

## EXPRESSION OF INTEREST (EOI)

<b>Project</b>	CERES
<b>Company / Client</b>	Perdaman Chemicals and Fertilisers Pty Ltd
<b>Material Requisition Number</b>	0000-SA-E-50002
<b>Package Title</b>	<b>FLOW PRIMARY ELEMENTS (VENTURI TUBES, FLOW NOZZLES, PITOT TUBES, ORIFICE PLATES &amp; RESTRICTION ORIFICE)</b>
<b>1. SUBMISSION PROCEDURE</b>	
<b>EOI Instructions</b>	<p>Supplier(s) are invited to express interest by registering on ICN Gateway where competency and previous positive experiences of similar supply of goods / services can be demonstrated.</p> <p>When submitting interest registrants will be asked to complete an expression of interest document. The registrant's response will form their Expression of Interest (EOI) for material and/or services.</p> <p>Suppliers will only be considered for Prequalification should they satisfy stated criteria, including but not limited to Health, Safety &amp; Environmental Management, Quality management, financial standing, relevant experience and availability.</p>
<b>EOI Closing Date</b>	Please submit by close of business on <b>04/12/2023</b>
<b>Returnable Schedules</b>	Where the EOI calls for any Returnable Schedules, please ensure all schedules are submitted.
<b>Contact</b>	<p>All initial enquiries should be made through the Industry Capability Network Western Australia (ICNWA).</p> <p>Andie Pfaff  <a href="mailto:Andie.Pfaff@icnwa.org.au">Andie.Pfaff@icnwa.org.au</a>  +61 (08) 9365 7442</p>
<b>URL</b>	<p>For more information regarding the Perdaman, refer</p> <ul style="list-style-type: none"> <li>• <a href="https://www.perdamanindustries.com.au/scjv/">https://www.perdamanindustries.com.au/scjv/</a></li> </ul>
<b>2. INDICATIVE SCOPE OF WORK</b>	
<b>Package Description</b>	<p><b>Overview</b></p> <p>Saipem Australia Pty Ltd and Clough Projects Australia Pty Ltd Joint Venture (herein referred to as the "CONTRACTOR") has reached an agreement with Perdaman Chemicals and Fertilisers Pty Ltd (herein referred to as the "OWNER") for the Engineering, Procurement, Construction and Commissioning of the PROJECT CERES located in Burrup Strategic Industrial Area, Burrup Peninsula, Western Australia.</p> <p>Perdaman Chemicals and Fertilisers Pty Ltd (OWNER) is focused on the development of Perdaman - Project CERES which shall be the world's largest gas stream ammonia-urea plant with a production capacity of 2.14 MMTPA granular urea.</p>

	<p><b>General Scope of Supply / Services</b></p> <p>Design, engineering, supply of materials, fabrication and assembly, shop tests and inspections, painting and marking, packing, transportation, etc., of <b>FLOW PRIMARY ELEMENTS (VENTURI TUBES, FLOW NOZZLES, PITOT TUBES, ORIFICE PLATES &amp; RESTRICTION ORIFICE)</b> as listed in Annexure 1.</p> <p>Further inclusions consist of provision of management, design, calculation, procurement, fabrication, testing and certification to satisfy the scope of supply.</p> <p>The following must be provided:</p> <ul style="list-style-type: none"> <li>• Technical deviations list</li> <li>• Special tools list</li> <li>• Schedule of rates</li> <li>• Spares list</li> <li>• Quality assurance</li> </ul> <p>Responsibilities will include <i>inter alia</i>:</p> <ul style="list-style-type: none"> <li>• The VENDOR shall assure responsibility for the entire package, including each sub-supply and components indicated in this specification.</li> <li>• Project management, reporting, attending meetings, participation in risk assessment workshops</li> <li>• Comply with site mobilisation and site requirements</li> <li>• Delivering work in a safe manner and to the required standards</li> <li>• Whole Guarantee and responsibility for assembling and good operation of the complete unit.</li> </ul>
<b>Standards</b>	Compliance with National, International and Industry Standards, Australian and WA Regulatory requirements.
<b>Key Dates</b>	Tender planned to be issued during 1 <sup>st</sup> week of December 2023
<b>Point of Delivery</b>	Module Fabrication Yard (Outside Australia)
<b>3. RETURNABLE DOCUMENTS</b>	
<b>List of Returnable Schedules</b>	List of experience on similar equipment supply projects
<b>4. DISCLAIMER</b>	
This Expression of Interest to gain an insight into the capabilities of potential suppliers and/or service providers and not a Tender Invitation or offer - the schedule and content of this work is subject to change pending project demand and timelines.	

## ANNEXURE 1

## VENTURI TUBES MTO LIST:

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Process connection size / Type / Rating / Facing	Flange Material	Tube / Body / Throat Material	Max Allowable PR Drop (MPa)	Remarks
			Unit	Min.	Max.	Nor.							
1	1100-FZE-0703	PROCESS GAS	Nm³/h	37260		195023	65G	450	DN450 Flanged CL600 RF / 125 µin.Ra	ASTM A182 F11 CL.2 - Norm.&Temp.	ASTM A335 P11 (Ann.) - SMLS	0.005	
2	1300-FE-2301	CO2 GAS	Nm³/h	62323		104070	31G	1200	DN1200, Butt Weld	NA	ASTM A358 TP304/TP304L CL.1 DUAL GRADE - EFW	0.005	
3	2500-FE-4303	SYNGAS	Nm³/h	338400		398113	77H	450	DN450, Butt Weld	NA	ASTM A333 GR.6 - SMLS	0.005	
4	2500-FE-4308	SYNGAS	Nm³/h	660025		776495	77H	500	DN500, Butt Weld	NA	ASTM A333 GR.6 - SMLS	0.005	
5	2500-FE-4368	SYNGAS	Nm³/h	328200		386117	77H	400	DN400, Butt Weld	NA	ASTM A333 GR.6 - SMLS	0.005	
6	3310-FE-7713	STEAM	kg/h	2500	13000	12315	65W	150	DN150 Flanged CL600 RF / 125 µin.Ra	ASTM A182 F11 CL.2.	ASTM A335 P11 (Ann.) - SMLS	0.005	

## NOTES:

- Venturi shall be equipped with piezo rings to equalize the measured pressure of each pressure tap.

