



# Hydraulic Equipment Catalogue

## Please note before using this catalogue:

This catalogue was planned and edited in such manner it can be used in the planning of hydraulic system, for product recommendation, and as technical material for those who usually handle oil hydraulic equipment.

### Product description

This catalogue describes Yuken's primary standard oil hydraulic equipment.

### Details of Description

The principal details described for each model include the following.

- Specifications
- Model Number Designation
- Instructions
- Attachment
- Outer dimensional drawing
- Performance characteristics
- List of seals
- Interchangeability between new and old products
- Others

However, there are some models for which descriptions are shortened. In this case, please request for separate materials.

## Design Standards

The range of Yuken hydraulic products is available to three different Design Standards as follows:

- a) Those products manufactured for use in Europe and other countries using metric standards are designed to meet the appropriate CETOP, DIN and ISO standards and are identified as "80" Design Standard.
- b) Those products manufactured for use in North America are designed to meet the appropriate NAS, USAS and NFPA standards, and are identified as "90" or "950" Design Standard.
- c) Those products manufactured for use in Japan are designed to meet the appropriate JIS standards, and have no suffix to the Design Number.

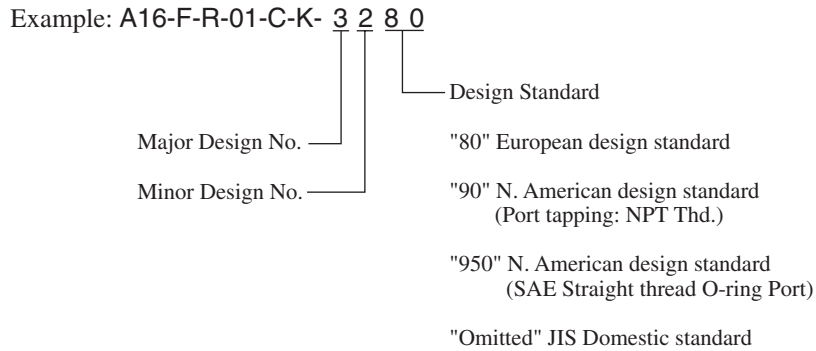
The distinctive features of the various Design Standards are as shown below.

Design Standard Feature	European Design Standard	N. American Design Standard ♦		Japanese Standard "JIS"
	"80" Design Standard	"90" Design Standard	"950" Design Standard	
Port Tapping	BSP. F	NPT	SAE Straight Thread O-ring Port (UN/UNF Thread)	Rc
Pressure Gauge Connection	BSP. Tr	NPT		Rc
Mounting Bolt	Metric	UNC		Metric
Conduit Entry	BSW	NPT		G

♦ For North American Design Standards, this catalogue describes "950" for AR/A/A3H Series Variable Displacement Piston Pumps and "90" for other control valves. Control valves with "950" are also available. Please contact us for the details.

## Design Number

Yuken products have factory applied Design numbers, the key to which is as follows.



Design Numbers are subject to change. But installation dimensions and specifications remain unchanged for variation in the second digit of design numbers (minor design number).

## Index System

When looking up products by name, please use to “Yuken hydraulic Equipment Catalogue Index” on [page 6](#).




When looking up products by model number, please use the “Model Number Index” on [page 9](#).

# Safety Precautions





To prevent serious accidents, equipment damage, and other property damage, please observe the following precautions, as well as all related regulations regarding safety.

Before using the product, be sure you read and understand all the instructions in the Operator's Manual entirely.






In this catalogue, safety precautions are classified into three ranks: DANGER, WARNING, and CAUTION. These words are defined as follows:

-  **DANGER:** Indicates an imminent danger that is very likely to cause death or severe injury unless the situation is avoided.
-  **WARNING:** Indicates a potential danger that may cause death or severe injury unless the situation is avoided.
-  **CAUTION:** Indicates a potential danger that may cause a minor or moderate injury or that may result in property damage.










## 1. Precautions for Use

-  **CAUTION** ① To avoid possible injury when handling the products, wear protective safety equipment in accordance with the instructions in the Operator's Manual.
-  **CAUTION** ② Failure to support the weight of the product or lifting the product with improper posture may result in injury to the hands or back. Be sure to follow the instructions in the operator's manual.
-  **CAUTION** ③ Do not climb on, strike, drop or exert unnecessary force on the product. This may lead to injury or fire due to improper operation, damage, or oil leakage.
-  **CAUTION** ④ Oil on the product or floor must be cleaned up thoroughly. Oil could cause you to drop the product or slip on the floor.






## 2. Precautions for Installation, Removal, and Maintenance

-  **WARNING** ① All installation, removal, maintenance, piping or wiring should be performed by properly trained personnel.
-  **WARNING** ② Before starting the work for installation, removal, maintenance, piping and wiring, do the following jobs. Failure to do these jobs may cause the equipment to move suddenly or spout the oil from it during the work, which eventually may cause the serious accidents.
  - Shut off the power supply to the equipment and make sure that all the electrical motors or engines have stopped.
  - Fix the Cylinder rod not move/move down when installing/removing the Cylinder.
  - Get the pressure in the pipes and cylinders in the hydraulic system back to zero pressure.
-  **WARNING** ③ Before working on any electrical wiring, be sure to shut off the power supply. Failure to do this may cause electrical shock.
-  **CAUTION** ④ Keep all installation holes and surfaces clean. Failure to do this may cause insufficient tightening of the bolts that may cause fire due to oil leakage.
-  **CAUTION** ⑤ Before installing the product, be sure that all specified bolts are tightened with the specified torque. Tightening with the outside specifications may cause improper operation, damage, oil leakage, etc.


