oplicant HER	ROSE GMBH Arma Device Cryogenic	aturen und Metall Globe Valve, Di	e N10 (3/8") to	DN150 (6")	AAR	No. <u>E25</u>	52103	;		
applicant No.										
. Manufact	urer HEROSE GM	IBH Armaturen u	nd Metalle							
. Address Elly-Heuss-Knapp- . Test facility if other than the		Str. 12 e manufacturer		City_Ba	ad Oldesloe	State Germany Zip 23843				
. Test date_	8/16/2013 and 5/2	3/2023		4. Observe	4. Observer <u>S. Korn (2013)</u> a					
EST PROC	EDURE on of prototype tes	ting: In acc. with I	DIN EN 162					c. QMAA 02-00		
6. Cycles	Min. Temp.	@ Pressure	Cycles	Max. Temp.	@ Pressure	Test Me	edium	Remarks		
2000	-321 °F	725psi		+248 °F	psi	Liquid Nitrogen		Remarks		
	<u>-196</u> ºC	<u>5000</u> _kPa		<u>+120</u> °C	kPa					
Cycles	Min. Temp.	@ Pressure	Cycles	Max. Temp.	@ Pressure	Test Me	edium	Remarks		
	°F	psi kPa		°F °C	psi kPa	l ————————————————————————————————————				
	I ——— °				KI u					
Cycles	Min Temp	@ Pressure	Cycles	May Temp	@ Pressure	Test Me	edium	Remarks		
Cycles	Min. Temp.	@ Pressurepsi	Cycles	Max. Temp.	@ Pressurepsi	Test Me	edium	Remarks		
Commodit	°F °C	psikPa modity_X_Non Reg	gulated Comi	°F °C modity Specifi	psi _kPa c Commodity	Air gases,	vapourse	e and cryogenic example: O2, N		
Commodit	°F	psikPa modity_X_Non Reg	gulated Com	modity Specifi	psikPa c Commodity	Air gases, liquefied g Ar, He, Co	vapourse gases (for O2, LNC	e and cryogenic		
Commodit Flow rate (°F °C	psikPa modity_X_Non Reg	gulated Comi	°F °C modity Specifi	psikPa c Commodity	Air gases, iliquefied g Ar, He, Co and simila Prec	vapourso gases (for D2, LNC ar)	e and cryogenic example: O2, N		
Commodit Flow rate (Applicab Device application of the commodity of the	ey: Regulated Comm (if applicable) N/2	psikPa modity X Non Reg gpm (Material	Draw	modity Specifi L/min) ring Number est revision	psikPa c Commodity	Air gases, liquefied g Ar, He, CC and simila Prec umber	vapourso gases (for D2, LNC ar)	e and cryogenic example: O2, N G, LPG, Ethylen		
Commodit Flow rate (Applicab Device appl). Device ass	ey: Regulated Comm (if applicable) N/2	psi kPa	Draw	modity Specifi L/min)	psikPa c Commodity	Air gases, liquefied g Ar, He, CC and simila Prec umber	vapourso gases (for D2, LNC ar)	e and cryogenic example: O2, N G, LPG, Ethylen		
Commodit Flow rate (Applicab Device appl). Device ass 1. Device det	ty: Regulated Comm (if applicable) N/A	psikPa modity_X_Non Reg gpm (Draw late 01341-Dished a certi	modity Specifi L/min) ring Number est revision NXX-ZULASSUN	psikPa	Air gases, iliquefied g Ar, He, CC and simila Prec umber	vapourse gases (for O2, LNC ar) redent Applica	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate		
Commodit Flow rate (Applicab Device appl.) Device ass 1. Device det	ty: Regulated Comm (if applicable) N/A	psikPa modity X Non Reg gpm (Draw late 01341-Dished a certi	modity Specifi L/min) ring Number est revision NXX-ZULASSUN	psikPa	Air gases, iliquefied g Ar, He, CC and simila Prec umber	vapourse gases (for O2, LNC ar) redent Applica	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate		
Commodit Flow rate (Applicab Device apploace associated by the commodition of the comm	ty: Regulated Comm (if applicable) N/A	psikPa modity_X_Non Reg gpm (Draw late 01341-Dished a certi	modity Specifi L/min) ring Number est revision NXX-ZULASSUN	psikPa	Air gases, iliquefied g Ar, He, CC and simila Prec umber	vapourse gases (for O2, LNC ar) redent Applica	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate		
Commodit Flow rate (Applicab Device appl) Device ass Device det Quality Commodity C	cy: Regulated Comm (if applicable) N/2 le drawings plication	modity X Non Regard Stainless steel EROSE has estable ED 2014/68/EU and the data is correct and the d	Draw late 01341-D: ished a certind AD 2000	modity Specification Specifica	psikPakPa c Commodity Drawing Nu IG (valid data: 2	Air gases, liquefied g Ar, He, Co and simila Pree nmber 2/6/2023)	vapourss gases (for O2, LNC ur) sedent Applica	e and cryogenic e example: O2, N G, LPG, Ethylen ation/Certificate		
Commodit Flow rate (Applicab Device appl) Device ass Device det Quality Commodity C	cy: Regulated Comm (if applicable) N/2 le drawings plication	modity X Non Regard Stainless steel EROSE has estable D 2014/68/EU at	Draw late 01341-D: ished a certind AD 2000	modity Specification Specifica	psipsi	Air gases, liquefied g Ar, He, CC and simila Prec umber 2/6/2023)	vapourss gases (for D2, LNC ur) edent Applica DIN EN	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate U ISO 9001:2015,		
Applicab Device applo. Device ass Device det Quality Constitution EVISIONS:	y: Regulated Comm (if applicable) N/2 le drawings plication sembly ontrol Statement H Pl TION: The above tested communications are the semble sembles are the semb	modity X Non Regard Stainless steel EROSE has estable D 2014/68/EU at the data is correct afform with drawing the data is correct afform the data is correct	Draw late 01341-D: ished a certind AD 2000 and conformers listed above	modity Specifical L/min) ring Number set revision NXX-ZULASSUN fied quality control - HP0 as with AAR Specifical Quality Control - Title - - T	psikPakPa c Commodity Drawing Nu IG (valid data: 2	Air gases, liquefied g Ar, He, CC and simila Prec umber 2/6/2023)	vapourss gases (for D2, LNC ur) edent Applica DIN EN	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate U ISO 9001:2015,		
