PERCIVAL

Helping You Create Better Science

Product Catalog

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Controlled Environment Experts

At Percival Scientific, our mission is to help you create better science with the most customized growth chambers available for your controlled environment research.

We engineer, custom-build and install durable and thoughtfully-designed controlled environments for nearly any research need. From bench-top chambers to large grow rooms, we manufacture more than 150 different models of research chambers.

We've been a global leader in the innovative design and manufacture of controlled environment chambers since 1959. Our products are used in all 50 states and in more than 79 countries. Universities, government institutions and private corporations in the U.S. and around the world trust us as a partner in accelerating research that impacts climate, human health and food production.

Iowa State University chose Percival Scientific as a partner for the Enviratron project, which was initially funded by the National Science Foundation. The project team developed a robotic rover that synchronizes with uniquely-designed growth chambers to automatically collect data from plants growing in a variety of environmental conditions during a single experiment. This project is the first of its kind and requires close ongoing collaboration between Percival and the Enviratron team.

Standards and Certifications

UL and ETL Standards

To ensure our products meet international safety and performance standards, Percival Scientific partners with nationally recognized testing labs, including Underwriters Laboratories (UL) and Intertek's Electrical Testing Laboratories (ETL).

ISO 9001:2015 Certification

In September 2019, DQS Inc. issued Percival Scientific ISO 9001:2015 certification, an international standard for a quality management system. The certification is based on Eight Principles of Quality Management, which can be used as a framework for management to guide organizations in continuous improvement. These include Customer Focus, Leadership, Involvement of People, Process Approach, System Approach to Management, Continual Improvement, Factual Approach to Decision Making and Mutually Beneficial Supplier Relationships.

"At Percival, we are committed to quality work and processes. The ISO 9001:2015 certification recognizes the efforts of our entire team. It assures our customers that Percival is dedicated to producing environmental chambers that exceed customer expectations and providing continuous improvement of our products, processes and services."

Gary Wheelock,
Percival Scientific President and CEO

10017261 UL REGISTERED FIRM ISO 9001:2015

DQS Inc.

PERCIVAL SCIENTIFIC, INC.

Walk-In Rooms

Percival Scientific excels at customizing chamber solutions for expanding research operations. Our walk-in rooms can be configured for any size production. As your operation grows and changes, we can easily add more rooms and modify your configuration. Our consultants will work closely with you to develop a tailored chamber solution perfect for virtually any application, including C_4 species plant growth, cannabis, food production, insect and reptile rearing, seed storage and stability testing.

- Adaptable for virtually any application
- Available with SciBrite® or SciWhite® LED lighting
- Wide range of optional custom-designed features and configurations
- Easy programming with IntellusUltra control system and touchscreen

Specifications

Model	Type/Use	Configuration		Humidity Control	Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving/ Growth Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
					µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
CTH-89	Controlled Temperature and Humidity	L5	Five Tiers	40 - 85% RH ± 5%	10	4 - 44 ± 1.0	478	13.5	160	14.9	16	40.6	96	243.8	108	274.3	102	259.1
IR-89L5	Incubator	L5	Five Tiers	Optional	230	7 - 44 ± 1.0	478	13.5	160	14.9	14	35.6	96	243.8	108	274.3	102	259.1
AR-89L3	Plant Growth	L3	Three Tiers	Optional	525	7 - 44 ± 1.0	540	15.3	96	8.9	24	61.0	96	243.8	108	274.3	102	259.1
AR-1011L3	Plant Growth	L3	Three Tiers	Optional	810	5 - 44 ± 1.0	839	23.8	150	13.9	28	70.1	120	304.8	133.5	339	114.3	290.2
PR-106	Plant Growth	L1	One Tier	Optional	1250	10 - 44 ± 1.0	386	10.9	41.9	3.9	85	215.9	120.5	306.1	70.5	179.1	104.5	265.4
PR-1010	Plant Growth	L1	One Tier	Optional	1200	10 - 44 ± 1.0	711	20.1	62	5.7	85	215.9	120.5	306.1	120.5	306.1	102	259.1
MPR-1011	Plant Growth	L1	One Tier	Optional	1375	5- 44 ± 1.0	839	23.8	67	6.2	97	246.4	120	304.8	133.5	339	114.3	290.2
CU-99L4	Plant Tissue Culture	L4	Three Tiers	Optional	370	10 - 44 ± 1.0	662	18.7	120	11.1	20.5	52.1	110.5	280.7	110.5	280.7	114.3	290.2
SS-1010	Seed Storage	L5	Five Tiers	20% RH ± 5%	Work Lights	4 - 25 ± 1.0	711	20.1	250	23.2	15	38.1	120.5	306.1	120.5	306.1	102	259.1
PGW-40	Plant Growth	L1	One Tier	Optional	1100	10 - 44 ± 1.0	378	10.7	43	4	79	200.7	120	304.8	70	178	108	274.3
WE-1012	Plant Growth	L1	One Tier	Optional	1100	10 - 44 ± 1.0	815	23.1	90	8.4	87	221	120	304.8	139	353.1	104	264.2

Shelving does not come standard with SS-1010 chambers but can be added as an optional feature. Contact Percival for more information.

SciBrite LED Plant Growth

Percival engineered this line of SciBrite® LED plant growth chambers specifically for light quality studies and other experiments requiring specific light wavelengths. You won't find chambers with more LED color options or combinations than these. Programming our SciBrite lighting is intuitively easy using our IntellusUltra touchscreen, making these chambers some of the best science has to offer.

