

FT FLUIDOTEHNIC

HYDRAULIC DEVICES AND SYSTEMS

CATALOG OF DEVICES





- FLUIDOTEHNIC's production program is based on its own development. Thanks to that, all the products are the result of the engineering staff work, as well as the quality and skilled workers in manufacturing and installation. Each serial product during the conquest passes through the phase of prototype development, functional tests and check in real operating conditions. Following step is removal of all possible defects and then, based on that, test series is produced. This is how we achieve high quality of manufactured devices. In case of the individual production, after the functional testing, we deliver the product to the customer.
- Since its foundation FLUIDOTEHNIC Ltd. has been continuously investing both in the expansion of commercial building and the purchase of modern equipment for the production, control and techno-economic support. It is located in the industrial zone of Vrnjacka Banja, on a lot size ~ 2ha. It consists several buildings, connected into a functional whole area of 4000 m2. The whole complex is adjusted to the environment- we are taking good care of health, work safety and environmental protection.





- Market research, device development, technical assistance and personnel training free of charge for all our customers is the main task of this service. Many years of experience in the development tasks of hydraulics, pneumatics and lubrication techniques, as well as the latest computer technology guarantee that our customers will get the optimum technical solution. During the development, every device passes precisely defined procedure, starting from making the design concept, followed by manufacturing and testing prototypes and going into production.
- It consists of several facilities and departments: foundry of non-ferrous metals, mechanical drive, locksmith department, installation and technical control. All operations from the casting to the final machining are performed with the universal and software machines. Control and assembly is 100%. When the assembly is finished, each device is being tested on the test stand and on the basis of the results it gets the appropriate certificates and guarantees. On each call of the user, service teams come in as soon as possible, with spare parts and the necessary tools, regardless of whether the equipment is in warranty or out of warranty period.



ACTUATOR FOR CORRECTION OF CONVEYORS LATERAL DEFLECTION



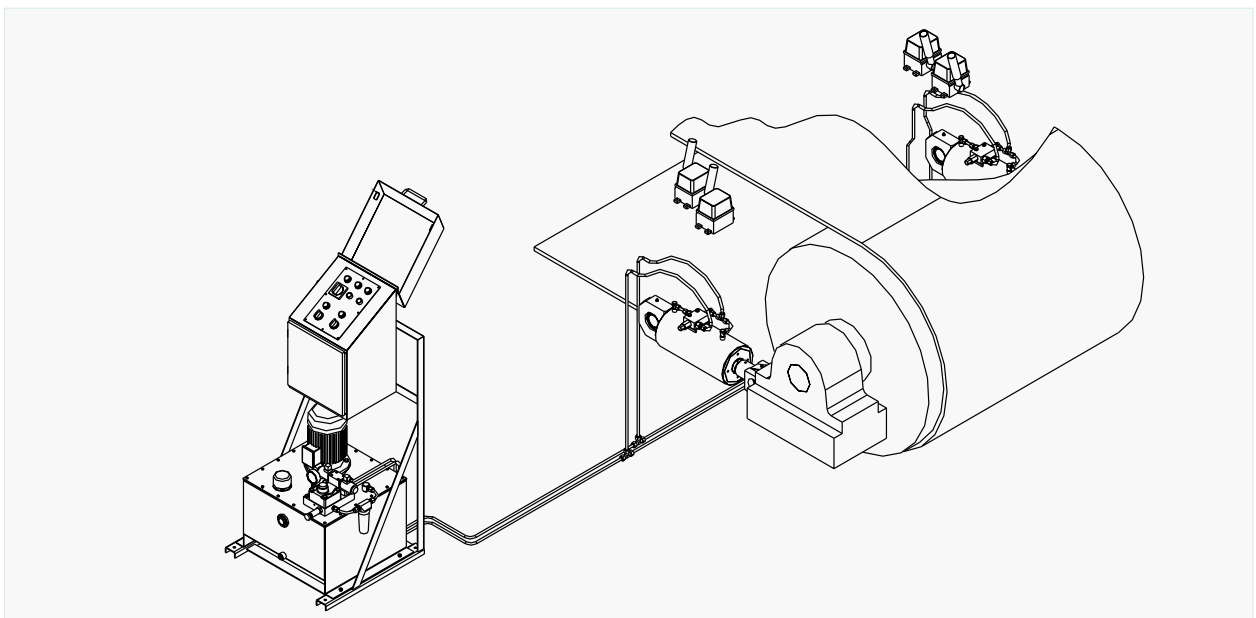
Actuator 90-0250 is applied for automatic correction of lateral deflection of the conveyors. The hydraulic cylinders swivel the band roller according to the signal from proximity detectors and keep the band in proper position. Control valve block assembled directly on the cylinder prevents the creep movements.

