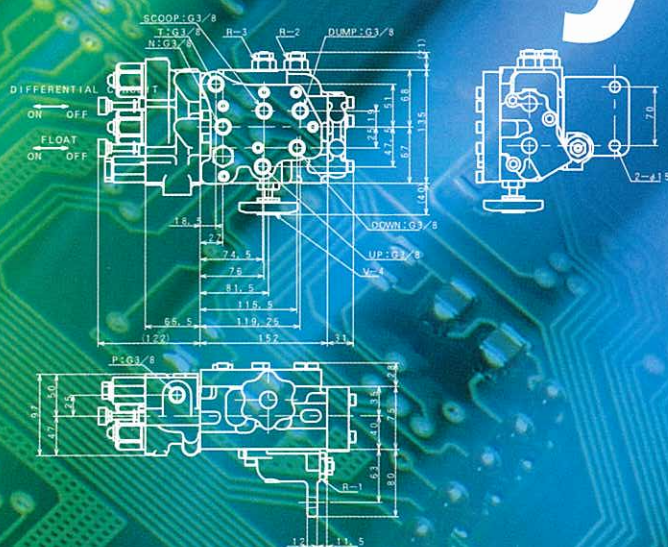


SANYO KIKI

Hydronics

Hydraulic & Electronic Components Catalogue



Sanyokiki Hydraulic & Electrical Components Chosen for their Precision & Quality

We first began developing our unique hydraulic technology for our evolutionary Front Loader (pictured below), a product that we can confidently boast to be one of the very best in the world.

We have since developed a wide range of hydraulic parts and machinery, that are now being used extensively both domestically and internationally. In recent years we have combined our hydraulic components with new electronic control technology, aiding in important cost reduction. It is this combination (of hydraulic and electronics) that inspired us to coin the world "Hydronics".

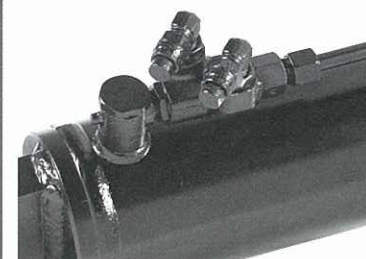
At our company, we work hard to meet our customer's needs with high quality products at a low cost. If you have a need to incorporate hydraulics into any machinery we would be more than happy to discuss your needs and give you an obligation free quote.

For more details on these, or any of our many other products, please feel free to contact us!



●Example use of hydraulic machinery demonstrated here by our revolutionary front loader

Pilot Check Valve PCV1600



- Its compact built in type construction greatly reduces required space.
- Will keep the cylinder in position much longer if internal leakage occurs in the directional control valve.

If internal leakage occurs in the directional control valve the resulting oil loss leads the cylinders to fall down by their own weight this valve serves as a buffer holding the cylinders in place for much longer periods of time.

Pilot Check Valve PCV2000·2100



- Single and double pilot valve types. Available in port sizes 1/4(2000,2100).
- Will keep the cylinder in position much longer if internal leakage occurs in the directional control valve.

Ball / Needle Valve ABV3000·ANV3001



- This valve is designed for opening and closing oil lines and controlling flow.
- Even under high hydraulic pressure this valve can be opened or closed with ease.

Rated flow: 40 L/min
Rated pressure: 20.6MPa(210kgf/cm²)

Easy Order Cylinder Series



- These cylinders are constructed to prevent contaminants, such as dust, from easily entering the system. If contaminants do find their way into the system they will still continue to work for long periods.
- They offer great cost performance and are easily configurable to meet your needs for quick delivery.

3Point Hitch Cylinders



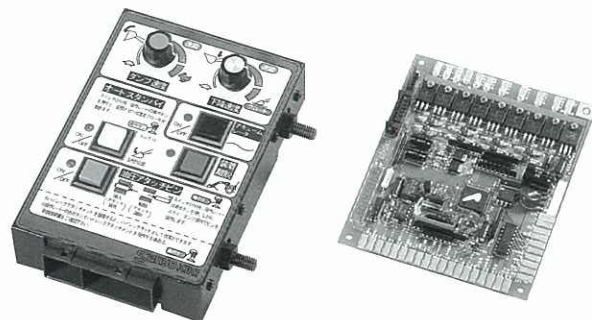
- A three point link hydraulic cylinder designed for tractors.
- Available in top link, lift rod, check chain and power assist types.
- Power assist types can also be adjusted to provide additional power where necessary.

3Way Directional Control Valve TBV3000



- Three way directional control valve that can be switched with your finger-tips.

Electronic Control Unit



- Electronic control device for hydraulic machinery.
- Controlling leveling, positioning, clearance and speed.

