

UAH001

Unit of hydraulic apprenticeship

DESCRIPTION

- This unit is delivered complete and fully equipped.
- This unit is compatible with every component of the hydraulic range UAH DIDATEC.
- Design, production and industrial equipment.
- This unit can be used at different levels and for different courses.



SUGGESTED LESSONS (according to the selected material)

- Study of the role and function of the components of an hydraulic or electro-hydraulic chain
 - Control
 - Pre-actuator
 - Actuator
 - Regulator
 - Limiting device
 - etc.
- Realisation of wiring and goffering
- Study of physical characteristic of every component (flow and pressure)...

1. Standards of the UAH range :

UAH range was developed around a progressive structure. Every components proposed in the range answer to integration criteria (electric, hydraulic and mechanic) which sounds compatible among them.

1.1 Mechanic integration :

Component of the UAH range are equipped of supports with different dimensions.

These supports allows their use on the work station but also their cupboard space on the magazine and without any tools.

Used material guarantee to the system an increased resistance to the handling test.

1.2 Electric linking:

Every component requiring an electric alimentation are compatible among them (24Vcc)

They are equipped of female plug with double shaft of \varnothing 4 mm for an optimal safety. They are connecting between them by cord equipped of male plug.

1.3 Hydraulic linking:

Every components of the UAH range requiring an hydraulic linking are equipped of rapid male coupler auto sealing.

Compatible flexible are proposed in the range



1.4 Presentation of the component :

Material proposed is submissive to improvement, illustration of the present document cannot have a contractual value.

2. Structure of the station

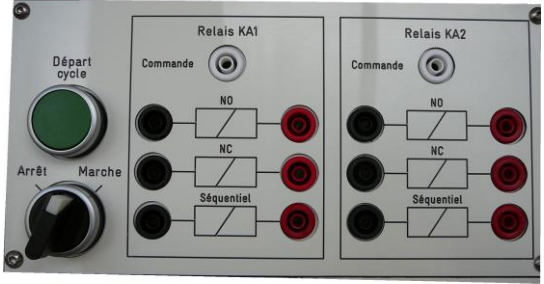


The station allows the work of a single pupil.


Its structure is studied to receive the whole of the components of UAH range

<u>Description</u>	<u>reference</u>	<u>presentation</u>
<p><u>Working station:</u></p> <ul style="list-style-type: none"> - anodic aluminum structure - 1 plate of work out of grating with vat of retention of the drops - 4 direct wheels with brake - 1 rack for arrangement of the electric cords - 1 rack for suspension of the hydraulic flexible devices - 1 electric box (description below) <p><u>box:</u></p> <ul style="list-style-type: none"> - piloting of the power (hydraulic central walk) by commutatur with key - food low tension (24Vdc – for distributors instruments measuring, charts of regulation and automat) - security management on module preventa (thermostat power station, emergency stop and opening of the casings of the operative parts) - catch 230V for connection of a PC - general four-pole disconnecting switch cadenassable <p>Length: approximately 1700 mm Width: approximately 800 mm Total height: approximately 1800 mm</p>	<p>UAH 010</p>	
<p><u>Store of arrangement</u></p> <p>For activity of identification and choice of the components for constitution of a circuit or realization of a function</p> <ul style="list-style-type: none"> - anodic aluminum structure 1200 (L) * 1700 (H) on braked wheels - 8 meters linear of arrangement 	<p>UAH 030</p>	

3. Food/energies

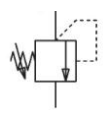
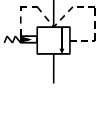
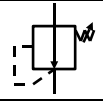
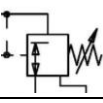
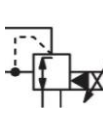
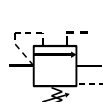
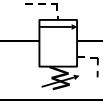
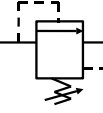
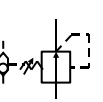
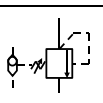
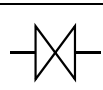
<p><u>Hydro-electric power station with 1 gear pump</u></p> <ul style="list-style-type: none"> - 1 mini tank 30L on casters - 1 valve 1/4tr of setting to the cover - 1 limiting device of pressure and pressure gauge - 1 thermostatic probe with contact - 1 engine 1.5kW 1500Tr/min - 1 gear pump 4 Cm3 mini not immersed (apparent pipings) 	<p>UAH 110</p>	
<p><u>Hydro-electric power station with 2 gear pump</u></p> <ul style="list-style-type: none"> - 1 tank 80L on casters - 1 valve of setting to the cover - 2 limitings device of pressure and 2 pressure gauges - 1 thermostatic probe with contact - 1 mini engine 3kW 1500tr/min - 1 gear pump 4 Cm3 - 1 gear pump 14cm3 not immersed (apparent pipings) 	<p>UAH 120</p>	
<p><u>Hydro-electric power station with pistons with variable flow</u></p> <ul style="list-style-type: none"> - 1 mini tank 80L on casters - 1 valve of setting to the cover - 1 limiting device of pressure and pressure gauge - 1 thermostatic probe with contact - 1 mini engine 3kW 1500tr/min - 1 piston pump with variable flow LS 18cm3 not immersed (apparent pipings) with regulator flow/pressure 	<p>UAH 130</p>	


