

# Eco-T Industrial Chillers



**industrialcooling**

SYSTEMS TECHNOLOGY

ICS House, Stephenson Road  
Calmore Industrial Estate  
Totton, SO40 3RY, United Kingdom  
t +44 (0)23 8052 7300  
e info@icstemp.com

[www.icstemp.com](http://www.icstemp.com)



6642

# Eco-T

## Features and Benefits

### Leading the way in Industrial Cooling

ICS Industrial Cooling provides heating and cooling solutions for a vast range of industries. Continually evolving and improving, ICS maintain their reputation within the temperature control market.

The Eco-T is an innovation within the cooling market. Using non ferrous parts throughout and R410A refrigerant, the unit ensures long-term, trouble free operation whilst saving on energy consumption.

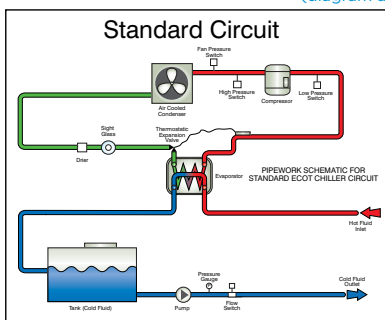


- **Cost effective**
- **Energy efficient**
- **'A grade' components**
- **Flexible options**
- **UK built**

### Open Circuit (diagram a)

The open circuit ensures precise and consistent water temperatures even when sudden load changes occur. A smooth operation is maintained with no effect from the surrounding environment.

(diagram a)



### Scroll Compressors

Scroll Compressors are used as standard on all the units within the Eco-T range. They offer lower energy consumption with fewer moving parts, whilst also more reliable for continuous running.

### Heat Exchangers

Non ferrous, stainless steel plate heat exchangers helps to maximise efficiency.

### Pumps

Within the chillers, a 3bar pump is mounted as standard offering a complete packaged solution.

### Advanced Microprocessor

The microprocessor presents digital water outlet temperature readings and icon messages; continuously monitoring the unit's performance. An alarm history, volt free contact and protective cover come as standard; ensuring fail-safe operation at all times.

### Condenser Sections

Built-in on either side with grill protection, are air-cooled vertical condensers consisting of grooved copper tubes and aluminum fins which further optimise efficiency.

### Multiple Components

Issues with efficiency in difficult weather conditions won't be an issue with 2 compressors from the 275 onwards and 2 circuits and 4 compressors from the 410 onwards, both providing compressor rotation and unloading functions.

### The ECO-T range offers a variety of benefits:

#### Quality

With 30 years experience, ICS guarantee 100% quality, using the latest components and refrigerants achieving industry leading energy efficiency levels. All units undergo thorough individual testing which is supported and controlled by ISO9001.

#### Flexibility

The Eco-T can cater for any industry need, with standard options available, and the added benefit of customising to suit customers requirements.

#### Control

Precise water temperatures are continually maintained with a generously sized buffer tank and the latest electronic controls.

#### Efficiency

ICS use the latest R410A refrigerant which offers a significant improvement when compared to conventional refrigerants such as R407C and R134a

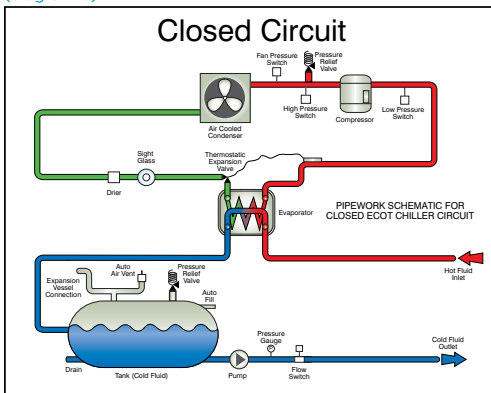
# Eco-T

## Optional Extras

### Optional Extras

- Closed circuit (diagram b)
- Electronic fan speed control
- Ductable fans
- Coated condenser coils
- Water cooled condenser
- Manual by pass
- Special voltages
- Low ambient temperature operation
- Supervisor controls
- Close control version
- Remote control options
- Different refrigerants R134a & R404A
- Stainless steel panels
- Digital scroll compressor
- Digital scroll compressor with free cooling

(diagram b)



## Digital Scroll Compressor and Free Cooling

Productivity and energy efficiency can be vastly improved with these two available options:

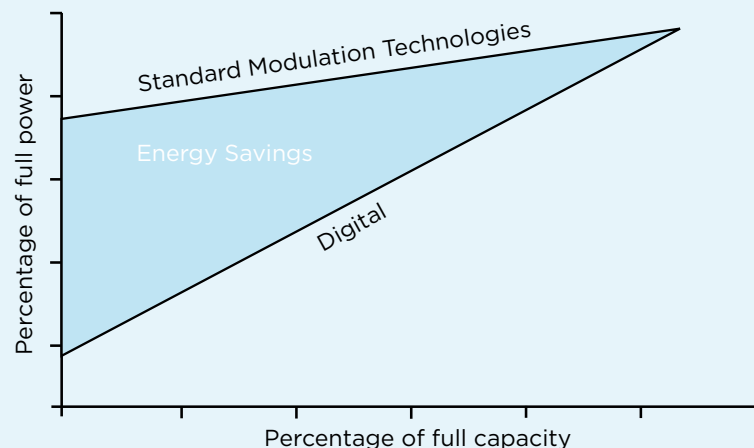
- *Digital Compressors*
- *Digital Compressors with free cooling*

### Digital Compressors

With the ability to work continuously, and modulate from 10% to 100%, the digital scroll compressor increases the functionality of the Eco-T. This results in increased part load efficiencies, which is reflected in the high energy efficiency levels (EER). In addition to this, the compressor offers precise temperature control; ensuring long-term life and thereby saving energy costs and boosting efficiency.

### Digital Compressors with Free Cooling Coil

Certain Eco-T models can be offered as a fully packaged chiller with digital compressor and integral free cooling. Free cooling operates with as little as 1°C differential between ambient and return fluid temperatures. This has been widely used with large chillers and multiple circuits. Small units with one compressor means that the free cooling can only be activated when the coil can achieve full load.



### Key Technical Data

- Air cooled with integrated free cooling
- EER's up to 2.6 and ESEER's up to 3.2
- Advanced controls and remote access from any BMS
- Innovative digital scroll compressor technology
- Direct axial fan with optional EC fan
- EER (Energy Efficiency Ratio)
- ESEER (European Seasonal Energy Efficiency Ratio - this has been based on the part load efficiency and is a better indicator of real energy drawn and running costs)
- Designed and optimized for R410A refrigerant



