PowerTrap® SYSTEM PACKAGE

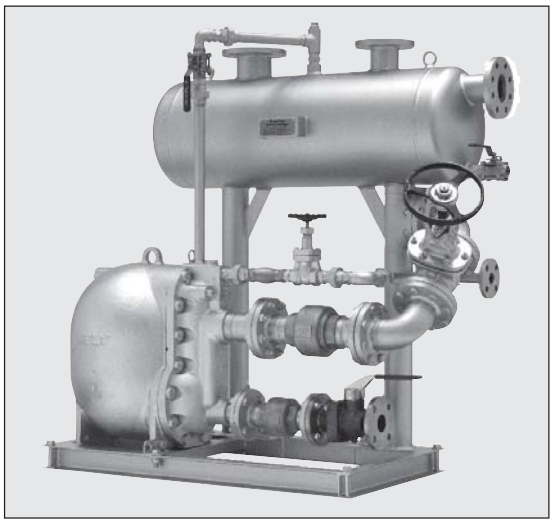
MODEL GP10-1CJ/GP10-2FJ

READY-TO-CONNECT MECHANICAL PUMP AND TANK PACKAGE

Features

Mechanical pump package incorporating a PowerTrap non-electric, mechanical pump for condensate removal and recovery, and pre-assembled with all necessary piping and valves for ease of installation, operation and maintenance.

1. Handles high-teperature condensate without cavitation.
2. No electric power or additional level controls required, hence INTRINSICALLY SAFE.
3. Can be used after connecting a condensate inlet, condensate outlet, motive medium inlet, overflow outlet, and an exhaust connection.
4. Cycle Counter installable as option.



Specifications

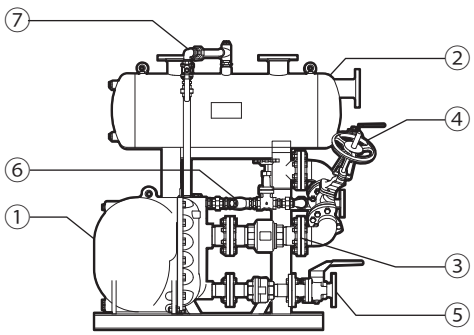
Model			GP10-1CJ	GP10-2FJ
Connection (mm)	Condensate Inlet		80 ASME Class 150RF	100 ASME Class 150RF
	Condensate Outlet		50 ASME Class 150RF	50 ASME Class 150RF
	Motive Medium Inlet		25 ASME Class 150RF	40 ASME Class 150RF
	Exhaust		100 ASME Class 150RF	150 ASME Class 150RF
	Overflow Outlet		80 ASME Class 150RF	
Maximum Operating Pressure (MPaG)		PMO	PowerTrap Unit: 1.05**	
Maximum Operating Temperature (°C)		TMO	PowerTrap Unit: 185	
Motive Medium Pressure Range (MPaG)			0.03 to 1.05	
Maximum Allowable Back Pressure			0.05 MPa less than motive medium pressure used	
Volume of Each Discharge Cycle (ℓ)			Approx. 30.0	
Condensate Tank Capacity (ℓ)			85	285
Maximum Allowable Flash Steam (kg/h)			Max. 500	Max. 1200
Motive Medium			Saturated Steam, Compressed Air, Nitrogen	
Pumped Medium*			Steam Condensate, Water	

* Do not use with toxic, flammable or otherwise hazardous fluids.
1 MPa = 10.197 kg/cm²
** The condensate tank unit must be under atmospheric conditions.
Other flanged connections available. Internal connections are JIS.
PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 1.4 (PowerTrap Unit)
Maximum Allowable Temperature (°C) TMA: 220 (PowerTrap Unit)

