



FAHLKE CONTROL SYSTEMS

DEHAZ 2000

Three Phase Current Electro-Hydraulic Actuator Technology



The new standard *produced by:*

FAHLKE CONTROL SYSTEMS GMBH

Rudolf-Diesel-Straße 3 • D-27356 Rotenburg • Germany
Tel.: + 49 (0)4261-9143-0 • Fax: + 49 (0)4261-3085
e-mail: csg@fahlke.de

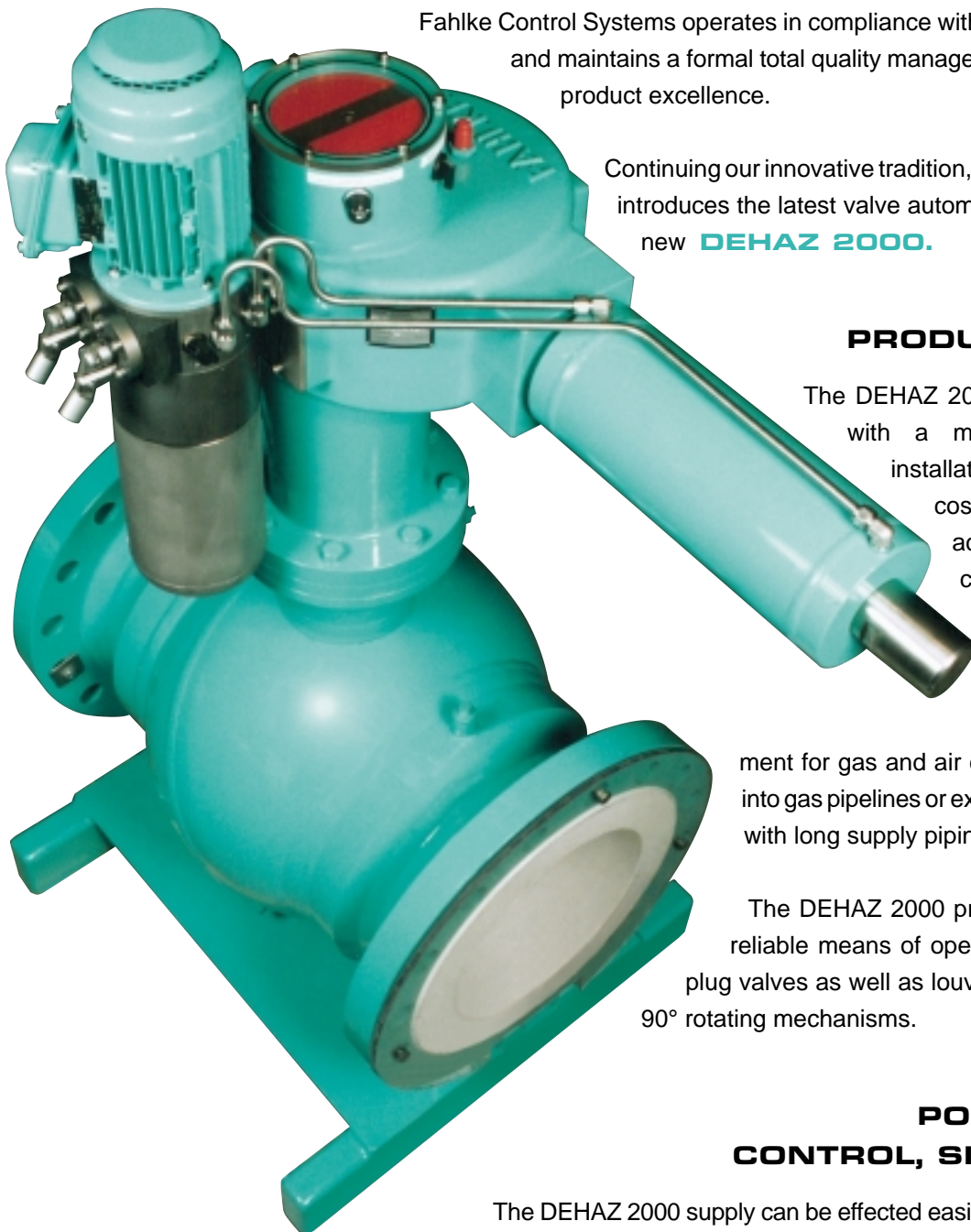


COMPANY PROFILE

For more than 25 years Fahlke Control Systems has combined its ingenuity with high quality standards, continuously pioneering valve actuator technology to obtain highest standards. Fahlke actuators are designed by this experience in actuator production and machined for the customer, who expects the best: efficiency, highest quality and long-term trouble free operation.

