



## New generation optimizing centre Ecotronic™

**Chiller Oy** has launched a new optimizing centre Ecotronic™ designed for control of condensers and liquid chillers. Ecotronic™ optimizing centre is an integral part of energy management in the whole water-cooling system. The equipment is always installed indoors as close as possible to the condenser or liquid chiller.

### The quality of Ecotronic™ optimizing centre

Harmonic phenomena and RFI emissions present a considerable concern in many instalments of hevac technology. Ecotronic™ optimizing centres already meet the requirements of harmonics standard IEC/ENG61000-3-12, which is a new EU standard. The standard will take effect in February, 2008. The standard sets the limits for harmonic distortions within the network that are considerably stricter than the IEC6000-3-12 standard.

In the application we have chosen inductance changes according to the load, which may reduce the harmonic distortion ca 25 % more than in case of equipment with fixed inductance. The EN61800-3 standard is used for EMC protection, which is used in demanding domestic as well as lower-level industrial environments. Ecotronic™ produced by Chiller Oy meets the requirements of both areas, and moreover, the equipment may be installed e.g. in office rooms. The above-mentioned standards characterise best the quality of our products.

In addition, the equipment fulfils a number of other standards related to safety required by the CE marking.

Optimizing Centre may be supplied in two different models depending on the plant.

- **Model AS 1** is intended for control of the fans of a liquid chiller/condenser
- **Model AS 2** is intended for control of two liquid chillers/condensers fans

Models AS 1 and AS 2 include stepless control of all the fans.

### The advantages of Ecotronic™ Optimizing Centre

- Simple system
- The small physical size of the equipment
- Control automation inside the building protected from outside interferences
- Changes in outdoor temperature and humidity have no influence on optimizing centre, because it is installed indoors
- Chiller Oy takes responsibility for the functioning of the whole equipment process
- The equipment produces a low environmental noise level due to the condensers and liquid chillers
- An energy-saving solution, since the fans work by using their optimal rotations
- Possibility to communicate with the cold-water station
- Interactive guidance in error situations
- Possibility for a field bus (LON works, Profibus)

## Technical data • Chiller Ecotronic™ - optimizing centre

### Product marking • Ecotronic™ -XX-YY-ZZ

**XX** AS 1 is for control of one condenser or the fans of a liquid chiller  
AS 2 is for control of the fans of two condensers or a liquid chiller

**YY** Number of the controllable fans (also other quantity of the fans possible than presented in Table)

**ZZ** Total nominal currency value of the controllable fans (see Table below)

If the length of the cabling from the optimizing centre to the condenser or to the liquid chiller is not adequate, the size of the equipment has to be enlarged or AS2 or 2 x AS2 has to be chosen.