Controller



- Remotely controls our solenoid directional valve.
- Allows you to control 2 systems with the one lever.
- An optional additional switch can be added to allow for the control of up to 4 systems.

Stack type Manual Directional Control Valve ASV50



- Small and light weight manually operated stack type directional control valve.
- This manual control type offers unsurpassed cost performance.
- Available in either parallel circuit, series circuit or tandem circuit types with a diverse range of accessories that can be added.

Available Options
detent, closed center, carryover, motor spool, port relief, single to double action direction switch.

Stack type Electronic Directional Control Valve ASV50E



- Small and light weight solenoid operated stack type directional control valve.
- Available in either parallel circuit, series circuit or tandem circuit types with a diverse range of accessories that can be added.

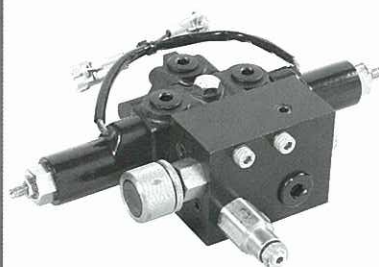
Available Options
Closed center, carryover, motor spool, port relief, single to double action direction switch.

Slow Return Check Valve ACV2000-3000



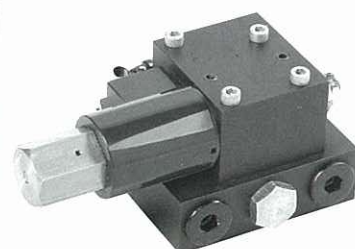
- Controls the oil flow rate volume and direction.

Flow Control Stack Valve VFPV50+ASV50E



- A combination of a flow control and stack type solenoid operated valves.
- Divides one flow line into one priority line and one secondary line.
- Varies the rate of flow to the priority line.
- This two type built in combination design greatly reduces user costs.

Electronic Proportional Directional Control Valve PSV10F



- A combination of electronic proportional and solenoid operated valves.
- It's compact design greatly reduces space requirements.

Max flow: 60L/min
Max working pressure:
20.6MPa (210kgf/cm²)

Solenoid Circuit Selector Valve CSV4000



- A Sanyokiki original design, this unique small size, light weight oil flow directional control valve uses only one spool for operation.
- Available in 2 position 6 port or 3 position 8 port valve types.
 - Will run on either 12V or 24V power supply.

Max flow: 80L/min
Max working pressure:
20.6MPa (210kgf/cm²)
Operating power supply:
DC12V or DC24V

Single Block Manual Operated Directional Control Valve TCV30



- Very small and very light low cost manual control directional valve.
- Another version that is able to be directly mounted to the main frame of a tractor is also available.

Single Block type Solenoid Operated Directional Control Valve HSV1000



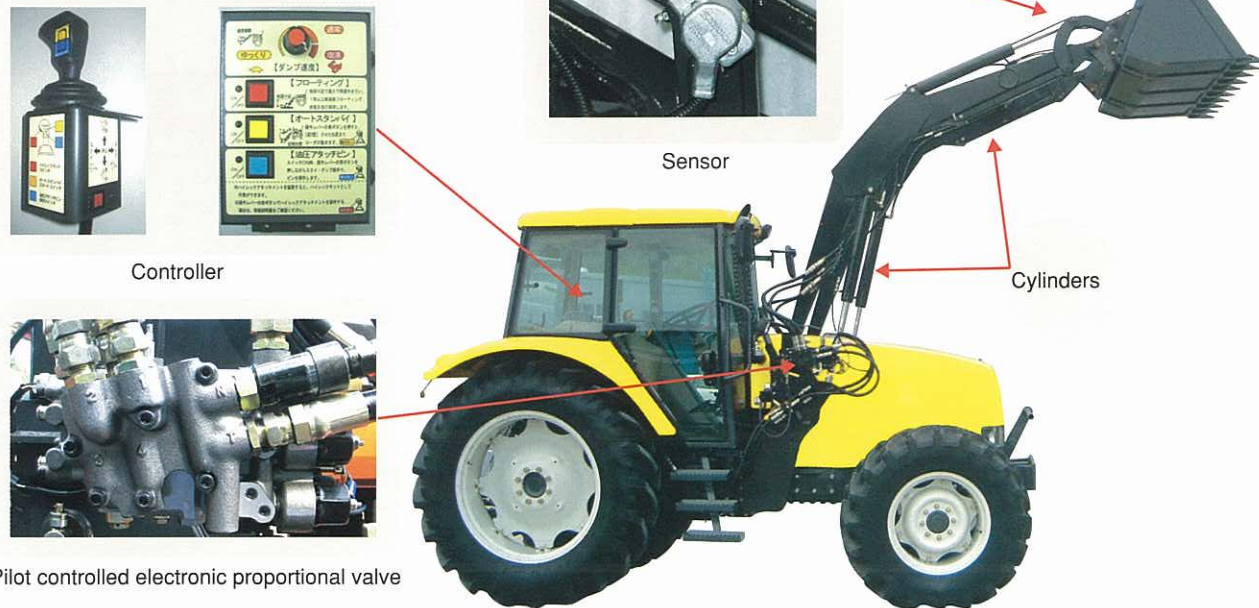
- This solenoid operated directional control valve can be powered by either a 12V or 24V power supply.
- Can be operated by a remote control switch.