The speed and sensitivity of the cylinders can be adjusting by changing the pump flow. In the same way it is possible to adjust the band tension without additional balance weights.

The actuators of various characteristics are available on customer request.

In the same way it is possible to adjust the band tension without additional balance weights.

Ordering code	90 - 0250	
Maximal working pressure	160 bar	
Fluid - mineral oil	HIDROL HD-46	
Working temperature	-20 to +50 °C	
Tank volume	50 dm ³	
Flow rate	0 to 3,8 dm ³ /min	
Piston stroke	200 mm	
Cylinder force at maximum pressure	32 000/26 000 daN	
Electric motor	Power	1,5 kW
	Voltage	380 V/50 Hz
	rpm	1405 rpm
Mass	285 kg	



ACTUATOR FOR OSCILLATING MOTION

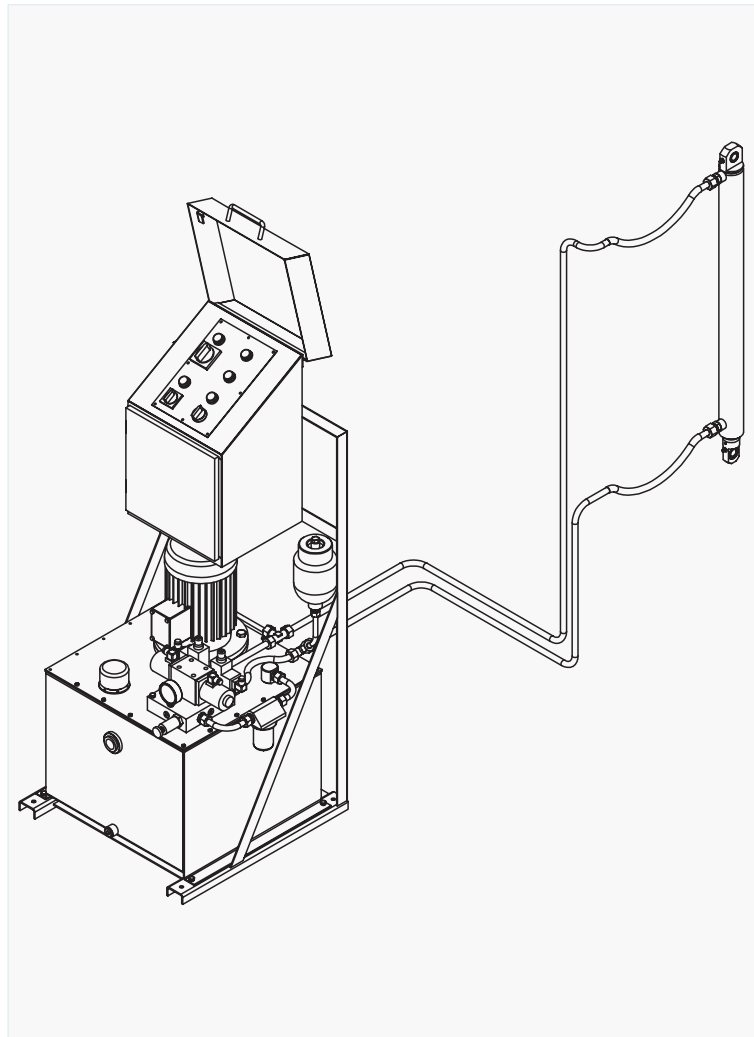


Actuator 90-0300 is applied oscillating motion with fixed amplitude according to the cylinder stroke. Movement of the cylinder rod can be continual or with a pause at the end position. Changing direction of the movement carried out without proximity switches so the device is insensitive of the dust and humidity.