- Varying light intensity by color, up to 1850 µmoles/m²/s at 6 inches from LEDs
- Independently dimmable tiers of SciBrite lighting for superior control of light intensity
- Wide range of programmable wavelengths for specific stages of plant development
- Easy to program with the IntellusUltra control system
- Durable, long-lasting construction and sleek design

LED-36L2

Specifications

Model	Configuration		Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
			µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
Horizontal Lighting																
LED-30	L1	One tier	1400	10 - 44 ± 0.5	9.6	0.3	3.0	0.3	25.5	64.8	31	78.7	24.3	61.6	46.1	117.2
LED-36	L1	One tier	1550	10 - 44 ± 0.5	29.7	0.8	5.4	0.5	47.6	121	33.5	85.1	33.6	85.4	77.2	196.1
	L2	Two tiers	1300	10 - 44 ± 0.5	29.7	0.8	10.8	1	21.6	54.9	33.5	85.1	33.6	85.4	77.2	196.1
LED-41	L1	One tier	1850	10 - 44 ± 0.5	37.2	1.1	6.8	0.6	47.6	121	41	104.1	33.6	85.4	77.2	196.1
	L2	Two tiers	1550	10 - 44 ± 0.5	37.2	1.1	13.6	1.3	21.6	54.9	41	104.1	33.6	85.4	77.2	196.1

Each color is independently dimmable by percentage and by tier. Standard four colors include blue, red, white and far-red. Additional colors are available upon request.

SciWhite LED Plant Growth

Our large line of plant growth chambers with SciWhite® lighting are ideal for tall, medium and short plant production requiring anywhere from low- to high-intensity light. The versatility and dependability of these chambers guarantee consistently high production from nearly any kind of plant, ranging from cereals, citrus, grasses and soybean to tomato, cotton, peanut and potato. Researchers have long trusted our standard plant growth chambers for a wide range of applications, including phytopathology research, seed germination, and plant growth and development.

- Light intensity up to 1,700 µmoles/m²/s at 6 inches from LEDs
- Dimmable light output
- Easy to program with the IntellusUltra control system
- Durable, long-lasting construction and sleek design
- Optional SciBrite® lighting

Specifications

Model	Configuration		Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
			µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
Vertical Lighting																
E-36	VL	Five tiers	515	7 - 44 ± 0.5	29.7	0.8	27	2.5	9.5	24.1	38.8	98.6	33.6	85.4	77.2	196.1
	VLHO	Five tiers	1000	10 - 44 ± 0.5	29.7	0.8	27	2.5	9.5	24.1	42.3	107.3	33.6	85.4	77.2	196.1
E-41	VL	Five tiers	515	7 - 44 ± 0.5	37.2	1.1	34	3.2	9.5	24.1	46.3	117.5	33.6	85.4	77.2	196.1
	VLHO	Five tiers	1000	10 - 44 ± 0.5	37.2	1.1	34	3.2	9.5	24.1	49.8	126.5	33.6	85.4	77.2	196.1
Horizontal Lighting																
E-30	L1	One tier	870	7 - 44 ± 0.5	9.7	0.3	3	0.3	27	68.6	31	78.7	23.8	60.3	46.1	117.2
	L1HO	One tier	1230	7 - 44 ± 0.5	9.7	0.3	3	0.3	27	68.6	31	78.7	23.8	60.3	46.1	117.2
E-36	L1	One tier	680	7 - 44 ± 0.5	29.7	0.8	5.4	0.5	48.6	123.4	33.5	85.1	33.6	85.4	77.2	196.1
	L1HO	One tier	1700	7 - 44 ± 0.5	29.7	0.8	5.4	0.5	48.6	123.4	33.5	85.1	33.6	85.4	77.2	196.1
	L2	Two tiers	680	7 - 44 ± 0.5	29.7	0.8	10.8	1	22.6	57.5	33.5	85.1	33.6	85.4	77.2	196.1
E-41	L1	One tier	800	7 - 44 ± 0.5	37.2	1.1	6.8	0.6	48.6	123.4	41	104.1	33.6	85.4	77.2	196.1
	L1HO	One tier	1600	7 - 44 ± 0.5	37.2	1.1	6.8	0.6	48.6	123.4	41	104.1	33.6	85.4	77.2	196.1
	L2	Two tiers	800	7 - 44 ± 0.5	37.2	1.1	13.6	1.3	22.6	57.5	41	104.1	33.6	85.4	77.2	196.1
PGC-6	L2	Two tiers	680	7 - 44 ± 0.5	36	1	10.8	1	27	68.6	51.6	131	33.6	85.4	77.2	196.1
Horizontal Lighting – Large Chambers																
PGC-9		Two Tiers	660	7 - 44 ± 0.5	34.8	1.0	11.1	1	29.8	75.7	75.8	192.6	37.8	96	79.3	201.3
E-75	L1	One tier	1360	7 - 44 ± 0.5	71.6	2	10.8	1	56	142.2	76.9	195.3	37.1	94.3	78.5	199.4
PGC-10	L1	One tier	1450	7 - 44 ± 0.5	64	1.8	10.1	0.9	48	121.9	71	180.3	38.8	98.6	78.8	200
PGC-15	L1	One tier	1520	7 - 44 ± 0.5	94.8	2.7	15.1	1.4	48	121.9	95.3	242.2	38.8	98.6	78.8	200
PGC-105	L1	One tier	1450	7 - 44 ± 0.5	108.3	3.1	16	1.5	56	142.2	105.9	269	38.8	98.6	78.8	200
PGC-20	L1	One tier	1600	7 - 44 ± 0.5	147.9	4.2	18.4	1.7	68.7	174.5	100.5	255.3	40.6	103.2	111.1	282.3
PGC-40	L2	Two tiers	1200	7 - 44 ± 1.0	147.9	4.2	36.7	3.4	32.7	83	100.5	255.3	40.6	103.2	111.1	282.3
Dual Chamber Series*																
E-22	L1	One tier	680	7 - 44 ± 0.5	14.6	0.4	5.4	0.5	20.2	51.3	33.5	85.1	36.6	93	77.9	197.8

** Specifications, excluding exterior dimensions, are per compartment only.*

Cannabis

We know the science behind healthy cannabis growth. Our chambers are designed to provide optimal results for all five cannabis growth stages: tissue culture, propagation, vegetative growth, bloom development and drying.

We've engineered our chambers with flexible designs so you can transition cannabis plants from one stage to the next without having to purchase separate chambers for every stage. From bench-top models to walk-in rooms, our chambers come in sizes that fit your space and budget and can be customized for your individual research needs.