# Eco-T Specifications

			020	025	035	050	060	090	120	135	155	205	275	290	355	410	480	565	650
Eco T	Cooling Capacity (1)	kW	6.98	9.77	12.85	17.75	21	30.8	42.5	44.7	53.7	66.5	95.4	102.1	123	142.2	168.6	193.8	222
	Absorbed Power (1)	kW	1.48	1.62	2.33	3.69	4.3	5.98	7.43	9.35	10.8	14.8	17	19	24.75	26.9	36.5	41.65	46
	Cooling Capacity (2)	kW	4.88	6.42	9.15	11.55	15.2	22.3	30.6	32.2	39.3	48.5	68.6	93	87.9	101.4	123.8	140.1	160.4
	Absorbed Power (2)	kW	1.67	2.12	2.58	3.4	4.59	6.36	8.08	9.86	11.3	15.15	18.04	20.32	26.35	28.4	37.5	43.55	47.8
	Cooling Capacity (3)	kW	5.55	7.3	10.45	14.3	17.15	25.3	34.4	35.6	44.1	53.9	78.6	84.3	101	115.6	139.6	157.3	181
	Absorbed Power (3)	kW	2.12	2.66	3.26	5.03	5.79	8	10.2	12.4	14.1	19.55	22.2	24.9	32.35	35.7	46.6	54.4	60
	Cooling Capacity (4)	kW	4.23	5.66	8.02	11.05	13.35	19.95	26.8	28.3	35.1	42.4	61.2	65.7	78.5	91	108.6	124.7	143.4
Absorbed Power (4)	kW	2.03	2.53	3.11	4.87	5.53	7.49	9.79	11.6	13	18.05	21.1	23.55	30.55	33	44.2	50.5	55.6	
	Power Supply	V/Ph/Hz	400±10%/3/50																
	Standard Configuration																		
	Standard Compressors / Circuits		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/1	2/1	2/1	4/2	4/2	4/2	4/2
	Axial Fan																		
	No of Fans		1	1	1	1	1	1	1	2	1	2	2	2	2	2	2	2	3
	Nominal Power (each)	kW	0.141	0.141	0.64	1.005	0.64	1.005	2.6	2.6	1.8	2.6	2.6	2.6	1.9	2.6	2.6	1.9	1.9
	Total Air flow	m <sup>3</sup> /h	2400	2900	5200	6500	6400	9000	17000	16500	17600	19000	36600	36600	38600	37600	37600	41000	52600
	Noise Level (5)	dB(A)	69	69	76	80	81	81	82	82	84	85	88	88	91	91	91	94	94
	Standard Pump																		
	Flow at 5K Split (nom/max)	m <sup>3</sup> /hr	1.2/4.8	1.7/4.8	2.2/6.0	3.1/6.0	3.6/6.0	5.3/9.6	7.3/9.6	7.7/9.6	9.2/18	11.4/18	16.4/27	17.6/27	21.2/48	24.5/48	29.0/48	33.3/85	38.2/85
	Available Pressure (nom/max)	bar	2.9/2.0	2.8/2.0	2.8/2.2	2.6/2.2	2.7/2.2	2.5/1.7	2.2/1.7	2.1/1.7	2.7/2.3	2.6/2.3	2.7/1.8	2.6/1.8	3.4/1.9	3.3/1.9	3.0/1.9	3.1/1.5	3.0/1.5
	Nominal Power	kW	0.55	0.55	0.75	0.75	0.75	0.9	0.9	0.9	1.85	1.85	2.2	2.2	4	4	4	5.5	5.5
	HP Pump Option																		
	Flow at 5K Split	m <sup>3</sup> /hr	1.2/4.8	1.7/4.8	2.2/6.0	3.1/6.0	3.6/12.5	5.3/12.5	7.3/12.5	7.7/12.5	9.2/12.5	11.4/27	16.4/24	17.6/24	21.2/50	24.5/50	29.0/50	33.3/87	38.2/87
	Available Pressure	bar	5.2/3.5	5.1/3.5	5.0/3.5	4.6/3.5	5.2/3.6	5.0/3.6	4.7/3.6	5.6/4.6	5.4/4.6	4.8/2.9	4.2/2.9	4.1/2.9	5.4/3.2	5.2/3.2	4.9/3.2	5.7/2.6	5.5/2.6
	Nominal Power	kW	1.1	1.1	1.1	1.1	2.2	2.2	2.2	3	3	4	4	4	7.5	7.5	7.5	11	11
	Width	mm	506	506	606	606	606	806	806	806	806	806	1006	1006	1006	1206	1206	1206	1206
	Length	mm	1100	1100	1200	1200	1200	1550	1550	1925	1925	1925	2752	2752	2752	3252	3252	3252	3252
	Height	mm	1300	1300	1450	1450	1450	1700	1700	2050	2050	2050	2185	2185	2185	2385	2385	2385	2385
	Tank Volume		40	40	75	75	75	125	125	175	175	175	500	500	500	700	700	700	700
	Connections		3/4"	3/4"	1"	1"	1"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	3"	3"

(1) 20/15 in a 25°C Ambient (2) 12/7 in a 32°C Ambient (3) 20/15 in a 40°C Ambient (4) 12/7 in a 40°C Ambient (5) Sound Power

## Contact Us Today

### Group Companies

UK

Head Office South  
ICS House  
Stephenson Road  
Calmore Industrial Estate  
Totton, Southampton SO40 3RY  
FREEPHONE 0800 169 3861  
T +44 (0) 23 8052 7300  
F +44 (0) 23 8042 8366

London  
Kingsbury House  
468 Church Lane, Kingsbury  
London NW9 8UA  
T +44 (0) 208 200 2404

Midlands  
Birmingham Science Park Aston  
Faraday Wharf,  
Holt Street, Birmingham B7 4BB  
T +44 (0) 121 326 7771  
F +44 (0) 121 327 4114

North  
Floor 3, Caspian House  
East Parade  
Little Germany  
Bradford BD1 5EP  
T +44 (0) 1274 740877  
F +44 (0) 1274 391708

Scotland  
Unit 5, 53/58 South Avenue  
Blantyre Industrial Estate  
Blantyre G72 0XB  
T +44 (0) 1698 723308  
F +44 (0) 1698 723309

Ireland  
T +353 (0) 86 38 77990  
F +353 (0) 46 90 59883



0800 169 3861