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www.tssa.org

February 8, 2023

ROUND ENGINEERING INC 10 SEGWUN RD WATERDOWN ON L8B 0K6

Workorder Type: Registration - Fitting(Conventional) Workorder No: 8229710 Your Reference No.: R-1748- CRN 0G8455.5R1 renewal Registered to: ARI-ARMATUREN ALBERT RICHTER GMBH & CO KG ARI- ARMATUREN USA, LP

Dear SCOTT ISLIP,

Technical Standards and Safety Authority (TSSA) is pleased to inform you that your submission has been reviewed and registered as follows:

CRN : 0G8455.5R2 Main Design No.: Scope of CRN registration, Manufacturer site list Expiry Date: Apr 22, 2033

Please be advised that a valid quality control system must be maintained for the fitting registration to remain valid until the expiry date.

The stamped copy of the approved registration and the invoice are mailed separately (There will be no hard copies for electronic submissions). Should you have any questions or require further assistance, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. We will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Ruiming You P,ENG Engineer, BPV Tel.: +1 416-734-3428 Email:ryou@tssa.org



Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below



STATUTORY DECLARATION Registration of Fittings

I, KEEFE FRENTZ, QUALITY MANAGER	
(Name and Position, e.g. President, Plant Manager, Chief Engineer)	
of ARI-ARMATUREN	
(Name of Manufacturer)	
Located atSEE ATTACHED WORLDWIDE LOCATIONS APPENDIX	
(Plant Address) (Telephone No.)	(Fax No.)
do solemnly declare that the fittings listed hereunder, which are subject to the <i>Technical State</i> and Pressure Vessels Regulation, comply with all of the requirements of ASME SECTION VIII-1	ndards and Safety Act, Boilers
<i>(Title of recognized North American Standard)</i> which specifies the dimensions, materials of construction, pressure/temperature ratings, identification	marking the fittings and service;
or are not covered by the provisions of a recognized North American standard and are therefi- as supported by the attached data which identifies the din pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identifi	nensions, material of construction,
I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirement of the second system meeting and the second system meeting the requirement of the second system meeting and the second system meeting the requirement of the second system meeting and the second system meeting the second system meeting the requirement of the second system meeting and the second system meeting the second	
SCOPE OF CRN REGISTRATION, CATALOG, REPORT	
(drawings, calculations, test reports, etc.) –	
Commissioner for Oaths: <u>Teodoro Sosa TII</u> (Printed name) <u>My Nota</u> Expires N	of <u>Jexcs</u> OORO SOSA III y ID # 131289924 lovember 30, 2025 Jure of Declarer)
FOR OFFICE USE ONLY To the best of my knowledge and belief, the application meets the requirements of the	
To the best of my knowledge and beller, the application meets the requirements of the Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category	Technical Boilers and Standards Pressure Vessels and Safety Safety Program Authority
CRN:	REGISTERED C.R.N.: 0G8455.5R2
Registered by:	Signed: Ruen Yn
Dated:April 22, 2033	

*Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request. PV 09553 (04/17)

ARI-ARMATUREN USA, LP

125 MAGELLAN CIRCLE WEBSTER, TX 77598, USA



THIS IS PART OF CRN 0G8455.5R2

Technical Standards and Safety Authority

Boilers and Pressure Vessels Safety Program PAGE 1 OF 2

SCOPE OF CRN REGISTRATION

Product		Nominal			Process	Pressure			Certified	Certificate	Drawing No. /
Description	Figure	Pressure	Material	Form	Connection	Range	NPS Min	NPS Max.	Medium	Number NB	Design Report
ARI-SAFE-SN	32.901	ANSI 150	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	Drawing No.
ANSI			SA216-WCB	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	s050010007 /
Safety Valve					Ū	15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	Design Report
-						>=30 psig	1"	6"	Steam & Air/Gas	08008	R-1748 Rev. 0
ARI-SAFE-SN	32.902	ANSI 150	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	
ANSI			SA216-WCB	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	
Safety Valve					-	15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	
-						>=30 psig	1"	6"	Steam & Air/Gas	08008	
ARI-SAFE-SN	32.911	ANSI 150	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	
ANSI			SA216-WCB	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	
Safety Valve				_	_	15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	
-						>=30 psig	1"	6"	Steam & Air/Gas	08008	
ARI-SAFE-SN	32.912	ANSI 150	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	
ANSI			SA216-WCB	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	
Safety Valve				_	_	15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	
-						>=30 psig	1"	6"	Steam & Air/Gas	08008	
ARI-SAFE-SN	35.901	ANSI 300	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	Drawing No.
ANSI			SA216-WCB	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	s050010006 /
Safety Valve				_	_	15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	Design Report
						>=30 psig	1"	6"	Steam & Air/Gas	08008	R-1748 Rev. 0
ARI-SAFE-SN	35.902	ANSI 300	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	
ANSI			SA216-WCB	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	
Safety Valve				_	_	15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	
-						>=30 psig	1"	6"	Steam & Air/Gas	08008	
ARI-SAFE-SN	35.911	ANSI 300	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	
ANSI			SA216-WCB	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	
Safety Valve						15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	
						>=30 psig	1"	6"	Steam & Air/Gas	08008	
ARI-SAFE-SN	35.912	ANSI 300	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	
ANSI			SA216-WCB	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	
Safety Valve						15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	
						>=30 psig	1"	6"	Steam & Air/Gas	08008	
ARI-SAFE-SN	52.901	ANSI 150	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	Drawing No.
ANSI			SA351-CF8M	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	s050010018 /
Safety Valve						15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	Design Report
						>=30 psig	1"	6"	Steam & Air/Gas	08008	R-1748 Rev. 0
ARI-SAFE-SN	52.911	ANSI 150	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	
ANSI			SA351-CF8M	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	
Safety Valve						15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	
						>=30 psig	1"	6"	Steam & Air/Gas	08008	