## FLOW NOZZLES MTO LIST:

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Flow Nozzle Type	Process connection size / Type / Rating / Facing	Flange Material / Spool Material	Nozzle Material	Max Allowable PR Drop (MPag)	Remarks
			Unit	Min.	Max.	Nor.								
1	1100-FE-1401	KP BFW	kg/h	36738	449242	408200	77W	300	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A106 GR.B Butt weld spool	SS 316	0.021	
2	1100-FE-1403	KS SATURATED STEAM	kg/h	121240		404200	77R	450	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A106 GR.B Butt weld spool	SS 316	0.021	
3	1100-FE - 6701	KS SUPERHEATED STEAM	kg/h	15000		512310	68M	600	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A335 P22 (Ann.) Butt weld spool	SS 316	0.021	
4	2500-FE-3802	SATURATED KS STEAM	kg/h	35190		117291	77R	300	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A106 GR.B Butt weld spool	SS 316	0.021	
5	2500-FE-3803	KP BFW	kg/h	10663	130324	118476	77W	200	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A106 GR.B Butt weld spool	SS 316	0.021	
6	2500-FE-4001	RECYCLE SYNGAS (HYDROGEN)	Nm³/h			1162715	77H	600	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A333 GR.6 - SMLS Butt weld spool	SS 316	0.021	
7	2500-FE-5494	SUPERHEATED KS STEAM	kg/h	131400		162249	68M	400	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A335 P22 (Ann.) Butt weld spool	SS 316	0.021	
8	2500-FE-5496	SUPERHEATED KS STEAM	kg/h	64426		291565	68M	450	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A335 P22 (Ann.) Butt weld spool	SS 316	0.021	
9	2500-FE-7114	HS STEAM	kg/h	4512		76730	66M	250	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A335 P22 (Ann.) Butt weld spool	SS 316	0.021	
10	2610-FE-1007	STEAM	kg/h	30000	87000	70807	13W	350	ISA 1932 Nozzle ( ISO 5167 / R.W.Miller )	DN350 CL300, RF / 125 µin.Ra.	ASTM A105 Normalized.	SS 316	0.02	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Flow Nozzle Type	Process connection size / Type / Rating / Facing	Flange Material / Spool Material	Nozzle Material	Max Allowable PR Drop (MPag)	Remarks
			Unit	Min.	Max.	Nor.								
11	2610-FE-1008	STEAM	kg/h	1000	4000	2058	13W	80	ISA 1932 Nozzle ( ISO 5167 / R.W.Miller )	DN80 CL300, RF / 125 µin.Ra.	ASTM A105 Normalized.	SS 316	0.02	
12	2610-FE-1013	MS SATURATED STEAM	kg/h	31860	95500	79650	13W	300	ISA 1932 Nozzle ( ISO 5167 / R.W.Miller )	DN300 CL300, RF / 125 µin.Ra.	ASTM A105 Normalized.	SS 316	0.02	
13	2610-FE-1079	STEAM	kg/h	29146	87000	72865	13W	350	ISA 1932 Nozzle ( ISO 5167 / R.W.Miller )	DN350 CL300, RF / 125 µin.Ra.	ASTM A105 Normalized.	SS 316	0.01	
14	2610-FE-1082	STEAM	kg/h	46520	135000	116300	65W	300	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A335 P11 Butt weld spool	SS 316	0.02	
15	2710-FE-1007	STEAM	kg/h	30000	87000	70807	13W	350	ISA 1932 Nozzle ( ISO 5167 / R.W.Miller )	DN350 CL300, RF / 125 µin.Ra.	ASTM A105 Normalized.	SS 316	0.02	
16	2710-FE-1008	STEAM	kg/h	1000	4000	2058	13W	80	ISA 1932 Nozzle ( ISO 5167 / R.W.Miller )	DN80 CL300, RF / 125 µin.Ra.	ASTM A105 Normalized.	SS 316	0.02	
17	2710-FE-1013	MS SATURATED STEAM	kg/h	31860	95500	79650	13W	300	ISA 1932 Nozzle ( ISO 5167 / R.W.Miller )	DN300 CL300, RF / 125 µin.Ra.	ASTM A105 Normalized.	SS 316	0.02	
18	2710-FE-1079	STEAM	kg/h	29146	87000	72865	13W	350	ISA 1932 Nozzle ( ISO 5167 / R.W.Miller )	DN350 CL300, RF / 125 µin.Ra.	ASTM A105 Normalized.	SS 316	0.01	
19	2710-FE-1082	STEAM	kg/h	46520	135000	116300	65W	300	ISO Long Radius Nozzle (ISO 5167 )	NA Butt weld spool	ASTM A335 P11 Butt weld spool	SS 316	0.02	

**NOTES:**

1. Design and limitations of use shall comply with ISO 5167-3.
2. Flow nozzle shall be supplied complete of butt weld spool.

**PITOT TUBE MTO LIST:**

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Mounting Flange Size and Rating (Nozzle welded to Pipe)	Mounting Flange / Weldolet Material	Pitot Tube / Flange Material	Root Isolation Valve/Material	Remarks
			Unit	Min.	Max.	Nor.							
1	1100-FZE-6201	NITROGEN GAS	Nm³/h	22405	38570	30008	11G	350	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
2	2610-FE-0001	COOLING WATER	m³/h.	3624	8132	7248	11V	1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
3	2610-FE-1019	STEAM	kg/h	25600	73600	64000	11W	500	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
4	2610-FE-1020	STEAM	kg/h	9320	27000	23300	11W	350	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
5	2610-FE-1053	CO2	Nm³/h	21000	51341	48837	31C	1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
6	2710-FE-0001	COOLING WATER	m³/h.	3624	8132	7248	11V	1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
7	2710-FE-1019	STEAM	kg/h	25600	73600	64000	11W	500	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
8	2710-FE-1020	STEAM	kg/h	9320	27000	23300	11W	350	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
9	2710-FE-1053	CO2	Nm³/h	21000	51341	48837	31C	1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
10	2620-FE-2021	FLUIDIZATION AIR	Nm³/h	38956	98460	77911	11W	2000 X1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Mounting Flange Size and Rating (Nozzle welded to Pipe)	Mounting Flange / Weldolet Material	Pitot Tube / Flange Material	Root Isolation Valve/Material	Remarks
			Unit	Min.	Max.	Nor.							
11	2620-FE-2022	FLUIDIZATION AIR	Nm³/h	61543	155550	123086	11W	3800X1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
12	2620-FE-2023	FLUIDIZATION AIR	Nm³/h	61543	155550	123086	11W	3800X1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
13	2620-FE-2024	FLUIDIZATION AIR	Nm³/h	55105	137763	110210	11W	3000 x 1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
14	2620-FE-2025	FLUIDIZATION AIR	Nm³/h	55105	137763	110210	11W	3000 x 1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
15	2620-FE-2026	FLUIDIZATION AIR	Nm³/h	55105	137763	110210	11W	3000 x 1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
16	2620-FE-2027	AMBIENT AIR	Nm³/h	40616	84617	67694	91Q	850	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
17	2720-FE-2021	FLUIDIZATION AIR	Nm³/h	38956	98460	77911	11W	2000 X1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
18	2720-FE-2022	FLUIDIZATION AIR	Nm³/h	61543	155550	123086	11W	3800X1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
19	2720-FE-2023	FLUIDIZATION AIR	Nm³/h	61543	155550	123086	11W	3800X1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
20	2720-FE-2024	FLUIDIZATION AIR	Nm³/h	55105	137763	110210	11W	3000 x 1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
21	2720-FE-2025	FLUIDIZATION AIR	Nm³/h	55105	137763	110210	11W	3000 x 1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
22	2720-FE-2026	FLUIDIZATION AIR	Nm³/h	55105	137763	110210	11W	3000 x 1000	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
23	2720-FE-2027	AMBIENT AIR	Nm³/h	40616	84617	67694	91Q	850	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	
24	3920-FE-0023	COOLING WATER	kg/h	14439410	41775360	36098525	11V	2100	Flanged, CL 150 RF / 125 µin.Ra	ASTM A105 Normalized	SS 316L	Ball / SS 316L	

