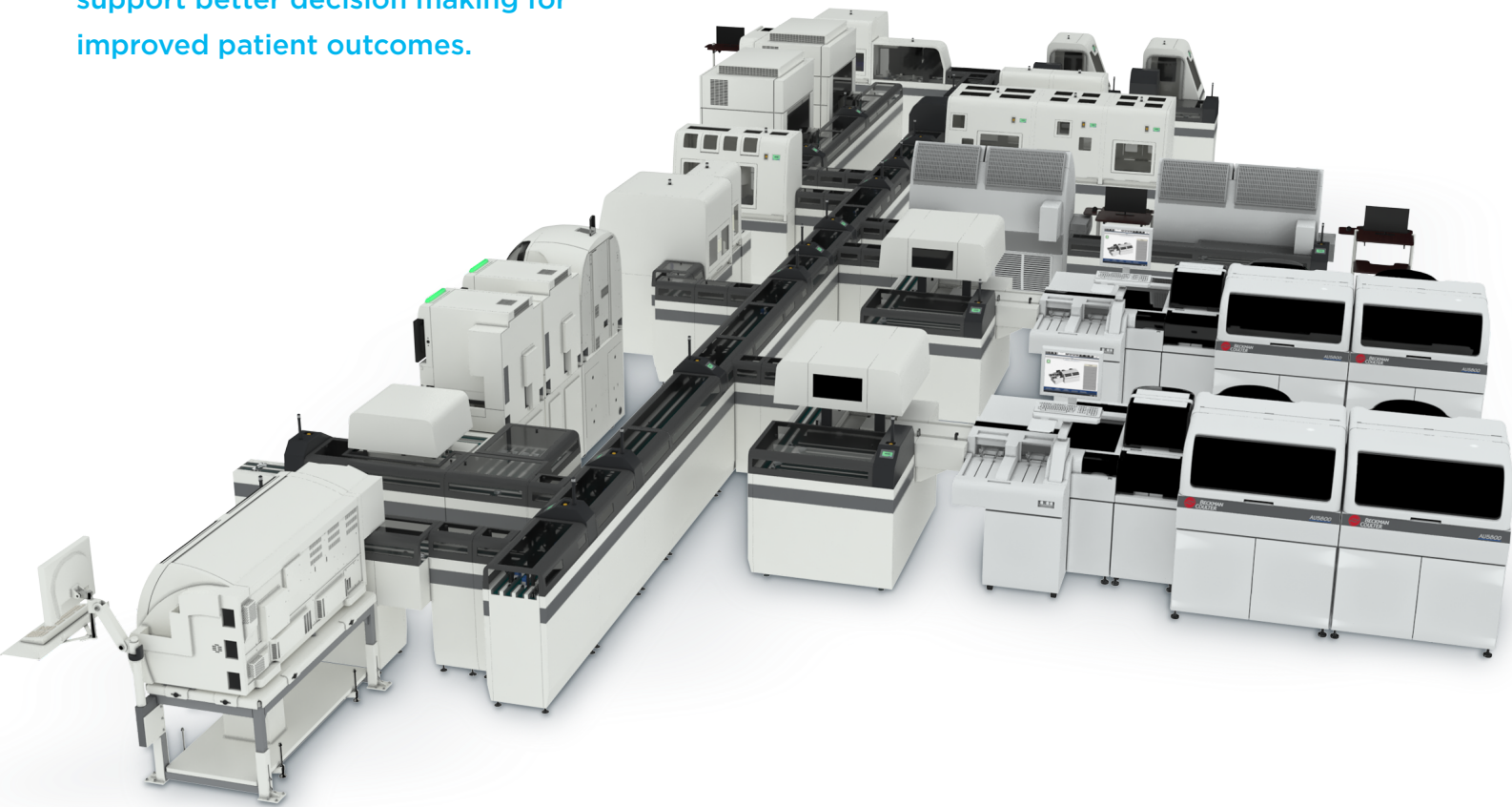


# POWER EXPRESS TECHNICAL SPECIFICATIONS

Power Express drives laboratory efficiency by automating pre-analytical, analysis and post-analytical processes across all core disciplines—chemistry, coagulation, hematology and immunoassay—to ensure consistent, fast, and accurate results. The wide variety of connectivity options, combined with superior modularity, empower labs to configure flexible, scalable layouts that maximize workflows and keep pace with future growth demands.

The following specifications detail how Power Express can fit into any lab and help support better decision making for improved patient outcomes.