### Ecotronic™ - AS-1-1 ...12-2...72 stepless control centre

Product	Number of fans	Max cons. cap. of the cond. fans [kW]	Max currency of the cond. fans [A]	Allowed max dist. to the equipment [m]	Casing height [mm]	Casing width [mm]	Casing depth [mm]
AS-1-1-2	1	0,75	4,3	10	700	500	250
AS-1-1-5	1	2,2	5,4	100	700	500	250
AS-1-1-6	1	3	6,9	100	700	500	250
AS-1-1-8	1	4	8,8	100	700	500	250
AS-1-2-3	2	1,5	8,6	100	700	500	250
AS-1-2-5	2	2,2	5,4	50	700	500	250
AS-1-2-6	2	3	6,9	50	700	500	250
AS-1-2-8	2	4	8,8	50	700	500	250
AS-1-2-12	2	5,5	11,9	50	700	500	250
AS-1-2-15	2	7,5	15,4	100	800	600	250
AS-1-3-5	3	2,2	5,4	33	700	500	250
AS-1-3-6	3	3	6,9	33	700	500	250
AS-1-3-8	3	4	8,8	33	700	500	250
AS-1-3-12	3	5,5	11,9	33	700	500	250
AS-1-3-15	3	7,5	15,4	67	800	600	250
AS-1-3-23	3	11	23	67	800	600	250
AS-1-4-5	4	2,2	5,4	25	700	500	250
AS-1-4-6	4	3	6,9	25	700	500	250
AS-1-4-8	4	4	8,8	25	700	500	250
AS-1-4-12	4	5,5	11,9	25	700	500	250
AS-1-4-15	4	7,5	15,4	50	800	600	250
AS-1-4-23	4	11	23	50	800	600	250
AS-1-4-31	4	15	31	50	1 000	600	250
AS-1-5-5	5	2,2	5,4	20	700	500	250
AS-1-5-6	5	3	6,9	20	700	500	250
AS-1-5-8	5	4	8,8	20	700	500	250
AS-1-5-12	5	5,5	11,9	20	700	500	250
AS-1-5-15	5	7,5	15,4	40	800	600	250
AS-1-5-23	5	11	23	40	800	600	250
AS-1-5-31	5	15	31	40	1 000	600	250
AS-1-5-38	5	18,5	38	40	1 000	600	250
AS-1-6-5	6	2,2	5,4	17	700	500	250
AS-1-6-6	6	3	6,9	17	700	500	250
AS-1-6-8	6	4	8,8	17	700	500	250
AS-1-6-12	6	5,5	11,9	17	700	500	250
AS-1-6-15	6	7,5	15,4	33	800	600	250
AS-1-6-23	6	11	23	33	800	600	250
AS-1-6-31	6	15	31	33	1 000	600	250
AS-1-6-38	6	18,5	38	33	1 000	600	250
AS-1-6-44	6	22	44	33	1 200	600	300
AS-1-8-5	8	2,2	5,4	13	700	500	250
AS-1-8-6	8	3	6,9	13	700	500	250
AS-1-8-8	8	4	8,8	13	700	500	250
AS-1-8-12	8	5,5	11,9	13	700	500	250
AS-1-8-15	8	7,5	15,4	25	800	600	250
AS-1-8-23	8	11	23	25	800	600	250
AS-1-8-31	8	15	31	25	1 000	600	250
AS-1-8-38	8	18,5	38	25	1 000	600	250
AS-1-8-44	8	22	44	25	1 200	600	300
AS-1-8-59	8	30	59	25	1 200	600	300
AS-1-10-6	10	3	6,9	10	700	500	250
AS-1-10-8	10	4	8,8	10	700	500	250
AS-1-10-12	10	5,5	11,9	10	700	500	250
AS-1-10-15	10	7,5	15,4	20	800	600	250
AS-1-10-23	10	11	23	20	800	600	250
AS-1-10-31	10	15	31	20	1 000	600	250
AS-1-10-38	10	18,5	38	20	1 000	600	250
AS-1-10-44	10	22	44	20	1 200	600	300
AS-1-10-59	10	30	59	20	1 200	600	300
AS-1-10-72	10	37	72	20	1 200	600	300
AS-1-12-8	12	4	8,8	8	700	500	250
AS-1-12-12	12	5,5	11,9	8	700	500	250
AS-1-12-15	12	7,5	15,4	17	800	600	250
AS-1-12-23	12	11	23	17	800	600	250
AS-1-12-31	12	15	31	17	1 000	600	250
AS-1-12-38	12	18,5	38	17	1 000	600	250
AS-1-12-44	12	22	44	17	1 200	600	300
AS-1-12-59	12	30	59	17	1 200	600	300
AS-1-12-72	12	37	72	17	1 200	600	300