End position cushioning of the hydraulic cylinders and hydraulic accumulator provide smooth operation of the system.

The actuators of various characteristics are available on customer request.

Ordering code	90 - 0300	
Cycles per minute	3,6 to 9	
Max working pressure	60 bar	
Fluid - mineral oil	HIDROL HD-46	
Working temperature	-20 to +50 °C	
Tank volume	80 dm ³	
Flow rate	22 dm ³ /min	
Piston stroke	750 mm	
Cylinder force at max. pressure	1 000/700 daN	
Electric motor	Power	3 kW
	Voltage	380 V/50 Hz
	rpm	1420 rpm
Mass	170 kg	



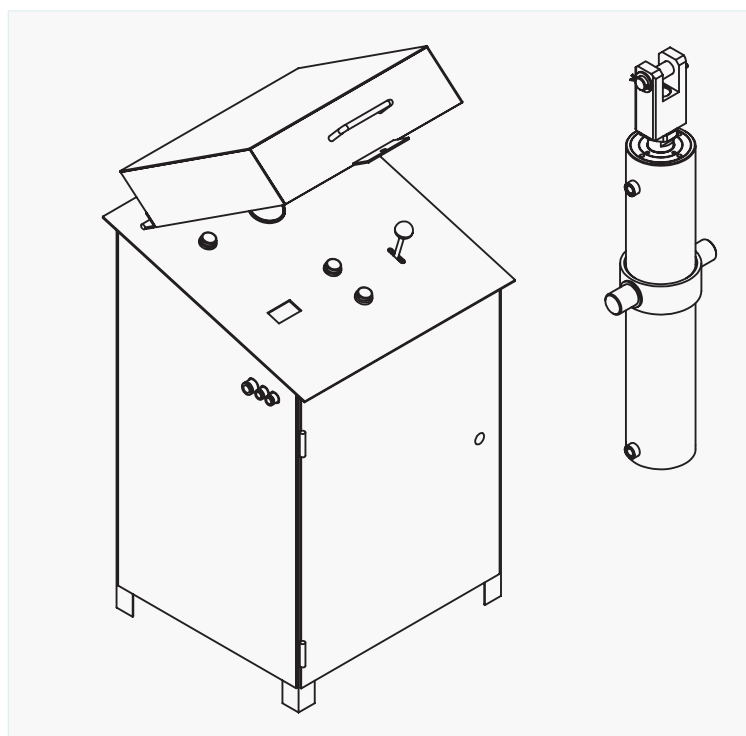
ACTUATOR 12T/120



The main purpose of the actuator is for produce force for closing and opening various types of valves and doors.

Hand operated hydraulic distributing valve is used for the controlling of the device. Version with solenoid valve is also available on the customer request.

Installation dimensions and configuration of the system are customized under customer request. Actuators with various characteristics are available on customer request.