20-Oct-22

ARI-ARMATUREN USA, LP

125 MAGELLAN CIRCLE WEBSTER, TX 77598, USA



THIS IS PART OF CRN 0G8455.5R2 Technical Standards and Safety Authority Boilers and Pressure Vessels Safety Program

PAGE 2 OF 2

SCOPE OF CRN REGISTRATION CONTINUED

Product		Nominal			Process	Pressure			Certified	Certificate	Drawing
Description	Figure	Pressure	Material	Form	Connection	Range	NPS Min	NPS Max.	Medium	Number NB	No.
ARI-SAFE-SN	55.901	ANSI 300	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	Drawing No.
ANSI			SA351-CF8M	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	s050010019 /
Safety Valve						15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	Design Report
						>=30 psig	1"	6"	Steam & Air/Gas	08008	R-1748 Rev. 0
ARI-SAFE-SN	55.911	ANSI 300	ASME	Angle	ASME B16.5	>=15 psig	1"	1"	Water	08020	
ANSI			SA351-CF8M	Through	Flanged	>=15 psig	1.5"	6"	Water	08019	
Safety Valve						15 psig - 30 psig	1"	6"	Steam & Air/Gas	08031	
						>=30 psig	1"	6"	Steam & Air/Gas	08008	

Note 1: For low temperature operation the products shall conform to the rules of the applicable codes under which they are used.

Note 2: Valves shall be marked with the ASME Certification mark and UV Designator along with the Canadian Registration Number (CRN).

Note 3: See attached Worldwide Locations Appendix.

Note 4: See attached copy of National Board Listings applicable to this Canadian Registration Number (CRN).

20-Oct-22



WORLDWIDE LOCATIONS APPENDIX – PAGE 1 OF 1

ARI-ARMATUREN LOCATIONS & CERTIFYING AUTHORITIES

(rev. July 20, 2022)

ARI-Armaturen Albert Richter GmbH & Co. KG

Mergelheide 56-60 33758 Schlob Holte-Stukenbrock Germany **ASME UV expires 12/16/2024**

ARI-Armaturen USA, LP

125 Megellan CircleWebster, TX77598, USAASME UV expires 9/20/2024



ARI - Armaturen USA, LP (TAR)

Webster, TX 77598United States

This Company Manufactures or Assembles:

Design Nam	e: 901/902/9	11/912		NBCert	# 08008		
Manufacturer/A	Assembler		Designat	ors	E	xpiration Date	•
Manufacturer			UV		1	1/21/2023	
Design Type							
Capacity Tests: Method of Estat Certified Value: Media - Test: Ai Set Pressure De Blowdown Char	olishing Relieving Ca	Board Testing L pacity: Flow Ca Gas, Steam e Discharge		001			
Inlet Size	Outlet Size	Flow Area	Orifice [designator] dia.	Lift	Set Pressure Range	Media	Designator
1 NPS	1.5, 2.0 NPS	0.617 in ²	0.886 in	0.22 in	30-493 psi	Air	UV
1 NPS	1.5, 2.0 NPS	0.617 in ²	0.886 in	0.22 in	30-493 psi	Steam	UV
1.25 NPS	2.0 NPS	1.024 in ²	1.142 in	0.29 in	30-493 psi	Air	UV
1.25 NPS	2.0 NPS	1.024 in ²	1.142 in	0.29 in	30-493 psi	Steam	UV
1.5 NPS	2, 2.5 NPS	1.024 in ²	1.142 in	0.29 in	30-493 psi	Air	UV
1.5 NPS	2, 2.5 NPS	1.024 in ²	1.142 in	0.29 in	30-493 psi	Steam	UV
1.5 NPS	2.5, 3.0 NPS	1.578 in ²	1.417 in	0.37 in	30-493 psi	Air	UV
1.5 NPS	2.5, 3.0 NPS	1.578 in ²	1.417 in	0.37 in	30-493 psi	Steam	UV
2 NPS	3 NPS	2.465 in ²	1.772 in	0.45 in	30-493 psi	Air	UV
2 NPS	3 NPS	2.465 in ²	1.772 in	0.45 in	30-493 psi	Steam	UV
2.5-3 NPS	4 NPS	4.166 in ²	2.303 in	0.61 in	30-406 psi	Air	UV
2.5-3 NPS	4 NPS	4.166 in ²	2.303 in	0.61 in	30-406 psi	Steam	UV
4 NPS	6 NPS	9.861 in ²	3.543 in	0.98 in	30-276 psi	Air	UV
4 NPS	6 NPS	9.861 in ²	3.543 in	0.98 in	30-276 psi	Steam	UV
5-6 NPS	8 NPS	13.678 in ²	4.173 in	1.34 in	30-392 psi	Air	UV
5-6 NPS	8 NPS	13.678 in ²	4.173 in	1.34 in	30-392 psi	Steam	UV
6 NPS	10 NPS	19.022 in ²	4.921 in	1.46 in	30-305 psi	Air	UV
6 NPS	10 NPS	19.022 in ²	4.921 in	1.46 in	30-305 psi	Steam	UV