## Ecotronic™ –AS-2-1...8-2...72 stepless control centre

Product	Number of fans	Max cons. cap. of the cond. fans [kW]	Max currency of the cond. fans [A]	Allowed max dist. to the equipment [m]	Casing height [mm]	Casing width [mm]	Casing depth [mm]
AS-2-1-2	2x1	0,75	4,3	10	800	600	250
AS-2-1-5	2x1	2,2	5,4	100	800	600	250
AS-2-1-6	2x1	3	6,9	100	800	600	250
AS-2-1-8	2x1	4	8,8	100	800	600	250
AS-2-2-5	2x2	2,2	5,4	50	800	600	250
AS-2-2-6	2x2	3	6,9	50	800	600	250
AS-2-2-8	2x2	4	8,8	50	800	600	250
AS-2-2-12	2x2	5,5	11,9	50	800	600	250
AS-2-2-15	2x2	7,5	15,4	100	800	600	250
AS-2-2-23	2x2	11	23	100	800	600	250
AS-2-2-31	2x2	15	31	100	1 000	1 000	300
AS-2-3-5	2x3	2,2	5,4	33	800	600	300
AS-2-3-6	2x3	3	6,9	33	800	600	300
AS-2-3-8	2x3	4	8,8	33	800	600	300
AS-2-3-12	2x3	5,5	11,9	33	800	600	300
AS-2-3-15	2x3	7,5	15,4	67	800	800	300
AS-2-3-23	2x3	11	23	67	800	800	300
AS-2-3-31	2x3	15	31	67	1 000	1 000	300
AS-2-3-38	2x3	18,5	38	67	1 000	1 000	300
AS-2-3-44	2x3	22	44	67	1 200	1 000	300
AS-2-4-5	2x4	2,2	5,4	25	800	600	300
AS-2-4-6	2x4	3	6,9	25	800	600	300
AS-2-4-8	2x4	4	8,8	25	800	600	300
AS-2-4-12	2x4	5,5	11,9	25	800	600	300
AS-2-4-15	2x4	7,5	15,4	50	800	800	300
AS-2-4-23	2x4	11	23	50	800	800	300
AS-2-4-31	2x4	15	31	50	1 000	1 000	300
AS-2-4-38	2x4	18,5	38	50	1 000	1 000	300
AS-2-4-44	2x4	22	44	50	1 200	1 000	300
AS-2-4-59	2x4	30	59	50	1 200	1 000	300
AS-2-5-8	2x5	4	8,8	20	800	600	300
AS-2-5-12	2x5	5,5	11,9	20	800	600	300
AS-2-5-15	2x5	7,5	15,4	40	800	600	300
AS-2-5-23	2x5	11	23	40	800	800	300
AS-2-5-31	2x5	15	31	40	1 000	1 000	300
AS-2-5-38	2x5	18,5	38	40	1 000	1 000	300
AS-2-5-44	2x5	22	44	40	1 200	1 000	300
AS-2-5-59	2x5	30	59	40	1 200	1 000	300
AS-2-5-72	2x5	37	72	40	1 200	1 000	300
AS-2-6-8	2x6	4	8,8	17	800	600	300
AS-2-6-12	2x6	5,5	11,9	17	800	600	300
AS-2-6-15	2x6	7,5	15,4	33	800	800	300
AS-2-6-23	2x6	11	23	33	800	800	300
AS-2-6-31	2x6	15	31	33	1 000	1 000	300
AS-2-6-38	2x6	18,5	38	33	1 000	1 000	300
AS-2-6-44	2x6	22	44	33	1 200	1 000	300
AS-2-6-59	2x6	30	59	33	1 200	1 000	300
AS-2-6-72	2x6	37	72	33	1 200	1 000	300
AS-2-8-12	2x8	5,5	11,9	13	800	600	300
AS-2-8-15	2x8	7,5	15,4	25	800	800	300
AS-2-8-23	2x8	11	23	25	800	800	300
AS-2-8-31	2x8	15	31	25	1 000	1 000	300
AS-2-8-38	2x8	18,5	38	25	1 000	1 000	300
AS-2-8-44	2x8	22	44	25	1 200	1 000	300
AS-2-8-59	2x8	30	59	25	1 200	1 000	300
AS-2-8-72	2x8	37	72	25	1 200	1 000	300

### The products include the following items:

- Frequency transformer/Frequency transformers
- Casing IP54
- Main switch
- For every fan motor there is overload protection
- Frequency transformer by-pass

Ask your retail seller about other numerous additional equipments and client-focused solutions!

### NBI

Control from the cold-water station, feeding from the cold-water station or directly from the group centre. Frequency transformers have been determined on the basis of the max. current (-30 °C).

Detailed choice data for different conditions are available from Chiller Oy sales engineers or from an authorized sales organisation. Chiller Oy reserves the right to changes without prior notice.



