

Revision: 2 Rev Date: 5/3/2013 Original Quote Date: 04/25/13

800 S. Raymond Ave., F			Tel 714.	578-6000	* Fax 71	4-578-6020	
300 3. Raymona Ave., 1	Your Request ID						
Order Manager	ervice	rodi Requ	acst ID				
Monica Perez	Brenda Nic	Partner cols	Customer Service Team		Estimated Lead Time		
714-578-6123	714-578-61	.15	714-578-6059	-	1 - we		
Monica@TerraUniversal.com	Brenda@T	erraUniversal.com	Info@TerraUniversal.co	m	Payment	Terms	
Fax: 714-578-1173	Fax: 714-5'	78-3115	Fax: 714-578-3116		50%Down/Net 15		
Loc	cal Sales &	Support Repre	esentative		Trans ID	TUI Ref #	
TUI Direct Support						130285	
Requested By:		End User:		Invoice	To Client #	5236	
University of Hawaii 2680 Woodlawn Dr., Institute Fo Honolulu, HI 96822 Work: 808-856-2962 Email: mhedges@hawaii.edu	r Astronomy	University of Hawai 2680 Woodlawn Dr. Honolulu, HI 96822 Work: 808-856-2962 Email: mhedges@ha	, Institute For Astronomy 2 2	University of 2680 Wood Institute For Honolulu, F	lawn Dr. r Astronomy II 96822	8-956-4532	
Ship To (See Term 2)		Shipping Tern	n (See Term 4)		Quote Summa	rv	
UNIVERSITY OF HAWAII 2680 WOODLAWN DR INST OI ASTRONOMY GREG CHING Honolulu, HI 96822	7	F.O.B. Destina Freight & Handling Partial Ship OK? N Shipped Via: Unspe	ation : Prepay & Add No		Services List & Services Total*	\$5,227.00 \$5,227.00	
ATTN: Voltage 12	20	Ship Acct # Tracking #		* Sales ta applicable,	* Sales tax, shipping and handling charges, if pplicable, will be added. A late charge will apply paid late (see Term #1)		
Critical Notes				Projected :	Sales Tax Status:		
Products built or bought for you, e					( Out of State)		
shipping and lead time estimates a LOADING DOCK/LIFTGATE IS REQUIRED	-	C	nteed (see Term 3).	(Pleas	se advise if status is not	accurate)	
					Pay to Terra Universal, aymond Ave., Fullerto 78-6000 Fax 7		
Tracking After your order is		eal Time Order Status Sy	stem presents daily progress rep	orts directly on	www.TerraUniversal.com	n. This service is	

Tracking

available ONLY from Terra.

Terra does not guarantee the suitability of Terra supplied equipment for your specific application, only that it will perform to the specifications documented above, NOT including oral instructions or other requirements not listed. Terra accepted and produced this order subject to Terra's acceptance of customer-approved drawings, receipt of initial payments and export license, credit approval and to the terms and conditions shown on TerraUniversal.com. Terra's terms and conditions supersede any conflicting terms in your PO or RFP/RFQ. Any terms on your PO that conflict with Terra's terms are NOT accepted unless authorized IN WRITING by an authorized Terra employee and documented by returning a signed copy of your PO. Summarized, Terra's terms are:

1. Payment terms are as given above. A Late Charge is invoiced on product and service invoices unpaid 15 days after their due dates. The late charge must be paid to retain open account status. The Late Charge is 10% of the products and services invoiced or the discount granted, if any, on these items, whichever is greater. Invoice due date is based on date shipped. 2. This order has been accepted with the understanding that the "Ship To" addressee and location provided are the final destination of these products for purposes of Department of Commerce regulations and that you will notify Terra if these change. If an export license is required, a processing charge of \$500 must be paid before the application is submitted. Export licenses require undeterminable time for DOC processing. Terra does not accept orders requiring export licenses until the licenses are received. 3. All Estimated Ship Dates, including confirmed ESDs, are estimates, depend on workloads when the order is ready for manufacturing release and are NOT guaranteed. 4. Except when specified "FOB Destination" in Shipping Terms, above, orders accepted by Terra are FOB Ex-Works. FOB Ex-Works means that risk of loss passes to you when the goods are loaded on the truck and you must file claims for freight damage directly with the freight carrier. If you order freight charges "prepaid and add," freight cost plus a handling charge computed under Terra's standard policy is added to each shipment. These costs may be avoided by ordering "freight collect" and FOB Ex-Works. To reduce costs and speed delivery, it may be necessary to ship from different factories and in different shipments. These are not "partial shipments." 5. Orders accepted, released and processed by Terra cannot be cancelled or returned except on terms that compensate Terra for work performed and expenses incurred. Custom items, items not purchased from Terra, and items modified or damaged by improper use, repairs, application of labels or nameplates are not returnable. 6. All returns must be approved by Terra in writing in advance and may be assessed restock and handling charges. No returns will be accepted without an RMA. All items accepted by Terra must be in original condition and in original shipping containers and returned freight prepaid, FOB Terra. Terra may elect to issue return credits against future orders rather than cash refunds. 7. Terra's warranty is as shown on TerraUniversal.com. This order may not be assigned without Terra's written approval. 8. If Terra files any proceeding to enforce the terms of this order or to collect any amount due, you agree to pay all reasonable attorney's fees and costs.