Commodit Flow rate (Applicab Device apple). Device ass 1. Device det 2. Quality Commodity Com	y: Regulated Comm (if applicable) N/2 le drawings plication sembly tails Ontrol Statement H Pl TION: The above tested community to the state of	modity X Non Regard Stainless steel EROSE has estable D 2014/68/EU at the data is correct afform with drawing sommittee Service	Draw late 01341-D: ished a certind AD 2000 and conformers listed above	modity Specifical L/min) ring Number set revision NXX-ZULASSUN fied quality control - HP0 as with AAR Specifical Quality Control - Title - - T	psikPa	Air gases, liquefied g Ar, He, CC and simila Prec umber 2/6/2023) acc. with:	vapourss gases (for O2, LNC ur) edent Applica	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate U ISO 9001:2015,		
Applicab Device apple Device ass 1. Device det 2. Quality Constitution Service Approved Device ApproveDevice Approved Device ApproveDevice Device ApproveDevice Device ApproveDevice Device ApproveDevice Device ApproveDevice Device Device ApproveDevice Device	ty: Regulated Comm (if applicable) N/A le drawings plication sembly tails ontrol Statement H Pi TION: The above tested community tested co	modity X Non Regard Stainless steel EROSE has estable D 2014/68/EU at the data is correct afform with drawing sommittee Service	Draw late 01341-D: ished a certind AD 2000 and conformers listed above	modity Specifical L/min) ring Number set revision NXX-ZULASSUN fied quality control - HP0 as with AAR Specifical Quality Control - Title - - T	psikPa	Air gases, liquefied g Ar, He, CC and simila Prec umber 2/6/2023)	vapourss gases (for O2, LNC ur) edent Applica	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate U ISO 9001:2015,		
Commodit Flow rate (Applicab Device apple (Device ass 1. Device det 2. Quality Commodit EVISIONS: ERTIFICA PPROVAL (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (ty: Regulated Comm (if applicable) N/A le drawings plication sembly tails ontrol Statement H Pi TION: The above tested community tested co	modity X Non Regard Stainless steel EROSE has estable D 2014/68/EU at the data is correct afform with drawing sommittee Service	Draw late 01341-D: ished a certind AD 2000 and conformers listed above	modity Specifi L/min) ring Number est revision NXX-ZULASSUN fied quality control- HP0 as with AAR Specification of the second of the secon	psikPa	Air gases, iliquefied g Ar, He, CC and simila Prec umber 2/6/2023) acc. with:	vapourss gases (for O2, LNC ur) edent Applica DIN EN	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate VISO 9001:2015, dix A. The device		
Commodit Flow rate (Applicab Device apple (Device ass 1. Device det 2. Quality Commodity Co	y: Regulated Comm (if applicable) N// le drawings plication	modity X Non Regard Stainless steel EROSE has estable D 2014/68/EU at the data is correct afform with drawing sommittee Service 3/17/2025	Draw late 01341-Dished a certind AD 2000 and conformate listed about	modity Specifical L/min) ring Number set revision NXX-ZULASSUN fied quality control - HP0 as with AAR Specifical Quality control - HP0 Title Quality Control - HP0 (S	psikPa	Air gases, iliquefied g Ar, He, CC and simila Prec umber 2/6/2023) acc. with:	vapourss gases (for O2, LNC ur) edent Applica DIN EN	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate VISO 9001:2015, dix A. The device		
Commodit Flow rate (Applicab Device apple (Device assell (Device assell (PPROVAL (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (y: Regulated Comm (if applicable) N/2 le drawings plication sembly tails pontrol Statement H Pl TION: The above tested communication of the service Trial Jumber 509 AAR Tank Car Co	modity X Non Regard Spm (pulated Communication of the c	modity Specifical L/min) ring Number Strevision NXX-ZULASSUN fied quality control HP0 as with AAR Specifical Quality control Grant Gra	psipsipsikPa RPa	Air gases, liquefied g Ar, He, Co and simila Prec Imber 2/6/2023) Tank Cars, ent of HER Chalf of Ta	vapourscasses (for 202, LNC or) seedent Applica DIN EN ROSE Gr	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate UISO 9001:2015, dix A. The deviceoup Committee		
Commodit Flow rate (Applicab Device apple (Device assell (Device assell (PPROVAL (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (Approved (y: Regulated Commiting applicable) N/A le drawings plication sembly tails phroof Statement H Pi TION: The above tested commiting application in the sembly sembly separate and the sembly	modity X Non Regard Spm (pulated Communication of the c	modity Specifical L/min) ring Number Strevision NXX-ZULASSUN fied quality control HP0 as with AAR Specifical Quality control Grant Gra	psipsipsikPa RPa	Air gases, liquefied g Ar, He, Co and simila Prec Imber 2/6/2023) Tank Cars, ent of HER Chalf of Ta	vapourscasses (for 202, LNC or) seedent Applica DIN EN ROSE Gr	e and cryogenic example: O2, N G, LPG, Ethylen ation/Certificate VISO 9001:2015, dix A. The device		

Fig. 1.6 Form AAR 4-5 Application for Approval of Valves and Fittings