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SYSTEMS**

Your guide to innovative production

Surpass Auto connectors

Innovative products for semiconductor processes

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012026REV1

Surpass Auto connectors



Model AQCB
Page 5



Model SSAQCB
Page 6



Model S-SE2-AQC
Page 7-8



Model AQC-F
Page 9



Model SAQC-F/Model SAQC-316L
Page 10

Surpass Auto connectors

Model Selection Table

	Model type	Connection size	Features	Wetted parts material	Sensor function	Washing drying function	Connection error prevention function	Examples
High Purity Chemicals	Model AQCB	50A	No variation in product dimensions during connection/detachment operations, making it easy to incorporate into equipment.	PTFE, PCTFE, JACKET O-ring(FEP/FKM), Various O-rings	Forward•Backward Check Leak Check	O	O	Pressure Feeding 1m3•2m3 LORY ISO Container Device Receiving
	Model SSAQCB	40A 50A	Stainless steel specifications for organic chemicals of AQCB model	PTFE, PCTFE, SUS316L,SUS316, JACKET O-ring(FEP/FKM), Various O-rings		O	O	
	Model S-SE2-AQC	50A	Simplified model with no sensor, cleaning, drying function	PTFE,PCTFE, JACKET O-ring(FEP/FKM), Various O-rings	x	x	O	Pressure Feeding 1m3•2m3 LORY ISO Container

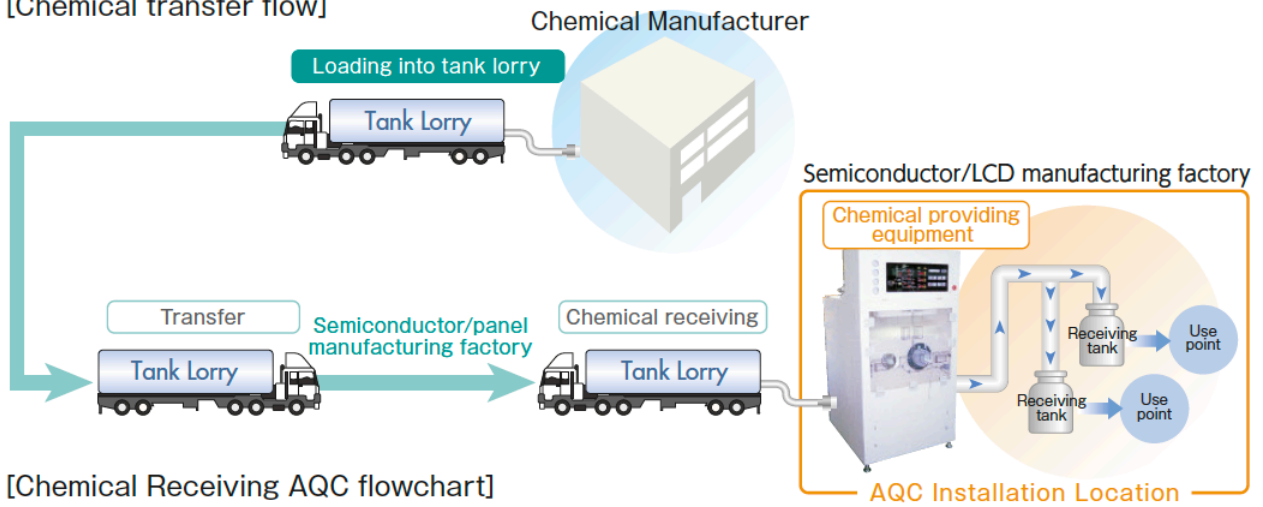
Socket/Plug Connection Compatibility

Socket	Plug		AQC		SAQC (SUS model)	
	Connection size		50A	50A	40A	50A
	Connection size	Key code(e.g.)	B	C	B	B
AQCB	50A	B	O	X	X	X
		C	X	O	X	X
	SS40A (SUS model)	B	X	X	O	X
	SS50A (SUS model)	B	X	X	X	O
S-SE2-AQC	50A	B	O	X	X	X
		C	X	O	X	X