## 3. Precautions for Operation

-  **DANGER** ① Never operate any device in an environment where there is danger of explosion or fire, unless the device is fully protected. This may lead to major and serious accidents including explosion or fire.
-  **WARNING** ② Do not approach near the pumps or motors in operation. There is a fear of injury by such an accident that the hands or clothes are caught by or coiled into the pumps and the motors.
-  **WARNING** ③ In event of abnormal operation (unusual sounds, oil leakage, smoke, etc.), immediately stop operation and take appropriate corrective measures.
-  **WARNING** ④ Completely discharge air from the cylinder at low pressure. Failure to do so may result in unexpected movement of the cylinder, which in turn may cause injury.
-  **WARNING** ⑤ To adjust the cushion, gradually increase the cylinder speed from a low speed [50 mm/s (2 in./s) or less]. Rapidly accelerating the cylinder may produce abnormal surge pressure, resulting in damage to the cylinder or the machinery and consequently leading to a serious accident.
-  **CAUTION** ⑥ Before operating this device for the first time, check that hydraulic and electrical circuits are properly connected and that adjoining surfaces are tightly aligned.
-  **CAUTION** ⑦ Do not use the product out of the specification as described in the catalogue, related data sheets, drawings, etc. Not doing so may cause improper operation, damage or injury.
-  **CAUTION** ⑧ During operation, high temperatures in the hydraulic system or solenoid units may occur. Wear protective gear on hands and body when around these parts.
-  **CAUTION** ⑨ Be sure to operate the product with proper oil, and within established ranges for temperature, viscosity and purity. Use outside of specified limits may cause improper operation or fire due to oil leakage.

## 4. General Precautions

-  **WARNING** ① Never convert the products. If any conversions are made, unexpected machine movement may cause injury.
-  **CAUTION** ② Do not disassemble or change the products without prior consent of the manufacturer. Failure to do this will cause the products not to perform the specified performance and characteristics, and moreover will become the causes of the accidents or failures.
-  **CAUTION** ③ For transportation/storage of the product, pay attention to environmental conditions, such as ambient temperature and humidity, and take anti-dust/rust measures.
-  **CAUTION** ④ The seals may be required to replace if the products is used after long-term storage.
-  **CAUTION** ⑤ Read the manual thoroughly and take due care to replace the seals.

## 5. Related Regulations

-  **CAUTION** To ensure that this product is used in a safe manner, it is essential to observe the above precautions, as well as all related regulations regarding safety.

## Head Office and Sagami Plant



● Sagami Plant Front Gate



● R&D Centre Design Room

## Fukuroda Plant



# Outline of the Company

## Live with hydraulic (Challenge to possibility)

The speed of technological innovations in the 21st century, hydraulic technology is also expected to undergo great change.

We **YUKEN** have been making efforts to meet the expectations of wide range of industrial fields as a leading manufacturer in hydraulic equipment, always thinking “What do our customers want?”. It is YUKEN’s desire to continue our efforts in development by fusing oil hydraulic with all high technology rather than adhering solely to it to ensure a widespread use of oil hydraulic in our daily lives.

Trade name: Yuken Kogyo Co., Ltd.

Inception: 1929

Incorporation: 1956

Capital: ¥4,109,101,656 (as of April 2007)

Sales: ¥19.4 billion (as of 2006)

Number of employees: about 460 persons (as of April 2007)

Head office: 4-34, Kamitsuchidana-Naka 4-chome, Ayase,  
kanagawa Prefecture, 252-1113, Japan

Tel. 0467-77-2111

International Sales Department : Hamamatsucho Seiwa Bldg., 4-8, Shiba-Daimon  
(Tokyo office)

1-chome, Minato-ku, Tokyo, 105-0012, Japan

Tel. 03-3432-2110 Fax. 03-3436-2344

URL <http://www.yuken.co.jp>

E-mail [int.bd@yuken.co.jp](mailto:int.bd@yuken.co.jp)

### Products:

#### ● Hydraulic equipment for industrial use:

Hydraulic pumps, Hydraulic motors, Directional control valves,  
Pressure control valves, Flow control valves, Modular valves,  
Logic valves, Proportional electro-hydraulic control equipment, Servo valves,  
Hydraulic cylinders, etc.

#### ● Hydraulic equipment for industrial vehicles

Hydraulic pumps, Hydraulic motors, Various control valves, etc.

#### ● Hydraulic systems

Various hydraulic systems for industrial machine,  
Various hydraulic systems for marine use, Special hydraulic power units,  
Various standard power packs, etc.

#### ● Applied hydraulic products

##### ◆ Environmental machinery

A compacting & separation machine for kitchen garbage,  
Automatic shavings compactor KIRIKO,  
PET bottle compacting press,  
Various compactors

#### ● Factories:

Sagami plant: 4-34, Kamitsuchidana-Naka 4-chome, Ayase, Kanagawa Prefecture, 252-1113  
Tel. 0467-77-2111

(Technical Center, Sagami factory, Component Assembly Centre, Hydraulic System Centre)

Fukuroda factory: 65, Kitadage, Daigo-machi, Kuji-gun, Ibaraki Prefecture, 319-3521  
Tel. 02957-2-0425