**ORIFICE PLATES MTO LIST:**

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
1	1100-FE-0101	HYDROGEN GAS	Nm³/h	512	6994	11968	15H	80	Square Edge Orifice-Concentric	DN80,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
2	1100-FE-0106	NATURAL GAS	Nm³/h	56570	117104	-	15G	350	Square Edge Orifice-Concentric	DN350,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	601.4000244	mmH2O	
3	1100-FE-0315	HS STEAM	kg/h	10000	16150	-	65W	150	Square Edge Orifice-Concentric	DN150,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F11 CL.2 - Norm.&Temp.	-	0.025	MPa	
4	1100-FE-0401	HYDROGEN GAS	Nm³/h	415	828	-	15H	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	1019	mmH2O	
5	1100-FE-0403	NITROGEN GAS	Nm³/h	22390	30008	38570	11G	350	Square Edge Orifice-Concentric	DN350,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
6	1100-FE-0404	NITROGEN GAS	Nm³/h	-	-	5000	11G	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	1019	mmH2O	
7	1100-FE-0701	NITROGEN GAS	Nm³/h	500	2000	-	65G	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	316 S.S.	ASTM A182 F11 CL.2 - Norm.&Temp.	-	0.025	MPa	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
8	1100-FE-1201	HS STEAM	kg/h	-	6815	-	35W	100	Square Edge Orifice-Concentric	DN100,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
9	1100-FE-1202	HS STEAM	kg/h	150	340	-	35W	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F304/304L DUAL GRADE	-	1019	mmH2O	
10	1100-FE-1203	HS STEAM	kg/h	150	340	-	35W	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F304/304L DUAL GRADE	-	1019	mmH2O	
11	1100-FE-1205	HS STEAM	kg/h	1300	4420	-	35W	80	Square Edge Orifice-Concentric	DN80,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
12	1100-FE-1501	HS SATURATED STEAM	kg/h	500	12835	-	65W	150	Square Edge Orifice-Concentric	DN150,CL600 RF/125 µin.Ra	316 S.S.	ASTM A182 F11 CL.2 - Norm.&Temp	-	1019.700012	mmH2O	
13	1100-FE-6126	FUEL GAS	Nm³/h	800	3005	3337	11Q	200	Square Edge Orifice-Concentric	DN200,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
14	1100-FE-6127	FUEL GAS	Nm³/h	2052	7750	8540	11Q	250	Square Edge Orifice-Concentric	DN250,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
15	1100-FE-6128	FUEL GAS	Nm³/h	7662	28820	31647	11Q	400	Square Edge Orifice-Concentric	DN400,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
16	1100-FE-6218	NITROGEN	Nm³/h	1080	1800	-	11G	100	Square Edge Orifice-Concentric	DN100,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
17	1100-FE-6501	RECYCLE GAS	Nm³/h	4225	7037	-	15H	80	Square Edge Orifice-Concentric	DN80,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
18	1100-FE-6703	KS SUPERHEATED STEAM	kg/h	4769	58000	70000	68M	250	Square Edge Orifice-Concentric	DN250,CL2500 RJ(F)/63 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F22 CL.3	Required	0.025	MPa	
19	1100-FE-9202	HIGH PRESSURE BFW	kg/h	1545	3860	4000	15W	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
20	1100-FZE-0107	NATURAL GAS	Nm³/h	56570	117104	-	15G	350	Square Edge Orifice-Concentric	DN350,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	601.4000244	mmH2O	
21	1100-FZE-0301	DESULPHURISED NG	Nm³/h	37217	124057	-	15G	350	Square Edge Orifice-Concentric	DN350,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A105 Normalized	-	1500	mmH2O	
22	1100-FZE-0303	DESULPHURISED NG	Nm³/h	18093	37217	-	15G	250	Square Edge Orifice-Concentric	DN250,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A105 Normalized	-	0.025	MPa	
23	1100-FZE-0307	HS STEAM	kg/h	10500	53811	53850	65W	250	Square Edge Orifice-Concentric	DN250,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F11 CL.2 - Norm.&Temp	-	0.025	MPa	
24	1100-FZE-0902	OXYGEN GAS	Nm³/h	18575	61915	-	35P	300	Square Edge Orifice-Concentric	DN300,CL600 RF/125 µin.Ra	K-MONEL	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
25	1100-FZE-0907	OXYGEN GAS	Nm³/h	3100	18575	-	85P	150	Square Edge Orifice-Concentric	DN150,CL600 RF/125 µin.Ra	K-MONEL	ASTM B564 UNS N04400 (Ann.)	-	0.025	MPa	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
26	1100-FZE-1101	HS STEAM	kg/h	2597	4330	-	35W	80	Square Edge Orifice-Concentric	DN80,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
27	1100-FZE-1204	HS STEAM	kg/h	600	2040	-	35W	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
28	1200-FE-1601	HIGH PRESSURE STEAM	kg/h	21310	21470	21570	65W	200	Square Edge Orifice-Concentric	DN200,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F11 CL.2 - Norm.&Temp	-	0.025	MPa	
29	1200-FE-6101		kg/h	34408	57347	68816	65W	250	Square Edge Orifice-Concentric	DN250,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F11 CL.2 - Norm.&Temp	-	0	MPa	
30	1200-FE-6102	PROCESS CONDENSATE	kg/h	62035	86157	103388	35G	150	Square Edge Orifice-Concentric	DN150,CL600 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
31	1200-FE-6103	PROCESS CONDENSATE	kg/h	3000	79331	95197	35G	150	Square Edge Orifice-Concentric	DN150,CL600 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
32	1200-FE-7000		kg/h	11740	19560	23472	35G	80	Square Edge Orifice-Concentric	DN80,CL600 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.02	MPa	
33	1300-FE-2101	PROCESS CONDENSATE	kg/h	3000	5000	-	33C	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
34	1300-FE-2601	OASE SOLUTION	kg/h	290250	725622	870604	31H	300	Square Edge Orifice-Concentric	DN300,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F316/F316L DUAL GRADE	-	0.025	MPa	
35	1300-FE-2701	FLASH GAS	Nm³/h	2275	5460	6297	31G	250	Square Edge Orifice-Concentric	DN200,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
36	1300-FE-2901	POLISHED WATER	kg/h	502000	251000	-	31Q	250	Square Edge Orifice-Concentric	DN250,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
37	1300-FE-3401	STRIPPED CONDENSATE	kg/h	3637	6062	-	15W	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
38	1300-FE-3402	SYNGAS	Nm³/h	6685	11140	-	13L	100	Square Edge Orifice-Concentric	DN100,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
39	1300-FE-3601	NITROGEN GAS	Nm³/h	-	100102	-	13G	300	Square Edge Orifice-Concentric	DN300,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
40	1300-FE-3602	LIQUID NITROGEN	kg/h	-	1875	-	31F	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F316/F316L DUAL GRADE	-	0.025	MPa	
41	1300-FE-3603	SYNGAS	Nm³/h	235258	392100		13H	500	Square Edge Orifice-Concentric	DN500,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	1065	mmH2O	
42	1300-FE-6301	OASE SOLUTION	kg/h	9000	78771	90000	15J	150	Square Edge Orifice-Concentric	DN150,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	3050	mmH2O	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
43	1300-FZE-3001	OASE SOLUTION	kg/h	403199	671998	806124	35H	300	Square Edge Orifice-Concentric	DN300,CL600 RF/125 µin.Ra	316 S.S.	ASTM A182 F316/F316L DUAL GRADE	-	0.025	MPa	
44	1300-FZE-3404	OASE SOLUTION	kg/h	1583919	5279730	6339810	35H	850	Square Edge Orifice-Concentric	DN850,CL600 RF/125 µin.Ra	316 S.S.	ASTM A182 F316/F316L DUAL GRADE	-	0.025	MPa	
45	2500-FE-4010	PURGE GAS	Nm³/h	226	500	752	77H	50	Square Edge Orifice-Concentric	DN50,CL1500 RJ(F)	316 S.S.	ASTM A105 Normalized	Required	1019	mmH2O	
46	2500-FE-4436	AMMONIA	Nm³/h	9490	11165	-	13U	400	Square Edge Orifice-Concentric	DN400,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
47	2500-FE-4437	AMMONIA	Nm³/h	28700	33760	-	13U	650	Square Edge Orifice-Concentric	DN650,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
48	2500-FE-4438	AMMONIA	Nm³/h	133700	157300	-	13U	800	Square Edge Orifice-Concentric	DN800,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
49	2500-FE-4701	INERT GAS	Nm³/h	1385	2310	-	13U	100	Square Edge Orifice-Concentric	DN100,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.021	MPa	
50	2500-FE-4802	AMMONIA WATER	kg/h	190	316	-	15G	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	1019	mmH2O	
51	2500-FE-4902A	HIGH PRESSURE BFW	kg/h	176	293	-	15W	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	3059	mmH2O	
52	2500-FE-5497	SUPERHEATED KS STEAM	kg/h	77650	194080	225000	65W	450	Square Edge Orifice-Concentric	DN450,CL600 RF/125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F11 CL.2 - Norm.&Temp	-	0.025	MPa	
53	2500-FE-7111	HP BFW	kg/h	5870	43430	-	15W	100	Square Edge Orifice-Concentric	DN100,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
54	2500-FE-7112	HP BFW	kg/h	5870	43430	-	15W	100	Square Edge Orifice-Concentric	DN100,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
55	2500-FE-7113	HP BFW	kg/h	352	7430	-	15W	50	Square Edge Orifice-Concentric	DN50,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
