube dimensions 21 mm x 12 mm x 530 mm (w x h x l) max. device length: 17 mm · metal + plastic tubes supported (tube-/device-specific tube loader/unloader conversion kit required)	for all tubes exceeding 460 mm, a special front door will be required
jamming rate (ambient/hot/cold)	1 error per 8 h or less	one (1) jamming error at a maximum every eight (8) hours (esmo semicon internal QA acceptance criteria)
tape loading option		
compatibility	compatible with tray unloading + tape loading options	
tape width	each tape width requires a specific feeder module: tape modules available for tape widths of 8 mm, 12 mm, 16 mm, 32 mm	toolless module exchange with quick-release lock
jamming rate (ambient/hot/cold)	1 error per 8 h or less	one (1) jamming error at a maximum every eight (8) hours (esmo semicon internal QA acceptance criteria)
lateral protrusion	300 mm without reel	
vision alignment option		
compatibility	compatible with tape loading + tray/waffle pack loading/unloading options	specific tray plate required
device sizes	1 mm x 1 mm x 0.4 mm to 5 mm x 5 mm	
package types	leadless devices without calibration/modification	for leaded devices a customized vision task will be required
jamming rate (ambient/hot/cold)	1.5 mm x 1.5 mm to 5 mm x 5 mm: 1 error per 8 h or less 1 mm x 1 mm to < 1.5 mm x 1.5 mm: 1 error per 1 h or less	one (1) jamming error at a maximum every eight (8) or one (1) hour(s) respectively (esmo semicon internal QA acceptance criteria)



Please get in touch with us.

**esmo Germany  
Rosenheim**

esmo AG  
Brueckenstrasse 1  
83022 Rosenheim  
Germany  
  
Phone +49 (8031) 233 88 0  
Fax +49 (8031) 233 88 10  
sales@esmo-ag.com

**esmo USA  
Sacramento**

esmo USA Corp.  
1020 Winding Creek Road  
Suite #120  
Roseville, California 95678  
USA  
  
Phone +1 (916) 307 6345  
Fax +1 (916) 307 6341  
sales@esmo-usa.com

**esmo Singapore  
Singapore**

esmo Asia Pte. Ltd.  
12 Tai Seng Link  
#06 - 01  
Singapore 534233  
Singapore  
  
Phone +65 (656) 288 57  
Fax +65 (656) 288 60  
sales@esmo-asia.com

**esmo China  
Shanghai**

esmo Asia North Co. Ltd.  
Building 2, No. 388 Xinrun Road  
Xin Qiao Industrial Zone  
Song Jiang District  
201612 Shanghai  
China  
  
Phone +86 (21) 5768 7228 + ext. 201  
Fax +86 (21) 5768 7132  
info@esmo-ag.com.cn