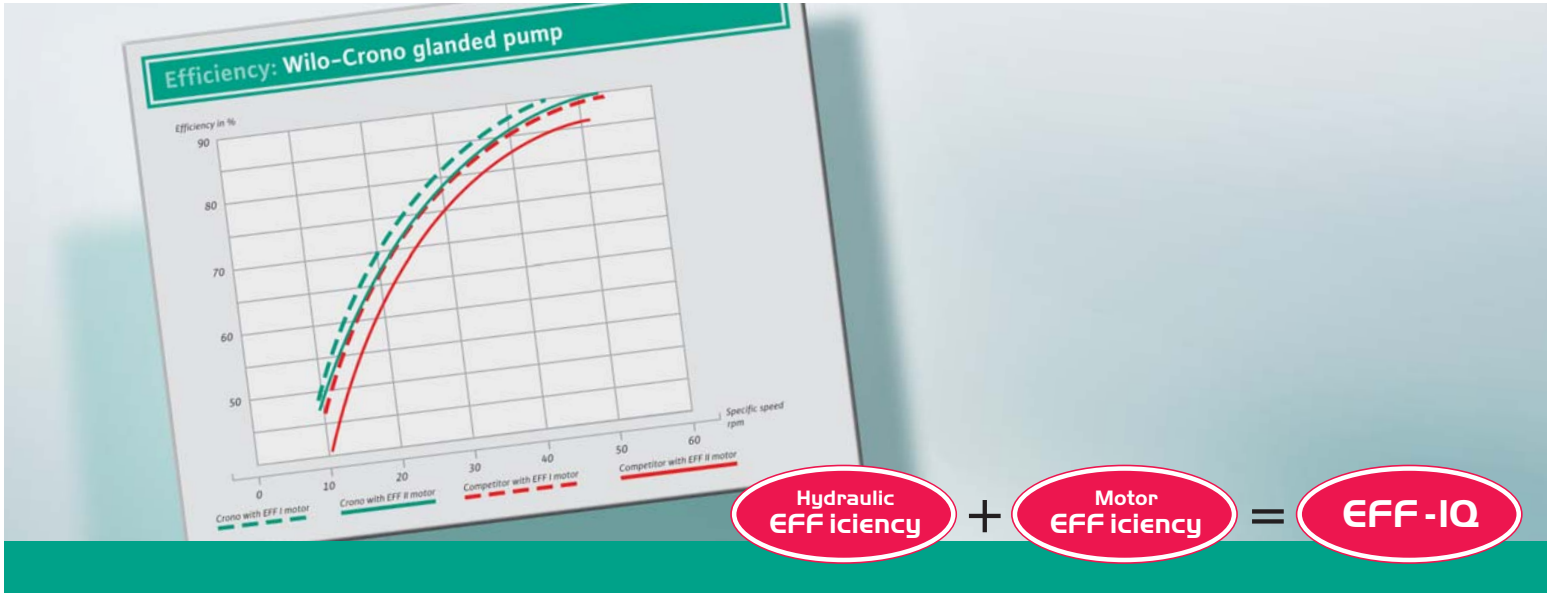
Glanded pump
Wilo-Crono.

EFF-IQ

Product brochure.

WILO
Pumpen Intelligenz.



Consideration of the efficiency of the motor alone only gives you half the truth. The combination of motor and hydraulics is the only way to gain a transparent and reliable yardstick: the overall efficiency (EFF-IQ). And this is where the outstanding hydraulic design of the Wilo-Crono comes into its own. It is down to this that the pumps in this series, even when specified with EFF II motors, achieve the same or higher overall efficiency than pumps of other manufacturers with EFF I motors. When fitted with EFF I motors, Wilo-Crono pumps reach the highest overall efficiency among all of the competition. An investment that more than pays off over the long term, especially in the upper performance range.

Wilo-Crono glanded pump.

Perfect hydrodynamics for optimal efficiency levels.