CU-41L5

CU-1014

AR-95L2

Arabidopsis (standard with SciWhite® lighting)

Not only have we met the steady demand for our Arabidopsis chambers, but we've re-engineered them to become a preferred choice of researchers who use Arabidopsis thaliana around the world. These chambers are also ideal for other plants that grow in low light, such as tobacco, Brassica, lettuce and spinach. SciBrite® lighting is optional for these chambers.

Specifications

Model	Configuration		Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
			µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
AR-36	L2	Two tiers	350	7 - 44 ± 0.5	29.7	0.8	10.8	1	21.8	55.2	33.5	85.1	33.6	85.4	77.2	196.1
	L3	Three tiers	350	7 - 44 ± 0.5	29.7	0.8	16.2	1.5	13.5	34.3	33.5	85.1	33.6	85.4	77.2	196.1
AR-41	L2	Two tiers	405	7 - 44 ± 0.5	37.2	1.1	13.6	1.3	22.6	57.5	41	104.1	33.6	85.4	77.2	196.1
	L3	Three tiers	405	7 - 44 ± 0.5	37.2	1.1	20.4	1.9	14.5	36.8	41	104.1	33.6	85.4	77.2	196.1
AR-66	L2	Two tiers	360	7 - 44 ± 0.5	62.4	1.8	20.3	1.9	22.8	57.9	66	167.6	33.6	85.4	77.2	196.1
	L3	Three tiers	360	7 - 44 ± 0.5	62.4	1.8	30.4	2.8	14	35.6	66	167.6	33.6	85.4	77.2	196.1
AR-75	L2	Two tiers	350	7 - 44 ± 0.5	71.6	2	21.5	2	27.9	71	76.9	195.3	37.1	94.3	78.5	199.4
	L3	Three tiers	350	7 - 44 ± 0.5	71.6	2	32.2	3	18.3	46.4	76.9	195.3	37.1	94.3	78.5	199.4
AR-95	L2	Two tiers	575	7 - 44 ± 0.5	95.9	2.7	28.6	2.7	27.6	70	95.9	243.5	37.1	94.3	78.5	199.4
	L3	Three tiers	575	7 - 44 ± 0.5	95.9	2.7	42.9	4	18.0	45.7	95.9	243.5	37.1	94.3	78.5	199.4
AR-100	L3	Three tiers	600	7 - 44 ± 0.5	147.9	4.2	55.1	5.1	22.3	56.6	100.5	255.3	40.6	103.2	111.1	282.3
Dual Chamber Series*																
AR-22	L1	One tier	350	7 - 44 ± 0.5	14.6	0.4	5.4	0.5	20.2	51.4	33.5	85.1	36.6	93	77.9	197.8

** Specifications, excluding exterior dimensions, are per compartment only.*

Algae (standard with SciWhite® lighting)

We designed our algae chambers with the high-intensity light required for algae to flourish. The tiers of shelving are individually lighted with our dimmable SciWhite LEDs and are ideal for flasks or short plants. Because of their versatility, these chambers also can be used for a variety of plants in early stages of development.

Specifications

Model	Configuration		Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
			µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
Vertical Lighting – Four Colors																
AL-30	L2	Two tiers	440	7 - 44 ± 0.5	9.7	0.3	6.1	0.6	10.5	26.7	31	78.7	23.8	60.3	46.1	117.2
AL-36	L4	Four tiers	350	7 - 44 ± 0.5	29.7	0.8	21.6	2	10.6	26.9	33.5	85.1	33.6	85.4	77.2	196.1
AL-41	L4	Four tiers	405	7 - 44 ± 0.5	37.2	1.1	27.2	2.5	10.6	26.9	41	104.1	33.6	85.4	77.2	196.1
Dual Chamber Series*																
AL-22	L2	Two tiers	350	7 - 44 ± 0.5	14.6	0.4	10.8	1	8.8	22.4	33.5	85.1	36.6	93	77.9	197.8

** Specifications, excluding exterior dimensions, are per compartment only.*

AL-36L4

Low Temperature (standard with SciWhite® lighting)

Our low temperature plant growth chambers give you the ability to measure cold hardiness, freeze tolerance, heat stress and exposure using a full range of seasonal temperatures. They are designed to consistently maintain low temperatures under high intensity SciWhite lighting without temperature spikes. (SciBrite® lighting is optional.) A self-contained air-cooled condensing unit ensures precise temperature control. These chambers are frequently used for research involving vernalization, cold water algae and ocean algae.

Specifications

Model	Configuration	Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
		µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
LT-36	VL Two tiers	515	-10 - 44 ± 0.5	29.7	0.8	10.8	1	21.5	54.6	38.8	98.6	33.6	85.4	79.9	202.9
LT-41	VL Two tiers	515	-10 - 44 ± 0.5	37.2	1.1	13.6	1.3	21.5	54.6	46.3	117.5	33.6	85.4	79.9	202.9
LT-105	One tier	1450	-10 - 44 ± 0.5	122.9	3.5	16	1.5	56	142.2	117.3	298	38.8	98.6	78.8	200

LT-41VL

Tissue Culture (standard with SciWhite® lighting)

This line of chambers provides the ideal environment for plant tissue culture on plates, dishes or in flasks. Several important features in these chambers minimize condensation on Petri dishes:

- Air diffuser with slow, vertical airflow insulates shelf level experiments from heat generated by the underlying light fixture
- Dimmable SciWhite lighting with low heat emission
- Precise temperature control across shelving
- Optional SciBrite® lighting

Specifications

Model	Configuration		Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*			
			µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
CU-30	L2	Two tiers	310	10 - 44 ± 0.5	9.7	0.3	6.1	0.6	9.1	23.1	31	78.7	23.8	60.3	46.1	117.2
CU-36	L4	Four tiers	350	10 - 44 ± 0.5	29.7	0.8	21.6	2	9.3	23.5	33.5	85.1	33.6	85.4	77.2	196.1
	L5	Five tiers	350	10 - 44 ± 0.5	29.7	0.8	27	2.5	6.7	17	33.5	85.1	33.6	85.4	77.2	196.1
CU-41	L4	Four tiers	405	10 - 44 ± 0.5	37.2	1.1	27.2	2.5	9.5	24.1	41	104.1	33.6	85.4	77.2	196.1
	L5	Five tiers	405	10 - 44 ± 0.5	37.2	1.1	34	3.2	6.9	17.6	41	104.1	33.6	85.4	77.2	196.1
Dual Chamber Series*																
CU-22	L2	Two tiers	350	10 - 44 ± 0.5	14.6	0.4	10.8	1	7.5	19.1	33.5	85.1	36.6	93	77.9	197.8