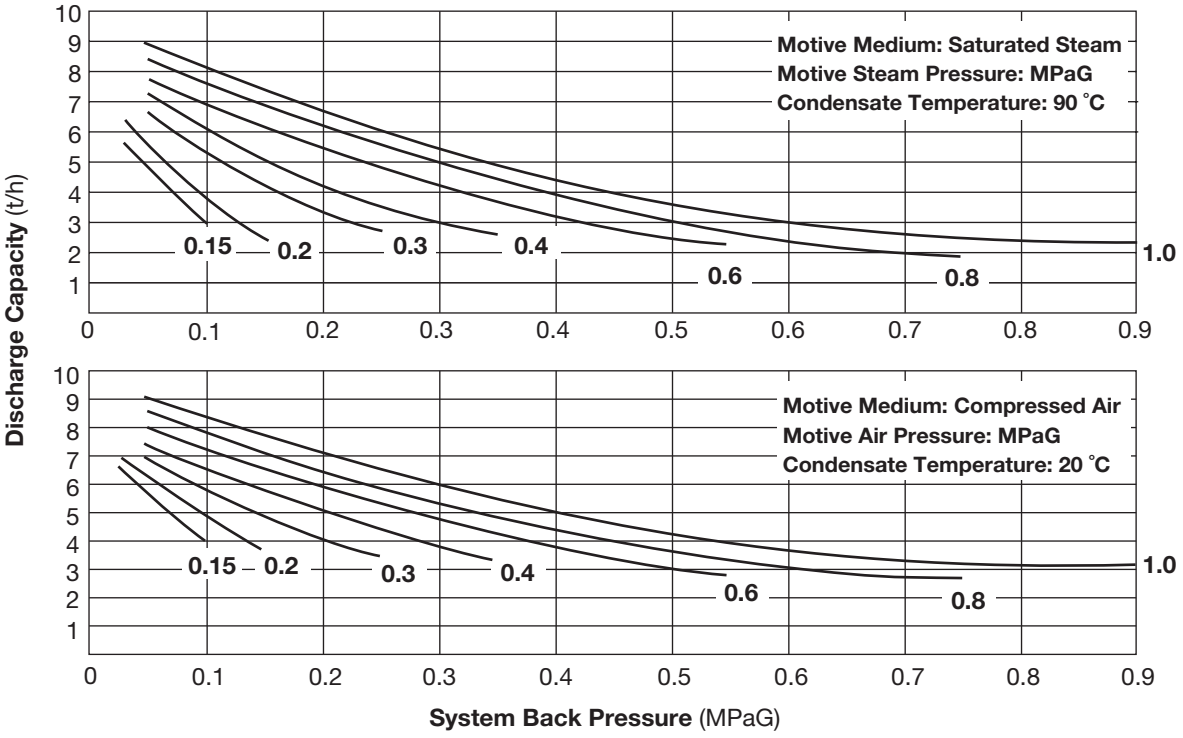
⚠ CAUTION To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI*
①	PowerTrap Unit	Cast Iron	FC250	A126 Cl.B
②	Condensate Tank Unit	Carbon Steel	STPY400	—
③	Condensate Check Valve Unit	Cast Stainless Steel	—	A351 Gr. CF8
④	Condensate Inlet Valve Unit	Ductile Cast Iron	FCD-S	A395
⑤	Condensate Outlet Unit	Cast Stainless Steel	—/CAC407	A351 Gr. CF8/ B584 C92200
⑥	Motive Medium Unit	Carbon Steel/ Malleable Cast Iron	STPG370/ FCMB270	A53 Type S Gr.A/ A47 Gr.32510
⑦	Exhaust Pipe Unit	Carbon Steel/ Malleable Cast Iron	STPG370/ FCMB270	A53 Type S Gr.A/ A47 Gr.32510

* Equivalent



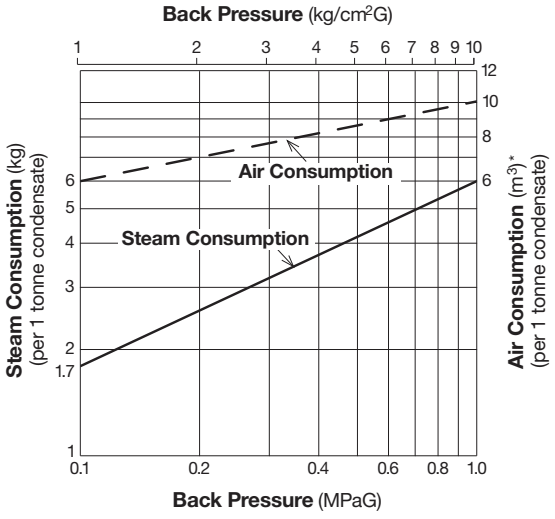
Discharge Capacity



NOTE:

- The discharge capacity is determined by the motive medium, motive medium pressure (Pm) and back pressure (P_2). Make sure that: Discharge Capacity > Required Flow Rate
- Motive medium pressure minus back pressure must be greater than 0.05 MPa.
- In closed system applications, the motive medium must be compatible with the liquid being pumped. If a non-condensable gas such as air or nitrogen is used as the motive medium, consult TLV for assistance.

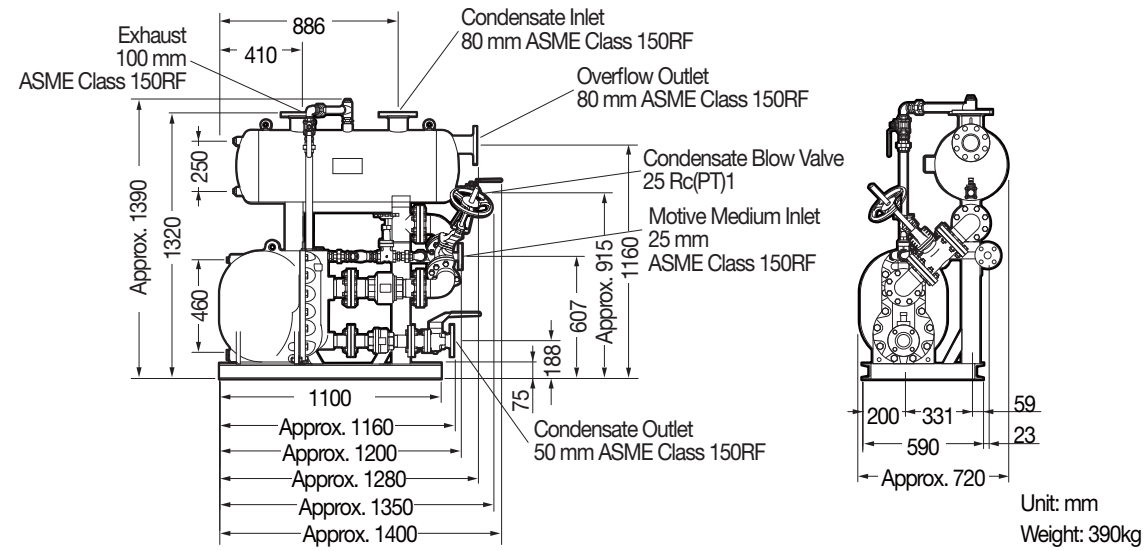
Steam or Air Consumption (Motive Medium)