Ordering code		90 - 0120	90 - 0120/1
Max working pressure		100 bar	130 bar
Fluid - mineral oil		HIDROL HD-46	
Working temperature		-20 to +50 °C	
Tank volume		20 dm ³	
Flow rate		6,3 dm ³ /min	
Piston stroke		500 mm	
Cylinder force at max. pressure		7 800 / 6 200 daN	10 200 / 8 100 daN
Electric motor	Power	1,1 kW	1,5 kW
	Voltage	380 V/50 Hz	
	rpm	1410 rpm	1405 rpm
Mass		135 kg	140 kg

TANDEM ACTUATOR

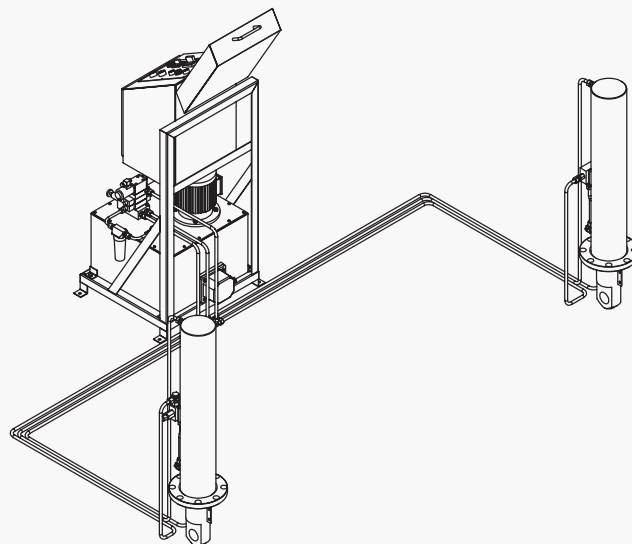


Tandem actuator is applied for synchronized lifting and downing of the cargo and holding it on the requested level. Speed of the cylinders movement is adjustable and independent of the load. Versions with manually and electric remote control are available. Automatic control with level indicator is available on customer request.

For low temperature operation device is equipped with heater and thermal switch.

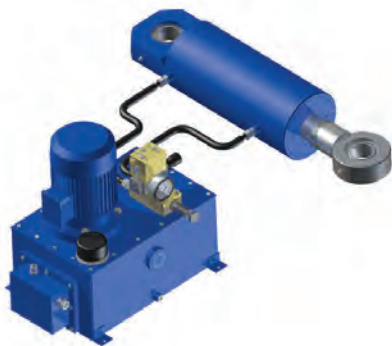
Installation dimensions, load capacity, speed, and stroke of the cylinder are customized under customer request.

Ordering code		90 - 0210
Max working pressure		140 bar
Fluid - mineral oil		HIDROL HD-46
Working temperature		-30 to +50°C
Tank volume		45 dm ³
Flow rate		2,4 dm ³ /min
Piston stroke		650 mm
Cylinder force at max. pressure		2x17 000/2x13 000 daN
Electric motor	Power	1,1 kW
	Voltage	380 V/50 Hz
	rpm	1370 rpm
Oil heater		220 V, 1000 W
Thermostat		-30 to +30°C
Mass		270 kg