Fahlke Control Systems operates in compliance with the ISO 9001 standard and maintains a formal total quality management program to assure product excellence.

Continuing our innovative tradition, Fahlke Control Systems introduces the latest valve automation advancement: the new **DEHAZ 2000**.



PRODUCT CONCEPT

The DEHAZ 2000 is designed to work with a minimum of operation, installation and maintenance costs. We built the new actuator technology which can be fast mounted on top of every valve and used everywhere.

There is no requirement for gas and air connections, no tapping into gas pipelines or expensive air compressors with long supply piping.

The DEHAZ 2000 provides a unique, highly reliable means of operating ball-, butterfly- or plug valves as well as louvers, dampers and other 90° rotating mechanisms.

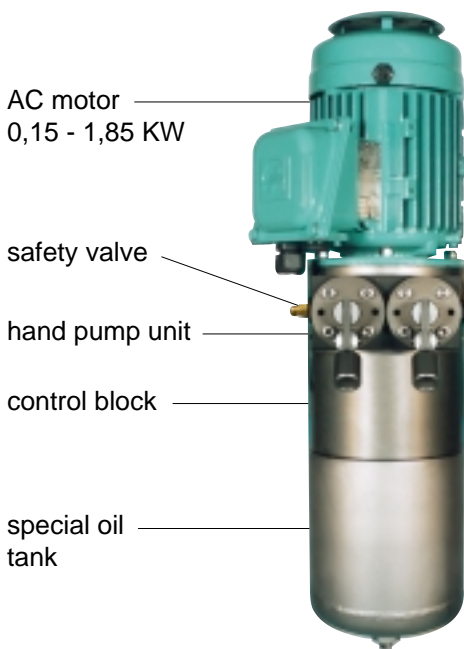
POWER SUPPLY, CONTROL, SIGNALIZATION

The DEHAZ 2000 supply can be effected easily by a 5 x 1,5 mm² cable powered with 380/440 V AC 50/60 Hz (other voltages on request), for signalization and remote control a 12 x 1,5 mm² cable is required.

HOW DOES THE DEHAZ 2000 CONTROL WORK?

The actuator has to be connected to a 380/440 V AC supply power. The control is energized by turning the key-operated switch at the limitswitch box from the off position into the local or remote position. For local control the pivoted switch at the limitswitch box has to be turned into open or close direction. For remote control the central control has to send the open or close signal. The motor starts turning left or right, the direction dependent on the command. The motor driven pump starts delivering hydraulic fluid through the special control block and pressurizes the cylinder from the left or the right hand side.

The actuator (valve) rotates into the open or closed position. After reaching the end position the actuator motor is automatically de-energized by the limitswitch and the signal for open or closed position will be send to the control unit.



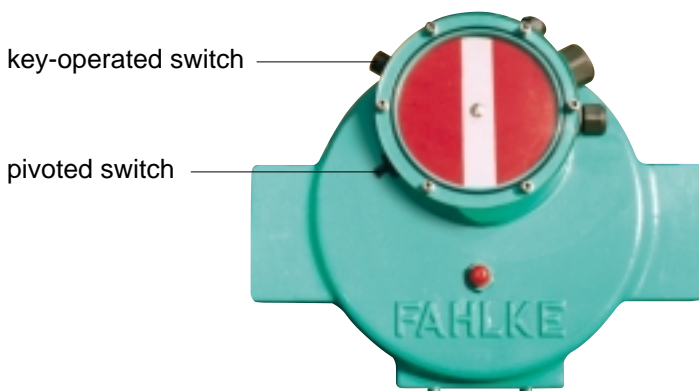
THE SAFETY SYSTEM

In case of emergency it is possible to actuate via the hand pump unit with one hand pump for opening and one for closing the actuator. They are marked correspondingly and allow simple operation.

The actuator is fitted with one safety valve at the control and one on the actuator housing to protect the actuator in case of stem seal damage on the valve.

THE LIMITSWITCH BOX

The limitswitch box consists of the position indicator on the top, which is visible from all sides, the internal potentialfree EEx d IIC limitswitches (signalization voltage as required), the key-operated switch (off, remote & local function) and the pivoted switch for the local operation (open/close) of the actuator (valve).