** Specifications, excluding exterior dimensions, are per compartment only.*

Custom designed with optional SciBrite LED lighting on fourth tier

I-36D

Dew Formation

Percival Scientific manufactures the only dew chamber available for research. We've engineered it with cutting-edge technology to closely simulate the natural dew formation process required for pathology research studies. These chambers are also useful for inoculating plants and other applications.

- Plants are maintained below dew point of air
- Heat sink below warming water causes vapor to rise and form dew on plants
- Not intended for long-term plant growth

Specifications

Model	Configuration	Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
		µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
I-36D	Four tiers	No Light	10 - 32 ± .75	29.7	0.8	19.5	1.8	10.5	26.7	33.5	85.1	33.6	85.4	77.2	196.1
I-36DL	Four tiers	500	12 - 32 ± 1	29.7	0.8	19.5	1.8	10.5	26.7	33.5	85.1	37.4	95.1	77.2	196.1

I-36DL comes standard with SciWhite lighting.

GR-66L

Seed Germination

Our seed germination chambers precisely control light, temperature and humidity to activate the growth of nearly any kind of seed. Their wide environmental range makes them ideal for cold weather plants like spinach and broccoli as well as hot weather varieties such as peppers and tomatoes. Researchers rely on these chambers as a standard for studying the effects of climate change on the germination and development of native plant species and for many other applications

Specifications

Model	Configuration		Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
			µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
GR-36	L	Fifteen tiers	140	5 - 44 ± 0.5	29.7	0.8	76.5	7.1	2.6	6.7	33.5	85.1	33.6	85.4	77.2	196.1
GR-41	L	Fifteen tiers	120	5 - 44 ± 0.5	37.2	1.1	96.4	9	2.6	6.7	41	104.1	33.6	85.4	77.2	196.1
GR-66	L	Fifteen tiers	120	5 - 44 ± 0.5	62.4	1.8	153	14.2	2.6	6.7	66	167.6	33.6	85.4	77.2	196.1

Incubators

Percival's incubators stand the test of time with durable all-steel construction and versatile features for a variety of applications. They give researchers precise control of lighting, temperature and humidity for consistent performance. As some of our long-time best-selling chambers, they are touted by customers as reliable, easy to maintain and a great return on investment.

- Low-Cost Germination
- Plant Seedling Growth
- Bacterial Culturing
- Low-Light Photosynthesis
- Insect and Amphibian Studies
- BOD Determination
- Algae Acclimation

I-66LLVL

Specifications

Model	Configuration	Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
		µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
No Lighting															
I-30	NL Three tiers	No light	2 - 44 ± 0.5	9.6	0.3	9.1	0.8	8.5	21.6	31	78.7	23.8	60.3	46.2	117.3
I-36	NL Six tiers	No light	2 - 44 ± 0.5	29.7	0.8	32.3	3	8	20.3	33.5	85.1	33.6	85.4	77.2	196.1
I-41	NL Six tiers	No light	2 - 44 ± 0.5	37.2	1.1	40.8	3.8	8	20.3	41	104.1	33.6	85.4	77.2	196.1
I-66	NL Six tiers	No light	2 - 44 ± 0.5	62.4	1.8	64.7	6	8	20.4	66	167.6	33.6	85.4	77.2	196.1
Vertical Lighting															
I-36	VL Five tiers	120	5 - 44 ± 0.5	29.7	0.8	27	2.5	9.5	24.1	33.5	85.1	33.6	85.4	77.2	196.1
I-41	VL Five tiers	120	4 - 44 ± 0.5	37.2	1.1	34	3.2	9.5	24.1	41	104.1	33.6	85.4	77.2	196.1
I-66	VL Five tiers	120	4 - 44 ± 0.5	62.4	1.8	54	5	9.5	24.1	66	167.6	33.6	85.4	77.2	196.1
Horizontal Lighting															
I-30	L Three tiers	125	5 - 44 ± 0.5	9.6	0.3	9.1	0.8	9.2	23.4	31	78.7	23.8	60.3	46.2	117.3
I-36	LL Four tiers	120	4 - 44 ± 0.5	29.7	0.8	21.6	2	11.25	28.6	33.5	85.1	33.6	85.4	77.2	196.1
I-41	LL Four tiers	100	4 - 44 ± 0.5	37.2	1.1	27.2	2.5	11.25	28.6	41	104.1	33.6	85.4	77.2	196.1
I-66	LL Four tiers	120	4 - 44 ± 0.5	62.4	1.8	43.1	4	11.25	28.6	66	167.6	33.6	85.4	77.2	196.1
Vertical and Horizontal Lighting															
I-36	LLVL Four tiers	230	5 - 44 ± 0.5	29.7	0.8	21.6	2	11.25	28.6	33.5	85.1	33.6	85.4	77.2	196.1
I-41	LLVL Four tiers	220	5 - 44 ± 0.5	37.2	1.1	27.2	2.5	11.25	28.6	41	104.1	33.6	85.4	77.2	196.1
I-66	LLVL Four tiers	230	4 - 44 ± 0.5	62.4	1.8	43.1	4	11.25	28.6	66	167.6	33.6	85.4	77.2	196.1
Dual Chamber Series*															
I-22L	Two tiers	120	4 - 44 ± 0.5	14.6	0.4	10.8	1	10	25.4	33.5	85.1	36.6	93	77.9	197.8

** Exterior dimensions are for entire chamber including both compartments*

Drosophila

Scientists have long trusted our traditional Drosophila chambers for rearing fruit flies and maintaining stock for research. We've designed them with a special phenolic coating to protect chamber components from the acidic environment of insect rearing. The IntellusUltra control system allows users to program and fine tune the temperature and humidity settings to perfectly match the environment required for healthy Drosophila.