Design Nan	ne: 901/902/§	911/912 (1"	liquid)	NBCer	t # 08020		
Manufacturer	/Assembler		Designat	tors	E	xpiration Da	te
Manufacturer			UV		1	1/21/2023	
Design Type							
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha	901/902/911/912 (1" s: Sec. UV at National ablishing Relieving Ca e:14.410 GPM/SQ.RT. Water/Liquid; Certified Definition: Opening Pr aracteristics: Fixed ARI-Armaturen Albert	Board Testing L apacity: Flow Ca PSID d: Liquid ressure		1			
Inlet Size	Outlet Size	Flow Area	Orifice [designator] dia.	Lift	Set Pressure Range	Media	Designator
1 NPS	1.5, 2.0 NPS	0.617 in ²	0.886 in	0.22 in	15-493 psi	Water	UV
Design Nan	ne: 901/902/§	911/912 (Liq	uids)	NBCer	t # 08019		
Manufacturer	/Assembler		Designat	tors	E	xpiration Da	te
Manufacturer			UV		0;	3/29/2024	
	901/902/911/912 (Liq s: Sec. UV at National		_ab on October 15, 20	01			
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha		Board Testing L apacity: Flow Ca d: Liquid ressure	apacity, K	01			
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha	s: Sec. UV at National ablishing Relieving Ca e: 0.545 Unitless Water/Liquid; Certified Definition: Opening Pr aracteristics: Fixed	Board Testing L apacity: Flow Ca d: Liquid ressure	apacity, K	01 Lift	Set Pressure Range	Media	Designator
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A	s: Sec. UV at National ablishing Relieving Ca e: 0.545 Unitless Water/Liquid; Certifier Definition: Opening Pr aracteristics: Fixed ARI-Armaturen Albert	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH &	apacity, K & Co. KG {ARI} Orifice			Media Water	Designator UV
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A	s: Sec. UV at National ablishing Relieving Ca e: 0.545 Unitless Water/Liquid; Certified Definition: Opening Pr aracteristics: Fixed ARI-Armaturen Albert Outlet Size	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH & Flow Area	apacity, K & Co. KG {ARI} Orifice [designator] dia.	Lift	Range		•
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A Inlet Size 1.25 NPS	s: Sec. UV at National ablishing Relieving Ca e: 0.545 Unitless Water/Liquid; Certified Definition: Opening Pr aracteristics: Fixed ARI-Armaturen Albert Outlet Size 2 NPS	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH & Flow Area 1.024 in ²	apacity, K & Co. KG {ARI} Orifice [designator] dia. 1.142 in	Lift 0.29 in	Range 15-493 psi	Water	UV
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A Inlet Size 1.25 NPS 1.5 NPS	s: Sec. UV at National ablishing Relieving Ca e: 0.545 Unitless Water/Liquid; Certified Definition: Opening Pr aracteristics: Fixed ARI-Armaturen Albert Outlet Size 2 NPS 2, 2.5 NPS	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH & Flow Area 1.024 in ² 1.024 in ²	Apacity, K & Co. KG {ARI} Orifice [designator] dia. 1.142 in 1.142 in	Lift 0.29 in 0.29 in	Range 15-493 psi 15-493 psi	Water	UV UV
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A Inlet Size 1.25 NPS 1.5 NPS 1.5 NPS	s: Sec. UV at National ablishing Relieving Ca ablishing Relieving Ca context of the second second water/Liquid; Certified Definition: Opening Pr aracteristics: Fixed ARI-Armaturen Albert Outlet Size 2 NPS 2, 2.5 NPS 2.5, 3 NPS	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH & Flow Area 1.024 in ² 1.024 in ² 1.578 in ²	Apacity, K & Co. KG {ARI} Orifice [designator] dia. 1.142 in 1.142 in 1.417 in	Lift 0.29 in 0.29 in 0.37 in	Range 15-493 psi 15-493 psi 15-493 psi	Water Water Water	UV UV UV
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A Inlet Size 1.25 NPS 1.5 NPS 1.5 NPS 2 NPS	s: Sec. UV at National ablishing Relieving Ca e: 0.545 Unitless Water/Liquid; Certified Definition: Opening Pr aracteristics: Fixed ARI-Armaturen Albert Outlet Size 2 NPS 2, 2.5 NPS 2, 2.5, 3 NPS 3 NPS	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH & Flow Area 1.024 in ² 1.024 in ² 1.578 in ² 2.465 in ²	Apacity, K Co. KG {ARI} Orifice [designator] dia. 1.142 in 1.142 in 1.417 in 1.772 in	Lift 0.29 in 0.29 in 0.37 in 0.45 in	Range 15-493 psi 15-493 psi 15-493 psi 15-493 psi 15-493 psi	Water Water Water Water	UV UV UV UV UV
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A Inlet Size 1.25 NPS 1.5 NPS 1.5 NPS 2 NPS 2.5-3 NPS 4 NPS 5-6 NPS	s: Sec. UV at National ablishing Relieving Ca ablishing Relieving Ca control Control Control Water/Liquid; Certified Definition: Opening Pr aracteristics: Fixed ARI-Armaturen Albert Outlet Size 2 NPS 2, 2.5 NPS 2, 2.5 NPS 2, 2.5, 3 NPS 3 NPS 4 NPS 6 NPS 8 NPS	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH & Flow Area 1.024 in ² 1.024 in ² 1.578 in ² 2.465 in ² 4.166 in ²	Apacity, K Co. KG {ARI} Crifice [designator] dia. 1.142 in 1.142 in 1.417 in 1.772 in 2.303 in 3.543 in 4.173 in	Lift 0.29 in 0.29 in 0.37 in 0.45 in 0.61 in 0.98 in 1.34 in	Range 15-493 psi	Water Water Water Water Water	UV UV
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A Inlet Size 1.25 NPS 1.5 NPS 1.5 NPS 2 NPS 2.5-3 NPS 4 NPS	s: Sec. UV at National ablishing Relieving Ca ablishing Relieving Ca control to the second second water/Liquid; Certified Definition: Opening Pr aracteristics: Fixed ARI-Armaturen Albert Outlet Size 2 NPS 2, 2.5 NPS 2, 2.5 NPS 2, 5, 3 NPS 3 NPS 4 NPS 6 NPS	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH & Flow Area 1.024 in ² 1.024 in ² 1.578 in ² 2.465 in ² 4.166 in ² 9.861 in ²	Appacity, K Co. KG {ARI} Orifice [designator] dia. 1.142 in 1.142 in 1.417 in 1.772 in 2.303 in 3.543 in	Lift 0.29 in 0.29 in 0.37 in 0.45 in 0.61 in 0.98 in	Range 15-493 psi 15-493 psi 15-493 psi 15-493 psi 15-493 psi 15-493 psi 15-495 psi	Water Water Water Water Water Water	UV UV UV UV UV UV UV
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A Inlet Size 1.25 NPS 1.5 NPS 1.5 NPS 2 NPS 2.5-3 NPS 4 NPS 5-6 NPS	s: Sec. UV at National ablishing Relieving Ca ablishing Relieving Ca construction: Opening Pr aracteristics: Fixed ARI-Armaturen Albert Outlet Size 2 NPS 2, 2.5 NPS 2, 2.5 NPS 2, 2.5, 3 NPS 3 NPS 4 NPS 6 NPS 8 NPS 10 NPS	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH & Flow Area 1.024 in ² 1.024 in ² 1.578 in ² 2.465 in ² 4.166 in ² 9.861 in ² 13.678 in ²	Apacity, K Co. KG {ARI} Crifice [designator] dia. 1.142 in 1.142 in 1.417 in 1.772 in 2.303 in 3.543 in 4.173 in 4.921 in	Lift 0.29 in 0.29 in 0.37 in 0.45 in 0.61 in 0.98 in 1.34 in	Range 15-493 psi 15-495 psi 15-392 psi 15-305 psi	Water Water Water Water Water Water Water Water	UV UV
Capacity Tests Method of Esta Certified Value Media - Test: V Set Pressure I Blowdown Cha Designed by: A Inlet Size 1.25 NPS 1.5 NPS 1.5 NPS 2 NPS 2 NPS 2.5-3 NPS 4 NPS 5-6 NPS 6 NPS	s: Sec. UV at National ablishing Relieving Ca ablishing Relieving Ca construction: Opening Pri aracteristics: Fixed ARI-Armaturen Albert Outlet Size 2 NPS 2, 2.5 NPS 2, 2.5 NPS 2, 2.5, 3 NPS 3 NPS 4 NPS 6 NPS 8 NPS 10 NPS me: 901/902/S	Board Testing L apacity: Flow Ca d: Liquid ressure Richter GmbH 8 Flow Area 1.024 in² 1.024 in² 1.578 in² 2.465 in² 4.166 in² 9.861 in² 13.678 in² 19.022 in²	Apacity, K Co. KG {ARI} Crifice [designator] dia. 1.142 in 1.142 in 1.417 in 1.772 in 2.303 in 3.543 in 4.173 in 4.921 in	Lift 0.29 in 0.29 in 0.37 in 0.45 in 0.45 in 0.61 in 0.98 in 1.34 in 1.34 in 1.46 in	Range 15-493 psi 15-305 psi 15-305 psi 15	Water Water Water Water Water Water Water Water	UV UV UV UV UV UV UV UV UV