\$5,227.00 T



#### Quote 130285

No

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800 S. Raymond Ave., Fullerton, CA 92831 Tel 714-578-6000								* Fax	x 714-578-6020	
Your Order Management Team									Your F	Request ID
	Order Manager	Pai	rtner		Customer Service			Service		
Monica Perez		Brenda Nicols	ols		Cu	Customer Service Team			Estimated Lead Time	
Local Rep: TUI Direct Support									1 - week	
#	Product Number # Product Name & Description		Qty Ord	Units	Of	Count	Unit	Unit Price	Custom Item	Extended

#### Cleanroom, Softwall ValuLine, Modular Powder Coated Steel

- Size: 6'L x 6'W x 7'H
- Class: 100

1 6600-66-VL

- (Height is floor to filter face)
- COMPONENTS INCLUDED:

Steel frame – posts and beams of 2.5" (280 mm) square tubing, powder coated

Steel ceiling grid – joists and cross members 3" (76 mm) T-bars

Steel reinforcing gussets – two on each corner post

Pre-mounted GripTrack for curtain panels and strip shield doors

Crate, wood

All electrical components UL and UL-C listed

• ACCESSORIES INCLUDED:

Curtain Panels – 40 mil anti-static PVC, corner notched, precut, hangs from GripTrack

Strip Shield Door – up to 4' 60 mm anti-static PVC, pre-cut, hangs from GripTrack

Fan Filter Units (FFUs) – HEPA filtered, 120 VAC, up to 808 CFM, as required to meet rating

Fluorescent Light Modules – 120 W, 3409 candlepower, 120-277 VAC, as required to meet rating

1

EA

Power Supply Unit – Switched supply to six-receptacle unit, plus one non-switched

user duplex GFI receptacle. 20W 120 VAC, as required to power FFUs and lights

Ceiling Panel -- 2' x 4', polypropylene, white, as required to complete ceiling grid

Ceiling Panel -- 2' x 2', polypropylene, white, as required to complete ceiling grid

Tool Kit – All tools necessary to assemble room

#### o ADDITIONAL INFORMATION:

Room is sent disassembled with assembly instructions. Two assemblers make the process easier

FFUs and lights plug into ceiling-mounted outlets from the Power Supply Unit

Power Supply Units plug into standard US wall receptacles. Each PSU requires

a separate, free 20 A circuit

Power Supply Unit Switch and non-switched GFI outlet mount on corner post

Strip door mounts at any corner

FFUs add 13" (330 mm) overhead to height. Additional 9" to 11" (230 - 280 mm)

clearance is required for air flow and installation. Total clearance required above filter

face is 22" to 24" (560 - 610 mm)

Heavy-duty casters may be ordered at additional cost (TUI 6704-08)

Room is shipped in large wood crate with casters that fits thourgh 36" doorwayfor internal delivery.

Forklift, lift gates and pallet jacks may be required unload crate

Room may be customized at reasonable additional cost and lead-time

Since regulations vary considerably in different locations, Terra assumes no

responsibility for meeting local building regulations, including fire and seismic codes.

Check your local planning department for regulations applying to your installation.

www.terrauniversal.com/6600-66-VL Catalog: Vol 10 #12, Page 17 Size: 120" W x 35" D x 45" H (3048 x 889 x 1143 mm) Origin: USA

