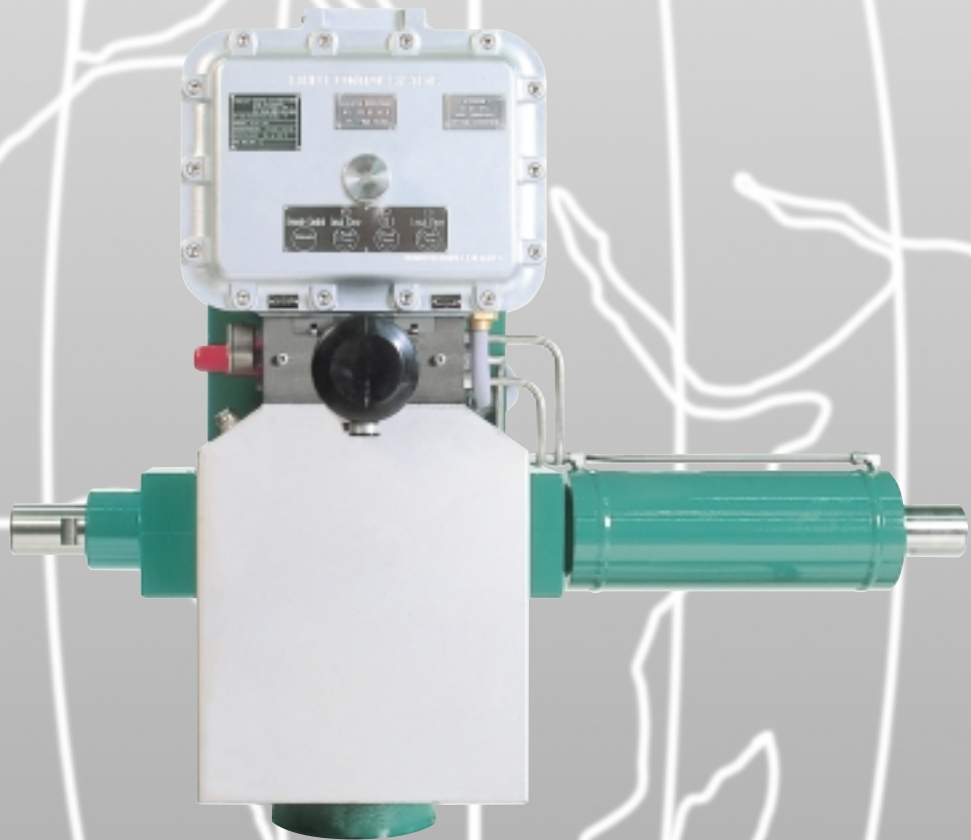




FAHLKE CONTROL SYSTEMS

SEHAZ 2000

Safety Electro-Hydraulic Actuator Technology



The new safety standard *produced by:*

FAHLKE CONTROL SYSTEMS GMBH

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COMPANY PROFILE

For more than 25 years Fahlke has combined its ingenuity with high quality standards, continuously pioneering valve actuator technology for highest demands. Fahlke actuators are designed by this experience in actuator production and machined for the customer, who expects the best: efficiency, highest quality and safe operation for years.

Fahlke operates in accordance with ISO 9001 and maintains a formal total quality management program to assure product excellence.

Continuing our innovative tradition, Fahlke introduces the latest valve automation advancement the new **SEHAZ 2000**.

PRODUCT CONCEPT

The SEHAZ 2000 is made to work for a minimum of operation, installation and maintenance costs. We built the new actuator technology which can be placed fast 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 tubes.

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

POWER SUPPLY, CONTROL, SIGNALIZATION

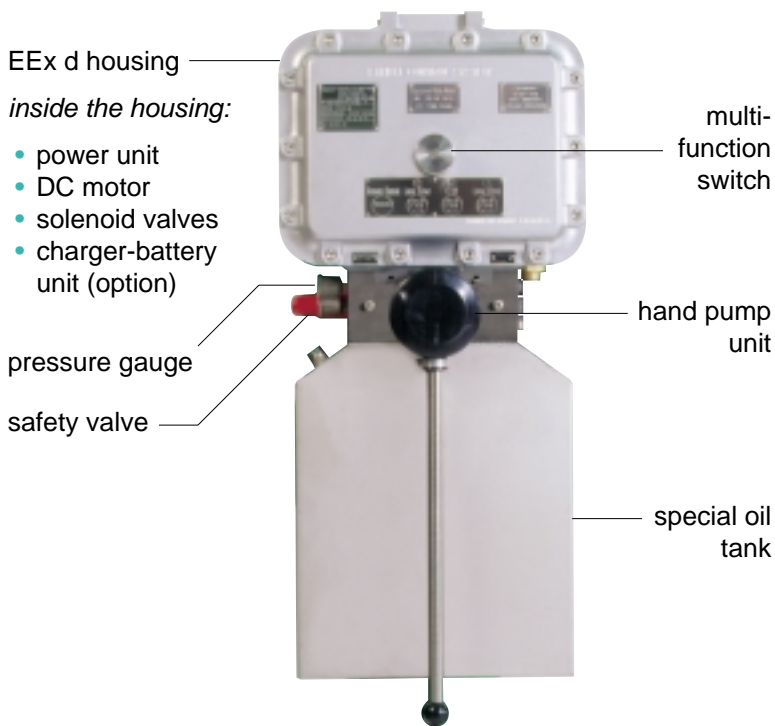
The SEHAZ 2000 supply can be done easily by a 3 x 1,5 mm² cable powered with 115/230 V AC 50/60 Hz or 24 V DC, for signalization and remote control a 8 x 1,5 mm² cable is required. Fahlke also delivers a solarpowered solution if there is no energy available.



