

# Electric Condensate Recovery Units



- Designed to handle condensate at boiling point
- No cavitation problems
- Cascade control on Duplex Unit
- Fast return of condensate
- Powerful lifting capacity

*First for Steam Solutions*

EXPERTISE | SOLUTIONS | SUSTAINABILITY

**spirax**  
**sarco**

# Spirax Sarco, the hottest name in cost savings

With fuel and running costs at today's levels, the recovery of condensate has become a vitally cost-effective measure in any plant or process steam system. Hospitals, steelworks, factories, breweries and industrial complexes of all types can make impressive savings with Spirax Sarco condensate recovery units.

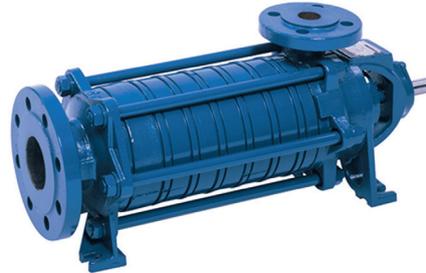
The hotter the condensate, the greater the savings inherent in efficient recovery. But the higher the condensate temperature, the greater the risk of cavitation leading to poor performance and even reduced pump life.

Here, the years of specialist experience incorporated in the Spirax Sarco CRU really pay off. The pumps used are designed to function efficiently at high temperatures (100°C), normally beyond the capabilities of ordinary pump units.

## High Temperature Efficiency

### THE PUMP

The special pump used in the Spirax Sarco CRU is unique in its ability to CONTINUOUSLY handle condensate that may be literally boiling, with no cavitation problems and without the need for high suction heads. To approach this ideal, most other condensate pump sets employ a larger conventional pump running at low speeds with a consequently larger motor (and increased running cost). But the Spirax Sarco CRU uses a special pump made by the international SIHI company, specially designed for this duty.



### THE RECEIVER

The small receiver of the Spirax Sarco pump can be insulated and the level controls operate from full to completely empty. Most other pump sets require a larger (non insulated) receiver which only partially empties, to allow the condensate to cool sufficiently to ease cavitation problems on the pump. Because the specialised pump can handle boiling water, the receiver need not be deliberately oversized.



## The Spirax Sarco CRU

Is not prone to cavitation and can handle condensate quantities up to 66,000 litres per hour continuously at 100°C (or even higher on special applications), with pump delivery heads up to 40 metres. For higher capacities and heads, consult our office. The Spirax Sarco CRU comes complete with delivery, check and isolation valves and is supplied fully assembled and tested, ready for installation. It is designed and fabricated in Australia.

# Materials and construction information

## STANDARD UNIT

### ■ PUMPS

Single or dual SIHI low NPSH self-priming side channel pumps capable of continuously pumping water at 100°C. Pump Body Rated to 4000kPa 180°C.

- Casing..... Cast Iron
- Shaft.....Stainless Steel
- Impellers.....Bronze

### ■ SEALS

Mechanical up to 120°C Carbon / Stainless Steel.

### ■ RECEIVER

3mm steel with high temperature silver coating. Adequately sized vent, overflow, drain and inlet connections.

### ■ PIPEWORK

Steel, painted.

### ■ VALVES

Isolating valve on pump suction, non-return and isolating valves on pump delivery.

### ■ BASEPLATE AND FRAMES

Steel, painted.

### ■ MOTORS

1450 RPM motors, 415v 50Hz 3 Phase, TEFC, IP55 enclosures. Class F insulation, weatherproof.

### ■ CONTROL PANEL

Totally enclosed control panel containing 1 or 2 direct on-line starters with thermal overloads. Running and failure warning lamps. IP55 enclosure.

### ■ LEVEL CONTROL

Spirax Saco LP10 Probe type conductivity sensors protected from splashing by an immersion tube and Spirax Sarco level controls. On single pump CRU's a high level probe switches the pump on and a low level probe switches the pump off. The same arrangement is used on Duplex CRU's but in addition there is an extra high level sensor which will switch on the second (standby) pump. It will stay on, with the duty pump if it is running, until switched off by the low-level sensor (i.e. cascade control). Either pump may be manually selected as the duty or standby pump.