Volts: 120 Amps: 18 Watts: 2160 Phase: 1 Freq: 50/60



Critical Environment Solutions						Revision	on: 2 R	Rev Date: 5/3/20	13 Original Qւ	uote Date: 04/25/13
800	S. Raymond Ave., Ful	lerton, CA	92831				Tel 71	4-578-6000	* Fax	714-578-6020
	Υ	our Order N	/lanage	ment <sup>-</sup>	Tear	m			Your R	lequest ID
	Order Manager	P	artner			Cus	tomer	Service		
	nica Perez	Brenda Nicols			Cı	ustomer S	ervice Te	am	Estimated	d Lead Time
Loc	al Rep: TUI Direct Support								1	- week
#	Product Number Product Name & Desci	ription	Qty Ord	Units	Of	Count	Unit	Unit Price	Custom Item	Extended
2	6601-24-H-VL		2	EA				\$0.00	No	<b>\$0.00</b> T
	<ul> <li>Fan Filter Unit, HEPA, 120</li> <li>HEPA-filtered, 3-speed, sel</li> <li>Plugs into Power Supply Un</li> <li>UL LIsted</li> <li>COMPONENTS INCLUDE FFU Power cable assembly</li> <li>SPECIFICATIONS (at 60 In Removes 99.99% of partice Dimensions: 23.63" x 47.6 Power: 120VAC/60Hz Operating Ratings Airflow CFM (m≈/hr) High Air Speed FPM (m/s): High Air Speed FPM (m/s): High Amps (Watts): High - 4.3 Average flowrate is measured Sound level approx. 49 dB</li> <li>ADDITIONAL INFORMAT Power cable shipped unatted Housing: Steel, white power</li></ul>	f-powered fan-init (TUI 6600-2 hit (TUI 6600-2 ED: Hz) des 0.3 micron 63" x 12.51" H gh - 808 (1372 gh - 115 (0.58) A (512W) Med gred 6" (152 mr gA, at flow of 90 TION: ached wder coated licone sealant 25 (order separatum speed turns of this iter FFUs add 13" (earance is requi	and large (600 mm .8) Medi Medium dium - 3.: n) below 0 FPM (0	or a x 1210 a - 102 (0 5A (416) filter fac 0.46 m/s) be acceptoverheadur flow ar	mm ? 7 (121 0.52) W) Le ted d to h d ins	x 318 mi 18.19) L Low - 9. ow - 3.3	ow - 654 3 (0.47) A (393W	7)		