[Safety Relief Valve] 901/902/911/912 {15-30} Capacity Tests: Sec. UV at National Board Testing Lab on May 9, 2007 Method of Establishing Relieving Capacity: Flow Capacity, K Certified Value: 0.769 Unitless Media - Test: Air/Gas, Steam; Certified: Air, Gas, Steam Set Pressure Definition: Initial Audible Discharge Blowdown Characteristics: Fixed

Designed by: ARI-Armaturen Albert Richter GmbH & Co. KG {ARI}

Inlet Size	Outlet Size	Flow Area	Orifice [designator] dia.	Lift	Set Pressure Range	Media	Designator
1 NPS	1.5, 2.0 NPS	0.394 in ²	0.709 in	0.205 in	15-30 psi	Air	UV
1 NPS	1.5, 2.0 NPS	0.394 in ²	0.709 in	0.205 in	15-30 psi	Steam	UV
1.25 NPS	2.0 NPS	1.024 in ²	1.142 in	0.29 in	15-30 psi	Air	UV
1.25 NPS	2.0 NPS	1.024 in ²	1.142 in	0.29 in	15-30 psi	Steam	UV
1.5 NPS	2, 2.5 NPS	1.024 in ²	1.142 in	0.29 in	15-30 psi	Air	UV
1.5 NPS	2, 2.5 NPS	1.024 in ²	1.142 in	0.29 in	15-30 psi	Steam	UV
1.5 NPS	2.5, 3.0 NPS	1.578 in ²	1.417 in	0.37 in	15-30 psi	Air	UV
1.5 NPS	2.5, 3.0 NPS	1.578 in ²	1.417 in	0.37 in	15-30 psi	Steam	UV
2 NPS	3 NPS	2.465 in ²	1.772 in	0.45 in	15-30 psi	Air	UV
2 NPS	3 NPS	2.465 in ²	1.772 in	0.45 in	15-30 psi	Steam	UV
2.5-3 NPS	4 NPS	4.166 in ²	2.303 in	0.61 in	15-30 psi	Air	UV
2.5-3 NPS	4 NPS	4.166 in ²	2.303 in	0.61 in	15-30 psi	Steam	UV
4 NPS	6 NPS	9.861 in ²	3.543 in	0.98 in	15-30 psi	Air	UV
4 NPS	6 NPS	9.861 in ²	3.543 in	0.98 in	15-30 psi	Steam	UV
5-6 NPS	8 NPS	13.678 in ²	4.173 in	1.34 in	15-30 psi	Air	UV
5-6 NPS	8 NPS	13.678 in ²	4.173 in	1.34 in	15-30 psi	Steam	UV
6 NPS	10 NPS	19.022 in ²	4.921 in	1.46 in	15-30 psi	Air	UV
6 NPS	10 NPS	19.022 in ²	4.921 in	1.46 in	15-30 psi	Steam	UV

Design Name:

Designators Manufacturer/Assembler **Expiration Date** UV 01/19/2027

Manufacturer **Design Type**

[Safety Relief Valve] Reyco R, RB & RO (Fig. 971, 973, 974) Capacity Tests: Sec. UV at National Board Testing Labon March 19, 1997 Method of Establishing Relieving Capacity: Flow Capacity, K Certified Value: 0.860 Unitless Media - Test: Air/Gas, Steam; Certified: Air, Gas, Steam Set Pressure Definition: Pop Blowdown Characteristics: Adjustable (Single Ring) Designed by: ARI - Armaturen USA, LP {TAR}