012026REV1

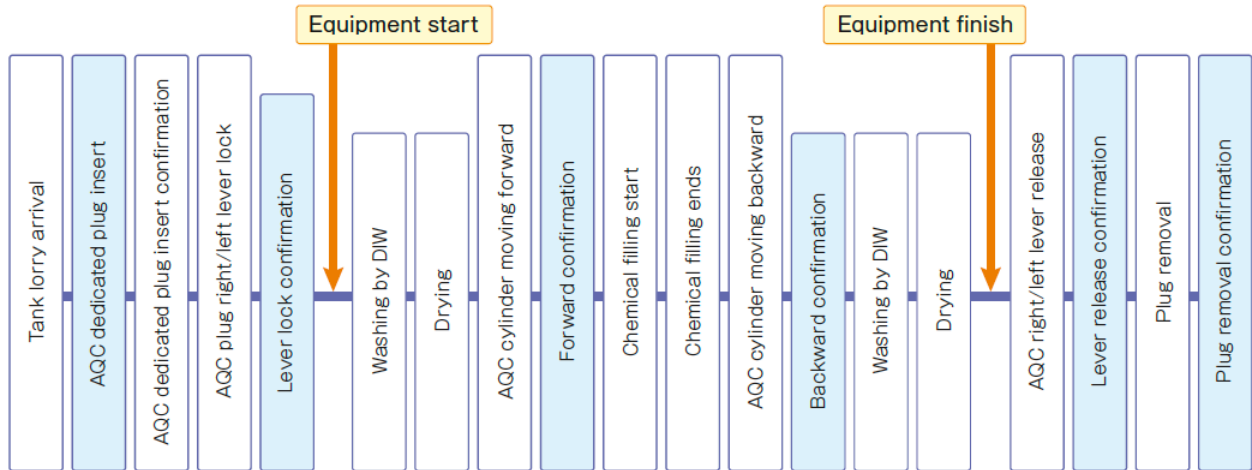
EXAMPLE OF HOW TO USE THE AUTO CONNECTOR

[Chemical transfer flow]



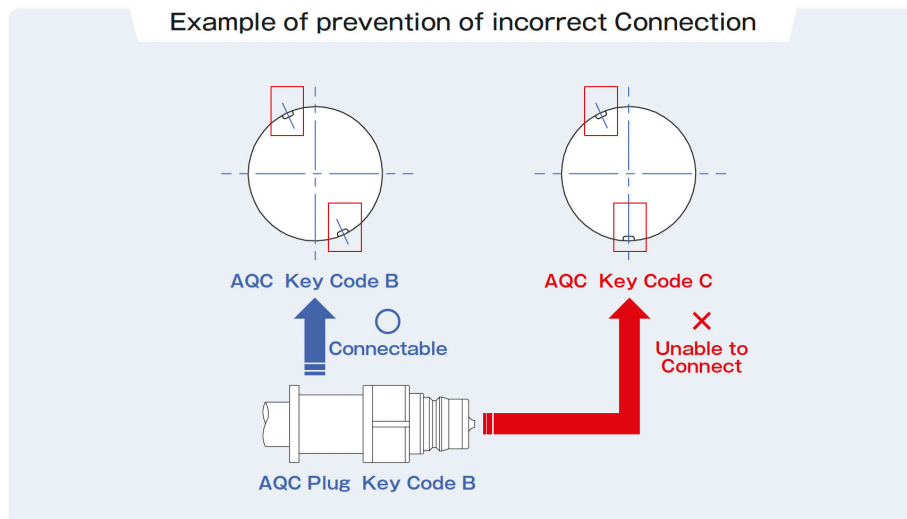
[Chemical Receiving AQC flowchart]

Blue square means sensor confirmation is possible in AQC main unit.



MISCONNECTION PREVENTION MECHANISM

The AQC and AQC series are equipped with a long proven key code system that prevents incorrect socket/plug connections during the chemical supply process, ensuring safe operation.



Model AQCB Auto connector

FEATURES

- Corrosive-resistant PTFE is adopted on wetted parts and these connectors have outstanding chemical resistance and durability.
- Because the cleaning and drying method of the auto connector adopts the "Eddy cyclone method", the coupling part is cleaned and dried.
- Connection-error prevention type with key grooves are available.
- The rear part of product part has unique mechanism structure, no moving action during operation.