Thermoelectric for Drosophila

Our TE-36VL Drosophila chamber uses thermoelectric cooling instead of refrigeration for consistent temperature control, reliability and easy maintenance.

DR-41NL

TE-36VL

Specifications

Model	Configuration		Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
			µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
DR-36	NL	Six tiers	No Light	2 - 44 ± 0.5	29.7	0.8	32.3	3	8	20.3	33.5	85.1	33.6	85.4	77.2	196.1
	VL	Five tiers	120	5 - 44 ± 0.5	29.7	0.8	27	2.5	9.5	24.1	33.5	85.1	33.6	85.4	77.2	196.1
DR-41	NL	Six tiers	No Light	2 - 44 ± 0.5	37.2	1.1	40.8	3.8	8	20.3	41	104.1	33.6	85.4	77.2	196.1
	VL	Five tiers	120	5 - 44 ± 0.5	37.2	1.1	34	3.2	9.5	24.1	41	104.1	33.6	85.4	77.2	196.1

All DR models come standard with additive humidity.

Thermoelectric																
TE-36	VL	Five tiers	100	13 - 70 ± 0.5	29.7	0.8	25.3	2.3	11	27.9	33.5	85.1	39.3	99.8	77.2	196.1

Thermoelectric

Our thermoelectric chambers provide a wide range of controlled environments for basic research and development, including quality control, material testing and stability testing of inorganic and organic materials. Peltier technology replaces traditional refrigeration in these units with the benefits of solid-state construction, energy efficiency, low maintenance and increased growth height. Allowing for rigid control of temperature and humidity, they are a preferred choice for applications across a variety of industries.

- Pharmaceutical stability testing to conform to ICH guidelines and FDA regulations
- Stability testing of sensitive materials and high-end OEM products, such as lithium ion batteries, medical devices, underwater cabling and electronic circuits
- Good manufacturing practice (GMP) and good lab practice (GLP) studies
- Long-term food storage testing
- Storage of organic samples such as algae, bacteria, blood serum, E. coli and tissue slides
- Drosophila melanogaster and other insect rearing or housing
- Mammalian, avian, reptilian and amphibian breeding experiments involving sensitive incubation periods

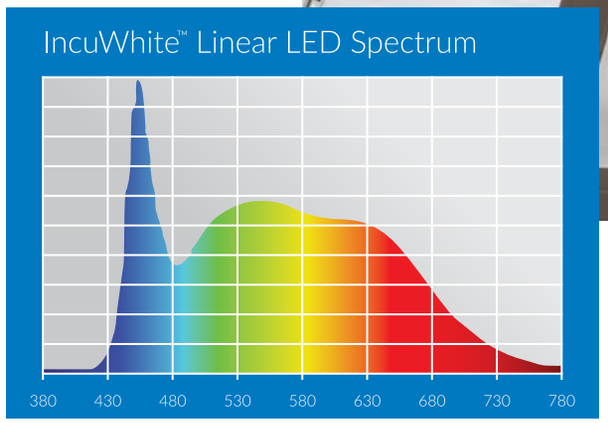
Specifications

Model	Configuration	Light Intensity *6" from lamps*	Temperature Range *with all lights on*	Interior Space *volume*		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions *width*		*depth*		*height*	
		µmoles/m²/s	°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm
TE-1100	Five tiers	No Light	12 - 70 ± 0.5	37.5	1.1	31	2.9	12	30.5	41	104.1	38	96.5	79.3	201.3

IncuWhite™
by Percival Scientific

Our engineers designed these white LEDs to match natural light inside our incubators. This creates an ideal environment for insects and other organisms. Compared to fluorescent lighting, the benefits of IncuWhite make our best-selling, reliable incubators an even more valuable investment:

- Increased shelf space and growing height due to streamlined design
- Significantly longer light lifetime
- Brighter light intensity
- More closely matches natural light
- Flicker-free and dimmable in one-percent increments
- More resistant to dust and water (protected from low-pressure jets)
- Lower energy use



I-66LLVL

SciBrite®
by Percival Scientific

Percival Scientific's proprietary SciBrite LEDs are backed by years of research and development. This high-intensity, dimmable lighting system offers more color combinations than most chamber manufacturers and comes in four-color or seven-color configurations.

Precise Color Control

Not only do SciBrite LEDs allow control over the composition and intensity of each color, specific light wavelengths can be selected and controlled, making SciBrite lighting ideal for a wide range of scientific applications.

Better Performance and Efficiency

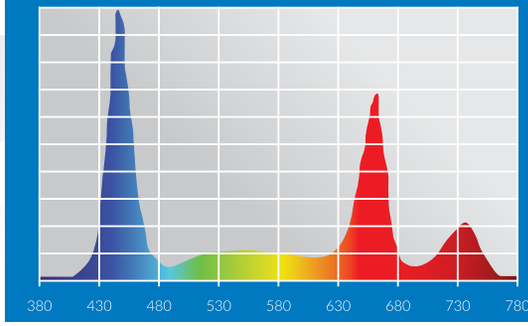
Among their many benefits, these groundbreaking LEDs consume less energy and provide more uniform distribution throughout the chamber while introducing considerably less heat than fluorescent lamps.

- More control over color composition and intensity
- Less demand on the temperature control system
- Improved humidity control and performance
- Improved temperature uniformity
- Improved light distribution
- Smaller day/night calibration offsets
- Reduced energy use
- Lower heat rejection to ambient
- Improved system responsiveness
- Increased lifespan of vital chamber components
- Increased growth height

SciBrite Spectrums

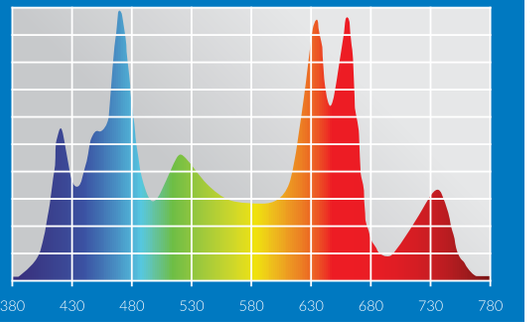
Percival chambers with SciBrite® lighting provide the correct spectral quality at the correct irradiance with exceptional environmental control. Create your own spectrum by adjusting the individual color spectrum ranges shown below. A multiple-channel dimming system allows advanced control of light output for each LED color from 1 to 100 percent in one-percent increments.