Inlet Size	Outlet Size	Flow Area	Orifice [designator] dia.	Lift	Set Pressure Range	Media	Designator
1-1.5 NPS	2 - 3 NPS	0.122 in ²	[D] 0.394 in	0.12 in	15-2900 psi	Steam	UV
1-1.5 NPS	2 - 3 NPS	0.122 in ²	[D] 0.394 in	0.12 in	15-6250 psi	Air	UV
1-1.5 NPS	2 - 3 NPS	0.217 in ²	[E] 0.526 in	0.16 in	15-2900 psi	Steam	UV
1-1.5 NPS	2 - 3 NPS	0.217 in ²	[E] 0.526 in	0.16 in	15-6250 psi	Air	UV

Design Type							
[Relief Valve] RL40, RL040, RL41, RLO41 (0.547 in. orifice) (Liquid), Design Rev. A Capacity Tests: Sec. UV at National Board Testing Lab on March 4, 2014 Method of Establishing Relieving Capacity: Flow Capacity, Flow Factor Certified Value: 5.635 GPM/SQ.RT. PSID Media - Test: Water/Liquid; Certified: Liquid Set Pressure Definition: First Steady Stream Blowdown Characteristics: Fixed Designed by: ARI - Armaturen USA, LP {TAR}							
Inlet Size	Outlet Size	Flow Area	Orifice [designator] dia.	Lift	Set Pressure Range	Media	Designator
1-1.5 NPS	1.5, 2 NPS	0.235 in ²	0.547 in	0.137 in	15-3000 psi	Water	UV
Design Name	7 .	040, RL41, esign Rev. <i>F</i>		· NBCert	# 73224	4	
Manufacturer/A	ssembler		Designate	ors	E	Expiration Date)
Manufacturer			UV	\mathbf{i}	C	9/29/2026	
Design Type							
Capacity Tests: S Method of Estab Certified Value: 3 Media - Test: Air Set Pressure De Blowdown Chara	Sec. UV at National I lishing Relieving Cap 3.760 SCFM/PSIA; (a /Gas, Steam; Certific finition: Pop	Board Testing L bacity: Flow Ca alternate mediu ed: Air, Gas, St	im): 10.560 PPH/PSIA				
Inlet Size	Outlet Size	Flow Area	Orifice [designator] dia.	Lift	Set Pressure Range	Media	Designator
1-1.5 NPS	1.5, 2 NPS	0.235 in ²	0.547 in	0.137 in	15-2900 psi	Steam	UV
1-1.5 NPS	1.5, 2 NPS	0.235 in ²	0.547 in	0.137 in	15-3000 psi	Air	UV

ARI-Armaturen Albert Richter GmbH & Co. KG (ARI)

Nameplate Abbreviation: ARI

Schloss Holte-Stukenbrock, 33758Germany

This Company Manufactures or Assembles:

Design Nam	e: 901/902/9	11/912		NBO	Cert # 0800)8	
Manufacturer/	Assembler		Designat	ors		Expiration Da	ite
Manufacturer			UV			12/12/2023	
Design Type							
Capacity Tests: Method of Estal Certified Value: Media - Test: A Set Pressure De Blowdown Char	olishing Relieving Ca	Board Testing L pacity: Flow Ca Gas, Steam le Discharge		001			
Inlet Size	Outlet Size	Flow Area	Orifice [designator] dia.	Lift	Set Pressure Range	Media	Designator
1 NPS	1.5, 2.0 NPS	0.617 in ²	0.886 in	0.22 in	30-493 psi	Air	UV