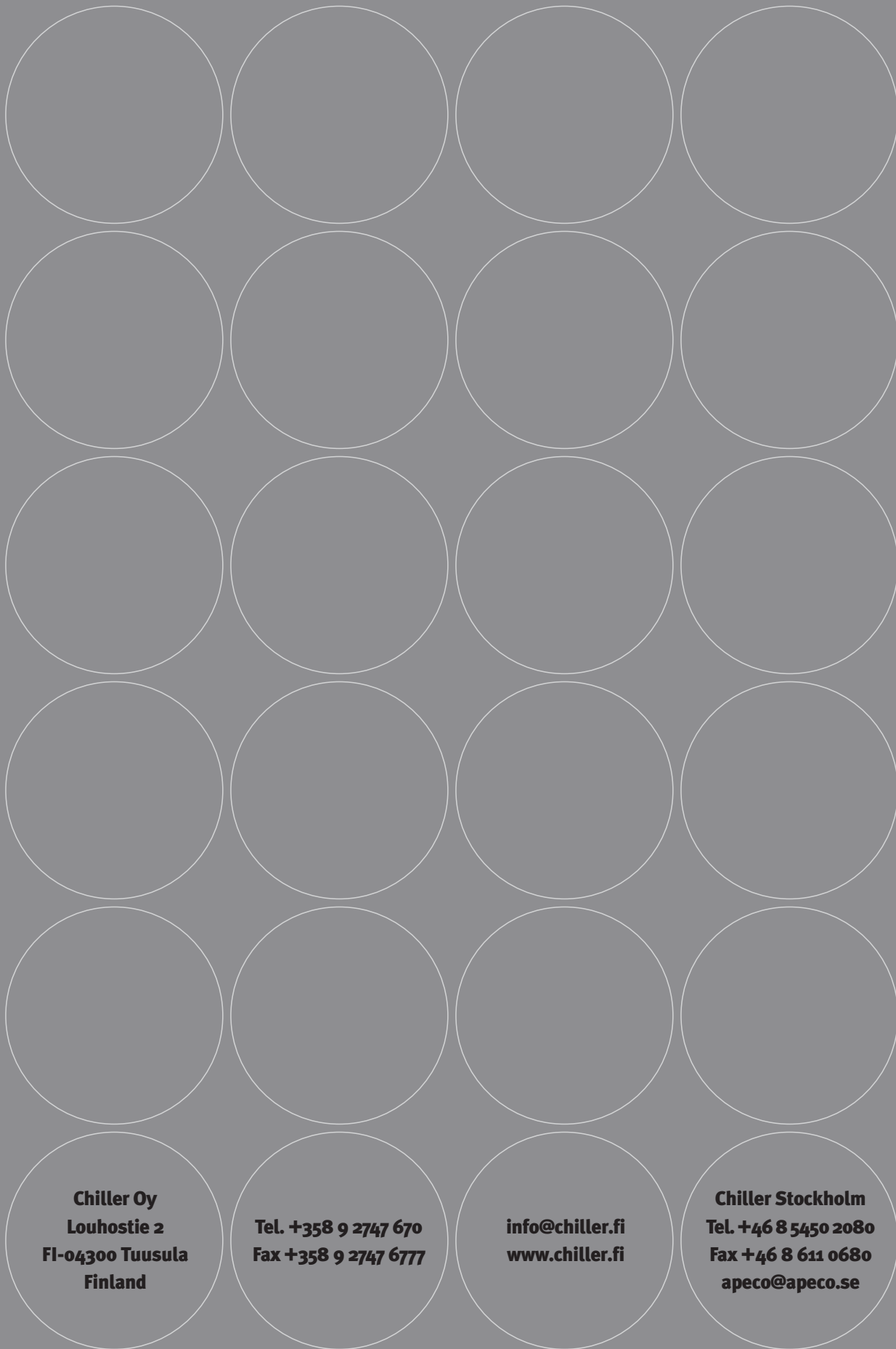
The logo for ECOTRONIC™ is displayed in a stylized, italicized font. The letters are white with a red outline, and the trademark symbol (TM) is in red. The background of the entire page is a dynamic, abstract image of blue and white light trails swirling in a circular pattern, resembling a vortex or a high-speed fluid flow.

... Quick and Environmentally Friendly Cooling

*Ecotronic™ Optimizing Centre  
is an integral part of energy  
management in the whole  
water-cooling system.*

### **Reliable and Innovative Air Conditioning Solutions**

- Product development based on climate zones know-how
- Easy installation and maintenance
- Easy to integrate with different architectural solutions
- Stylish design



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AIR-CONDITIONING