## OPTIONS

### 1 GAUGE GLASS (LEVEL INDICATOR)

- 1.1 Plain glass tube.
- 1.2 Plain glass tube with 3-pane protector.
- 1.3 Fully protected glass tube in which the colour changes to red to indicate level.

### 2 INSULATED RECEIVER

- 2.1 For indoor installation.
- 2.2 For outdoor installation.
- 2.3 To your specific requirements.

### 3 GALVANISED RECEIVER

N.B. Some authorities DO NOT recommend galvanised equipment for use with very hot water, such as condensate.

### 4 SPECIAL APPLICATIONS

Please discuss with us.

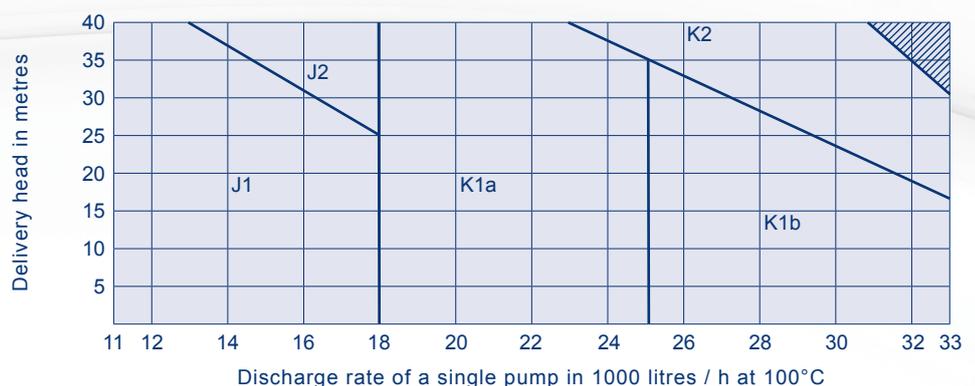
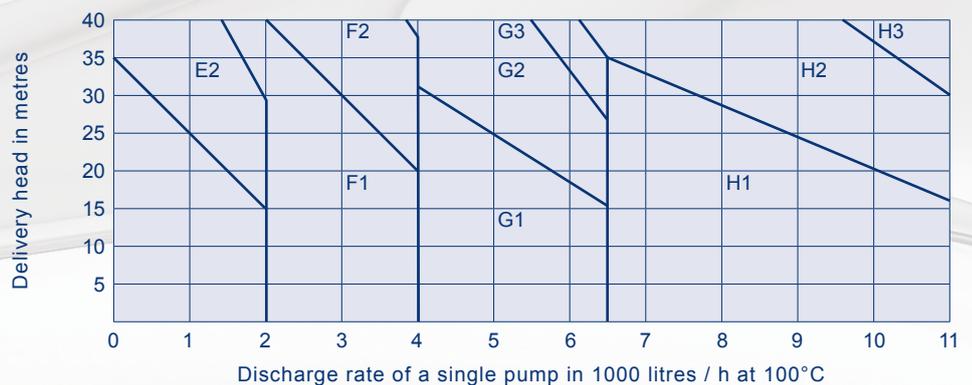
## The Spirax Sarco CRU Sizing Chart