RAIL CATCHER ACTUATOR

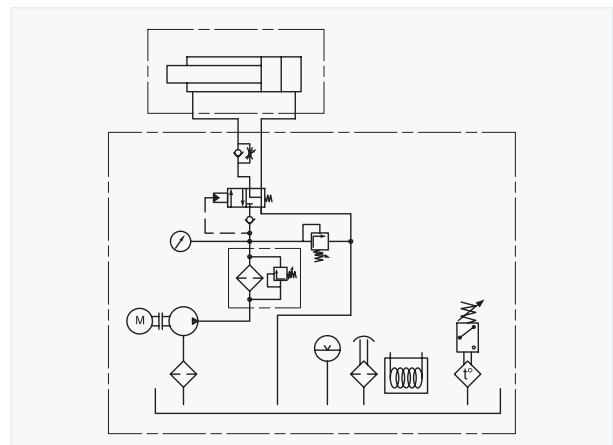
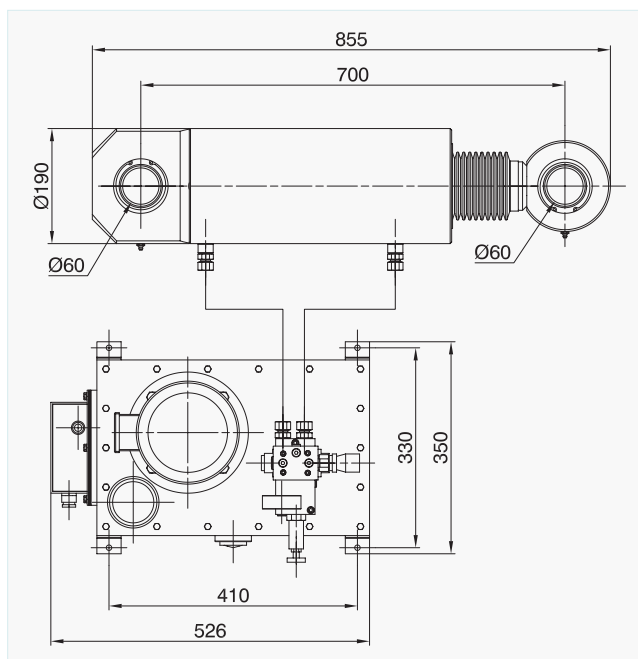
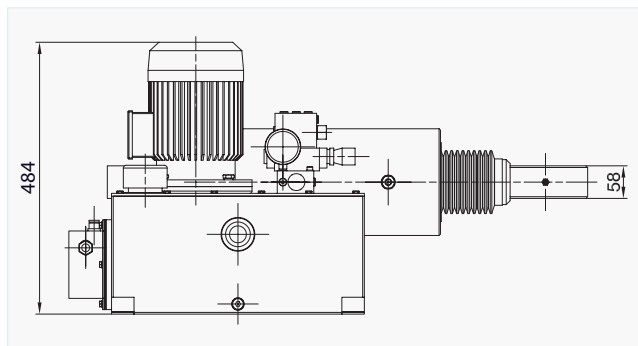
15T/220



Actuator is mainly used for produce great breaking forces to anchoring big cranes. Hydraulic power unit with gear pump is assembled in the robust housing. After the starting electric motor of the power unit and switching on the valve solenoid, oil flows to the front side of the hydraulic cylinder. Retracting force of the cylinder overcomes the spring force of the breaking mechanism. The crane is ready to move. Limitation of the releasing force is carried out by the adjusting pressure on the pressure relief valve. It is recommended to adjust releasing force 15 to 20% over the spring force. To

prevent damage of the device, do not adjust the releasing pressure over the maximum permissible value. After the switching of the electric motor and valve solenoid, spring force moves the cylinder rod to the start position. The crane is anchored. Breaking speed can be adjusted by check throttle valve. Down direction increase the speed. The swinging bearing is mounted at the end of the cylinder rod. For low temperature operation device is equipped with heater.

Actuators of other dimensions and characteristics are available on customer request.



Ordering code	15T/220	
Inserting force on the rod	max. 160kN	
Piston stroke	220mm	
Retract piston speed	6,06mm/s	
Time of rod extraction	adjustable	
Pump	Flow	6,0dm ³ /min
	Working pressure	max. 100bar
Fluid - mineral oil	Shell Tellus* Arctic 32	
Tank volume	20dm ³	
Electric motor	1,5kW; 400V; 50Hz	
Oil heater	220V; 500W	
Thermostat	0 to +40°C	
Ambient temperature *	-40 to +50°C	
Mass	136kg	
* Min. temp. without oil preheating -15°C		

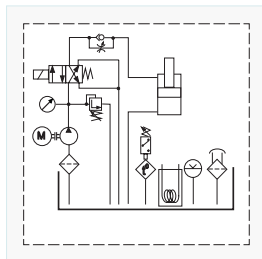
ACTUATOR - ELECTROHYDRAULIC RELEASING DEVICE