56	2610-FE-1003	LIQUID AMMONIA	m³/h	73	181	208	58C	200	Square Edge Orifice-Concentric	DN200, CL2500 RJ (F)	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
57	2610-FE-1004A	LIQUID AMMONIA	m³/h	73	181	208	53C	250	Square Edge Orifice-Concentric	DN250, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
58	2610-FE-1004B	LIQUID AMMONIA	m³/h	73	181	208	53C	250	Square Edge Orifice-Concentric	DN250, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
59	2610-FE-1006	CARBON DI-OXIDE	Nm³/h	21000	48837	51341	77A	200	Square Edge Orifice-Concentric	DN200, CL1500 RJ (F) / 63 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
60	2610-FE-1009	STEAM CONDENSATE	m³/h	1		4	13A	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
61	2610-FE-1010	LIQUID AMMONIA	m³/h	8	18	23	53C	80	Square Edge Orifice-Concentric	DN80, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
62	2610-FE-1012	STEAM CONDENSATE	m³/h	0	1	2	13A	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
63	2610-FE-1014	STEAM COND.	m³/h	0	1	2	13A	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
64	2610-FE-1016	STEAM	kg/h	1000	4700	6580	65W	100	Square Edge Orifice-Concentric	DN100, CL600 RF / 125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F11 CL.2 - Norm.&Temp.	-	0.015	MPa	
65	2610-FE-1017	PROC COND	m³/h	15	37	66	31C	150	Square Edge Orifice-Concentric	DN150, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
66	2610-FE-1021	STEAM CONDENSATE	m³/h	20	49	98	11W	150	Square Edge Orifice-Concentric	DN150, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
67	2610-FE-1022	STEAM	kg/h	5700	14400	18000	11W	250	Square Edge Orifice-Concentric	DN250, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
68	2610-FE-1023	STEAM	kg/h	7000	27100	38000	11W	350	Square Edge Orifice-Concentric	DN350, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.01	MPa	
69	2610-FE-1027	CARBAMATE SOLUTION	m³/h	0	4	4	33C	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
70	2610-FE-1030	POLLUTED PROCESS CONDENSATE	m³/h	23	58	72	31C	150	Square Edge Orifice-Concentric	DN150, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
71	2610-FE-1034	STEAM	kg/h	12000	25900	31080	11W	300	Square Edge Orifice-Concentric	DN300, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
72	2610-FE-1035	STEAM	kg/h	5000	12300	18500	11W	200	Square Edge Orifice-Concentric	DN200, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
73	2610-FE-1050	AIR	Nm³/h	449	1055	1245	11A	80	Square Edge Orifice-Concentric	DN80, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
74	2610-FE-1052	AIR	Nm³/h	-	70	81	77A	50	Square Edge Orifice-Concentric	DN50, CL1500 RJ (F) / 63 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
75	2610-FE-1070	STEAM CONDENSATE	m³/h	35	43	55	11W	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
76	2610-FE-1113	NH3 + INERTS	Nm³/h	749	1874	9500	53B	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
77	2610-FE-1115	STEAM	kg/h	200	500	2500	13W	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
78	2610-FE-1119	STEAM	kg/h	-	-	5000	13W	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	INCONEL X, ANNEALED	ASTM A105 Normalized	-	0.025	MPa	
79	2610-FE-1128	FUEL GAS	Nm³/h	-	-	5000	11P	200	Square Edge Orifice-Concentric	DN200, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
80	2610-FE-1140	STEAM	kg/h	500	-	3000	11W	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
81	2610-FE-1141	FUEL GAS	Nm³/h	-	-	4000	11P	80	Square Edge Orifice-Concentric	DN80, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
82	2610-FE-1142	FUEL GAS	Nm³/h	-	5000	-	11P	150	Square Edge Orifice-Concentric	DN150, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
83	2610-FE-1143	FUEL GAS	Nm³/h	-	2000	-	11P	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
84	2610-FE-1811	CONDENSATE	m³/h	2	3	6	33C	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
85	2620-FE-2017	UREA SOLUTION	m³/h	4	8	14	31C	80	Square Edge Orifice-Concentric	DN80, CL300,RF/125 µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
86	2620-FE-2074	45% UREA/WATER SOLUTION	m³/h	64	118	142	31C	200	Square Edge Orifice-Concentric	DN200,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
87	2620-FE-2303	COOLING WATER	Nm³/h	-	-	-	11V	200	Square Edge Orifice-Concentric	DN200,CL300,RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
88	2620-FE-2307	AMBIENT AIR	m³/h	-	242	275	31C	50	Square Edge Orifice-Concentric	DN50, CL300,RF/125 µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0	MPa	
89	2620-FE-2709	39% UREA/WATER SOLUTION	m³/h	8	26	29	31C	250	Square Edge Orifice-Concentric	DN250,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
90	2620-FE-2724	PROCESS CONDENSATE	m³/h	-	258	353	31C	100	Square Edge Orifice-Concentric	DN100,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
91	2620-FE-2726	39%. UREA/WATER SOLUTION	m³/h	0	1	1	31C	250	Square Edge Orifice-Concentric	DN250,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
92	2620-FE-2731	PROCESS CONDENSATE	m³/h	-	285	359	31C	100	Square Edge Orifice-Concentric	DN100,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
93	2620-FE-2733	AMMONIUM SULPHATE SOLN.	m³/h	-	572	647	31B	250	Square Edge Orifice-Concentric	DN250,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F316/F316L DUAL GRADE	-	0.025	MPa	
94	2620-FE-2735	AMMONIUM SULPHATE SOLN.	m³/h	-	-	50	31B	250	Square Edge Orifice-Concentric	DN250,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F316/F316L DUAL GRADE	-	0.025	MPa	
95	2630-FE-1032	PROC COND	m³/h	11	28	35	31C	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
96	2710-FE-1003	LIQUID AMMONIA	m³/h	73	181	208	58C	200	Square Edge Orifice-Concentric	DN200, CL2500 RJ (F)	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
97	2710-FE-1004A	LIQUID AMMONIA	m³/h	73	181	208	53C	250	Square Edge Orifice-Concentric	DN250, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
98	2710-FE-1004B	LIQUID AMMONIA	m³/h	73	181	208	53C	250	Square Edge Orifice-Concentric	DN250, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
99	2710-FE-1006	CARBON DI-OXIDE	Nm³/h	21000	48837	51341	77A	200	Square Edge Orifice-Concentric	DN200, CL1500 RJ (F) / 63 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
100	2710-FE-1009	STEAM CONDENSATE	m³/h	1		4	13A	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
101	2710-FE-1010	LIQUID AMMONIA	m³/h	8	18	23	53C	80	Square Edge Orifice-Concentric	DN80, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
102	2710-FE-1012	STEAM CONDENSATE	m³/h	0	1	2	13A	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
103	2710-FE-1014	STEAM COND.	m³/h	0	1	2	13A	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
104	2710-FE-1016	STEAM	kg/h	1000	4700	6580	65W	100	Square Edge Orifice-Concentric	DN100, CL600 RF / 125 µin.Ra	INCONEL X, ANNEALED	ASTM A182 F11 CL.2 - Norm.&Temp.	-	0.015	MPa	
105	2710-FE-1017	PROC COND	m³/h	15	37	66	31C	150	Square Edge Orifice-Concentric	DN150, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
106	2710-FE-1021	STEAM CONDENSATE	m³/h	20	49	98	11W	150	Square Edge Orifice-Concentric	DN150, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
107	2710-FE-1022	STEAM	kg/h	5700	14400	18000	11W	250	Square Edge Orifice-Concentric	DN250, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
108	2710-FE-1023	STEAM	kg/h	7000	27100	38000	11W	350	Square Edge Orifice-Concentric	DN350, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.01	MPa	
109	2710-FE-1027	CARBAMATE SOLUTION	m³/h	0	4	4	33C	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
110	2710-FE-1030	POLLUTED PROCESS CONDENSATE	m³/h	23	58	72	31C	150	Square Edge Orifice-Concentric	DN150, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
111	2710-FE-1034	STEAM	kg/h	12000	25900	31080	11W	300	Square Edge Orifice-Concentric	DN300, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
112	2710-FE-1035	STEAM	kg/h	5000	12300	18500	11W	200	Square Edge Orifice-Concentric	DN200, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
113	2710-FE-1050	AIR	Nm³/h	449	1055	1245	11A	80	Square Edge Orifice-Concentric	DN80, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
114	2710-FE-1052	AIR	Nm³/h	-	70	81	77A	50	Square Edge Orifice-Concentric	DN50, CL1500 RJ (F) / 63 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
115	2710-FE-1070	STEAM CONDENSATE	m³/h	35	43	55	11W	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
116	2710-FE-1113	NH3 + INERTS	Nm³/h	749	1874	9500	53B	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
117	2710-FE-1115	STEAM	kg/h	200	500	2500	13W	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