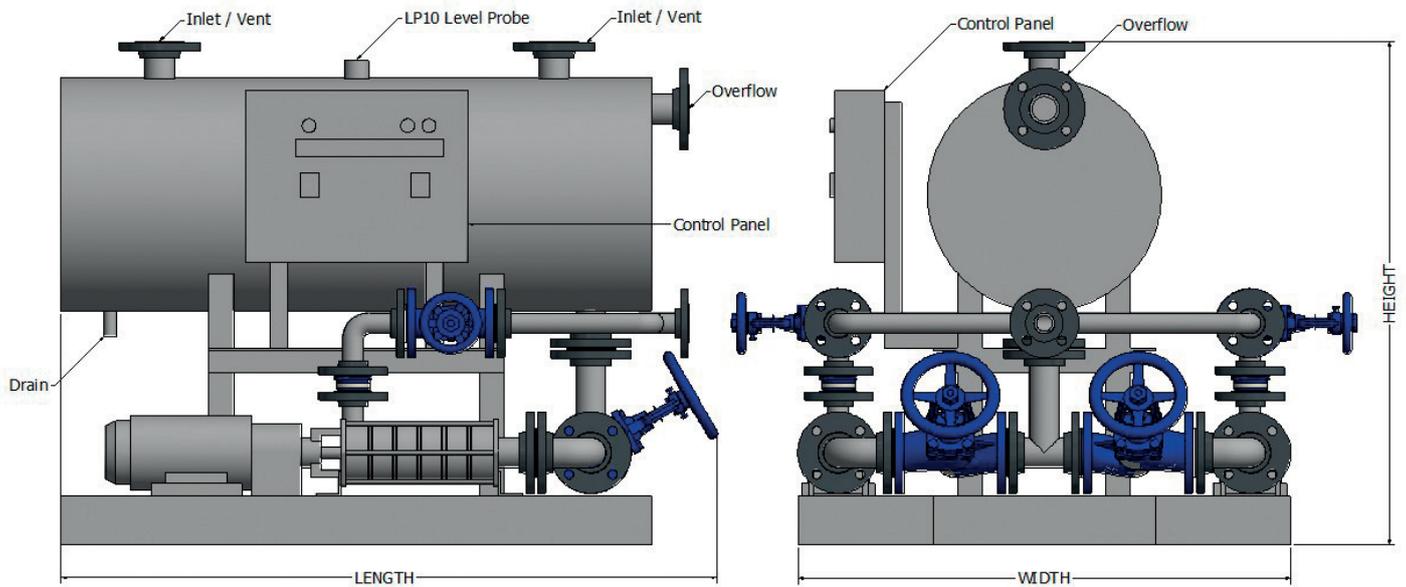
■ The chart shows the discharge of a single pump operating alone. With Duplex Units, when both pumps are running, the discharge rate will be slightly less than twice that of a single pump. For precise details, contact Spirax Sarco.

■ At 100°C. 1 Litre water weighs 0.9581 kg.

■ For operating conditions beyond those shown, please consult Spirax Sarco.

■ N.B. On Spirax Sarco CRU's, max rate of condensate inflow can be equal to the discharge rate.





## Overall dimensions and weights (approximately)

Pump Size	Motor Size (1450 rpm) kW	RECEIVER Nominal volume (Litres)	PUMP		RECEIVER CONNECTIONS VENT, INLET & OVERFLOW (mm)	LENGTH mm	WIDTH mm	HEIGHT mm	WEIGHT* kg
			Delivery mm	Suction mm					
E1	0.5	115	20	40	50	1200	1000	950	220
E2	0.75	115	20	40	50				230
F1	1.1	115	32	65	50	1200	1000	950	350
F2	2.2	115	32	65	50				385
G1	1.5	225	32	65	65	1360	1000	1200	390
G2	2.2	225	32	65	65				420
G3	4.0	225	32	65	65				475
H1	2.2	340	40	80	80	1700	1100	1260	575
H2	4.0	340	40	80	80				635
H3	5.5	340	40	80	80				720
J1	5.5	455	50	100	100	1950	1200	1670	960
J2	11.0	455	50	100	100				1075
K1a	7.5	680	65	100	100	2050	1250	1800	1250
K1b	7.5	910	65	100	125	2200	1300	1960	1375
K2	15.0	910	65	100	125	2200	1300	1960	1500

If any dimensions are critical, please confirm them when ordering. \*For single pump CRU's, weight will be approx 10% less.

## Example of Model No., How to specify, How to order.

eg.: Model No. D – E1 – A  
(1) (2) (3)

- (1) D = Dual-pump CRU (a Duplex Unit).  
S = Single-pump CRU
- (2) Pump size - see sizing chart
- (3) A = a standard Unit  
PE = a non-standard Unit. This includes a Unit supplied with any of the listed options and / or other non-standard requirements, which should ALL be fully described at the time of quoting. A PE number will be assigned (eg, PE142) which will then be the suffix of the Model No.

N.B. If a STANDARD UNIT is required (with NO options), only parts (1) & (2) need be quoted, eg, "D – E1"

In the interests of development and improvement of the product, we reserve the right to change the specification.

SB-ECRU-02-A

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First for Steam Solutions

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