# POWER EXPRESS TOTAL LABORATORY AUTOMATION

When patients and providers depend upon you, your laboratory must deliver. Power Express provides your laboratory with the options needed to ensure your workflow delivers upon your turnaround time commitments.



### Power Express base system modules:

- > Dynamic inlet
- > Error lane
- > Outlet(s)
- > Miscellaneous transport lanes (I-lanes, L-lanes, T-lanes and U-lanes)
- > Cennexus/Line controller computer

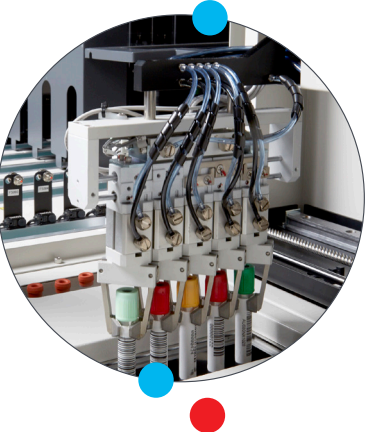
### Optional modules:

- > Two-bin bulk inlet
  - Connection to 3rd party tube transport systems
- > Centrifuge(s), temperature-controlled or ambient
- > Decapper(s)
- > Aliquotter (level detector, labeler and aliquotter)
- > Recapper
- > Storage(s), 3K refrigerated or ambient
- > Storage(s), 5K refrigerated or ambient
  - Auto-disposal chute



### Beckman Coulter analyzer connections:

- > UniCel Dxl immunoassay system
- > DxC 700 AU
- > AU680
- > AU5800 series
- > UniCel DxC 600/800 series
- > DxH 800 and 900



### Optional third-party hardware connection(s):\*

- > Abbott ARCHITECT® i2000SR®
- > Roche® Cobas 8000
- > DiaSorin LIAISON XL
- > IL TOP® 700/750
- > Siemens ADVIA Centaur
- > Stago STA-R/STA-R Evolution
- > Sysmex CS-5100
- > Sysmex XN-9000/9100
- > Tosoh G8 and G11\*\*

\*Third-party instrument connections need to be approved by their respective companies.  
\*\* Pending FDA clearance.

**THROUGHPUT**-Defined as the number of samples that route through a given point in the system per hour.

Bulk Inlet	1,400 tubes/hour
Dynamic Inlet (v.3.0/3.5)	1,450 tubes/hour
Centrifuge	300 tubes/hour per centrifuge (up to 4 centrifuges)
Decapper	1,200 tubes/hour
Aliquoter (1:1)	600 tubes/hour
3K/5 K Storage	600 tubes/hour (up to 4 storage units)
Recapper	1,200 tubes/hour
Universal Recapper	1,258 tubes/hour
Secondary Decapper	600 tubes/hour
Outlet	600 tubes/hour (up to 2 outlets)

For specific accounts, the system throughput can be boosted up to **1,450 samples per hour** for maximum productivity.

### Compatible sample containers

P/N	Mfr.	Tube size	Material/Additive	Draw volume	Label	Closure	Cap color	Fluid
367861	BD	13 x 75 mm	Plastic	4.0 mL	Paper	Hemogard	Lavender	Whole blood
367983	BD	13 x 75 mm	Plastic/Gel	3.5 mL	Paper	Hemogard	Gold	Serum
366415	BD	13 x 75 mm	Glass/Sodium citrate	4.5 mL	Paper	Cnv./Rubber	Light blue	Plasma
367977 (SST)	BD	13 x 100 mm	Plastic/SST	4.0 mL	Paper	Hemogard	Gold	Serum
367886	BD	13 x 100 mm	Plastic/Non-gel	6.0 mL	Paper	Hemogard	Green	Plasma
369714	BD	13 x 75 mm	Glass/Sodium citrate	4.5 mL	Paper	Hemogard	Light blue	Plasma
367947	BD	13 x 75 mm	Glass/Buffered sodium citrate	4.5 mL	Paper	Hemogard	Light blue	Plasma
363083	BD	13 x 75 mm	Plastic/Sodium citrate	4.0 mL	Paper	Hemogard	Light blue	Plasma
365043	BD	13 x 75mm	Plastic/Barricor Li.Hep	3.0 mL	Paper	Hemogard	Lime	Plasma
365045	BD	13 x 100mm	Plastic/Barricor Li.Hep	4.5 mL	Paper	Hemogard	Lime	Plasma
367988	BD	16 x 100 mm	Plastic/Clot activator separator gel	8.5 mL	Paper	Cnv./Rubber	Red/Grey	Serum
367953	BD	16 x 100 mm	Plastic/Clot activator separator gel	8.5 mL	Paper	Hemogard	Gold	Serum
459000	Greiner	13 x 75 mm	Plastic/None	5.0 mL	No	Screw	White	SerumPlasma
454008	Greiner	13 x 75 mm	Plastic/Gel	4.0 mL	Paper	Pull-top	Green w/ yellow ring	Plasma
456073	Greiner	13 x 100 mm	Plastic/Clot activator separator gel	5.0 mL	Paper	Pull-top	Red cap w/ yellow ring	Serum
455071	Greiner	16 x 100 mm	Plastic/Clot activator separator gel	8.0 mL	Paper	Pull-top	Red/Yellow ring	Serum
454332	Greiner	13 x 75mm	Plastic/Sodium Citrate	3.5 mL	Paper	Pull top	Light Blue w/ black ring	Plasma
04.1943.001	Sarstedt	13 x 75mm	Plastic/Clot activator	2.7 mL	Paper	Screw	White	Serum
04.1919.100	Sarstedt	13 x 75mm	Plastic/TrisodiumCitrate	3.0 mL	Paper	Screw	Blue	Plasma
04.1934.100	Sarstedt	13 x 90mm	Plastic/Clot activator	4.9 mL	Paper	Screw	Light Red	Serum
01.1601.100	Sarstedt	15 x 92mm	Plastic/Clot activator	7.5 mL	Paper	Screw	Light Red	Serum