118	2710-FE-1119	STEAM	kg/h	-	-	5000	13W	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	INCONEL X, ANNEALED	ASTM A105 Normalized	-	0.025	MPa	
119	2710-FE-1128	FUEL GAS	Nm³/h	-	-	5000	11P	200	Square Edge Orifice-Concentric	DN200, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
120	2710-FE-1140	STEAM	kg/h	500	-	3000	11W	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
121	2710-FE-1141	FUEL GAS	Nm³/h	--	-	4000	11P	80	Square Edge Orifice-Concentric	DN80, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
122	2710-FE-1142	FUEL GAS	Nm³/h	-	5000	-	11P	150	Square Edge Orifice-Concentric	DN150, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
123	2710-FE-1143	FUEL GAS	Nm³/h	-	2000	-	11P	100	Square Edge Orifice-Concentric	DN100, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
124	2710-FE-1811	CONDENSATE	m³/h	2	3	6	33C	50	Square Edge Orifice-Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
125	2720-FE-2017	UREA SOLUTION	m³/h	4	8	14	31C	80	Square Edge Orifice-Concentric	DN80, CL300,RF/125 µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
126	2720-FE-2074	45% UREA/WATER SOLUTION	m³/h	64	118	142	31C	200	Square Edge Orifice-Concentric	DN200,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
127	2720-FE-2303	COOLING WATER	Nm³/h	-	-	-	11V	200	Square Edge Orifice-Concentric	DN200,CL300,RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
128	2720-FE-2307	AMBIENT AIR	m³/h	-	242	275	31C	50	Square Edge Orifice-Concentric	DN50, CL300,RF/125 µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0	MPa	
129	2720-FE-2709	39% UREA/WATER SOLUTION	m³/h	8	26	29	31C	250	Square Edge Orifice-Concentric	DN250,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
130	2720-FE-2724	PROCESS CONDENSATE	m³/h	-	258	353	31C	100	Square Edge Orifice-Concentric	DN100,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
131	2720-FE-2726	39%. UREA/WATER SOLUTION	m³/h	0	1	1	31C	250	Square Edge Orifice-Concentric	DN250,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
132	2720-FE-2731	PROCESS CONDENSATE	m³/h	-	285	359	31C	100	Square Edge Orifice-Concentric	DN100,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
133	2720-FE-2733	AMMONIUM SULPHATE SOLN.	m³/h	-	572	647	31B	250	Square Edge Orifice-Concentric	DN250,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F316/F316L DUAL GRADE	-	0.025	MPa	
134	2720-FE-2735	AMMONIUM SULPHATE SOLN.	m³/h	-	-	50	31B	250	Square Edge Orifice-Concentric	DN250,CL300,RF/125µin.Ra.	316 S.S.	ASTM A182 F316/F316L DUAL GRADE	-	0.025	MPa	
135	3110-FE-0014	PLANT AIR	Nm³/h	3240	8100	9400	11P	150	Square Edge Orifice-Concentric	DN150,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
136	3120-FE-0004	INSTRUMENT AIR	Nm³/h	1240	3650	4500	91T	150	Square Edge Orifice-Concentric	DN150,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
137	3310-FE-0901	CONDENSATE	kg/h	2328	6983	25000	11W	80	Square Edge Orifice-Concentric	DN80,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
138	3310-FE-7602	DEMI WATER	kg/h	1760	501806	551986	31Q	250	Square Edge Orifice-Concentric	DN250,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
139	3310-FE-7704	KP BOILER FEED WATER	kg/h	10100	526717	600000	77W	350	Square Edge Orifice-Concentric	DN350,CL1500RJ(F)/63µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
140	3310-FE-7706	HP BOILER FEED WATER	kg/h	5600	15547	28100	15W	80	Square Edge Orifice-Concentric	DN80,CL600 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.02	MPa	
141	3410-FE-6550	LOW PRESSURE FUEL GAS	Nm³/h	655	7989	8788	11P	150	Square Edge Orifice-Concentric	DN150,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
142	3420-FE-6537	FUEL GAS	Nm³/h	415	2085	2300	11P	250	Square Edge Orifice-Concentric	DN250,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
143	3430-FE-6526	FUEL GAS	Nm³/h	35	189	208	11P	100	Square Edge Orifice-Concentric	DN100,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
144	3720-FE-5001	POTABLE WATER	kg/h	16800	42000	46200	91N	80	Square Edge Orifice-Concentric	DN80,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
145	3720-FE-5010	POTABLE WATER	kg/h	1200	3000	62000	91N	100	Square Edge Orifice-Concentric	DN100,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
146	3730-FE-0012B	POLISHED WATER	kg/h	201721	504303	574850	31Q	350	Square Edge Orifice-Concentric	DN350,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
147	3730-FE-0012D	POLISHED WATER	kg/h	60960	152408	167960	31Q	200	Square Edge Orifice-Concentric	DN200,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
148	3730-FE-0012E	POLISHED WATER	kg/h	225416	563541	701541	31Q	350	Square Edge Orifice-Concentric	DN350,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
149	3740-FE-5002	DESALINATED WATER	kg/h	3990	22000	24950	31Q	80	Square Edge Orifice-Concentric	DN80,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
150	3750-FE-5020	CONDENSATE	kg/h	58410	146027	165000	31G	200	Square Edge Orifice-Concentric	DN200,CL300 RF/125 µin.Ra	316 S.S.	ASTM A182 F304/304L DUAL GRADE	-	0.025	MPa	
151	3750-FE-5030	CONDENSATE	kg/h	186000	417505	465000	11W	250	Square Edge Orifice-Concentric	DN250,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
152	3910-FE-0032	SEA WATER	kg/h	1225648	3064122	3370535	41T	750	Square Edge Orifice-Concentric	DN750,CL150 FF	DUPLEX S.32750	RTR-EPOXY	-	0.025	MPa	
153	3910-FE-0033	SEA WATER	kg/h	6467875	16263800	16263800	41T	1100	Square Edge Orifice-Concentric	DN1100,CL150 FF	DUPLEX S.32750	RTR-EPOXY	-	0.025	MPa	
154	3910-FE-6111	SEA WATER	kg/h	1285400	3213502	3534852	41T	750	Square Edge Orifice-Concentric	DN750,CL150 FF	DUPLEX S.32750	RTR-EPOXY	-	0.025	MPa	
155	3910-FE-6114	SEA WATER	kg/h	132321	330804	364500	41T	250	Square Edge Orifice-Concentric	DN250,CL150 FF	DUPLEX S.32750	RTR-EPOXY	-	0.025	MPa	
156	3930-FE-5009	FIRE WATER	m³/h	0	-	239	91X	200	Square Edge Orifice-Concentric	DN200,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.02	MPa	
157	3950-FE-0004	CLEAN DRAINAGE WATER	kg/h	320000	800000	880000	41G	500	Square Edge Orifice-Concentric	DN500,CL150 FF	DUPLEX S.32750	RTR-EPOXY	-	0.025	MPa	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Flange Material	RTJ Holder	Allowable Pressure Loss	Unit	Remarks
			Unit	Min.	Max.	Nor.										
158	3950-FE-7013	CLEAN DRAINAGE WATER	kg/h	19960	49900	54890	41G	100	Square Edge Orifice-Concentric	DN100,CL150 FF	DUPLEX S.32750	RTR-EPOXY	-	0.025	MPa	
159	3950-FE-7019	BRINE	kg/h	40000	100000	110000	41H	150	Square Edge Orifice-Concentric	DN150,CL150 FF	HASTELLOY C	RTR-EPOXY	-	0.025	MPa	
160	3950-FE-7023	CLEAN DRAINAGE WATER	kg/h	20000	50000	55000	41G	100	Square Edge Orifice-Concentric	DN100,CL150 FF	DUPLEX S.32750	RTR-EPOXY	-	0.025	MPa	
161	3970-FE-0001	TREATED SEWAGE WATER	kg/h	678	1696	2000	41G	50	Square Edge Orifice-Concentric	DN50,CL150 FF	DUPLEX S.32750	RTR-EPOXY	-	0.025	MPa	
162	3980-FE-0071	OILY WASTE WATER	kg/h	2000	5000	5500	11A	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
163	3980-FE-0080	OILY WASTE WATER	kg/h	2000	5000	5500	11A	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
164	3980-FE-7001	OILY WASTE WATER	kg/h	2000	5000	5500	11A	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
165	3980-FE-7002	OILY WASTE WATER	kg/h	2000	5000	5500	11A	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
166	3980-FE-7003	OILY WASTE WATER	kg/h	2000	5000	5500	11A	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
167	3980-FE-7004	OILY WASTE WATER	kg/h	2000	5000	5500	11A	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
168	3980-FE-7005	OILY WASTE WATER	kg/h	2000	5000	5500	11A	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
169	3980-FE-7006	OILY WASTE WATER	kg/h	2000	5000	5500	11A	50	Square Edge Orifice-Concentric	DN50,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
170	3990-FE-0010	HIGH PRESSURE FUEL GAS	Nm³/h	4800	26357	29900	13G	200	Square Edge Orifice-Concentric	DN200,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
171	3990-FE-0014	LOW PRESSURE FUEL GAS	Nm³/h	38	16901	18600	11P	250	Square Edge Orifice-Concentric	DN250,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
172	4210-FE-0001	NITROGEN	kg/h	269	741	741	11G	80	Square Edge Orifice-Concentric	DN80,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.025	MPa	
173	4210-FE-6707	AMMONIA	kg/h	58640	146600	161221	53G	250	Square Edge Orifice-Concentric	DN250,CL300 RF/125 µin.Ra	316 S.S.	ASTM A350 LF2 - CL.1	-	0.025	MPa	
174	4230-FE-6990	DIESEL	kg/h	1740	4350	4785	11P	80	Square Edge Orifice-Concentric	DN80,CL300 RF/125 µin.Ra	316 S.S.	ASTM A105 Normalized	-	0.02	MPa	