SPECIFICATIONS

- Operating pressure: 250KPA
- Fluids: Chemicals
- Temperature range: 5-50°C
- Wetted parts: PCTFE, PTFE, Various types of O-ring
- DI water cleaning pressure: Max.200kPa
- DI water cleaning flow rate: 5L/min
- Brow-drying pressure: Max.200kPa
- Cylinder operating pressure: 450-480kPa
- Tube size of relief valve: 1/2"(Ø12.7×Ø9.53)
- Relief pressure of relief valve: 450kPa



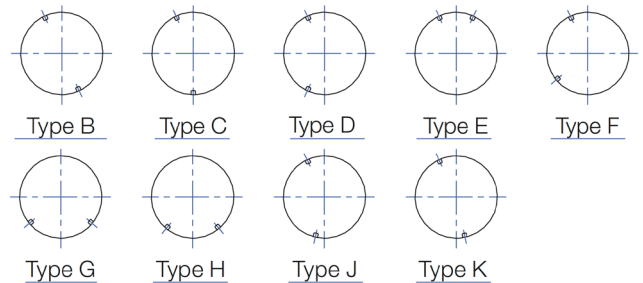
MODELS

50AQCB- [] [] [] [] RS2

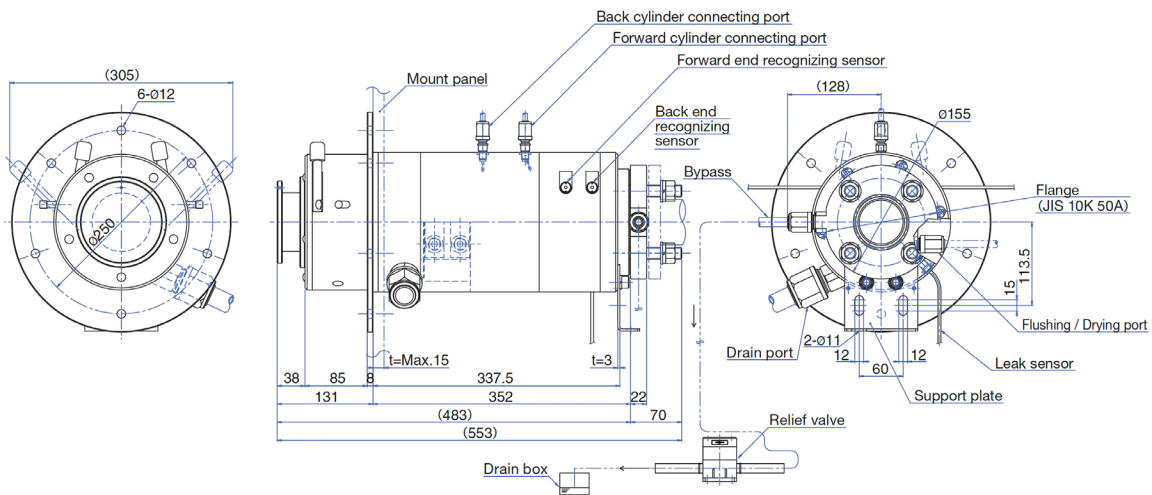
Connection size: 50A

Administered No. (O-ring material, Key groove type)

CONNECTION-ERROR PREVENTION MECHANISM USING KEY GROOVE



DIMENSIONS



Model S-SE2-AQC SemiAuto connector

FEATURES

- The same locking mechanism as the auto-connector is used, which is very reliable.
- This product is compatible with AQC plug 50A size.
- Key code system prevents incorrect plug connection.
- This is a simplified specification product with the washing/drying and sensor functions eliminated from the auto-connector.
- Manual operation is possible by using the optional manual operation cylinder. (MODEL : S-SE2-AQC-SLD)

SPECIFICATIONS

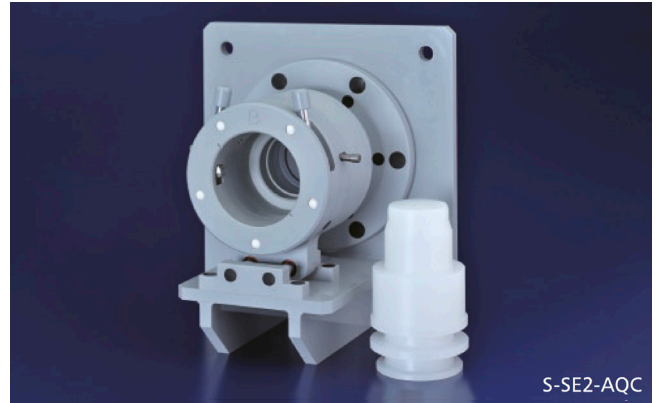
- Operating pressure: 250KPA
- Fluids: Liquid
- Fluids temperature: 5-50°C
- Environment temperature: 5-40°C
- Wetted parts material: PTFE, PCTFE, JACKET O-ring (FEP/FKM), Various O-ring
- Cylinder operating pressure: 400 450kPa (Max: 480kPa)