Packaged Weight: 71 Lb (32.2 kg) Origin: USA

Volts: 120 Amps: 4.3 Watts: 512 Phase: 1 Freq: 50/60



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800 S. Raymond Ave.,					Tel 7	14-578-6000		714-578-6020		
	Your Order Management Team Your Re									
Order Manager										
Monica Perez	Estimated E									
Local Rep: TUI Direct Suppor	t						1 - 1	week		
# Product Number Product Name & I	Description	Qty Ord	Units	Of Coun	t Unit	Unit Price	Custom Item	Extended		
3 <b>3800-80-VL</b>		1	EA			\$0.00	No	<b>\$0.00</b> T		
<ul> <li>Fluorescent 4-tube light, with white finished steel housing</li> <li>Plugs into Power Supply Unit (TUI 6600-20-VL)</li> <li>UL listed</li> <li>COMPONENTS INCLUDED:     Light     Power Cable, Light</li> <li>SPECIFICATIONS:     Produces 3409 Candlepower     Dimensions: 2' x 4' (610 mm x 1219 mm)     Power: 120-277 VAC/50 or 60 Hz, heat load: 500 BTUH</li> <li>ADDITIONAL INFORMATION:     To calculate foot candles at a work surface, divide candlepower by the square of the distance between light and work surface measured in feet.</li> <li>www.terrauniversal.com/3800-80-VL     Packaged Weight: 20 Lb (9.1 kg) Size: 51" W x 27" D x 10" H (1295 x 686 x 254 mm) Origin: USA</li> </ul>										
4 6600-20-VL		1	EA			\$0.00	No	\$0.00 T		
Power Supply Unit, 120V, Cleanroom, Softwall, ValuLine  • Supplies power for up to 3 FFUs and 3 lights  • Plugs into standard US wall receptacle  • Requires a free 20A 120 VAC circuit  • COMPONENTS INCLUDED:  Switch box to be mounted on post w/supplied mounting plate  Switched 6-outlet 20 A power distribution box to be mounted on ceiling, switched and breaker protected  GFI duplex convenience 5 A outlet, non-switched, mounted on post  Electrical components UL and UL-C listed  • ADDITIONAL INFORMATION:  Shipped fully assembled  White powder coated  Liquid Tight conduit runs power cable up post to ceiling  o  Catalog: Mini 10, #8, Page 02  Volts: 120 Amps: 20 Watts: 2400 Phase: 1 Freq: 50/60										
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Product Number   Product Name & Description   Product Number   Product Name & Description   Product Name & Description   Product Name & Description   Product Name & Description   Product Name & Product Name & No.00   No.   \$0.00   The Name & Product Name & No.00   Product Name & Produ	<u>Critical Environment</u>	ns	Revis	ion: 2 F	Rev Date: 5/3/20	13 Original Quo	te Date: 04/25/13			
Condition   Cond	800 S. Raymond Ave., Fullerton,	CA 92831			Tel 7	14-578-6000	* Fax 714-578-602			
Brenda Nicols   Customer Service Team   1 - week	Your Ord	er Manage	ement 1	Геат			Your Re	quest ID		
Product Number   Prod	Order Manager Partner Customer Service									
Product Name & Description		icols		Customer	Service Te	eam				
# Product Name & Description			1		<u> </u>		1 - v	week		
Wall Kit, Softwall Cleanrooms, ValuLine, 7'  Provides all wall panels and door strips to complete ValuLine softwall cleanroom Attached via snap-tight polypropylene GripTrack mounted on beams  COMPONENTS INCLUDED: Curtain panels, pre-cut to fit cleanroom Strip shields to make 4' door Pre-cut to leave air out-flow opening of about 4" at bottom  SPECIFICATIONS Panels – 40 mil thick, anti-static PVC w/6" overlap, up to 48" wide, sized as required to fit room Strip Shields – 60 mil thick, anti-static PVC w/2" overlap, , 8" wide, 8 pieces  ADDITIONAL INFORMATION: Panels - lightly tinted, blur-free Strip Shields - lightly tinted www.terrauniversal.com/1320-17-WallKit-VL Packaged Weight: 50 Lb (22.7 kg)  For a solution of the soluti			Units	Of Count	Unit	Unit Price	Custom Item	Extended		
Provides all wall panels and door strips to complete ValuLine softwall cleanroom Attached via snap-tight polypropylene GripTrack mounted on beams  COMPONENTS INCLUDED: Curtain panels, pre-cut to fit cleanroom Strip shields to make 4' door Pre-cut to leave air out-flow opening of about 4" at bottom  SPECIFICATIONS Panels – 40 mil thick, anti-static PVC w/6" overlap, up to 48" wide, sized as required to fit room Strip Shields – 60 mil thick, anti-static PVC w/2" overlap, , 8" wide, 8 pieces  ADDITIONAL INFORMATION: Panels – lightly tinted, blur-free Strip Shields - lightly tinted www.terrauniversal.com/1320-17-WallKit-VL Packaged Weight: 50 Lb (22.7 kg)  6 6704-20  Ceiling Panel for Modular Cleanrooms; 2' x 4', Polypropylene Ceiling panel, 2' x 4' x .25", White  COMPONENTS INCLUDED: Panel, polypropylene, white Sealing tape, white, pressure sensitive foam  O ADDITIONAL INFORMATION: Fills unused ceiling grid bays www.terrauniversal.com/6704-20 Catalog: Vol 10 # 12, Page 22 Packaged Weight: 8 Lb (3.6 kg) Origin: USA	5 <b>1320-17-WallKit-VL</b>	1	EA			\$0.00	No	<b>\$0.00</b> T		