Hydraulic EFF iciency

Harmony of forces.
The perfect development of forces in the hydraulics of Wilo-Crono glanded pumps is above all down to extremely precise matching of rotor and pump housing. Thanks to the latest hydrodynamic findings and the use of ultra-modern methods, our development engineers have succeeded in keeping flow energy losses extremely low, thus achieving optimal efficiency. The particularly smooth interior surfaces of the housing and rotor are fundamental to this. In addition, the geometry of the pump housing has been designed so that separation and unwanted deflection of the flow are largely ruled out. This also means that there is a noticeable reduction in axial and radial forces, providing smoother running and better operating reliability.

Flow made to measure.
Owing to perfect design and precise manufacture, the gap dimensions of the hydraulic components are kept extremely small without risking rotor locking, despite the axial and radial forces that are present. Wilo has all the production engineering capabilities required for this exceptional level of precision. Small gap dimensions have an extremely positive effect on flow behaviour: internal recirculation between suction and delivery sides within the hydraulics is reduced to a minimum. That also helps achieve high pump efficiency. A positive effect of perfect design is that the loads on wearing parts – bearings and mechanical seals – are reduced and their service life is significantly longer.

The perfect geometry of the rotor in terms of hydrodynamic aspects is developed using the latest computer technology.

Precision work: the extremely accurate arrangement and orientation of the blades in the rotor enable optimal development of force.

Smallest possible gap dimensions at the junctions between housing and rotor guarantee optimal pressure and flow conditions.

Wilo-Crono glanded pump.

Ultra-modern motor technology for optimal efficiency levels.

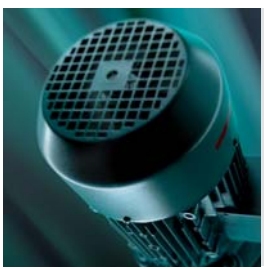
Motor EFF iciency

Master of all classes.
Through outstanding hydraulics alone, the glanded pumps of the Wilo-Crono series win over with exceptional efficiency. If needed, this can even be further increased through selection of an appropriate motor. Wilo offers powerful motors in very high efficiency classes for this purpose. To illustrate, the Wilo-Crono is fitted as standard with an energy-saving EFF II motor, but can by supplied with an even more efficient EFF I motor if required. But whichever motor you decide on, Crono motors are standard units that, even after many years of service, can be replaced without any difficulties.

EFF I EFF II

Save energy intelligently.
And things get even more efficient if you decide on an electronically controlled Wilo-Crono. For, in contrast to the standard models, these are specified with an integrated frequency converter. This latest Wilo technology enables extraordinarily precise control of pump speed – and thus energy savings of up to 50 %*. The pump intelligently matches its speed to the demand and consumes only as much energy as is actually needed. A further advantage of electronic pumps: they offer optimal capabilities for communication in building automation systems.

* Compared to standard pumps.



Ensuring an energy-saving drive with the Wilo-Crono series: motors of efficiency classes EFF I and EFF II.

The Wilo-Crono is also available with electronic speed control, if required: made by Wilo in Dortmund.

The red-button technology in the Wilo-Crono electronically controlled models enables optimal usability.

Wilo-Crono glanded pump.
Economy for the long term.

Life cycle costs: greater transparency in planning.
You can only begin to see how cost-effective a pump system really is once you take account of all the arising costs. Besides the obvious investment costs for pumps and accessories, these include the operating costs that accumulate over the long life of pump. When planning any installation or replacing existing pumps, it is important to perform an accurate costing of these life cycle costs. In detail, the following cost factors should be included:

- Acquisition
- Installation
- Maintenance and repair
- Energy
- Shutdown
- Environment
- Disposal

Wilo-Crono: an investment in cost saving.
Ultimately, all aspects of the life cycle costs are important. However, the energy costs constitute the greatest share by far. These are incurred day after day and inexorably mount up over the years: especially in the case of continuously running units in large applications. In contrast, the pure acquisition costs amount to just 6%. This was the result of a calculation of life cycle costs based on typical standards carried out by the Europump Hydraulic Institute. The investment in energy-saving Pumpen Intelligenz pumps was very quickly amortised.