1 NPS	1.5, 2.0 NPS	0.617 in ²				-	
	1.0, 2.0 11 0	0.017 111	0.886 in	0.22 in	30-493 psi	Steam	UV
1.25 NPS	2.0 NPS	1.024 in ²	1.142 in	0.29 in	30-493 psi	Air	UV
1.25 NPS	2.0 NPS	1.024 in ²	1.142 in	0.29 in	30-493 psi	Steam	UV
1.5 NPS	2, 2.5 NPS	1.024 in ²	1.142 in	0.29 in	30-493 psi	Air	UV
1.5 NPS	2, 2.5 NPS	1.024 in ²	1.142 in	0.29 in	30-493 psi	Steam	UV
1.5 NPS	2.5, 3.0 NPS	1.578 in ²	1.417 in	0.37 in	30-493 psi	Air	UV
1.5 NPS	2.5, 3.0 NPS	1.578 in ²	1.417 in	0.37 in	30-493 psi	Steam	UV
2 NPS	3 NPS	2.465 in ²	1.772 in	0.45 in	30-493 psi	Air	UV
2 NPS	3 NPS	2.465 in ²	1.772 in	0.45 in	30-493 psi	Steam	UV
2.5-3 NPS	4 NPS	4.166 in ²	2.303 in	0.61 in	30-406 psi	Air	UV
2.5-3 NPS	4 NPS	4.166 in ²	2.303 in	0.61 in	30-406 psi	Steam	UV
4 NPS	6 NPS	9.861 in ²	3.543 in	0.98 in	30-276 psi	Air	UV
4 NPS	6 NPS	9.861 in ²	3.543 in	0.98 in	30-276 psi	Steam	UV
5-6 NPS	8 NPS	13.678 in²	4.173 in	1.34 in	30-392 psi	Air	UV
5-6 NPS	8 NPS	13.678 in ²	4.173 in	1.34 in	30-392 psi	Steam	UV
6 NPS	10 NPS	19.022 in ²	4.921 in	1.46 in	30-305 psi	Air	UV
6 NPS	10 NPS	19.022 in ²	4.921 in	1.46 in	30-305 psi	Steam	UV
Manufacturer// Manufacturer	Assembler		Designa UV	tors		Expiration Da 1/12/2028	te
Design Type		_					
Besign type							
Relief Valve] 9 Capacity Tests: Method of Estal Certified Value: Media - Test: W Set Pressure Do Blowdown Char		I Board Testing I apacity: Flow Ca . PSID d: Liquid ressure	ab on August 24, 200 apacity, Flow Factor & Co. KG {ARI}	11			
[Relief Valve] 9 Capacity Tests: Method of Estal Certified Value: Media - Test: W Set Pressure De Blowdown Char Designed by: Al	Sec. UV at Nationa blishing Relieving C 14.410 GPM/SQ.RT Vater/Liquid; Certifie efinition: Opening P racteristics: Fixed	I Board Testing I apacity: Flow Ca . PSID d: Liquid ressure	apacity, Flow Factor	11 Lift	Set Pressure Range	Media	Designator
[Relief Valve] 9 Capacity Tests: Method of Estal Certified Value: Media - Test: W Set Pressure D Blowdown Char Designed by: Al Inlet Size	Sec. UV at Nationa blishing Relieving C 14.410 GPM/SQ.RT Vater/Liquid; Certifie efinition: Opening P racteristics: Fixed RI-Armaturen Albert	I Board Testing I apacity: Flow Ca PSID d: Liquid ressure Richter GmbH a	apacity, Flow Factor & Co. KG {ARI} Orifice			Media Water	Designator
Relief Valve] 9 Capacity Tests: Method of Estal Certified Value: Media - Test: W Set Pressure De Blowdown Char Designed by: Al Inlet Size	Sec. UV at Nationa blishing Relieving C 14.410 GPM/SQ.RT Vater/Liquid; Certifie efinition: Opening P racteristics: Fixed RI-Armaturen Albert Outlet Size 1.5, 2.0 NPS	I Board Testing I apacity: Flow Ca PSID d: Liquid ressure Richter GmbH a Flow Area	Apacity, Flow Factor & Co. KG {ARI} Orifice [designator] dia. 0.886 in	Lift	Range 15-493 psi	Water	Ũ
Relief Valve] 9 Capacity Tests: Method of Estal Certified Value: Media - Test: W Set Pressure Do Blowdown Char Designed by: Al Inlet Size	Sec. UV at Nationa blishing Relieving C 14.410 GPM/SQ.RT Vater/Liquid; Certifie efinition: Opening P racteristics: Fixed RI-Armaturen Albert Outlet Size 1.5, 2.0 NPS e: 901/902/	I Board Testing I apacity: Flow Ca PSID d: Liquid ressure Richter GmbH a Flow Area 0.617 in ²	Apacity, Flow Factor & Co. KG {ARI} Orifice [designator] dia. 0.886 in	Lift 0.22 in NBCer	Range 15-493 psi rt # 08019	Water	UV
Relief Valve] 9 Capacity Tests: Method of Estal Certified Value: Media - Test: W Set Pressure Do Blowdown Char Designed by: Al nlet Size I NPS Design Nam Manufacturer//	Sec. UV at Nationa blishing Relieving C 14.410 GPM/SQ.RT Vater/Liquid; Certifie efinition: Opening P racteristics: Fixed RI-Armaturen Albert Outlet Size 1.5, 2.0 NPS e: 901/902/	I Board Testing I apacity: Flow Ca PSID d: Liquid ressure Richter GmbH a Flow Area 0.617 in ²	apacity, Flow Factor & Co. KG {ARI} Orifice [designator] dia. 0.886 in uidS)	Lift 0.22 in NBCer	Range 15-493 psi rt # 08019 E	Water	UV
[Relief Valve] 9 Capacity Tests: Method of Estal Certified Value: Media - Test: W Set Pressure D Blowdown Char	Sec. UV at Nationa blishing Relieving C 14.410 GPM/SQ.RT Vater/Liquid; Certifie efinition: Opening P racteristics: Fixed RI-Armaturen Albert Outlet Size 1.5, 2.0 NPS e: 901/902/	I Board Testing I apacity: Flow Ca PSID d: Liquid ressure Richter GmbH a Flow Area 0.617 in ²	Apacity, Flow Factor & Co. KG {ARI} Orifice [designator] dia. 0.886 in uidS) Designa	Lift 0.22 in NBCer	Range 15-493 psi rt # 08019 E	Water	UV