MODELS

A-SE2-AQC-WF **-50AS-CASE** **-PM**

O-ring material
P: PERFLUO
K: KALREZ®

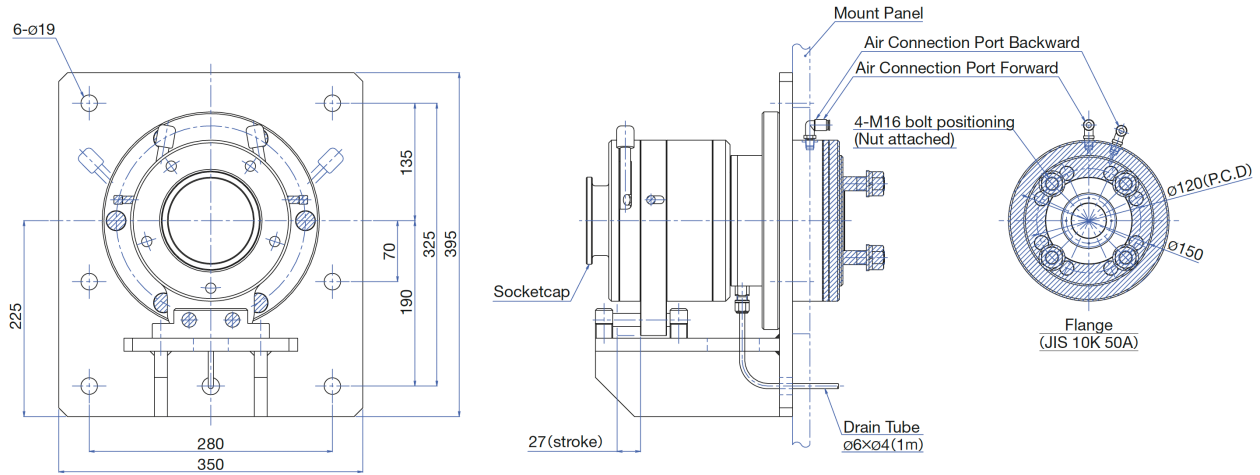
Keycode



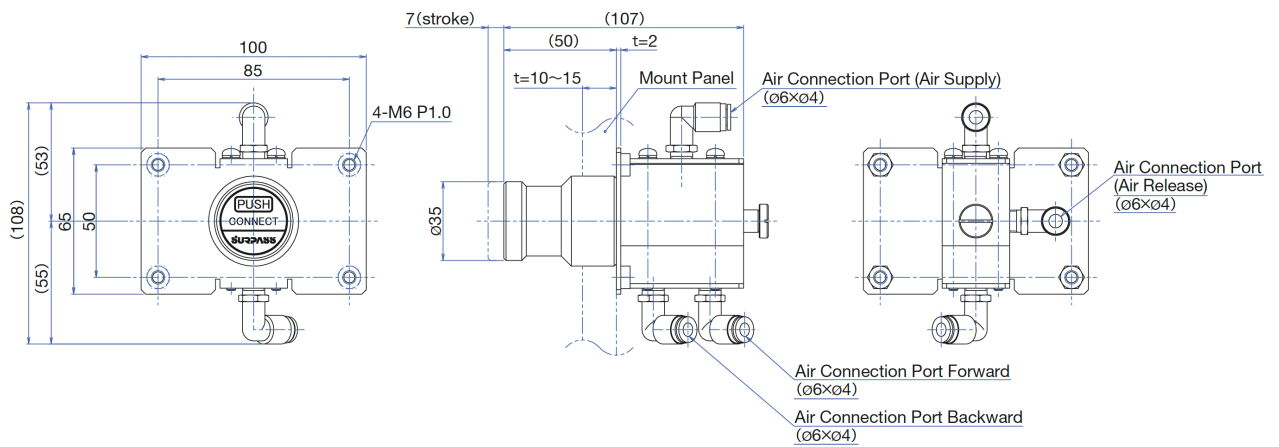
A-SE2-AQC-SLD Cylinder for manual controls (option)