The life cycle costs of the pumps of the series Wilo-Crono can be calculated and compared quickly, comfortably and reliably with the online version of Wilo-Select. Our planning consultants are also available to help you.

Wilo won a large contract from the Romanian electricity provider, Radet, to supply the whole of Greater Bucharest with heat and warm water via long-distance heating. This amounts to 600,000 flats for 1.2 million people as well as 5,425 public buildings. The pumps in the Wilo-Crono series are used to renovate 541 of the 651 distance heating transfer stations with the most efficient pump technology. Based on the entire intelligent concept they decided on Wilo.

WILO

Pumpen Intelligenz.

WILO AG
Nortkirchenstraße 100
44263 Dortmund
Germany
T +49 231 4102-0
F +49 231 4102-7363
www.wilo.com

Wilo – International (Subsidiaries)

Austria
WILO Handelsges. m.b.H.
office@wilo.at

Azerbaijan
WILO Caspian LLC
info@wilo.az

Belarus
WILO Bel OOO
wilobel@wilo.by

Belgium
WILO SA/NV
info@wilo.be

Bulgaria
WILO Bulgaria Ltd.
info@wilo.bg

Canada
WILO Canada Inc.
bill.lowe@wilo-na.com

China
WILO SALMSON (Beijing)
Pumps System Ltd.
wilobj@wilo.com.cn

Croatia
WILO Hrvatska d.o.o.
wilo-hrvatska@wilo.hr

Czech Republic
WILO Praha s.r.o.
info@wilo.cz

Denmark
WILO Danmark A/S
wilo@wilo.dk

Estonia
WILO Eesti OÜ
12618 Tallinn
info@wilo.ee

Finland
WILO Finland OY
wilo@wilo.fi

France
WILO S.A.S.
info@wilo.fr

Great Britain
WILO (U.K.) Ltd.
sales@wilo.co.uk

Greece
WILO Hellas AG
wilo.info@wilo.gr

Hungary
WILO Magyarország Kft
wilo@wilo.hu

Ireland
WILO Engineering Ltd.
sales@wilo.ie

Italy
WILO Italia s.r.l.
wilo.italia@wilo.it

Kazakhstan
WILO Central Asia
in.pak@wilo.kz

Korea
WILO Pumps Ltd.
wilo@wilo.co.kr

Latvia
WILO Baltic SIA
mail@wilo.lv

Lebanon
WILO SALMSON
wsl@cyberia.net.lb

Lithuania
WILO Lietuva UAB
mail@wilo.lt

Montenegro
WILO Beograd d.o.o.
office@wilo.co.yu

The Netherlands
WILO Nederland b.v.
info@wilo.nl

Norway
WILO Norge AS
wilo@wilo.no

Poland
WILO Polska Sp. z.o.o.
wilo@wilo.pl

Portugal
Bombas Wilo-Salmson Portugal Lda.
bombas@wilo-salmson.pt

Romania
WILO Romania s.r.l.
wilo@wilo.ro

Russia
WILO Rus ooo
wilo@orc.ru

Serbia
WILO Beograd d.o.o.
office@wilo.co.yu

Slovakia
WILO Slovakia s.r.o.
wilo@wilo.sk

Slovenia
WILO Adriatic d.o.o.
wilo.adriatic@wilo.si

Spain
WILO Ibérica S.A.
wilo.iberica@wilo.es

Sweden
WILO Sverige AB
wilo@wilo.se

Switzerland
EMB Pumpen AG
info@emb-pumpen.ch

Turkey
WILO Pompa Sistemleri
San. ve Tic. A.Ş.
wilo@wilo.com.tr

Ukraina
WILO Ukraina t.o.w.
wilo@wilo.ua

USA
WILO-EMU LLC
terry.rouse@wilo-emu.com

USA
WILO USA LLC
bill.lowe@wilo-na.com

August 2006

2713/5T/0610/GB/KE