12T/120.000

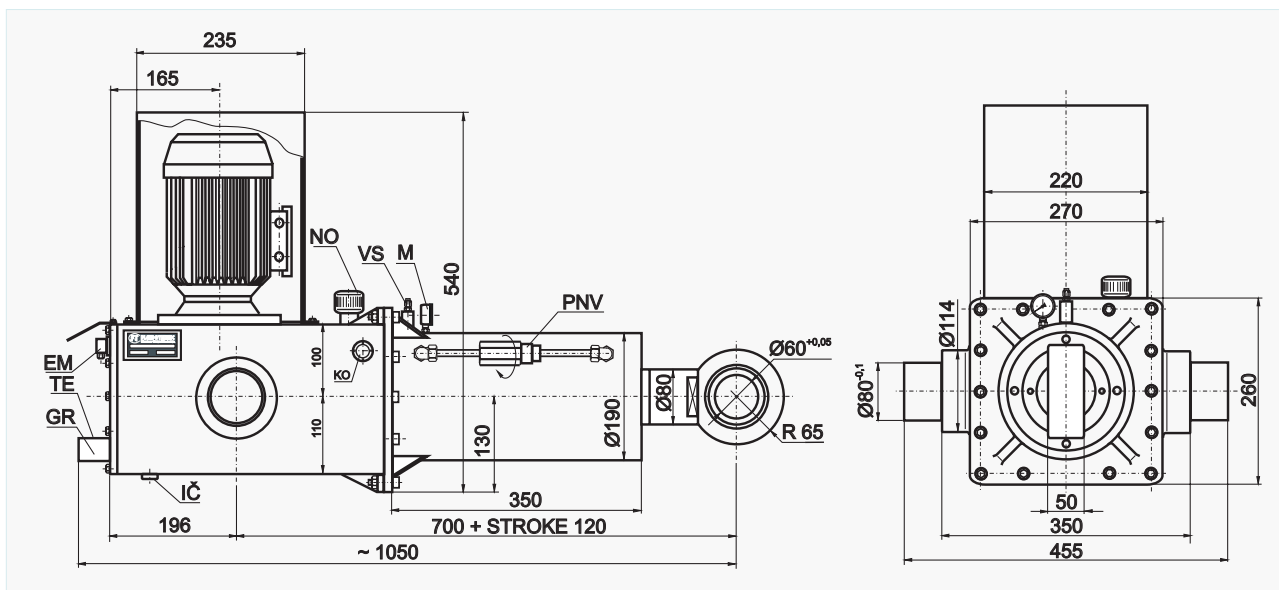


Ordering code	12T/120.000	
Retracting force	max. 120kN	
Piston stroke	120mm	
Retracting time	17s	
Ejecting time	adjustable from 6 to 60s	
Flow	6,3dm ³ /min	
Pump	max. 80bar	
Working pressure	max. 80bar	
Fluid - mineral oil	Shell Tellus* Arctic 32	
Tank volume	16dm ³	
Electric motor	Power	1,1kW
	Voltage	400V 50Hz
	rpm	1370 rpm
Solenoid valve	220V 50Hz 0,13A	
Oil heater	220V 500W	
Thermostat	0 to +50°C	
Ambient temperature *	-40 to +50°C	
Mass	180kg	
* Min. temp. without oil preheating -15°C		

Actuator is mainly used for produce great breaking forces to anchoring big cranes. Hydraulic power unit with gear pump is assembled in the robust housing. After the starting electric motor of the power unit and switching on the valve solenoid, oil flows to the front side of the hydraulic cylinder. Retracting force of the cylinder overcomes the spring force of the breaking mechanism. The crane is ready to move. Limitation of the releasing force is carried out by the adjusting pressure on the pressure relief valve. It is recommended to adjust releasing force 15 to 20% over the spring force. To prevent damage of the device, do not adjust the releasing pressure over the maximum permissible value. After the switching of the electric motor and valve solenoid, spring force moves the cylinder rod to the start position. The crane is anchored. Breaking speed can be adjusted by check throttle valve. Down direction increase the speed. The swinging bearing is mounted at the end of the cylinder rod. For low temperature operation device is equipped with heater. Actuators of other dimensions and characteristics are available on customer request.