Inlet Size	Outlet Size	Flow Area	Orifice [designator] dia.	Lift	Set Pressure Range	Media	Designator
1.25 NPS	2 NPS	1.024 in ²	1.142 in	0.29 in	15-493 psi	Water	UV
1.5 NPS	2, 2.5 NPS	1.024 in ²	1.142 in	0.29 in	15-493 psi	Water	UV
1.5 NPS	2.5, 3 NPS	1.578 in ²	1.417 in	0.37 in	15-493 psi	Water	UV
2 NPS	3 NPS	2.465 in ²	1.772 in	0.45 in	15-493 psi	Water	UV
2.5-3 NPS	4 NPS	4.166 in ²	2.303 in	0.61 in	15-406 psi	Water	UV
4 NPS	6 NPS	9.861 in ²	3.543 in	0.98 in	15-276 psi	Water	UV
5-6 NPS	8 NPS	13.678 in ²	4.173 in	1.34 in	15-392 psi	Water	UV
6 NPS	10 NPS	19.022 in ²	4.921 in	1.46 in	15-305 psi	Water	UV

Manufacturer/Assembler	Designators	Expiration Date
Manufacturer	UV	11/29/2023
Desire Ture		

Design Type

[Safety Relief Valve] 901/902/911/912 {15-30} Capacity Tests: Sec. UV at National Board Testing Lab on May 9, 2007 Method of Establishing Relieving Capacity: Flow Capacity, K Certified Value: 0.769 Unitless

Media - Test: Air/Gas, Steam; Certified: Air, Gas, Steam

Set Pressure Definition: Initial Audible Discharge

Blowdown Characteristics: Fixed

Designed by: ARI-Armaturen Albert Richter GmbH & Co. KG {ARI}

Inlet Size	Outlet Size	Flow Area	Orifice [designator] dia.	Lift	Set Pressure Range	Media	Designator
1 NPS	1.5, 2.0 NPS	0.394 in ²	0.709 in	0.205 in	15-30 psi	Air	UV
1 NPS	1.5, 2.0 NPS	0.394 in ²	0.709 in	0.205 in	15-30 psi	Steam	UV
1.25 NPS	2.0 NPS	1.024 in ²	1.142 in	0.29 in	15-30 psi	Air	UV
1.25 NPS	2.0 NPS	1.024 in ²	1.142 in	0.29 in	15-30 psi	Steam	UV
1.5 NPS	2, 2.5 NPS	1.024 in ²	1.142 in	0.29 in	15-30 psi	Air	UV
1.5 NPS	2, 2.5 NPS	1.024 in ²	1.142 in	0.29 in	15-30 psi	Steam	UV
1.5 NPS	2.5, 3.0 NPS	1.578 in ²	1.417 in	0.37 in	15-30 psi	Air	UV
1.5 NPS	2.5, 3.0 NPS	1.578 in ²	1.417 in	0.37 in	15-30 psi	Steam	UV
2 NPS	3 NPS	2.465 in ²	1.772 in	0.45 in	15-30 psi	Air	UV
2 NPS	3 NPS	2.465 in ²	1.772 in	0.45 in	15-30 psi	Steam	UV
2.5-3 NPS	4 NPS	4.166 in ²	2.303 in	0.61 in	15-30 psi	Air	UV
2.5-3 NPS	4 NPS	4.166 in ²	2.303 in	0.61 in	15-30 psi	Steam	UV
4 NPS	6 NPS	9.861 in ²	3.543 in	0.98 in	15-30 psi	Air	UV
4 NPS	6 NPS	9.861 in ²	3.543 in	0.98 in	15-30 psi	Steam	UV
5-6 NPS	8 NPS	13.678 in ²	4.173 in	1.34 in	15-30 psi	Air	UV
5-6 NPS	8 NPS	13.678 in ²	4.173 in	1.34 in	15-30 psi	Steam	UV
6 NPS	10 NPS	19.022 in ²	4.921 in	1.46 in	15-30 psi	Air	UV
6 NPS	10 NPS	19.022 in ²	4.921 in	1.46 in	15-30 psi	Steam	UV