

Type Approval Certificate Extension

This is to certify that Certificate No. 13/10050 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER Hy-Lok Corporation

PLACE OF PRODUCTION 97, Noksansandan 27-ro, Gangseo-gu, Busan, Korea, Republic of.

DESCRIPTION Instrument Manifolds Valves

TYPE M-Series
Body materials: 316 stainless steel, carbon steel and ally 400
Packing materials: PTFE and Grafoil

Remote Mounting			
Description	Part No.	Orifice	Material
2-Valves Block	M2V**8N	3.2 mm	SS316 / Carbon Steel Alloy 400
2-Valves Vertical	M2VV**8N	3.2 mm	
3-Valves Block	M3V**8N	3.2 mm	
5-Valves Block	M5V**8N	3.2 mm	
Direct Mounting			
Description	Part No.	Orifice	Material
2-Valves Single Flange	M2V1F**8N	3.2 mm	SS316 / Carbon Steel Alloy 400
2-Valves Single Block Flange	M2VDM**8N	3.2 mm	
3-Valves Single Flange	M3V1F**8N	3.2 mm	
3-Valves Dual Flange	M3V2F**	3.2 mm	
3-Valves Single Block Flange	M3VDM**8N	3.2 mm	
3-Valves Dual Block Flange	M3V2DM**	3.2 mm	
5-Valves Single Flange	M5V1F**8N	3.2 mm	
5-Valves Dual Flange	M5V2F**	3.2 mm	
5-Valves Single Block Flange	M5VDM**8N	3.2 mm	
5-Valves Single Block Flange "A" style	M5VDMA**8N	3.2 mm	

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Issue Date 27 June 2018

Expiry Date 26 June 2023

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Busan Technical Support Office
Lloyd's Register Marine & Offshore

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119, Daegyo-ro, Jung-gu, Busan, Republic of Korea



Gauge / Root Valve			
Description	Part No.	Orifice	Material
Gauge Valves	GV**MF8N	3.2 mm	SS316 / Carbon Steel Alloy 400
	GV**MF12N8N	3.2 mm	
	GV**MF8N12N	3.2 mm	
	GV**F8N	3.2 mm	
Root Valves	GRV**MF8N	3.2 mm	
	GRV**MF12N8N	3.2 mm	
	GRV**MF8N12N	3.2 mm	
	GRV**F8N	3.2 mm	
Gauge 2-Valves	GV2**-MF8N	3.2 mm	

APPLICATION Marine piping systems for air, steam, thermal oil, fuel oil, lubricating oil and hydraulic oil

DESIGN CODE STANDARD Lloyd's Register (LR) Rules and Regulations for the Classification of Ships (July 2017)

ASME B31.3 "Power Piping" 2016

ASME B1.20.1 "Pipe Threads, General Purpose(inch)" 2013

ASME B16.34 "Valves-Flanged, Threaded and Welding End" 2017

RATINGS

Pressure-Temperature Rating

Packing Material	Body Material	Temperature Range	Pressure Rating @100°F	Pressure Rating @Max. Temp.
PTFE	Stainless Steel	-65°F ~ 450°F (-54°F ~ 232°C)	6,000 psig (41,369 kPa)	4,130 psig@450°F (28,475 kPa@232°C)
	Carbon Steel	-20°F ~ 350°F (-29°F ~ 176°C)	6,000 psig (41,369 kPa)	5,230 psig@350°F (36,060 kPa@176°C)
	Alloy 400	-65°F ~ 450°F (-54°F ~ 232°C)	5,000 psig (34,474 kPa)	3,970 psig@450°F (27,372 kPa@232°C)
Grafoil	Stainless Steel	-65°F ~ 1200°F (-54°F ~ 648°C)	6,000 psig (41,369 kPa)	1,175 psig@1200°F (8,101 kPa@648°C)
	Carbon Steel	-20°F ~ 350°F (-29°F ~ 176°C)	6,000 psig (41,369 kPa)	5,230 psig@350°F (36,060 kPa@176°C)
	Alloy 400	-65°F ~ 500°F (-54°F ~ 260°C)	5,000 psig (34,474 kPa)	3,960 psig@500°F (27,303 kPa@260°C)

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Y. D. Kong

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119, Daegyo-ro, Jung-gu, Busan, Republic of Korea*

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OTHER CONDITIONS

Where the valves are intended to be installed on a ship classed with Lloyd's Register (LR), they are to be made, installed and tested in accordance with Part 5, Chapter 12 of the Rules and Regulations for the Classification of Ships.

LIMITATION

- 1) Type Approval does not eliminate the need for normal inspection survey procedures required by the Rules and Regulation.
- 2) If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.
- 3) (in case of applications other than Marine) The application of this Type Approval Certificate will be limited to the relevant scope of the Specified standards and acceptance thereof by the local authorities.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid certificate."

The attached Design Appraisal Document No. 18/40054(E1) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 13/10050 and associated Design Appraisal Documents to which this extension should be attached.

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Y. D. Kong
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