#### Notes:

- The Serum Level Detector can detect fluid levels in all tube types except for double-walled tubes, the 13 x 75 mm BD microtainer (pediatric) tube or the Power Processor 13 x 100 false-bottom aliquot tubes.
- DxC analyzer connection only supports 13 x 75 mm (non-Sarstedt) or 13 x 100 mm sample tube size..
- Stago analyzer connection only supports 13 x 75 mm sample-tube size.
- COAG Special Handling must be enabled when double-wall coagulation tube types are used on the system to prevent risk of aliquotting double-wall tubes.
- AU5800 connection/rack does not support BD 16 x 100 mm PN 367953.
- Sarstedt tubes with on-center cap are supported.
- Bulk Inlet does not support glass tubes nor pour-off tubes. Only unopened tubes with primary cap are allowed.

#### Secondary sample containers (for aliquoter module):

13 x 100 mm or 13 x 75 mm Beckman Coulter/IDS plastic tubes:

P/N	Mfr.	Tube type	Size (mm)
800256	BCI/IDS	Plastic	13 x 75
2910034	BCI/IDS	Plastic	13 x 100

Please contact your Beckman Coulter representative if your sample container is not listed above.

Note: Power Express does not support non-BCI/IDS secondary tubes.



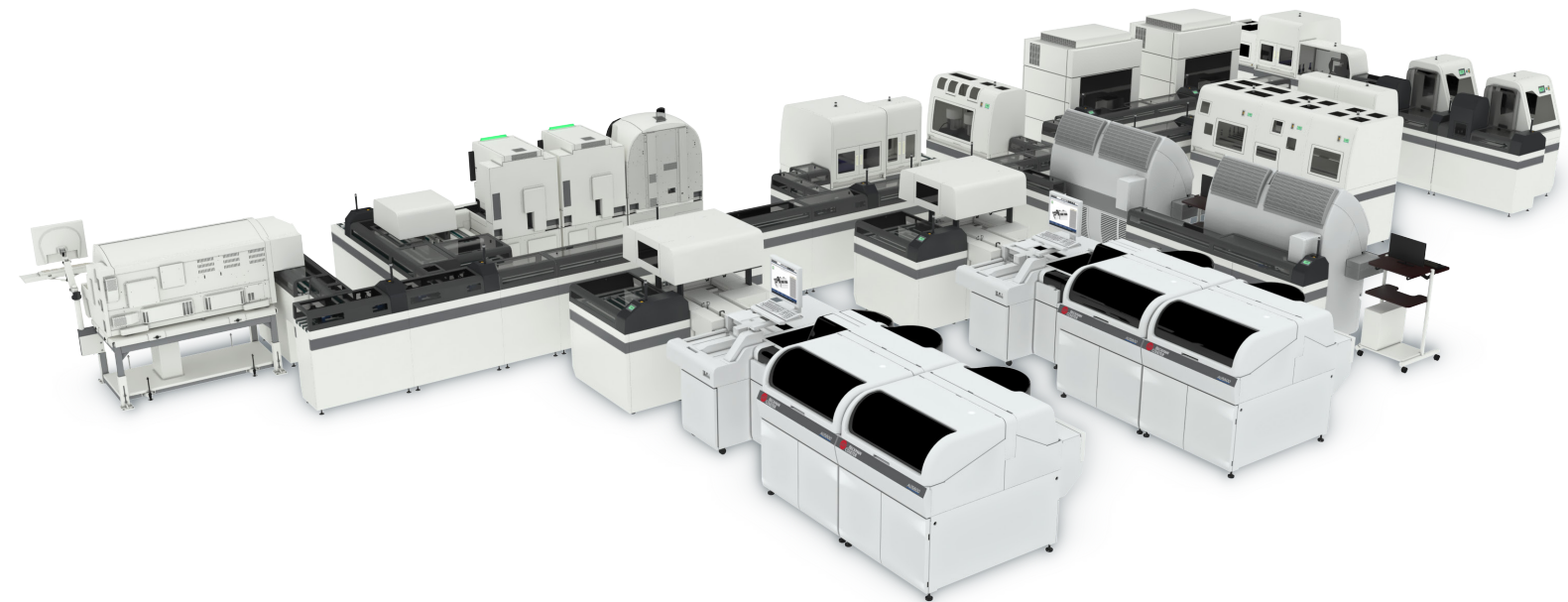
Power requirements

Manufacturer module name	Power		Connector	Heat output		
	Voltage/Current/Phase	Freq.		kCal/hr	BTU/hr	
<b>Pre-analytical</b>						
Dynamic inlet	200-230 VAC, 16 A, 1Ø		NEMA L6-20P	172	683	
Bulk inlet	‡		N/A	185	734	
Error lane	‡		N/A	111.8	444	
T-lane for centrifuge group one	‡		N/A	101	401	
D-lane for single centrifuge or in second position in a branch with dual centrifuge	‡		N/A	133.3	529	
Centrifuge(s)	200-230 VAC, 16 A, 1Ø		NEMA L6-20P	111.8	444	
Temperature-controlled centrifuge(s)	200-230 VAC, 16 A, 1Ø		NEMA L6-20P	111.8	444	
D-lane for centrifuge in first position in a branch with dual centrifuge	‡		N/A	96.75	384	