**NOTES:**

1. Orifice flange assembly shall be complete with 2 pair of flange taps and each tap shall be equipped with plugs.
2. Gaskets will be provided by piping department.

RESTRICTION ORIFICE PLATES MTO LIST:

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
1	1100-FO-0201	DESULPHURISED NG	Nm³/h	-	-	20256	15G	150	Restriction Orifice - Square Edge Concentric	DN150, CL600 RF / 125 µin.Ra	INCONEL X, ANNEALED	4.4	-	
2	1100-FO-0702	PROCESS GAS	Nm³/h	-	-	7175	65J	80	Restriction Orifice - Square Edge Concentric	DN80, CL600 RF / 125 µin.Ra	INCONEL X, ANNEALED	4.0	-	
3	1100-FO-1506	PROCESS GAS	Nm³/h	-	-	20020	65G	150	Restriction Orifice - Square Edge Concentric	DN150, CL600 RF / 125 µin.Ra	INCONEL X, ANNEALED	3.4	-	
4	1100-FO-6502	PROCESS CONDENSATE	kg/h	-	-		13K	50	Restriction Orifice - Square Edge Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	HOLD	-	
5	1200-FO-1801	SHIFTED GAS	Nm³/h	-	-	4047	65G	80	Restriction Orifice - Square Edge Concentric	DN80, CL600 RF / 125 µin.Ra	INCONEL X, ANNEALED	3.2	-	
6	1200-FO-1901	SHIFTED GAS	Nm³/h	-	-	30940	65G	150	Restriction Orifice - Square Edge Concentric	DN150, CL600 RF / 125 µin.Ra	INCONEL X, ANNEALED	3.2	-	
7	1200-FO-2201	PROCESS CONDENSATE	kg/h	-	-	-	35G	100	Restriction Orifice - Square Edge Concentric	DN100, CL600 RF / 125 µin.Ra	316 S.S.	0.0	-	
8	1300-FO-2302	OH CONDENSATE	kg/h	-	-	-	31G	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	HOLD	-	
9	1300-FO-2303	OH CONDENSATE	kg/h	-	-	-	31G	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	HOLD	-	
10	1300-FO-3503	PROCESS CONDENSATE	kg/h	-	-	-	13K	50	Restriction Orifice - Square Edge Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	HOLD	-	
11	1300-FO-3504	PROCESS CONDENSATE	kg/h	-	-	-	13K	50	Restriction Orifice - Square Edge Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	HOLD	-	
12	1300-FO-3604	SYNGAS	kg/h	-	-	-	13H	400	Restriction Orifice - Square Edge Concentric	DN400, CL300 RF / 125 µin.Ra	316 S.S.	HOLD	-	
13	2500-FO-4002	SYNGAS	Nm³/h	-	-	95000	77H	150	Restriction Orifice - Square Edge Concentric	DN150, CL1500 RJ (F)	316 S.S.	16.5	Required	
14	2500-FO-4301	AMMONIA	kg/h	87928	-	146547	77H	200	Restriction Orifice - Square Edge Concentric	DN200, CL1500 RJ (F)	316 S.S.	HOLD	Required	
15	2500-FO-4366	SYNGAS	Nm³/h	-	-	-	77H	400	Restriction Orifice - Square Edge Concentric	DN400, CL1500 RJ (F)	316 S.S.	HOLD	Required	
16	2500-FO-5001	AMMONIA	kg/h	-	-	-	51G	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	HOLD	-	
17	2500-FO-5495	STEAM	kg/h	-	-	-	11W	100	Restriction Orifice - Square Edge Concentric	DN100, CL150 RF / 125 µin.Ra	316 S.S.	HOLD	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
18	2610-FO-1050	COOLING WATER	m³/h	-	-	142	11V	100	Restriction Orifice - Square Edge Concentric	DN100, CL150RF / 125 µin.Ra	316 S.S.	0.1	-	
19	2610-FO-1071	STEAM	kg/h	-	-	4000	65W	80	Restriction Orifice - Square Edge Concentric	DN80, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	4.7	-	
20	2610-FO-1072	STEAM	kg/h	-	-	3000	13W	80	Restriction Orifice - Square Edge Concentric	DN80, CL300RF / 125 µin.Ra	INCONEL X, ANNEALED	2.4	-	
21	2610-FO-1073	STEAM	kg/h	-	-	4000	65W	80	Restriction Orifice - Square Edge Concentric	DN80, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	4.7	-	
22	2610-FO-1411	NH3+CO2+(H2O)	m³/h	-	-	3	99A	50	Restriction Orifice - Square Edge Concentric	DN50, SpecialLENS	MATERIAL NOT LISTED	13.4	-	
23	2610-FO-1412	NH3+CO2+(H2O)	m³/h	-	-	3	99A	50	Restriction Orifice - Square Edge Concentric	DN50, SpecialLENS	MATERIAL NOT LISTED	13.4	-	
24	2610-FO-1442	STEAM CONDENSATE	kg/h	-	-	100	33B	15	Restriction Orifice - Square Edge Concentric	DN15, CL300RF / 125 µin.Ra	316 S.S.	0.7	-	
25	2610-FO-1443	STEAM CONDENSATE	kg/h	-	-	100	33B	15	Restriction Orifice - Square Edge Concentric	DN15, CL300RF / 125 µin.Ra	316 S.S.	0.7	-	
26	2610-FO-1451	STEAM	kg/h	-	-	100	51B	40	Restriction Orifice - Square Edge Concentric	DN40, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
27	2610-FO-1472	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
28	2610-FO-1473	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
29	2610-FO-1474	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
30	2610-FO-1475	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
31	2610-FO-1476	CARBAMATE SOLUTION	m³/h	-	-		31C	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	HOLD	-	
32	2610-FO-1477	CARBAMATE SOLUTION	m³/h	-	-		31C	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	HOLD	-	
33	2610-FO-1483	STEAM	kg/h	-	-	10	31W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
34	2610-FO-1484	STEAM	kg/h	-	-	10	31W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
35	2610-FO-1485	STEAM	kg/h	-	-	50	11W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
36	2610-FO-1486	FUEL GAS	Nm³/h	-	-	4	51B	40	Restriction Orifice - Square Edge Concentric	DN40, CL150RF / 125 µin.Ra	316 S.S.	0.4	-	
37	2610-FO-1487	STEAM COND.	m³/h	-	-	0	11A	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
38	2610-FO-1488	STEAM CONDENSATE	m³/h	-	-	0	11A	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.4	-	
39	2610-FO-1491	STEAM COND.	m³/h	-	-	3	33C	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	2.6	-	
40	2610-FO-1495	NITROGEN	Nm³/h	-	-	50	31C	20	Restriction Orifice - Square Edge Concentric	DN20, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
41	2610-FO-1496	NITROGEN	Nm³/h	-	-	50	51B	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
42	2610-FO-1511	NITROGEN	Nm³/h	-	-	50	31C	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
43	2610-FO-1512	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
44	2610-FO-1513	STEAM	kg/h	-	-	100	11W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
45	2610-FO-1514	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
46	2610-FO-1515	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
47	2610-FO-1516	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
48	2610-FO-1517	STEAM	kg/h	-	-	100	11W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
49	2610-FO-1522	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
50	2610-FO-1523	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
51	2610-FO-1524	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
52	2610-FO-1525	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
53	2610-FO-1526	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
54	2610-FO-1527	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
55	2610-FO-1531	NITROGEN	Nm³/h	-	-	40	31C	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
56	2610-FO-1532	NITROGEN	Nm³/h	-	-	5	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
57	2610-FO-1533	NITROGEN	Nm³/h	-	-	5	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
58	2610-FO-1534	STEAM	kg/h	-	-	50	11W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
59	2610-FO-1535	NH3+H2O	m³/h	-	-	2	53B	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	0.4	-	
60	2610-FO-1536	NH3+H2O	m³/h	-	-	2	53B	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	0.4	-	
61	2610-FO-1537	NH3+INERTS	Nm³/h	-	-	1109	53B	80	Restriction Orifice - Square Edge Concentric	DN80, CL300RF / 125 µin.Ra	316 S.S.	1.7	-	
62	2610-FO-1538	STEAM	kg/h	-	-	100	11W	40	Restriction Orifice - Square Edge Concentric	DN40, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
63	2610-FO-1542	NITROGEN	Nm³/h	-	-	40	51B	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
64	2610-FO-1558	STEAM CONDENSATE	m³/h	-	-	0	11W	20	Restriction Orifice - Square Edge Concentric	DN20, CL150RF / 125 µin.Ra	316 S.S.	0.4	-	
65	2610-FO-1559	STEAM CONDENSATE	m³/h	-	-	0	11W	20	Restriction Orifice - Square Edge Concentric	DN20, CL150RF / 125 µin.Ra	316 S.S.	0.4	-	
66	2610-FO-1570	STEAM CONDENSATE	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
67	2610-FO-1571	STEAM CONDENSATE	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
68	2610-FO-1572	STEAM CONDENSATE	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
69	2610-FO-1573	STEAM CONDENSATE	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
70	2610-FO-2563A	NH3+CO2+(H2O)	m³/h	-	-	0	31Q	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
71	2610-FO-2563B	NH3+CO2+(H2O)	m³/h	-	-	0	31Q	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
72	2620-FO-2075	UREA SOLUTION	m³/h	-	-	2	31C	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	HOLD	-	
73	2620-FO-2507	LOW PRESSURE FLUSHING CONDENSATE	m³/h	4	6	-	11A	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
74	2620-FO-2512	STEAM CONDENSATE	m³/h	-	-	0	11W	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
75	2620-FO-2513	STEAM CONDENSATE	m³/h	-	-	0	11W	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
76	2620-FO-2522	LOW PRESSURE FLUSHING CONDENSATE	m³/h	1	2	-	11A	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
77	2620-FO-2523	UREA SOLUTION	m³/h	-	-	37	31C	100	Restriction Orifice - Square Edge Concentric	DN100, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
78	2620-FO-2524	UREA SOLUTION	m³/h	-	-	37	31C	100	Restriction Orifice - Square Edge Concentric	DN100, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
79	2620-FO-2535	LOW PRESSURE FLUSHING CONDENSATE	m³/h	1	2	-	11A	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
80	2620-FO-2536	LOW PRESSURE FLUSHING CONDENSATE	m³/h	4	6	-	11A	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
81	2620-FO-2540	LOW PRESSURE SATURATED STEAM	kg/h	-	1000	-	31C	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
82	2620-FO-2545	STEAM	kg/h	-	500	-	31C	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
83	2620-FO-2570	STEAM CONDENSATE	m³/h	-	-	0	11W	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
84	2620-FO-2571	STEAM CONDENSATE	m³/h	-	-	0	31B	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
85	2620-FO-2572	STEAM CONDENSATE	m³/h	-	-	0	31B	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
86	2620-FO-2575	AMMONIUM SULPHATE SOLN.	m³/h	-	-	9	31B	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
87	2620-FO-2576	AMMONIUM SULPHATE SOLN.	m³/h	-	-	9	31B	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
88	2620-FO-2734	AMMONIUM SULPHATE SOLN.	m³/h	-	-		31B	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
89	2630-FO-1425	PROC COND	m³/h	-	-	15	31C	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
90	2630-FO-1534	NITROGEN	Nm³/h	-	-	40	31C	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