Ceiling Panel for Modular Cleanrooms; 2' x 4', Polypropylene  • Ceiling panel, 2' x 4' x .25", White  • COMPONENTS INCLUDED: Panel, polypropylene, white Sealing tape, white, pressure sensitive foam  o ADDITIONAL INFORMATION: Fills unused ceiling grid bays www.terrauniversal.com/6704-20 Catalog: Vol 10 # 12, Page 22 Packaged Weight: 8 Lb (3.6 kg) Origin: USA	<ul> <li>Attached via snap-tight polypropylene GripTrack mounted on beams</li> <li>COMPONENTS INCLUDED:     Curtain panels, pre-cut to fit cleanroom     Strip shields to make 4' door     Pre-cut to leave air out-flow opening of about 4" at bottom</li> <li>SPECIFICATIONS     Panels – 40 mil thick, anti-static PVC w/6" overlap, up to 48" wide, sized as required to fit room     Strip Shields – 60 mil thick, anti-static PVC w/2" overlap, , 8" wide, 8 pieces</li> <li>ADDITIONAL INFORMATION:     Panels - lightly tinted, blur-free     Strip Shields - lightly tinted     www.terrauniversal.com/1320-17-WallKit-VL</li> </ul>									
<ul> <li>Ceiling panel, 2' x 4' x .25", White</li> <li>COMPONENTS INCLUDED: Panel, polypropylene, white Sealing tape, white, pressure sensitive foam</li> <li>ADDITIONAL INFORMATION: Fills unused ceiling grid bays www.terrauniversal.com/6704-20 Catalog: Vol 10 # 12, Page 22 Packaged Weight: 8 Lb (3.6 kg) Origin: USA</li> </ul>	6 6704-20	1	EA			\$0.00	No	<b>\$0.00</b> T		
	<ul> <li>Ceiling panel, 2' x 4' x .25", White</li> <li>COMPONENTS INCLUDED: Panel, polypropylene, white Sealing tape, white, pressure sensitive foam</li> <li>ADDITIONAL INFORMATION: Fills unused ceiling grid bays www.terrauniversal.com/6704-20 Catalog: Vol 10 # 12, Page 22</li> </ul>									
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7	6600-88-VL	1	EA			\$0.00	No	<b>\$0.00</b> T	
	<ul> <li>Tool Kit, Cleanroom, Softwall, ValuLine</li> <li>All tools needed to assemble ValuLine softwall cleanroom</li> <li>COMPONENTS INCLUDED:     Assembly instructions: read or regret it!     Variable speed drill w/tool bits, corded     Measuring tape, English, 25'     Mallet, non-marring rubber, 16 oz     Screwdriver, w/bits     Allen wrench     Drill bit, 3/16"</li> <li>Components vary depending on availability     o ADDITIONAL INFORMATION</li> </ul>								
8	Ladder, 6' (not included), required for www.terrauniversal.com/6600-88-VL Packaged Weight: 8 Lb (3.6 kg) Size: Volts: 120 Amps: 3 Watts: 360 F	24" W x 24"	D x 6" H eq: 60 EA	I (610 x 610	x 152 mi	m) Origin: US	A No	\$0.00 T	
	Ceiling Panel for Modular Cleanrooms			ene		φο.σσ	110	ψ0.00 1	
	<ul> <li>Ceiling panel, 2' x 2' x .25", White</li> <li>COMPONENTS INCLUDED: Panel, polypropylene, white Sealing tape, white, pressure sensitive foam</li> <li>ADDITIONAL INFORMATION: Fills unused ceiling grid bays www.terrauniversal.com/6703-81 Catalog: Internet Only Origin: USA</li> </ul>								
9	6600-66-VL-9	1	EA			\$0.00	No	<b>\$0.00</b> T	
	<ul> <li>Crating Charge</li> <li>Crating service for ValuLine Softwall Cleanroom</li> <li>COMPONENT INCLUDED  Crate, wood, 30" wide by 48" high, length longest CR part + 1 foot</li> <li>ADDITIONAL INFORMATION  Fits through 36" doorway  Freight dock and 2 pallet jacks or forklift required to unload  Depending on size and configuration, more than one crate may be required</li> <li>Origin: USA</li> </ul>								
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300 S. Raymond Ave., Fullerton, CA 92									714-578-6020
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10	9998-FasTrak		0	EA			\$0.00	No	\$0.00
FasTrak Services  On a tight schedule? You may choose one of Terra's FasTrak Priority Services to help meet your critical schedule for Terra-manufactured products  FASTRAK ADVANTAGE works within Terra's existing production organization to meet the Estimated Ship Date, even if shop loads or other circumstances change by the time your order hits the shop floor. FasTrak Advantage assigns a FasTrak order expediter to ensure production priority, streamlines internal purchase and overtime authorization, and logs progress to senior management status reports. FasTrak Advantage guarantees* to meet the agreed-to Estimated Ship Date (ESD).  FASTRAK 24/7 provides a higher level of service: a 24/7 commitment to meet the shipping date YOU specify, regardless of quoted lead times. FasTrak-24/7 assigns and a dedicated production team plus a dedicated senior expeditor working three shifts to meet your delivery specification. FasTrak 24/7 guarantees to meet the agreed-to specified ship date.  Call for pricing on the FasTrak program that meets your production schedule. (FasTrak service fees cover costs of additional services only, without additional profit.)  *Terra's FasTrak services limited guarantee are ship on the ESD or date specified or to refund 200% of FasTrak charges. This guarantee covers no direct, special, consequential or other damages and is strictly limited to									
11	9999-RTOSS		0	EA			\$0.00	No	\$0.00
<ul> <li>REAL-TIME ORDER STATUS SYSTEM</li> <li>You can track progress on all manufactured items on your orders on Terra's REAL-TIME ORDER STATUS SYSTEM (R-TOSS)</li> <li>R-TOSS is located on TerraUniversal.com, click the button on the upper right-hand corner.</li> <li>Progress is updated each day at 2:00 AM PST to show completion of each task on each item being manufactured.</li> <li>R-TOSS displays are open to all Preferred Clients just enroll or log-in.</li> <li>As items ship, R-TOSS also displays shipping data (date, shipper, tracking number) for all items.</li> </ul>									
Tha	anks for Letting Us Quote!			Total	ls on Page	e 1			Last Page
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