Centrifuge merge lane two	‡		N/A	38.7	154	
T-lane for centrifuge group two	‡		N/A	101	401	
D-lane for centrifuge (second in centrifuge branch)	‡		N/A	96.75	384	
Centrifuge merge lane one	‡		N/A	38.7	154	
Primary decapper	‡		N/A	116.1	461	
T-lane for Aliquotter	‡		N/A	105.35	418	
Level detector	‡		N/A	116.1	461	
Labeler	‡		N/A	221.45	879	
Aliquotter	‡		N/A	234.35	930	
Aliquotter merge lane	‡		N/A	38.7	154	
<b>Analytical</b>						
Dxl/Centaur/TOP connection	‡		N/A	96.75	384	
Cobas 8000 RBU connection	‡		N/A	404.2	1,603	
AU680 connection	‡		N/A	96.75	384	
DiaSorin LIAISON XL connection	‡		N/A	142	564	
DxC connection	‡		N/A	142	564	
Stago connection	‡		N/A	142	564	
AU5800 connection	‡		N/A	285.95	1,135	
AU5800 XL connection	‡		N/A	240.8	955	
DxH workcell connection	‡		N/A	306	1,214	
Tosoh G8/G11 DTS connection	‡		N/A	98.9	456	
i2000SR connection	‡		N/A	148	1,213	
Cobas 8000 RBU connection	‡		N/A	404.2	1,603	
Sysmex CS-5100 connection	‡		N/A	140	556	
Sysmex XN-9000 RBU connection	‡		N/A	402.2	1,595	
I-lane 900 with power switch for i2000SR connection	‡		N/A	30	246	
Power module for i2000SR connection	200-230 VAC, 16 A, 1 Ø		NEMA L6-20P	0	0	
<b>Post-analytical</b>						
Recapper	‡		N/A	120.8	479	
Auto-disposal chute	‡		N/A	120.8	479	
HS 5K stockyard-ref (has two separate power cords)	Refrigeration	200-230 VAC, 12 A, 1 Ø	50/60 Hz	NEMA L6-20P	3,268	12,947
	Servo	200-230 VAC, 12 A, 1 Ø	50/60 Hz	NEMA L6-20P		
HS 3K stockyard-ref (has two separate power cords)	Refrigeration	200-230 VAC, 12 A, 1 Ø	50/60 Hz	NEMA L6-20P	3,268	12,974
	Servo	200-230 VAC, 12 A, 1 Ø	50/60 Hz	NEMA L6-20P		
HS stockyard H-lane 1,200	‡		N/A	19.35	77	
HS stockyard H-lane 800	‡		N/A	234.35	930	
Secondary decapper	‡		N/A	51.6	205	

‡Power supplied by the system; module does not have its own power cord.

