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### **Transparent Hydraulic System Trainer 0.8 MPa**

**PN:0401010070**

#### **Transparent Hydraulic System Trainer**

##### **Features**

This transparent hydraulic trainer is a professional hydraulic circuit design and demonstrating of hydraulic experimental platform. The internal structure and working principle of various hydraulic components can be convenient studied in the hydraulic teaching class. All transparent hydraulic components are made according to actual internal structure of industrial hydraulic components which can reflect tectonic principle and work principle of industrial hydraulic components. All hydraulic components are made of imported transparent plexiglass with performance of high diaphaneity, small volume and light weight etc. Students can learn the structure, work principle and function of each single hydraulic components, and also can constitute any fundamental hydraulic circuit to survey movement situation of spool in the loop tank and flow direction of fluid in the spool body. It can meet the teaching of the different hydraulic disciplines for demonstrating and training of:

- 1, The composition of hydraulic transmission system.
- 2, The structure and working principle of various parts of a hydraulic transmission system observing, disassembly and assembly training.
- 3, PLC electrical control experiment: machine-electric-hydraulic integrated control experiments.

4,The basic hydraulic circuit constitution

## **Transparent Hydraulic System Trainer**

### **Performance**

1,The training panel is designed as T-slot and all hydraulic components use rapid joint which can inserted for easy operation.

3,the hydraulic components are made of transparent plexiglass,the structure and the working process of the hydraulic components are vividly demonstrated.

4,Circuit experiment adopts leak proof fast inserted interface makes experiment circuit assembly simple, quick, clean

5,All hydraulic components fixed floor adopts quick type slab fixed.

6,All hydraulic components are made at high-precision according to standard physical structure.

7,Good sealing performance,There is no leakage of hydraulic components when the system is working under the conditions of a pressure not more than 0.8 MPa.

8,With three control modes:PLC control,relay control and manual control.

## **Transparent Hydraulic System Trainer**

### **Typical Training Contents**

#### **Part A Basic Hydraulic Circuit Constitution and Training**

##### **1.Pressure control circuits**

###### **1.1 Pressure regulated circuit**

1.1.1 Pressure regulated circuit by pressure relief valve/overflow valve

1.1.2 Multi-stage pressure regulated circuit by multi-stage pressure relief valve/overflow valve

###### **1.2 Pressure reducing circuit**

1.2.1 One-stage pressure reducing circuit

###### **1.3 Pressure holding circuit**

1.3.1 Pressure holding circuit by pilot check valve

## **1.4 Decompression circuit**

1.4.1 Decompression circuit by throttle valve

1.4.2 Decompression circuit by sequence valve

## **1.5 Pressure relief circuit(Pressure-venting circuit)**

1.5.1 Pressure relief circuit by two position two-way valve

1.5.2 Pressure relief circuit by pilot oriented pressure relief valve/overflow valve

1.5.3 Pressure relief circuit by two position two-way valve

## **2.Speed control circuits**

### **2.1 Speed regulated circuit**

2.1.1 Oil-inlet throttle speed regulated circuit (constant pressure throttle governor)

2.1.2 Oil-return throttle speed regulated circuit (constant pressure throttle governor)

2.1.3 By-pass throttle speed regulated circuit (variable pressure throttle governor)

2.1.4 Differential connection fast-speed movement circuit

2.1.5 Speed regulated circuit by speed regulated valve

2.1.6 Speed-reducing/Slow-speed circuit by solenoid valve and speed regulated valve

2.1.7 Differential circuit of two position three-way valve

2.1.8 Secondary feed circuit

### **3.Direction control circuit**

#### **3.1 Reversing circuit**

3.1.1 Reversing circuit by reversing valve

### **4.Double/Twin cylinders synchronous/sequence circuit,**

#### **4.1 Sequence action circuit**

4.1.1 Sequence action circuit by sequence valve

4.1.2 Sequence action circuit by proximity switch, reversing valve

4.1.3 Sequence action circuit by pressure relay, proximity switch

#### **4.2 Synchronization circuit**

4.2.1 Double/Twin cylinders synchronization action circuit

4.2.2 Synchronization circuit by shunt valve

4.2.3 Synchronization circuit by speed regulating valve

4.2.4 Synchronization circuit by throttle valve

### 4.3 Lock circuit

4.3.1 Lock circuit by reversing valve

4.3.2 Lock circuit by pilot check valve

4.3.3 Lock circuit by one-way valve

### 5. Relay control circuit

5.1 Sequence control by relays, proximity switches

## Part B. PLC electrical control experiment(machine - electric - hydraulic integrated control experiments.)

1. PLC programming instructions and ladder programming

2. Learn and use PLC programming software

3. Communication of PLC and computer

4. PLC application and optimization solutions in the hydraulic transmission system.

### Transparent Hydraulic System Trainer

#### The Main Technical Parameters

Nos	Items	Specification	
1	Variable vane pump	Rated power	0.75kw
		Voltage	380v/50hz
		Displacement	12L/min
		Max Pressure	7Mpa
		Rated speed	1380r/min
2	Fluid air cooling circulator	Rated power	38w
		Voltage	220v
		Displacement	20L/min
		Pressure	1.4Mpa
3	Cooling tank	volume	50L
4	Dimensions	L*W*H	1570*580*1670mm