DIMENSIONS

A-SE2-AQC-WF **-50AS-CASE** **-PM**



A-SE2-AQC-SLD



Model AQC-F Auto connector plug

FEATURES

- The same locking mechanism as the auto-connector is used, which is very reliable.
- This product is compatible with AQC plug 50A size.
- Key code system prevents incorrect plug connection.
- This is a simplified specification product with the washing/drying and sensor functions eliminated from the auto-connector.
- Manual operation is possible by using the optional manual operation cylinder. (MODEL: S-SE2-AQC-SLD)

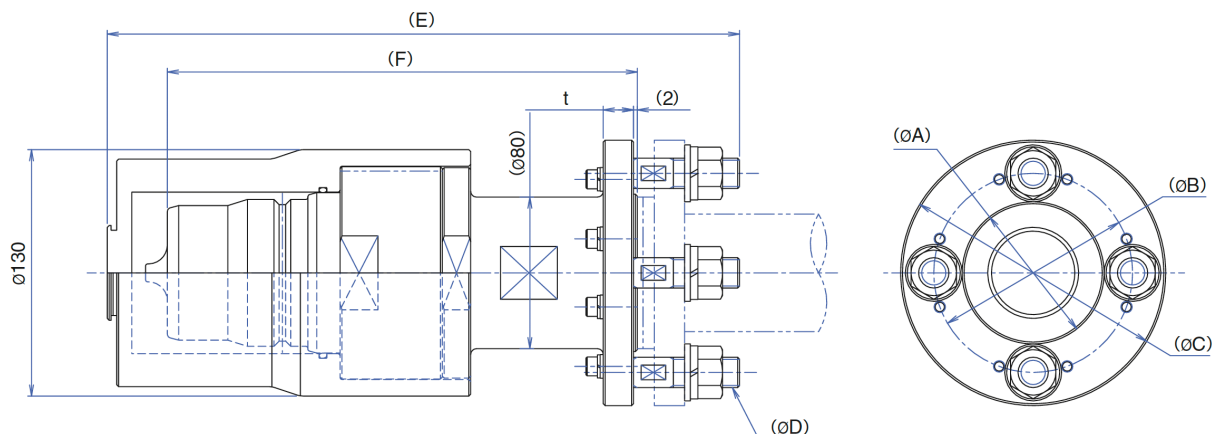
SPECIFICATIONS

- Operating pressure: 250KPA
- Temperature range: 5-50°C
- Wetted parts: PCTFE, PFA, Various types of O-ring, PTFE
- Accessories: AQC-50A-PP-P (Dust Proof Cap)



Models / Dimensions

Type	(ØA)	(ØB)	(ØC)	(ØD)	(E)	(F)	t	O-ring	Flange
AQC-WP-50AP-F-CASE □	Ø84	Ø120	Ø155	M16 P2.0	337	260	16	Perfluor	JIS 10K 50A
AQC-WK-50AP-F-CASE □	Ø84	Ø120	Ø155	M16 P2.0	337	260	16	Kalrez®	JIS 10K 50A
AQC-WP-50AP-40AF-CASE □	Ø75	Ø105	Ø140	M16 P2.0	314	260	16	Perfluor	JIS 10K 40A
AQC-WK-50AP-40AF-CASE □	Ø75	Ø105	Ø140	M16 P2.0	314	260	16	Kalrez®	JIS 10K 40A
AQC-WP-50AP-A40AF-CASE □	Ø71	Ø98.5	Ø127	M12 P1.75	334	250	17.5	Perfluor	ANSI 150Lb 40A
AQC-WK-50AP-A40AF-CASE □	Ø71	Ø98.5	Ø127	M12 P1.75	334	250	17.5	Kalrez®	ANSI 150Lb 40A