Max flow: 40L/min
Max working pressure:
20.6MPa (210kgf/cm²)
Operating power supply:
DC12V or DC24V
Available in closed center, all posts open, single or double action types.

The search to create a better Hydraulic Control System

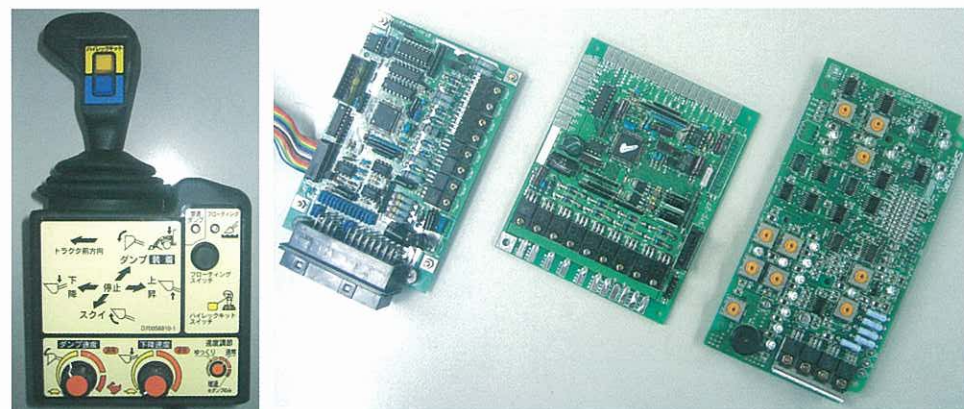
1 From Hydraulic Machinery to Electronic Control Systems

- We are able to supply hydraulic control systems to meet the needs of our customers.
- We are also able to develop new hydraulic and electronic control systems.



2 Electronic Control System Development

Drawing on our specialist knowledge as a hydraulic system maker, we are continuously striving to create better electronic control devices. We are now design and develop new electronic circuit boards and micro-computer control programs.



3 Control Items

- For cylinders and motors
- Position Control
 - Speed Control
 - Pressure Control
 - Sequence Control
 - Direction Control
 - Angle Control
 - Radio Control
 - Electric Current Control
 - Electric Current Stabilizer

4 Sensor Items

- Potential Meter
- Incline Meter
- Pressure Sensor
- Pivot Sensor
- Ultra Sonic Sensor
- Acceleration Sensor
- Angle Velocity Sensor
- Infrared Sensor

5 Control Switches

- Switches (toggle switch, limit switch, approach switch)
- Joystick (operating lever)
- Touch panel switch

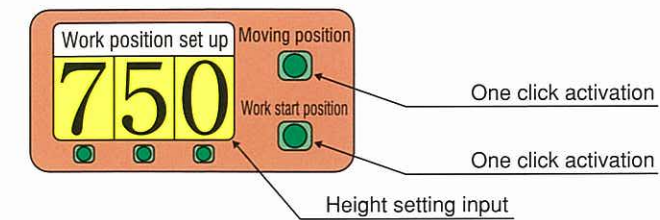
6 Indicators

- LCD display (character type, Dot type)
- Segment display
- LED

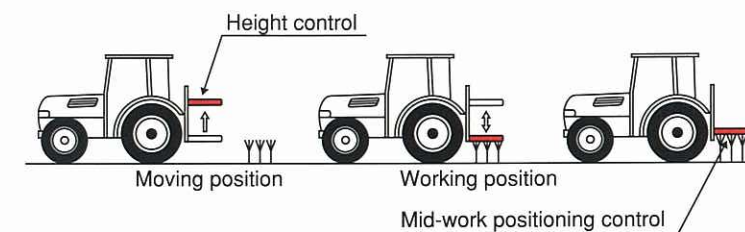
Example Hydraulic cylinder control (speed and position control)