- EM** solenoid connector
- TE** thermostat
- GR** heater
- NO** oil filling port
- VS** pressure relief valve
- M** presure gauge
- KO** oil level indicator
- IC** oil drain plug
- PNV** check throttle valve





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Reg. broj: 11506568939
Br. Reg. Upisa: 1-14429-00



EC DECLARATION OF CONFORMITY / DECLARATION ON INSTALLATION

DEKLARACIJA O USAGLAŠENOSTI / DEKLARACIJA O UGRADNJI

We hereby declare that the following products

Izjavljujemo da su sledeći uređaji

Hydraulic cylinders (Hidraulički cilindri)
Hand pumps (Ručne pumpe)
Actuators (Aktuatori)
Hydraulic presses (Hidraulične prese)
Change-over valves (Hidraulički razvodnici)
Electric driven change-over valve (Elektromotorni razvodnici)
Pressure and flow valves (Ventili pritiska i protoka)

Are designed and produced in accordance with the safety requirements according to the following regulations:

Projektovani i proizvedeni u skladu sa bezbednosnim zahtevima prema sledećim propisima:

Machinery Directive EC/2006/42
(Mašinska direktiva EC/2006/42)

Low voltage directive EC/2014/35
(Niskonaponska direktiva EC/2014/35)

in accordance with the following standards:
i u skladu sa sledećim standardima:

Safety of machinery - General principles for design

- **Risk assessment and risk reduction EN ISO 12100:2010**
Bezbednost mašina - Opšti principi za projektovanje
- Ocena rizika i smanjenje rizika SRPS ISO 12100:2014

Safety of machinery - Electrical equipment of machines - Part 1: EN 60204-1:2016
Bezbednost mašina - Električna oprema mašina - Deo 1: EN 60204-1:2016

Declaration on installation in the sense of EC Machinery Directive (2006/42/EC) Annex II B

Izjava o ugradnji u skladu sa EC Mašinskom direktivom (2006/42/EC) Anex II B

Product of "FLUIDOTEHNIC" assemble into mechanical devices and equipment. Start-up is not admissible unless it has been verified that the whole equipment, meets the requirements defined in the EC machinery Directive (2006/42/EC)

Proizvod "FLUIDOTEHNIC"-a se ugrađuje u drugu opremu i dodatne uređaje. Pokretanje nije dozvoljeno sve dok i relevantna oprema u koju se ugrađuju ne bude u skladu sa Mašinskom direktivom (2006/42/EC)

The manufacturer undertakes to supply the relevant information of incomplete machine on request to responsible inspector by electronic way. Technical documents of the machine is prepared in accordance with Annex VII, part B Machinery Directive (2006/42/EC)

Proizvođač se obavezuje da će elektronskim putem dostaviti odgovarajuće podatke o delimično završenoj mašini nadležnom inspektoru na njegov zahtev. Tehnička dokumentacija je izrađena u skladu sa Anexom 7, deo B Mašinske direktive.

Vrnjačka Banja, 01/02/2017 godine



Šjivić Miroslav, General Manager

The EC Declaration of Conformity is only valid in conjunction with confirmation that the device has been correctly applied, installed, inspected and maintained according to the operating instructions provided. The validity of the declaration will cease in case of any modification and/or supplement not previously approved by "FLUIDOTEHNIC".

Ova deklaracija o usaglašenosti važi samo u slučaju da je uređaj pravilno ugrađen, iskontrolisan i da se koristi i održava u skladu sa uputstvom za rukovanje i održavanje. Važenje izjave prestaje u slučaju bilo kakve modifikacije ili dodatka koji nisu prethodno odobreni od "FLUIDOTEHNIC"-a.

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