Manufacturer module name	Power		Connector	Heat output	
	Voltage/Current/Phase	Freq.		kCal/hr	BTU/hr
Outlet	‡		N/A	129	512
<b>Transportation</b>					
I-lane 1,200 (4-4) w/o pedestal	‡		N/A	17.2	68
I-lane 600 (4-4)	‡		N/A	17.2	68
I-lane 1,200 (4-4)	‡		N/A	38.7	154
I-lane 300 (2-2)	‡		N/A	8.6	34
I-lane 1,200 (2-2)	‡		N/A	8.6	34
I-lane 900 (4-4)	‡		N/A	38.7	154
I-lane 300 (4-4)	‡		N/A	17.2	68
I-lane 600 (2-2)	‡		N/A	8.6	34
I-lane 900 (2-2)	‡		N/A	38.7	154
L-lane 600 (4-4)	‡		N/A	55.9	222
L-lane 300 (2-2)	‡		N/A	17.2	68
U-lane 400 (2-2)	‡		N/A	8.6	34
U-lane 300 (2-4)	‡		N/A	10.75	43
Adjustment lane (2-4)	‡		N/A	17.2	68
T-lane	‡		N/A	86	341
<b>Other</b>					
Power module	200-230 VAC, 12 A, 1 Ø		NEMA L6-20P	0	0
Cennexus/line controller PC	110 or 220 VAC +/- 10%, auto selectable, 5 A, 1 Ø	50/60 Hz	NEMA L5-15P	301	1,194
Cennexus/line controller monitor	110 or 220 VAC +/- 10%, auto selectable, 5 A, 1 Ø	50/60 Hz	NEMA L5-15P	22	89

‡30 A Service and Nema L6-30R connector required when using 30A UPS.



## Sample identification

Barcodes placed on sample tubes will be identified if the following symbologies are used:

- › Codabar/NW7
- › Interleaved 2 of 5 (with or without check digit)
- › Code 39 (with or without check digit)
- › Code 128/USS 128 (with check digit)

## HOST/LIS communications

- › Cennexus-Host interface: ASTM
- › Sample ID length option: 3 to 20 + 2 characters
- › Communications mode: bidirectional
- › Supports up to three hosts (LIS or middleware) by using the ASTM protocol

## Sample programming input method:

- › Dynamic download: sample programming can be downloaded to Cennexus before the sample tube is loaded at the inlet
- › Host query: request is sent to the Host at the first barcode reader at the error lane. Available only in host interface line 1 and in ASTM option

## REMISOL Advance:

Cennexus software supports connection to REMISOL Advance according to Cennexus host interface specifications.

For more information, please visit  
[beckmancoulter.com/powerexpress](http://beckmancoulter.com/powerexpress)

## Agency approvals

### Product safety

- › EN 61010-1: 2010 (3rd edition)
- › CAN/CSA C22.2 no. 61010-1-12
- › UL 61010-1 (3rd edition)
- › IEC 61010-2-081: 2015
- › EN 61010-2-081: 2015
- › CAN/CSA C22.2 no. 61010-2-081:154
- › UL 61010-2-081: 2015
- › IEC 61010-2-101: 2015
- › EN 61010-2-101
- › CAN/CSA C22.2 no. 61010-2-101:15
- › UL 61010-2-101: 2015

### Cennexus PC

- › UL 60950-1 second edition
- › CSA60950-1-07 second edition amendment 1:2009
- › EN 60950-1:2006/A11:2009/A1:2010/A12:2011
- › IEC 60950-1:2005 (2nd edition); Am 1:2009

### EMC

- › IEC/EN 61326-1:2013
- › IEC/EN 61326-2-6:2013
- › Cennexus EMC compliance:
  - FCC Class B
  - EN 55024-1 2003
  - CISPR 22; 2003
  - ICES-003, issue 3
  - EN 55022

Not available in all regions. Contact your local representative for availability.

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