<p><u>modulate order simple relay</u></p> <ul style="list-style-type: none"> - multichannel relays dry NO +NC - casings doubles well - Simple Function relayage or sequential function 	<p>UAH 340</p>	
<p><u>Modulate chart amplifier</u></p> <p>Analogical chart Adjustment of the parameters by potentiometers For open loop control of all components proportional</p>	<p>UAH 360</p>	
<p><u>Modulate numerical chart proportional pressure/flow</u></p> <ul style="list-style-type: none"> - 1 potentiometer - 1 selector piloting potentiometer/chart - chart with software of parameter setting and acquisition/exploitation of the data in the form of curves type SD13 22 Wandfluh - function open loops/closed loops - recopy of the analogical signal of the operative parts in 0/10V on casings doubles puit - piloting by potentiometers and switches - 2 voltmeters for tension of instruction and analogical size measured on operative part 	<p>UAH 370</p>	
<p><u>Modulate numerical chart proportional position</u></p> <ul style="list-style-type: none"> - 1 potentiometer - 1 selector piloting potentiometer/chart - chart with software of parameter setting and acquisition/exploitation of the data in the form of curves type SD1342 Wandfluh - function open loops/closed loops - recopy of the analogical signal of the operative parts in 0/10V on casings doubles puit - piloting by potentiometers and switches for control of position - 2 voltmeters for tension of instruction and analogical size measured on operative part 	<p>UAH 380</p> <p>UAH 390</p>	





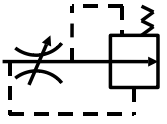




<u>Modulate anmeter</u>		
-------------------------	--	--

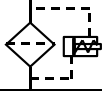
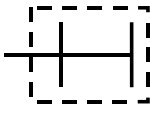

6. Modules hydraulic functions

all our hydraulic modules are equipped with car-sealing couplers 3/8 "and various accessories

<u>Description</u>	<u>reference</u>	<u>presentation</u>
<u>Limiting device of pressure</u>	UAH 410	
<u>Limiting device of pressure proportional</u>	UAH 415	
<u>Limiting device of pressure controlled</u>	UAH 420	
<u>Pressure regulator</u>	UAH 430	
<u>Governor automatically-controlled</u>	UAH 440	
<u>Governor automatically-controlled proportional</u>	UAH 450	
<u>Circuit-closer/circuit breaker</u>	UAH 460	
<u>Double valve of balancing</u>	UAH 470	
<u>Simple valve of balancing</u>	UAH 475	
<u>Valve of sequence</u>	UAH 480	
<u>Compensator 2 ways</u>	UAH 490	
<u>Compensator 3 ways</u>	UAH 500	
<u>Isolating valve</u>	UAH 510	
<u>BECAUSE 0.5bars</u>	UAH 520	


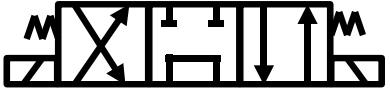
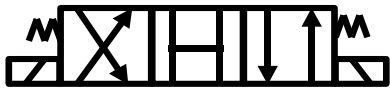
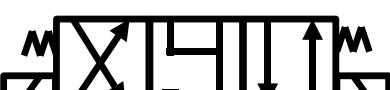

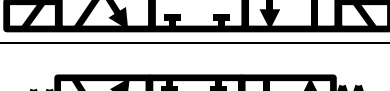
<u>BECAUSE 5 bars</u>	UAH 530	
------------------------------	---------	---

