



The Large Stream Hydraulic Bench is designed as a worktop, on which a great variety of teaching equipment can be used, when a large flow of water is needed.

This version of Hydraulic Bench has two pumps connected in parallel, which allows to carry out twice as much work as with a traditional hydraulic bench.

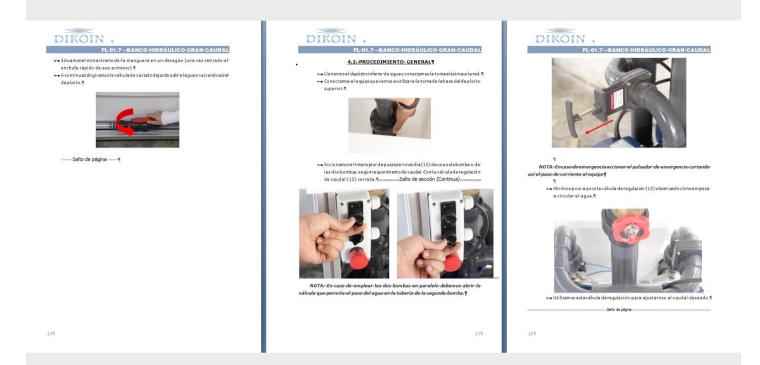
It also has two volumetric tanks of different sizes, for the measurement of small and large flows.

This equipment is specially designed to be used along with hydraulic turbines, but it can also be operated as a standard bench, with the pumps being connected separately.

The bench has connections by connecting nuts and a quick plug (supplied with 2 meters of flexible hose), so that the installation of the different work equipment is quick and simple. It also has a drain that allows a faster discharge when working with large streams.

The Large Stream Hydraulic Bank also has an interchangeable section, where an electronic flowmeter can be optionally coupled for the accurate and quick reading of the working flow rates.





The user manual clearly shows and with a large number of images, the entire process to be followed for the operation of the equipment.

FL 01.4 BANCO HIDRÁULICO FL 01.4 BANCO HIDRÁULICO						FL 01.4	4 BANCO HIDRÁL
5. PRÁCTICAS REALIZABLES	5.1.2. LECTURAS Y RESULTADOS				DEPÓSITO GRANDE		
5.1. CALIBRACIÓN DE UN DEPÓSITO VOLUMÉTRICO	DEPÓSITO PEQUEÑO				VOLUMEN VERTIDO	ALTURA h (mm)	CONSTANTE
3. FUNDAMENTO TEÓRICO El volumen de un depósito es igual a V = S. h, de manera que conocida su sección,	VOLUMEN VERTIDO V (litros)	ALTURA h (mm)	CONSTANTE K		V (litros)		
amos obtener el volumen de agua contenido en él a partir de la altura. Por razones tructivas, los depósitos del banco no son perfectamente rectangulares, por lo que su sión varia en función de la altura.							
Es por esto, por lo que es conveniente obtener la ley de variación del volumen de contenido en los mismos en función de la altura. Para ello utilizamos un matraz aforado con de que iremos llenando poco a poco los							
sitos, anotando cada vez que vertemos el contenido del matraz en el depósito, la a de agua alcanzada.							
A partir de los resultados obtenidos, podemos establecer la relación altura de agua men contenido para cada uno de ellos.							
V = K.h		Valor medio					
	Con lo que El banco se suministra con u	V =					
						Valor medio	
					Con lo que	V =	* b

The practical manual shows and explains all the theoretical foundations, as well as the mathematical formulas used to carry out all the experimentation.





The equipment has pressure ports prepared to be able to perform the analysis and calculation of the characteristic curve of the pump.



The lower tank has a coupling for easy filling and emptying of the equipment.





The upper tanks have calibrated rules to facilitate the work of the student in the flow measurements.





Optional Accessory: FLQ-320Im - ELECTRONIC FLOW METER FOR FL 01.7 Electronic flow meter with display for FL 01.7 hydraulic bench.

The flowmeter has a digital display where the flow that circulates through the hydraulic circuit is visualized. Its installation in a hydraulic bench allows to obtain measurements in a much faster and more precise way.

The installation of this accessory on the bench is done by means of threaded links, which allows it ti be done in a simple, fast and safe way.



LEARNING OBJECTIVES

With the equipment, the following experiments can be performed, among others:

- Calibration of a volumetric tank.
- Measurement of volumetric flow rates.

TECHNICAL DATA

Pump Characteristics:

- 2 pumps in parallel.
 Maximum manometric height 24 m wc.
- Flow: 20 / 120 l/min or 240 l/min.
- Manometric height: 23 / 12 m wc.
- Consumed power 0,55 kW (0,75 HP) or 1,1 kW (1,5 HP).
- Turning speed 2900 r.p.m. (50 Hz).

Tanks:

• Storage capacity in lower tank: 120 litres. (available version with 250 l) .

Measurement of levels by vertical manometers, and calibrated rules in liters.

• Upper calibration tanks.

- 0 to 8 litres.
- 0 to 40 litres.

<u>Dimensions</u>

• Width x lenght x height: 1300 x 845 x 975 mm.

Included ancillary:

Stop-watch.

REQUIREMENTS

• Input: 230V/50Hz.