4-Color Spectrum



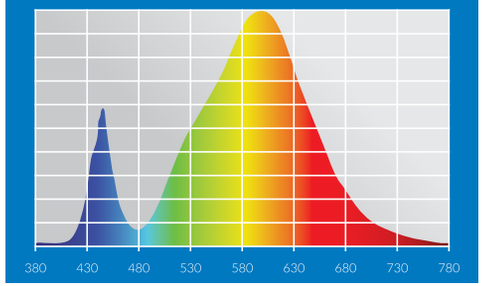
Cool White (6500K), Deep Red (660nm), Blue (450nm), Far Red (730nm)

8-Color Spectrum

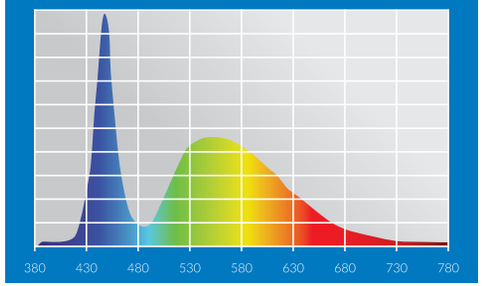


Violet (UVA 420), Warm White (4000K), Cool White (6500K), Blue (450), Red (630), Far Red (735), Deep Red (660), Green (520)

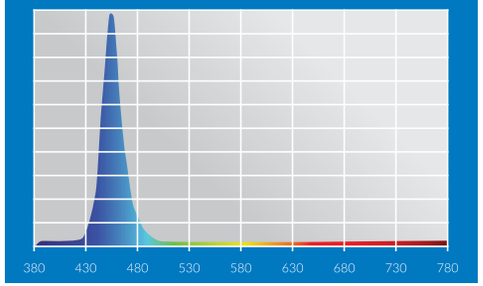
Warm White Spectrum



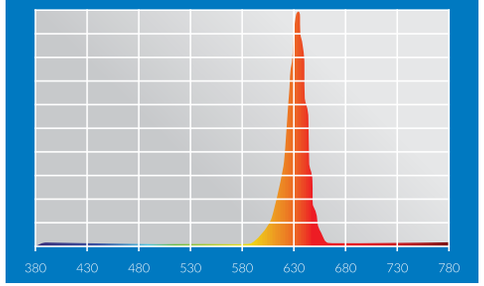
Cool White Spectrum



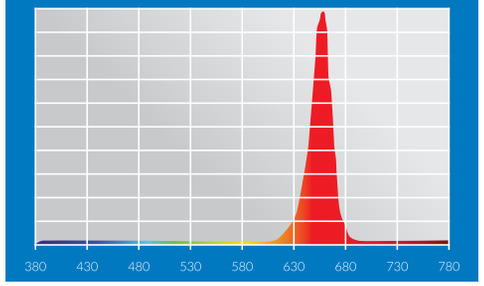
Blue Spectrum



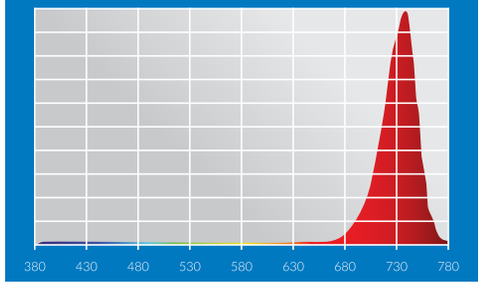
Red Spectrum



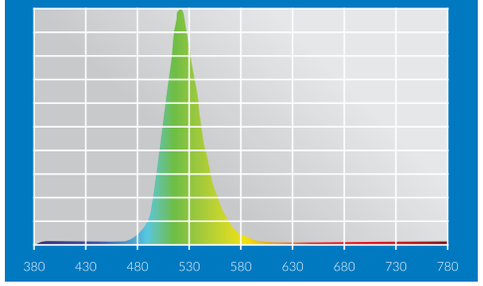
Deep Red Spectrum



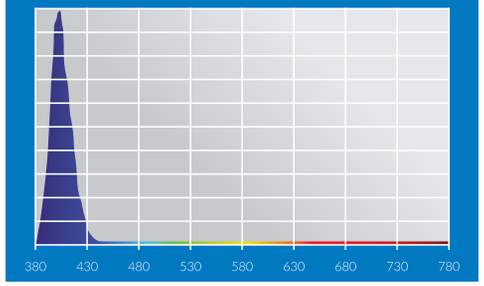
Far Red Spectrum



Green Spectrum



Violet Spectrum



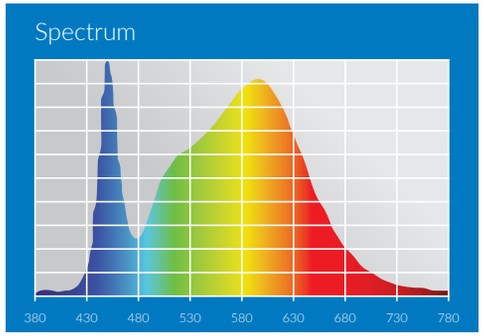
SciWhite®
by Percival Scientific

SciWhite is Percival's highest performing and most efficient white LED platform to date. This system offers standard output or optional high output with light intensity up to 2400 µmoles/m²/s depending on the chamber model. It distributes light evenly throughout the chamber with a well-balanced spectrum for general plant growth.