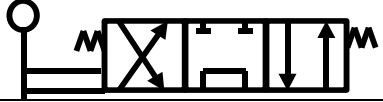
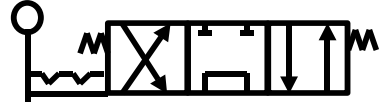
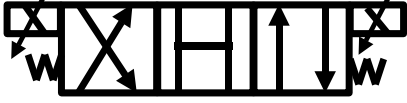
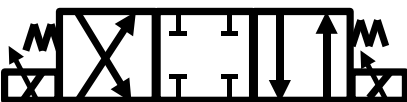
<u>Description</u>	<u>Reference</u>	<u>presentation</u>
<u>BECAUSE controlled</u>	UAH 540	
<u>BECAUSE controlled double</u>	UAH 550	
<u>Flow control valve with BUS</u>	UAH 560	
<u>Bidirectional flow control valve</u>	UAH 565	
<u>Double flow control valve</u>	UAH 570	
<u>Volumetric governor</u>	UAH 580	
<u>Volumetric governor proportional</u>	UAH 590	
<u>Pressure gauge - pressure controller 0-250 bars</u>	UAH 600	
<u>Pressure gauge - pressure controller 0-250 bars with analogical transmitter</u> for regulation of pressure in closed loop (cf UAH 370)	UAH 605	
<u>Pressure gauge (0-160 bars)</u>	UAH 610	
<u>Capillaries for catches minimess and pressure gauges lq 1000 mm</u>	UAH 615	
<u>Accumulator 0.7L welded with inflating valve</u>	UAH 620	
<u>Accumulator 0.7L welded with inflating valve</u> + block of safety	UAH 630	
<u>Filter pressure + clogging indicator +</u>	UAH 640	

<u>bypass</u>		
<u>Block of distribution 4 stations</u>	UAH 650	
<u>Balance pressure 2 ways</u>	UAH 660	
<u>Flowmeter 3-20 L/min</u>	UAH 670	
<u>T-pieces equipped 1 male coupler female/2 couplers</u>	UAH 680	
<u>Pressure taps on line 1 male coupler/1 coupler female + taken minimes</u>	UAH 690	
		

7. Distributers:



<u>Description</u>	<u>reference</u>	<u>presentation</u>
<u>Distributer 4/2</u>	UAH 810	
<u>Distributer 4/3 Pt</u>	UAH 820	
<u>Distributer 4/3 CO</u>	UAH 830	
<u>Distributer 4/3 ABT</u>	UAH 840	
<u>Distributer 4/3 CF</u>	UAH 850	
<u>Distributer 4/3 CF cetop 5 controlled hydraulically</u>	UAH 860	

<u>Distributer 4/3 manual Pt</u>	UAH 870	
<u>Distributer 4/3 indexed manual Pt</u>	UAH 880	
<u>Distributer 4/3 CO proportional</u>	UAH 890	
<u>Distributer 4/3 CF proportional</u>	UAH 895	

Foot-note: Other specific models can be referred on request


8. operative parts:


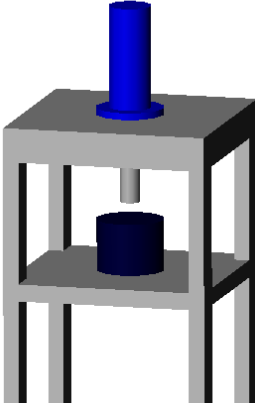
The operative parts suggested make it possible to study piloting TOR of actuators and the regulation speed, effort/pressure and position by integrating current problems of industry.

The access securities inside each operative part are connected in series with the loop of safety integrated into the electric box of bench UAH 010

The piloting of the operative parts can indifferently be ordered by circuits carried out by assembly of the hydraulic and electrohydraulic modules of range UAH DIDATEC, or by specific platinums of orders (cf "platinums of order of the operative parts").

<u>Description</u>	<u>Reference</u>	<u>presentation</u>
<p><u>Jack raises load</u></p> <ul style="list-style-type: none"> - rigid metal structure - Housings with protected door of access - 10 masses of 5 kg - specific housing - 2 position encoders <p><u>in option:</u></p> <p>for regulation of position in closed loop: a potentiometric rule + bill-poster/conditioner compatible with chart <u>UAH 380</u>.</p>	UAH 1000	
<p><u>Mixer</u></p> <ul style="list-style-type: none"> - Rigid metal Structure - Housings with protected door of access - 1 hydraulic engine 60 turns/min; 400Nm couples - 1 axis equipped with blades - 1 tank 100L - height of immersion of the blades in the 	UAH 2000	