▼ example of a FAHLKE DEHAZ actuator

ORDERING/MODEL DESIGNATION

DEHAZ - D - 1 - 125 - -

ACTUATOR TYPE

PAZ	(pneumatic actuator)
HAZ	(hydraulic actuator)
GAZ	(gas actuator)
EHAZ	(electro-hydraulic actuator)
GHAZ	(gas over oil actuator)
SEHAZ	(safety electro-hydraulic actuator)
DEHAZ	(three phase current electro-hydraulic actuator)
GEHAZ	(direct current electro-hydraulic actuator)

PAZ	A	1	50	50	HP
HAZ	B	2	80	80	SR
GAZ	C		100	125	HW
EHAZ	D		125	160	BT
GHAZ	E		160		SP
SEHAZ	F		200		SO
DEHAZ	G		250		LBC/E
GEHAZ			300		LBC/P
			400		
			500		
			600		

ACTUATOR SIZE A B C D E F G

CYLINDER QUANTITY 1 or 2

CYLINDER DIAMETER 50 - 600

HYDRAULIC HAND PUMP CYLINDER DIAMETER 50 - 600

SPECIAL EQUIPMENT

HP	(hydraulic hand pump cylinder)
SR	(spring cartridge)
HW	(handwheel)
BT	(battery)
SP	(bladder accumulator)
SO	(solar panel)
LBC/E	(electronic line break system)
LBC/P	(pneumatic line break system)

DEHAZ 2000

Three Phase Current
Electro-Hydraulic Actuator

When there is no requirement for a short regulating time and a 380/440 V AC power supply is available.

FURTHER MODELS OF THE 2000 ACTUATOR FAMILY:

GEHAZ 2000*

Direct Current
Electro-Hydraulic Actuator

When there is no requirement for a short regulating time and a 24 V DC or a 115/230 V AC power supply is available.

SEHAZ 2000*

Safety
Electro-Hydraulic Actuator

For maximum safety and a short regulating time. Power supply: 24 V DC or 115/230 V AC.



► * Please contact us for actuator brochure.

TECHNICAL DATA OF DOUBLE ACTING ACTUATORS

actuator type	break torque (NM)	operating time (sec.)	actuator size L x B x H (mm)	total weight (kg)
DEHAZ-A-1-50	50-200	008/015/025	500 x 200 x 310	60*
DEHAZ-B-1-50	200-1000	010/018/035	600 x 200 x 360	70*
DEHAZ-C-1-80	500-4500	010/015/025/045	800 x 650 x 750	125
DEHAZ-D-1-125	4000-20000	035/045/070/110/190	1200 x 800 x 750	360
DEHAZ-E-1-125	20000-60000	070/090/130/220/360	1850 x 1100 x 850	900
DEHAZ-E-2-125	60000-80000	140/180/260/440/720	2280 x 1100 x 850	1100
DEHAZ-F-2-125	80000-150000	100/160/200/300	3150 x 1350 x 850	1200
DEHAZ-G-2-125	100000-300000	130/210/260/400	3940 x 1500 x 850	2000

* The hydraulic control unit is mounted on a separate stand.

ELECTRICAL DATA & SAFETY EQUIPMENT

required power	→ 0,15 - 1,85 KW
power supply	→ 380/440 V AC, 50/60 Hz
limitswitch	→ potentialfree, EEx d IIC (signalization voltage as needed)
emergency operation	→ 2 hand pumps (1 open, 1 close)
cable requirement	→ 5 x 1,5 mm ² PG 16 (power supply), 12 x 1,5 mm ² PG 21 (signalization and control)

ADVANTAGES OF THE DEHAZ 2000

The high efficiency of the Fahlke electro-hydraulic actuator technology reduces the power consumption by *10 % compared* to a standard electric actuator.

The control times are adjustable for both directions, for example: fast closing, slow opening the valve to allow the best adaption to your control process.

The DEHAZ 2000 units can be mounted up to 1000 metres away from the power supply. The cable connection for DEHAZ 2000 is cheaper than for any electric actuator due to smaller cable diameters.

THE FAHLKE ADAPTION SYSTEM

We offer an **INDIVIDUAL ADAPTION SOLUTION** suitable to your valve. The flanges and drive sleeves, manufactured according to the top-work drawing of each valve, allow to mount the actuator within a few minutes onto the valve.