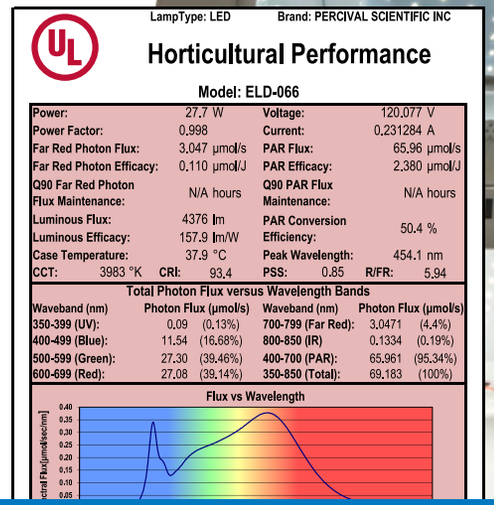
More Intensity Control

SciWhite LEDs provide advanced control over light intensity with the ability to dim output from 10 to 100 percent in one-percent increments. They make a long-lasting, cost-effective solution for a large range of scientific applications and offer many of the same benefits as our SciBrite® LEDs when compared to fluorescent lamps.

- More control over light intensity
- Less demand on the temperature control system
- Improved humidity control and performance
- Improved temperature uniformity
- Improved light distribution
- Smaller day/night calibration offsets
- Reduced energy use
- Lower heat rejection to ambient
- Improved system responsiveness
- Increased lifespan of vital chamber components
- Increased growth height



Percival's proprietary SciWhite lighting system is UL-tested.



LampType: LED Brand: PERCIVAL SCIENTIFIC INC

Horticultural Performance

Model: ELD-066

Power:	27.7 W	Voltage:	120.077 V
Power Factor:	0.998	Current:	0.231284 A
Far Red Photon Flux:	3.047 µmol/s	PAR Flux:	65.96 µmol/s
Far Red Photon Efficacy:	0.110 µmol/J	PAR Efficacy:	2.380 µmol/J
Q90 Far Red Photon Flux Maintenance:	N/A hours	Q90 PAR Flux Maintenance:	N/A hours
Luminous Flux:	4376 lm	PAR Conversion Efficiency:	50.4 %
Luminous Efficacy:	157.9 lm/W		
Case Temperature:	37.9 °C	Peak Wavelength:	454.1 nm
CCT: 3983 °K	CRI: 93.4	PSS: 0.85	R/FR: 5.94

Total Photon Flux versus Wavelength Bands

Waveband (nm)	Photon Flux (µmol/s)		Waveband (nm)	Photon Flux (µmol/s)	
350-399 (UV):	0.09	(0.13%)	700-799 (Far Red):	3.0471	(4.4%)
400-499 (Blue):	11.54	(16.68%)	800-850 (IR)	0.1334	(0.19%)
500-599 (Green):	27.30	(39.46%)	400-700 (PAR):	65.961	(95.34%)
600-699 (Red):	27.08	(39.14%)	350-850 (Total):	69.183	(100%)

Flux vs Wavelength

Customized Lighting Options

Percival Scientific leads the industry in specialized lighting for scientific chambers, offering more lighting options than any other chamber manufacturer. Our full range of specialty lighting features uniquely engineered lamp banks that provide maximum irradiance without sacrificing temperature control.

All our lighting solutions can be customized for any size unit, from bench-tops to walk-in rooms. No chamber company works more closely with you than we do to match the best lighting options with your research needs.

- SciBrite® LEDs
- SciWhite® LEDs
- IncuWhite™ LEDs
- White LED flat panels
- HID
- UV
- Germicidal
- Aquatic
- Fluorescent
- Incandescent

IntellusUltra Touchscreen Interface

Most Percival Scientific chambers* come standard with a high-resolution touchscreen interface for programming the IntellusUltra (C8) or IntellusUltraConnect (C9) control system. It displays advanced settings and data for fine-tuning your research, including graphs and charts. Multi-touch sensitivity makes programming your chambers easier than ever.

- 10.1" IPS high-resolution display with 10-point multi-touch sensitivity
- Tabular and graphical presentation of chamber programs and parameters
- Highly visible process values and alarm notifications
- Enhanced user feedback menus

** Incubators and tissue culture chambers excluded*

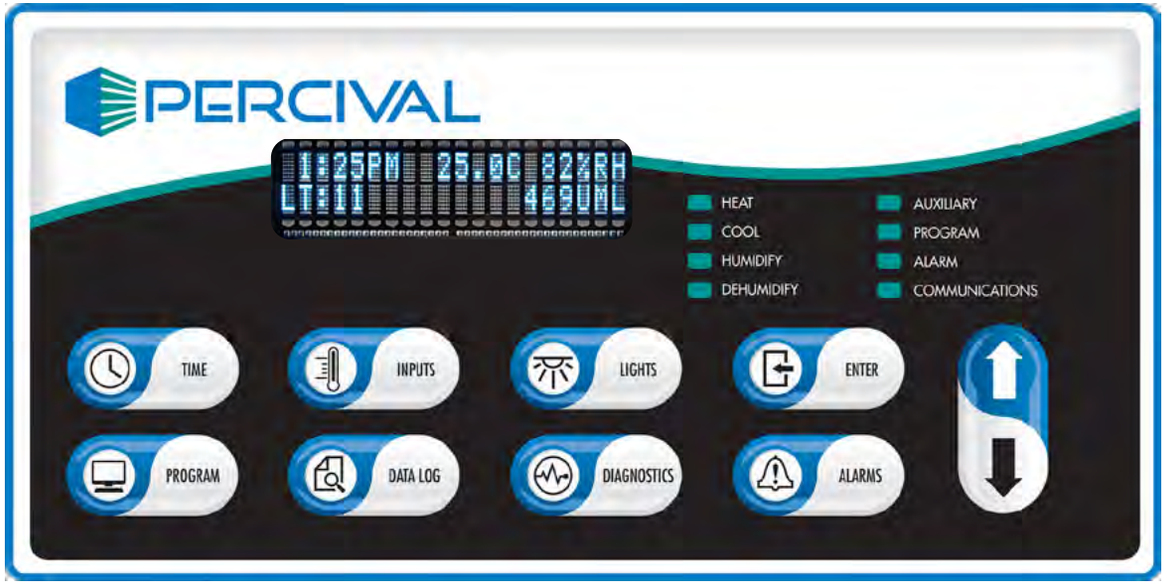
IntellusUltra Control Systems

Percival Scientific listens carefully to what our customers want from a chamber control system. In response, we've refined our IntellusUltra (C8) and our IntellusUltraConnect (C9), two of the highest standard controllers available in the life science market. Adaptive to nearly any programming style you prefer, these intuitive platforms provide built-in protection and a large range of options for more control over experiments.