91	2710-FO-1050	COOLING WATER	m³/h	-	-	142	11V	100	Restriction Orifice - Square Edge Concentric	DN100, CL150RF / 125 µin.Ra	316 S.S.	0.1	-	
92	2710-FO-1071	STEAM	kg/h	-	-	4000	65W	80	Restriction Orifice - Square Edge Concentric	DN80, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	4.7	-	
93	2710-FO-1072	STEAM	kg/h	-	-	3000	13W	80	Restriction Orifice - Square Edge Concentric	DN80, CL300RF / 125 µin.Ra	INCONEL X, ANNEALED	2.4	-	
94	2710-FO-1073	STEAM	kg/h	-	-	4000	65W	80	Restriction Orifice - Square Edge Concentric	DN80, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	4.7	-	
95	2710-FO-1411	NH3+CO2+(H2O)	m³/h	-	-	3	99A	50	Restriction Orifice - Square Edge Concentric	DN50, SpecialLENS	MATERIAL NOT LISTED	13.4	-	
96	2710-FO-1412	NH3+CO2+(H2O)	m³/h	-	-	3	99A	50	Restriction Orifice - Square Edge Concentric	DN50, SpecialLENS	MATERIAL NOT LISTED	13.4	-	
97	2710-FO-1442	STEAM CONDENSATE	kg/h	-	-	100	33B	15	Restriction Orifice - Square Edge Concentric	DN15, CL300RF / 125 µin.Ra	316 S.S.	0.7	-	
98	2710-FO-1443	STEAM CONDENSATE	kg/h	-	-	100	33B	15	Restriction Orifice - Square Edge Concentric	DN15, CL300RF / 125 µin.Ra	316 S.S.	0.7	-	
99	2710-FO-1451	STEAM	kg/h	-	-	100	51B	40	Restriction Orifice - Square Edge Concentric	DN40, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
100	2710-FO-1472	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
101	2710-FO-1473	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
102	2710-FO-1474	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
103	2710-FO-1475	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
104	2710-FO-1476	CARBAMATE SOLUTION	m³/h	-	-		31C	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	HOLD	-	
105	2710-FO-1477	CARBAMATE SOLUTION	m³/h	-	-		31C	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	HOLD	-	
106	2710-FO-1483	STEAM	kg/h	-	-	10	31W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
107	2710-FO-1484	STEAM	kg/h	-	-	10	31W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
108	2710-FO-1485	STEAM	kg/h	-	-	50	11W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
109	2710-FO-1486	FUEL GAS	Nm³/h	-	-	4	51B	40	Restriction Orifice - Square Edge Concentric	DN40, CL150RF / 125 µin.Ra	316 S.S.	0.4	-	
110	2710-FO-1487	STEAM COND.	m³/h	-	-	0	11A	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
111	2710-FO-1488	STEAM CONDENSATE	m³/h	-	-	0	11A	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.4	-	
112	2710-FO-1491	STEAM COND.	m³/h	-	-	3	33C	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	2.6	-	
113	2710-FO-1495	NITROGEN	Nm³/h	-	-	50	31C	20	Restriction Orifice - Square Edge Concentric	DN20, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
114	2710-FO-1496	NITROGEN	Nm³/h	-	-	50	51B	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
115	2710-FO-1511	NITROGEN	Nm³/h	-	-	50	31C	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
116	2710-FO-1512	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
117	2710-FO-1513	STEAM	kg/h	-	-	100	11W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
118	2710-FO-1514	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
119	2710-FO-1515	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
120	2710-FO-1516	STEAM COND.	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
121	2710-FO-1517	STEAM	kg/h	-	-	100	11W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
122	2710-FO-1522	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
123	2710-FO-1523	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
124	2710-FO-1524	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
125	2710-FO-1525	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
126	2710-FO-1526	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
127	2710-FO-1527	STEAM	kg/h	-	-	50	35M	20	Restriction Orifice - Square Edge Concentric	DN20, CL600RF / 125 µin.Ra	INCONEL X, ANNEALED	1.2	-	
128	2710-FO-1531	NITROGEN	Nm³/h	-	-	40	31C	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
129	2710-FO-1532	NITROGEN	Nm³/h	-	-	5	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
130	2710-FO-1533	NITROGEN	Nm³/h	-	-	5	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
131	2710-FO-1534	STEAM	kg/h	-	-	50	11W	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
132	2710-FO-1535	NH3+H2O	m³/h	-	-	2	53B	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	0.4	-	
133	2710-FO-1536	NH3+H2O	m³/h	-	-	2	53B	50	Restriction Orifice - Square Edge Concentric	DN50, CL300RF / 125 µin.Ra	316 S.S.	0.4	-	
134	2710-FO-1537	NH3+INERTS	Nm³/h	-	-	1109	53B	80	Restriction Orifice - Square Edge Concentric	DN80, CL300RF / 125 µin.Ra	316 S.S.	1.7	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
135	2710-FO-1538	STEAM	kg/h	-	-	100	11W	40	Restriction Orifice - Square Edge Concentric	DN40, CL150RF / 125 µin.Ra	316 S.S.	0.2	-	
136	2710-FO-1542	NITROGEN	Nm³/h	-	-	40	51B	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
137	2710-FO-1558	STEAM CONDENSATE	m³/h	-	-	0	11W	20	Restriction Orifice - Square Edge Concentric	DN20, CL150RF / 125 µin.Ra	316 S.S.	0.4	-	
138	2710-FO-1559	STEAM CONDENSATE	m³/h	-	-	0	11W	20	Restriction Orifice - Square Edge Concentric	DN20, CL150RF / 125 µin.Ra	316 S.S.	0.4	-	
139	2710-FO-1570	STEAM CONDENSATE	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
140	2710-FO-1571	STEAM CONDENSATE	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
141	2710-FO-1572	STEAM CONDENSATE	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
142	2710-FO-1573	STEAM CONDENSATE	m³/h	-	-	0	31C	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
143	2710-FO-2563A	NH3+CO2+(H2O)	m³/h	-	-	0	31Q	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
144	2710-FO-2563B	NH3+CO2+(H2O)	m³/h	-	-	0	31Q	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
145	2720-FO-2075	UREA SOLUTION	m³/h	-	-	2	31C	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	HOLD	-	
146	2720-FO-2507	LOW PRESSURE FLUSHING CONDENSATE	m³/h	4	6	-	11A	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
147	2720-FO-2512	STEAM CONDENSATE	m³/h	-	-	0	11W	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
148	2720-FO-2513	STEAM CONDENSATE	m³/h	-	-	0	11W	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
149	2720-FO-2522	LOW PRESSURE FLUSHING CONDENSATE	m³/h	1	2	-	11A	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
150	2720-FO-2523	UREA SOLUTION	m³/h	-	-	37	31C	100	Restriction Orifice - Square Edge Concentric	DN100, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
151	2720-FO-2524	UREA SOLUTION	m³/h	-	-	37	31C	100	Restriction Orifice - Square Edge Concentric	DN100, CL150RF / 125 µin.Ra	316 S.S.	0.6	-	
152	2720-FO-2535	LOW PRESSURE FLUSHING CONDENSATE	m³/h	1	2	-	11A	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
153	2720-FO-2536	LOW PRESSURE FLUSHING CONDENSATE	m³/h	4	6	-	11A	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
154	2720-FO-2540	LOW PRESSURE SATURATED STEAM	kg/h	-	1000	-	31C	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
155	2720-FO-2545	STEAM	kg/h	-	500	-	31C	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.3	-	
156	2720-FO-2570	STEAM CONDENSATE	m³/h	-	-	0	11W	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
157	2720-FO-2571	STEAM CONDENSATE	m³/h	-	-	0	31B	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
158	2720-FO-2572	STEAM CONDENSATE	m³/h	-	-	0	31B	25	Restriction Orifice - Square Edge Concentric	DN25, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
159	2720-FO-2575	AMMONIUM SULPHATE SOLN.	m³/h	-	-	9	31B	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
160	2720-FO-2576	AMMONIUM SULPHATE SOLN.	m³/h	-	-	9	31B	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.5	-	
161	2720-FO-2734	AMMONIUM SULPHATE SOLN.	m³/h	-	-		31B	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.7	-	
162	2730-FO-2559A	AMMONIUM SULPHATE SOLN.	m³/h	-	-	10	31B	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.1	-	
163	2730-FO-2559B	AMMONIUM SULPHATE SOLN.	m³/h	-	-	10	31B	50	Restriction Orifice - Square Edge Concentric	DN50, CL150RF / 125 µin.Ra	316 S.S.	0.1	-	
164	2730-FO-2591	LOW PRESSURE FLUSHING CONDENSATE	m³/h	-	-	0	31B	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
165	2730-FO-2592	LOW PRESSURE FLUSHING CONDENSATE	m³/h	-	-	0	31B	15	Restriction Orifice - Square Edge Concentric	DN15, CL150RF / 125 µin.Ra	316 S.S.	0.8	-	
166	3310-FO-0801	BLOWDOWN WATER	kg/h	10000	50000	40000	41T	100	Restriction Orifice - Square Edge Concentric	DN100, CL150 FF	DUPLEX S.32750	0.2	-	
167	3310-FO-0802	SEA WATER SUPPLY	kg/h	5000	25000	20000	41T	80	Restriction Orifice - Square Edge Concentric	DN80, CL150 FF	DUPLEX S.32750	0.2	-	
168	3310-FO-7601	STEAM	kg/h	200	1000	500	11W	100	Restriction Orifice - Square Edge Concentric	DN100, CL150 RF / 125 µin.Ra	316 S.S.	0.2	-	
169	3310-FO-7603	STEAM	kg/h	2500	25000	13000	11W	250	Restriction Orifice - Square Edge Concentric	DN250, CL150 RF / 125 µin.Ra	316 S.S.	0.3	-	
170	3310-FO-7701	KP BOILER FEED WATER	kg/h	-	10000	-	77W	25	Restriction Orifice - Square Edge Concentric	DN25, CL1500 RJ (F) / 63 µin.Ra	316 S.S.	0.0	Required	
171	3310-FO-7702	KP BOILER FEED WATER	kg/h	-	10000	-	77W	25	Restriction Orifice - Square Edge Concentric	DN25, CL1500 RJ (F) / 63 µin.Ra	316 S.S.	0.0	Required	
172	3410-FO-6505	NITROGEN	Nm³/h	50	200	126	11G	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	0.5	-	
173	3410-FO-6590	STEAM	kg/h	-	200	-	11W	25	Restriction Orifice - Square Edge Concentric	DN25, CL150 RF / 125 µin.Ra	316 S.S.	0.4	-	
174	3420-FO-6532	FUEL GAS	Nm³/h	80	220	200	11P	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	0.2	-	
175	3420-FO-6533	NITROGEN	Nm³/h	80	220	200	11G	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	0.4	-	
176	3420-FO-6539	STEAM	kg/h	-	200	-	11W	25	Restriction Orifice - Square Edge Concentric	DN25, CL150 RF / 125 µin.Ra	316 S.S.	0.4	-	
177	3420-FO-8012	CONDENSATE	kg/h	1865	20512	18650	31G	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	0.0	-	
178	3430-FO-3689	STEAM	kg/h	-	200	-	11W	25	Restriction Orifice - Square Edge Concentric	DN25, CL150 RF / 125 µin.Ra	316 S.S.	0.4	-	
179	3430-FO-3690	NITROGEN	Nm³/h	14	39	35	11G	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	0.7	-	
180	3430-FO-3692	FUEL GAS	Nm³/h	14	39	35	11P	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	0.5	-	
181	3600-FO-2501	BOILER BLOWDOWN	kg/h	17600	48400	44000	41T	100	Restriction Orifice - Square Edge Concentric	DN100, CL150 FF	DUPLEX S.32750	0.3	-	