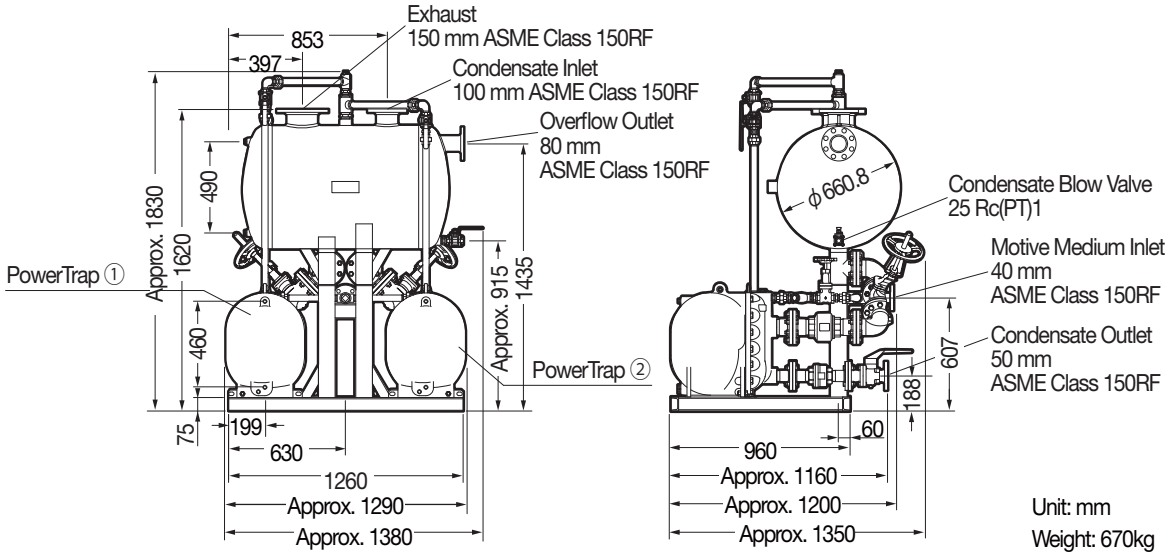
* Equivalent consumption of air at 20 °C under atomospheric pressure

Dimensions

- **GP10-1CJ**



- **GP10-2FJ**

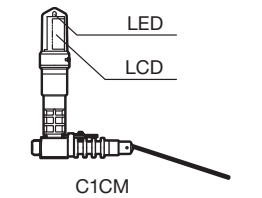


Cycle Counter (Option)

Two types of counter can be installed on the PowerTrap unit to monitor the number of pumping cycles and help to determine the timing of maintenance, or estimate the volume of pumped condensate.

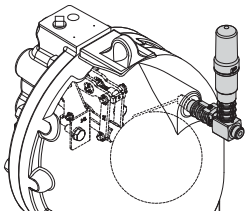
- C1CM - (Counter Unit Type):
  Self-contained standalone unit. Includes an LCD counter display and an operation indicator LED.
- C1SM - (Terminal Box Type):
  Designed for use with remote monitoring equipment and systems.

Intrinsically safe models are also available.
See the Cycle Counter SDS for further details.



C1CM


C1SM


Installation example

Optional Equipment*

Inlet strainer	GP10-1CJ: 80 mm ASME Class 150RF Cast Stainless Steel SCS14A GP10-2FJ: 100 mm ASME Class 150RF Cast Stainless Steel SCS14A
Motive medium pressure reducing valve	GP10-1CJ: COS-16** 25 + Pressure gauge + Valve set GP10-2FJ: COS-16** 25 + Pressure gauge + Valve set
Liquid level gauge for tank	Including connection parts
Liquid level gauge for PowerTrap	With siphon pipe and connection parts
Cycle counter for PowerTrap Unit***	See above

Custom specifications and options may also be available. Please contact TLV.
* Optional equiment should be installed after delivery to avoid damage during transportation.
** Refer to the individual specification data sheet (SDS) for full product details.
*** Pressure gauge and cycle counter cannot be installed on the PowerTrap unit when using the liquid level gauge for PowerTrap.

Manufacturer
TLV CO., LTD.
Kakogawa, Japan
is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001
ISO 14001
CERTIFIED ISO 9001 · ISO 14001

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