- Robust and reliable industrial-grade integrated hardware design
- Highly flexible design allows for customized configurations and expansion
- Precise, simultaneous control of up to seven environmental parameters
- Industry-leading experiment protection and system diagnostics

Added Features of IntellusUltraConnect (C9)

- Remote monitoring
- Customizable system notifications
- Cloud-based data logging



IntellusUltra

WeatherEze

Revolutionary Control System Software for Climate Based Research

Percival's exclusive WeatherEze control system software gives you the amazing ability to replicate current or past global weather patterns.

Real-Time Control

If you want to match current conditions, real-time METAR weather data, the same information used by meteorologists, can be downloaded from nearly any global location* and used to program the relative humidity, lighting and temperature for your chamber. As the METAR data changes, the chamber conditions are updated to duplicate the global location with unsurpassed realism.

** The United States and Europe produce ample METAR data; however, some data gaps exist in isolated areas of the world.*

Climate Change Scenarios

By linking to quality data, WeatherEze allows researchers to run climate change model scenarios with just a few clicks. Twenty-one different models and seven emission scenarios are currently supported through public data (World Bank: Open Data Catalog).

Historical Simulations

This program simulates the average weather conditions from a selected location beginning and ending with the historical dates you choose. Want to match the natural light, humidity and temperature of January 2000 in Brazil? WeatherEze can do that!

Customized Weather Data

Users can edit weather data generated by the software or upload their own data sets.

Contact a Percival representative or visit our website at percival-scientific.com to learn more about what WeatherEze can do to revolutionize your research.

WeatherEze®

Optional Product Features

All options are not available for every chamber. Contact sales@percival-scientific.com with questions.

CODE	OPTION DESCRIPTION	CODE	OPTION DESCRIPTION
C8T	IntellusUltra and Android-based Touchscreen	Q10	Additional Access Ports (1", 2", 3" or 4" increments)
C9	IntellusUltraConnect (includes PercivalConnect® software)	Q11	Air Filter Assembly (insect screen)
C9T	IntellusUltraConnect and Android-based Touchscreen	Q12	Full Size Glass Door
C12	WeatherEze Software (Compatible with Windows Only; Requires C9)	Q18	Stacking Hardware for 30 Series
EXW	Extended Warranty (annually) - Additional 1, 2 or 3 Years	Q19	External Drip Pan
H1	Pan-type Humidifier and Electronic RH Sensor (0-1VDC)	Q22	Closed Loop Dimmable Lighting Control with PAR Light Sensor
H3	Pan-type Humidifier, Dehumidifier, and Advanced RH Sensor (0-5VDC)	Q23	Open Loop Dimmable Lighting Control (dimmable by percentage of total light output)
H6	Pan-type Humidifier, Dehumidifier, and Electronic RH Sensor (0-1VDC)	Q23+	Open Loop Dimmable Lighting Control (each shelf is independently dimmable by percentage)
H8	Spray Nozzle Humidifier, Dehumidifier, and Advanced RH Sensor (0-5VDC)	Q24	LED Working Light (energized when door opens)
H9	Spray Nozzle Humidifier and Advanced RH Sensor (0-5VDC)	Q29	Left-Hand Door Swing
H11	Ultrasonic Humidifier and Advanced RH Sensor (0-5 VDC)	Q30	Additive Carbon Dioxide Control with 2000 ppm Sensor
H12	Ultrasonic Humidifier, Dehumidifier, and Advanced RH Sensor (0-5VDC)	Q31	Additive Carbon Dioxide Control with 5000 ppm Sensor
H14	Ultrasonic Humidifier and Electronic RH Sensor (0-1VDC)	Q32	Additive Carbon Dioxide Control with 10% Sensor
H15	Ultrasonic Humidifier, Dehumidifier, and Electronic RH Sensor (0-1VDC)	Q33	Carbon Dioxide Removal System (Requires Q30, Q31 or Q32 to Operate)
R1	Temperature Recorder	Q41	Heavy Duty Door Handle with Latch
R2	Temperature and Humidity Recorder	Q42	1 NEMA 5-15R 1A Convenience Receptacle, Programmable via Intellus Control System
S1	Locking Door, Power Switch and Dry Contacts (one door)	WAC1	Stainless Steel Interior
S2	Locking Door, Power Switch and Dry Contacts (two doors)	WAC2	Water-cooled Condensing Unit
S3	Remote phone auto-dialer	WAC4	Large Observation Window (12" X 42") on Door
S4	Dry Contact for Remote Alarm	WAC5	Cover for WAC4
Q1	Door with Two Fresh Air Ports	WAC6	Self-contained, Air-cooled Condensing Unit
Q2	Observation Window with Cover (12" x 12") on Door	WAC7	Remote, Outdoor, Air-cooled Condensing Unit with All-Weather Housing
Q4	Door Lock	WTM1	Extended Temperature Range to -10°C (for non-lighted units only)
Q5	Additional Epoxy Wire Shelf (each)	WTM2	Extended Temperature Range to -10°C lights off/0°C lights on
Q6	Stainless Steel Wire Shelf (each)	WTM3	Extended Temperature Range to +60°C (No refrigeration above 44°C)
Q7	Caster Assembly with Levelers for 30 Series	WTM4	Extended Temperature Range to +60°C with Continuous Running Condenser
Q9	Phenolic Coated Coil(s) (required for Drosophila research)		

Contact Percival Scientific for comprehensive warranty program information.

PERCIVAL

Helping You Create Better Science

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