

Turbo Molecular Pump Unit Selection Guide

• **Model YTP-SA automated unit with abundant expandability and various interlock functions**

The YTP-SA series (type I) provides automatically operated pump units using sequencer control. Various interlocks are included and pumping is stopped and a warning light is lit when an abnormality is detected.

Pumping operations are started by simply pressing the start switch. Automatic pumping operations involve the following procedure:

Oil rotary vacuum pump startup -> Fore valve opened after several seconds -> Rough suction starts -> Turbo-molecular pump operation starts when the Pirani vacuum gauge reaches 10 Pa -> YTP startup completed approximately 1 minute after the turbo-molecular pump begins normal operation.

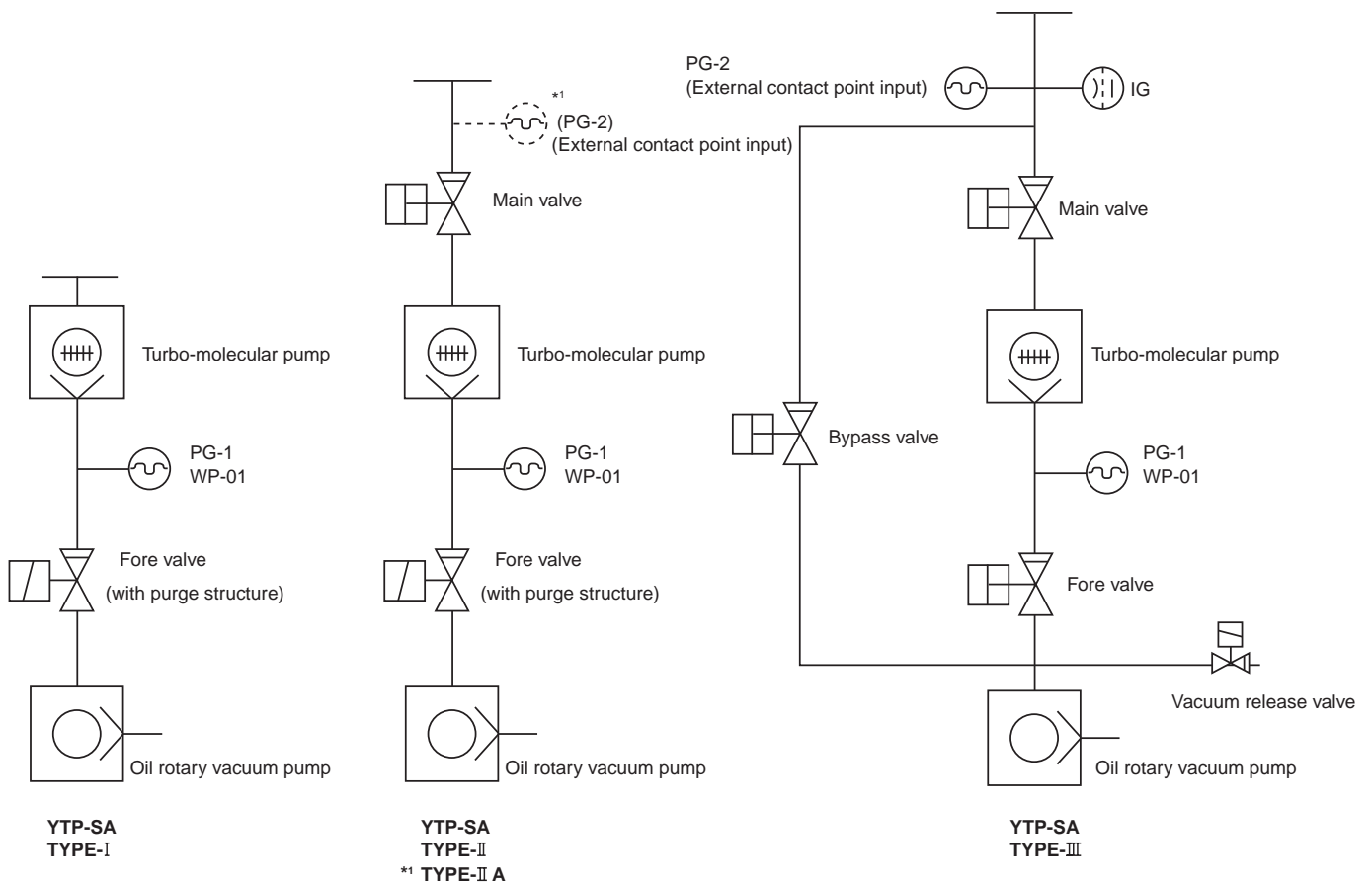
Pumping operations are stopped by simply pressing the stop switch. Automatic stopping of the pump unit involves the following procedure:

Begin slowdown of turbo-molecular pump -> Fore valve closed and oil rotary vacuum pump stopped -> After several seconds the oil rotary vacuum pump is vented -> YTP stop is

complete when the turbo-molecular pump completely stops. The YTP-SA type II, type IIA, and type III are made to order.

- Type II contains the type I unit with an added air driven main valve and various equipment added for main valve operation.
- Type IIA provides the type II unit with opening and closing of the main valve using the contact point output from a Pirani gauge installed in the up-flow side (side being purged) of the main valve. This is only a change in the sequence software. The structural equipment is the same as type II.
- Type III contains the type IIA unit with an added bypass pump line (bypass valve, flexible tube, piping, etc.).
- Upgrades to of type I, type II, type IIA, and type III are possible.

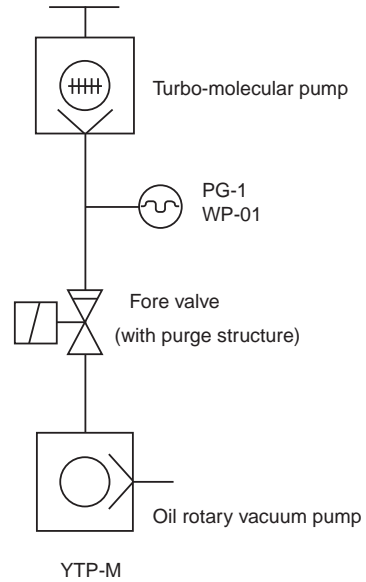
YTP-SA Series Vacuum Pumping Unit Diagram



• Model YTP-M Simple Manual Unit

The YTP-M series provides manually operated pumping units where each unit is operated manually. Pumping operations are started by first turning the start switch ON. The oil rotary pump is thereby started and, after several seconds, the fore valve opens (automatic). Rough vacuum pumping is therefore started. After checking that the Pirani vacuum gauge has reached 10 Pa, the start switch of the turbo-molecular pump controller is pressed to start the pump. YTP startup is complete when the turbo-molecular pump reaches normal operation. Pumping operations are stopped by first turning the stop switch ON on the turbo-molecular pump controller in order to begin pump slowdown. The YTP switch is then turned ON to close the fore valve and stop the oil-sealed rotary vacuum pump. The oil-sealed rotary vacuum pump is vented after several seconds and YTP shutdown is complete when the turbo-molecular pump stops completely.

YTM-M Series Vacuum Pumping Unit Diagram



YTP Application Example

- 1. Small experiment equipment
- 2. Main pumping system
- 3. Back pumping system or differential pumping system