<p>adjustable tank by standard elevator live/nut for variation of the resistive torque</p> <ul style="list-style-type: none"> - 2 male couplers car sealing for food of the hydraulic system <p>in option:</p> <p>for regulation of flow in open loop or buckles closed: a velocity pick-up + frequency meter compatible with chart UAH 370.(analogical exit 0 – 10 v)</p>		
---	--	---

<u>Description</u>	<u>Reference</u>	<u>presentation</u>
<p>Rocking-lever</p> <ul style="list-style-type: none"> - Rigid metal Structure - Housings with protected door of access - 1 beam equipped with a support for positioning of the masses - 5 removable masses of 10 kg - 1 jack of 500mm of race/diameter 40 minis - 2 valves of balancing - 2 sensors race end - 2 male couplers car sealing - 2 valves parachutes <p>in option:</p> <p>for regulation of position in closed loop: a potentiometric rule + bill-poster/conditioner compatible with chart UAH 380.</p>	<p>UAH 3000</p>	
<p>Press</p> <ul style="list-style-type: none"> - Rigid metal Structure - Housings with protected door of access - 1 jack of 100mm of race/diameter 40 minis - 1 flap valve pilot-operated to avoid the movement of the jack under the effect of its actual weight - 1 cassette with spring for variation of the effort and the position <p>in option:</p> <p>for regulation of pressure in closed loop: an effort or pressure pick-up + bill-poster/conditioner compatible with chart UAH 370.</p>	<p>UAH 4000</p>	

<p><u>Together of fastening</u></p> <ul style="list-style-type: none"> - Rigid metal Structure - Housings - 2 jacks 50 mms in diameter 40mm with covers of fastening allowing the implementation of the hydraulic sequences. - 1 pressure controller for detection of fastening + detecting inductive to visualize the re-entry of the 2 jacks. - 4 sealing couplers car - 1 metal part to attach <p><u>in option:</u> for regulation of pressure in closed loop: a pressure pick-up + bill-poster/conditioner compatible with chart <u>UAH 370.</u></p>	<p>UAH 5000</p>	
---	-----------------	--

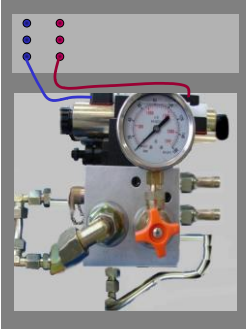
9. Platitudes of order of the operative parts:

Platitudes of order of the operative parts integrate a hydraulic system of order goffered. Their interest lies in the problems of implementation of flow measurements and pressure on a real installation.

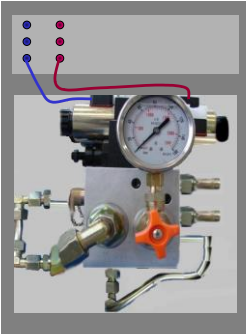
These platitudes are assembled on the desk of bench UAH 010

9.1. Platinize of order all or anything:

<u>Description</u>	<u>reference</u>	<u>presentation</u>
<p><u>Mixer</u></p> <ul style="list-style-type: none"> - 1 distributer 4/3 ABT - 1 double volumetric governor - 1 drilled block - pressure taps - male couplers car sealing 	<p>UAH 2100</p>	
<p><u>Rocking-lever:</u></p> <ul style="list-style-type: none"> - distributer 4/3 ABT - double flow control valve - pressure taps - male couplers car sealing 	<p>UAH 3100</p>	

<p><u>Press:</u></p> <ul style="list-style-type: none"> - distributer 4/3 ABT - pressure regulator - double valve controlled non-return valve - pressure taps - male couplers car sealing 	<p>UAH 4100</p>	
---	-----------------	---

9.2. Platinums of order proportional or controlled:

<u>Description</u>	<u>reference</u>	<u>presentation</u>
<p><u>Mixer</u></p> <ul style="list-style-type: none"> - 1 distributer 4/3 ABT - 1 volumetric governor proportional - pressure taps - male couplers car sealing 	<p>UAP 2200</p>	
<p><u>Rocking-lever:</u></p> <ul style="list-style-type: none"> - distributer 4/3 ABT proportional - double flow control valve - pressure taps - male couplers car sealing 	<p>UAP 3200</p>	
<p><u>Press:</u></p> <ul style="list-style-type: none"> - distributer 4/3 ABT - governor automatically-controlled proportional - non-return valve doubles controlled - pressure taps - male couplers car sealing 	<p>UAP 4200</p>	