Model SAQC-F/SAQC-316L Plug for Auto Connector

FEATURES

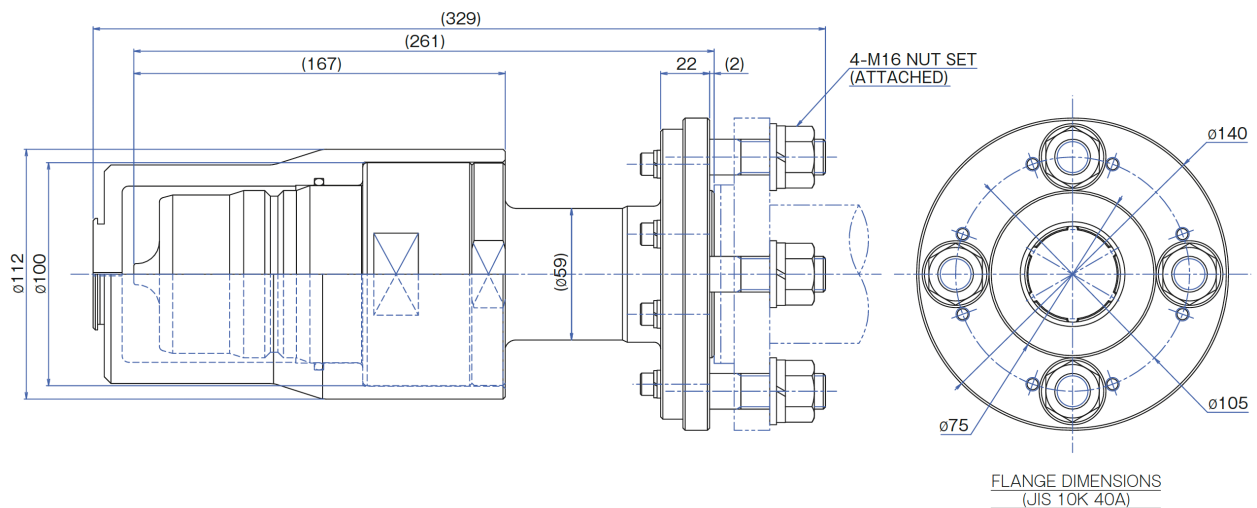
- This is all-stainless-steel made for organic chemicals.
- Plug for Auto connector (flange type).
- Hose and connector can be managed separately. It is excellent for the maintenance.
- Connection-error prevention type with key grooves are available.

SPECIFICATIONS

- Operating pressure: 250KPA
- Temperature range: 5-50°C
- Wetted parts: SUS316, SUS316L, Various types of O-ring
- Accessories: AQC-50A-PP-P (Dust Proof Cap)



DIMENSIONS



● Safety Instructions

- ⊙ Before using the product, read the instruction manual carefully and use it correctly.
We are not liable for accidents that occurred during use other than those described in the instruction manual.
- ⊙ Use this product within the specified range.
- ⊙ Confirm the compatibility of the product material with the type of fluid and ambient atmosphere before use.
- ⊙ Do not detach quick connectors under pressurized conditions.
It may cause chemical fluid to splash out, and injuries or serious accidents.
- ⊙ Using inappropriate O-ring material may cause leakage. Before specifying O-ring material to be used, make sure that is compatible with fluid type and temperature.
- ⊙ Do not use fluids that contain refuse or foreign matter, as this may interfere with normal function.
- ⊙ Abrasive or coagulate fluids may interfere with normal function, and take measures to prevent stacking residue on the wetted parts.
- ⊙ Do not use auto connectors in applications subject to flexural or tensile stress.
- ⊙ Make sure that every detachments of connectors are done in a clean, dust-free area.
- ⊙ Do not use the product with excessive vibration or shock.
- ⊙ When detaching quick connectors, always wear a protective face mask, gloves, clothing.
- ⊙ Fully examine and select the appropriate material for the wetted parts.
- ⊙ Do not use the product in a harsh environment where fluid temperature changes rapidly, as this may cause damage to the product.
- ⊙ Product images might be different from the actual product.
- ⊙ There is a risk of cracking connector material based upon the chemical solution used.
Please be cautious to select the material before use.
- ⊙ Periodic inspection should be performed for safety when using chemical solution with high permeability for long time.
- ⊙ If static electricity is generated, the equipment may seriously damage.
Please use after applying anti-static measures.
- ⊙ When operating 50AQCB forward/backward, please confirm the secondary valve remains open.
- ⊙ Do not warm up the product directly from the outside.
It may cause external or internal leakage failure.

- Kalrez® is a registered trademark of DuPont.
- Flowell 60 series is a trademark of Flowell Co., Ltd.