1 Control Example

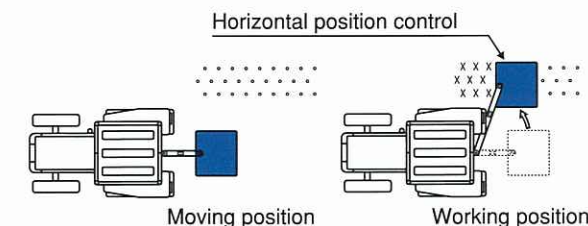
① Controller



② Hydraulic cylinder speed, position and attachment height control



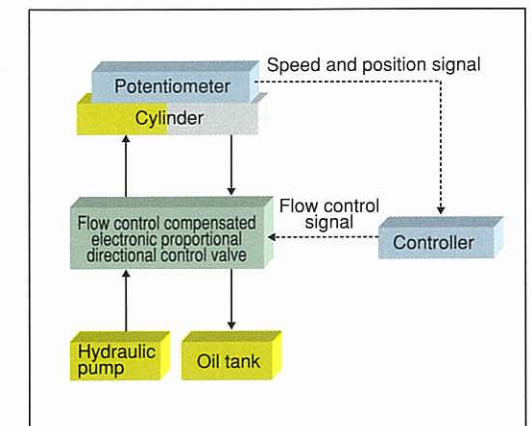
③ Hydraulic cylinder speed, position and attachment horizontal control



2 Control Contents

Hydraulic cylinder speed and position control

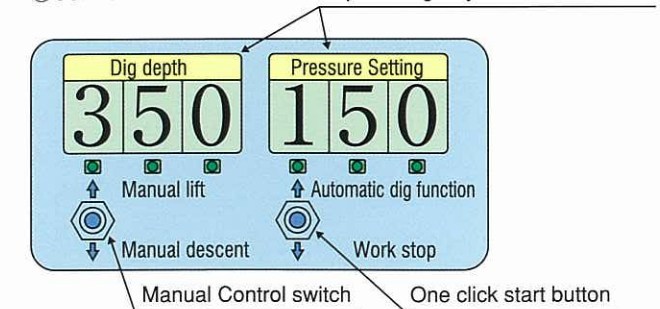
- ① Work operations and positioning are inputted digitally.
- ② With one click of work position or movement buttons the attachment will move into place to the millimeter of the pre-inputted setting.
- ③ During operation position real time feedback allows it to keep running at the exact pre-inputted setting.
- ④ Controls the hydraulic valve to regulate flow volume
- ⑤ Utilizing an electronic proportional directional control valve to control speed and positioning.



Example Hydraulic motor load detection and cylinder positioning control

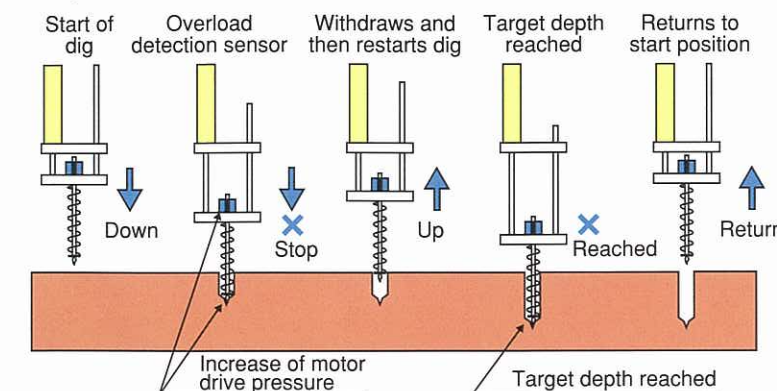
1 Control Example

① Controller



② Cylinder positioning controls the dig depth.

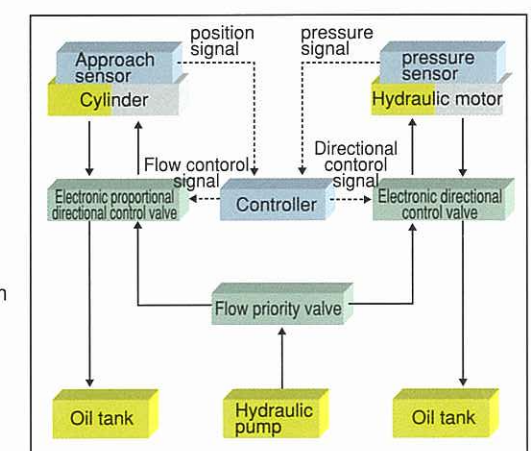
By controlling the hydraulic motor pressure increases dig efficiency.



2 Control Contents

Hydraulic motor load and cylinder positioning control

- ① Dig depth and Pressure setting are inputted digitally
- ② One click of the Automatic dig button starts dig
- ③ Spins the Spiral drill bit as it pushes downward
- ④ If there is an overload in hydraulic pressure the system automatically pulls back before and then restarts the dig.
- ⑤ Once the target depth is reached it automatically returns to the start position
- ⑥ Returns to original start position



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