S.No	Tag	Fluid	Flow				Pipe Class	Line size (mm)	Orifice Plate Type	Orifice Flange Size / Rating	Orifice Plate Material	Pressure Drop	RTJ Holder	Remarks
			Unit	Min.	Max.	Nor.								
182	3600-FO-2502	SEA WATER SUPPLY	kg/h	11450	32000	28694	41T	80	Restriction Orifice - Square Edge Concentric	DN80, CL150 FF	DUPLEX S.32750	0.2	-	
183	3910-FO-0034	SEA WATER	kg/h	6467875	16263800	16263800	41T	1100	Restriction Orifice - Square Edge Concentric	DN1100, CL150 FF	DUPLEX S.32750	HOLD	-	
184	3950-FO-7020	BRINE	kg/h	40000	110000	100000	41H	150	Restriction Orifice - Square Edge Concentric	DN150, CL150 FF	HASTELLOY C	0.6	-	
185	3950-FO-7021	BRINE	kg/h	-	-	75000	41H	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 FF	HASTELLOY C	0.0	-	
186	3990-FO-0001	HIGH PRESSURE FUEL GAS	Nm <sup>3</sup> /h	-	8360	-	13G	50	Restriction Orifice - Square Edge Concentric	DN50, CL300 RF / 125 µin.Ra	316 S.S.	3.7	-	
187	3990-FO-0007	NATURAL GAS	Nm <sup>3</sup> /h	-	4000	-	15G	80	Restriction Orifice - Square Edge Concentric	DN80, CL600 RF / 125 µin.Ra	316 S.S.	5.8	-	
188	4230-FO-6985B	DIESEL	kg/h	780	2175	1957	11P	50	Restriction Orifice - Square Edge Concentric	DN50, CL150 RF / 125 µin.Ra	316 S.S.	0.0	-	

**NOTES:**

1. Restriction orifice shall be suitable for installation between flanges specified in datasheet. Flanges, gaskets, bolts and nuts by others.