HOW DOES THE NEW SEHAZ 2000 CONTROL WORK?

The control has to be connected to supply currency (115/230 V AC 50/60 Hz or 24 V DC). The motor inside works by 24 V DC via the internal power pack, which accepts all supply currencies mentioned, or the special charger-battery unit (optional system), which enables up to 20 strokes in case of a power failure. Prior to the reaching of the pressure on the electrically operated pressure switch the motor driven pump

automatically starts to deliver the hydraulic fluid to the solenoid valves and into the bladder accumulator. On reaching the preset pressure (adjustable, depends on the required torque output), the motor will automatically switch off. The integrated solenoid valves will be operated from the central control unit or directly from the actuator multi-function switch. The hydraulic fluid will flow into the cylinder and open or close the actuator. After reaching the end position, the solenoid valve will be deactivated via a limit-switch and your central control unit will receive the open or closed position signal.



WHY IS THE SEHAZ 2000 THE PERFECT SAFETY SYSTEM?

Fahlke has combined into the SEHAZ 2000 up to four possibilities of operating the actuator (valve) in case of complete power supply failure: by bladder accumulator (included), by hand pump unit (included), by spring cartridge (option) or by battery package (option).



bladder accumulator

◀ *The accumulation of high pressure hydraulic fluid enables a short regulating time and guarantees actuation in case of a power failure.*

spring cartridge

▼ *An additional spring cartridge increases safety, it guarantees one stroke independent of the hydraulic system.*



▼ example for a FAHLKE SEHAZ actuator

ORDERING/MODEL DESIGNATION SEHAZ - D - 1 - 125 - - SP

ACTUATOR TYPE

PAZ (pneumatic actuator)	PAZ	A	1	50	50	HP
HAZ (hydraulic actuator)	HAZ	B	2	80	80	SR
GAZ (gas actuator)	GAZ	C		100	125	HW
EHAZ (electro-hydraulic actuator)	EHAZ	D		125	160	BT
GHAZ (gas over oil actuator)	GHAZ	E		160		SP
SEHAZ (safety electro-hydraulic actuator)	SEHAZ	F		200		SO
DEHAZ (alternating current electro-hydraulic actuator)	DEHAZ	G		250		LBC/E
GEHAZ (direct current electro-hydraulic actuator)	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 - 160

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)

SEHAZ 2000

Safety
Electro-Hydraulic Actuator

For maximum safety and a short regulating time.

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 24 V DC power supply is given.

DEHAZ 2000*

Alternating Current
Electro-Hydraulic Actuator

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



► * Please contact us for actuator brochure.

TECHNICAL DATA OF DOUBLE ACTING ACTUATORS

actuator type	break torque (Nm)	operating time min. (sec.)	actuator size L x B x H (mm)	total weight (kg)
SEHAZ-A-1-50-SP	50-200	004	500 x 200 x 310	65*
SEHAZ-B-1-50-SP	200-1000	005	600 x 200 x 360	75*
SEHAZ-C-1-80-SP	500-4500	010	800 x 900 x 900	180
SEHAZ-D-1-125-SP	4000-20000	020	1200 x 1050 x 900	380
SEHAZ-E-1-125-SP	20000-60000	030	1850 x 1350 x 1150	950
SEHAZ-E-2-125-SP	60000-80000	060	2280 x 1350 x 1750	1100
SEHAZ-F-2-125-SP	80000-150000	080	3150 x 1600 x 2300	1200
SEHAZ-G-2-125-SP	150000-300000	120	3940 x 1700 x 2300	1950

Bladder accumulator for one stroke included. The operating time is adjustable.

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

TECHNICAL DATA OF SPRING RETURN ACTUATORS

actuator type	break torque (Nm)	operating time open/close (sec.)	actuator size L x B x H (mm)	total weight (kg)
SEHAZ-A-1-50-SR-SP	50-150	015 / 004	850 x 200 x 310	75*
SEHAZ-B-1-50-SR-SP	150-700	020 / 005	950 x 200 x 360	85*
SEHAZ-C-1-80-SR-SP	500-3000	025 / 006	1200 x 900 x 900	200
SEHAZ-D-1-125-SR-SP	3000-15000	035 / 010	2300 x 1050 x 900	600
SEHAZ-E-1-125-SR-SP	15000-50000	050 / 015	3500 x 1350 x 1150	1180
SEHAZ-F-1-125-SR-SP	50000-100000	080 / 018	4400 x 1600 x 1700	1600

Bladder accumulator for one stroke included. Length dimensions are approximative, because the length of the spring cartridge depends on the torque and must be designed accordingly.

The operating time is adjustable.

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

ELECTRICAL DATA & SAFETY EQUIPMENT

required power	→ 0,25 - 0,50 KW
power supply	→ 115/230 V AC, 50/60 Hz or 24 V DC
power demand for solenoid valves	→ 12 Watt (operating voltage as needed)
operating voltage internal	→ 24 V DC
Limitswitch	→ potentialfree, EEx d IIC (signalization voltage as needed)
failsafe operation	→ bladder accumulator
failsafe operation SR	→ spring
emergency operation	→ hand pump
cable requirement	→ 3 x 1,5 mm ² PG 16 (power supply), 18 x 1,5 mm ² PG 29 (signalization and control)

THE FAHLKE ADAPTION SYSTEM

We offer an **INDIVIDUAL ADAPTION SOLUTION** suitable to your valve.
The flanges are manufactured according to the top-work drawing of each valve.