- - - - -	Type Line Schedule Application Ambient conditions Pressure Rating	Gate	Valves	Gate valve	
- - - - -	Line Schedule Application Ambient conditions				
-	Application Ambient conditions			400	
	Ambient conditions		408		
	· · · · · · · · · · · · · · · · · · ·		Normally Open or Close		
	Pressure Rating	Ambient conditions		10 to 60 °C	
j			Class 600	Class 150	
	Physical State		Liquid	Liquid	
	Fluid to be controlled		R-134a	DMW	
	Specific Gravity		1.2	1.0	
	:	DN 100		08	
ļ		DN 80		01	
	Quantity w.r.t Line size and Class	DN 50		12	
	Size and Class	DN 40		01	
	;	DN 15	19		
	End connection		RF Flanged (A	NSI) RF Flanged (ANSI	
	Design Pressure (MPa)		7	1.1	
	Design Temperature (°C)		150	66	
	Hydrostatic Test Pressure (MPa)		9	1.3	
	Fluid Entry		Bi-Direction	nal Bi-Directional	
	Orientation		Horizonta	l Horizontal	
	Actuator Type		Manual	Manual	
	Material of Construct Stem, Flanges, Plugs upper/lower guides,	truction (Body, Bonnet, lugs, Seat ring, SS-		SS-304/SS-316	
	Fire Protection		IP-65		
02.	Terms and conditions – documentation required				
:	ii. Liquid penet iii. Seat leakage	Test A certificate should be	vii. Diagn viii. Comp with A ix. Relev	ve Emission Test lostic Test liance Certificate in accordance API 602 ant technical literature must be ded for all items along-with tions	
03.	Pre-Shipment Inspection				
	ensures before dispator At least one/two piece testing standards, espe Material Dimensions Hydrostatic te Pressure & testing standards, espe	h of shipment. s of each required item cially ASTM, ASME & esting mperature rating and oth consible to provide all wi	would be tested in a API 598, in respec- ner technical parame		
04.	prior to dispatch of co	norgimient.	Furanean/ Am	nerican/Japanese	

Sr. No.	Description				
Con.	Globe Valves				
	Туре		Globe with single seat		
	Line Schedule		40S		
	Application		Control		
	Ambient conditions		10 to 60 °C		
	Pressure Rating			Class 150	
	Physical State Fluid to be controlled		Liquid	Liquid	
			R-134a	DMW	
****	Specific Gravity		1.2	1.0	
		DN 100		03	
	, , ,	DN 80	→ ••	02	
	Quantity w.r.t Line	DN 50	45. Mc 45	02	
	size and Class	DN 40		***	
		DN 15	04		
	End connection		RF Flanged (ANSI)	RF Flanged (ANSI)	
	Pressure Rating		Class 600	Class 150	
	Design Pressure (MPa)		7	1.1	
	Design Temperature (°C)		150	66	
	Hydrostatic Test Pressure (MPa)		9	1.3	
	Fluid Entry	(11114)	Bottom	Bottom	
	Orientation		Horizontal	Horizontal	
	Actuator Type		Manual	Manual	
	Material of Construction (Body, Bonnet, Stem, Flanges, Plugs, Seat ring, upper/lower guides, Tubing/Fitting)		SS-304/SS-316		
	Fire Protection		IP-65		
02.	Terms and conditions – documentation required				
	i. 3.1 B Material ii. Liquid penetrar iii. Seat leakage Te iv. Standard QA coprovided. v. Hydrostatic Te	nt Test. est ertificate should be	vi. Fugitive Emission Test vii. Diagnostic Test viii. Compliance Certificate in accordance with API 602 ix. Relevant technical literature must be provided for all items along-with quotations		
03.	Pre-Shipment Inspection				
	Pre-shipment inspecti ensures before dispate At least one/two piece testing standards, espe • Material • Dimensions • Hydrostatic to • Pressure & te	on by third party at the march of shipment. es of each required item wo ecially ASTM, ASME & A	ould be tested in accordant PI 598, in respect of: technical parameters	nce with international	
04.	prior to dispatch of consignment. Make European/ American/Japanese			_	

Sr. No.	Description				
(1)	Check Valves				
	Туре		Swing check valve		
	Line Schedule			40S	
	Application Ambient conditions Pressure Rating Physical State Fluid to be controlled		Direction Control		
			10 to 60 °C		
			Class 600	Class 150	
			Liquid	Liquid	
			R-134a	DMW	
	Specific Gravity	- 100	1.2	1.0	
		DN 100	M-4 .	W = W	
		DN 80		04	
	Quantity w.r.t Line size and Class	DN 50		04	
	size and Class	DN 40		02	
	:	DN 15	03	A = 40	
	End connection		RF Flanged (ANSI)	RF Flanged (ANSI)	
	Pressure Rating		Class 600	Class 150	
	Design Pressure (MPa)		7	1.1	
	Design Temperature (°C)		150	66	
	Hydrostatic Test Press	ure (MPa)	9	1.3	
	Orientation		Horizontal	Horizontal	
	Actuator Type		Self	Self	
	Material of Construction (Body, Bonnet, Stem, Flanges, Plugs, Seat ring, upper/lower guides, Tubing/Fitting)		SS-304/SS-316		
	Fire Protection		IP	-65	
02.	Terms and condition	s – documentation	required		
	 i. 3.1 B Material te ii. Liquid penetrant iii. Seat leakage Tes iv. Standard QA cer provided. v. Hydrostatic Test 	Test. t tificate should be	vi. Fugitive Emission Test vii. Diagnostic Test viii. Compliance Certificate in accordance wi API 602 ix. Relevant technical literature must be provided for all items along-with quotations		
03.	Pre-Shipment Inspection				
,	Pre-shipment inspection by third party at the manufacturer's premises for all items must be ensures before dispatch of shipment.				
	At least one/two pieces of each required item would be tested in accordance with international testing standards, especially ASTM, ASME & API 598, in respect of: • Material • Dimensions • Hydrostatic testing • Pressure & temperature rating and other technical parameters Supplier shall be responsible to provide all witnesses & non-witnessed test certificates /reports pr to dispatch of consignment.				
		iviit.			

Sr. No.	Description				
Ald.	- Needle Valves				
	Туре		Needle valve		
	Line Schedule		40S		
	Application Ambient conditions		Fine Control		
			10 to 60 °C		
	Pressure Rating		Class 600	Class 150	
	Physical State		Liquid	Liquid	
	<u> </u>	Fluid to be controlled		DMW	
	Specific Gravity		1.2	1.0	
		DN 100	***	***	
	Quantity w.r.t	DN 80		•••	
	Line size and	DN 50	03		
	Class	DN 40			
		DN 15	02		
	End connection		RF Flanged (ANSI)	RF Flanged (ANSI)	
	Pressure Rating		Class 600	Class 150	
	Design Pressure (MPa)		7	1.1	
	Design Temperature (°C)		150	66	
	Hydrostatic Test		. 9	1.3	
	Orientation		Horizontal	Horizontal	
	Actuator Type	W. 5000000 W. 5000000 W. 50000000 W. 50000000000	Manual	Manual	
	Material of Construction (Body, Bonnet, Stem, Flanges, Plugs, Seat ring, upper/lower guides, Tubing/Fitting)		SS-304/SS-316		
	Fire Protection	•	IP	2-65	
02.	Terms and conditions – documentation required				
•	ii. Liquid pendiii. Seat leakag	A certificate should be	vi. Fugitive Emission Test vii. Diagnostic Test viii. Compliance Certificate in accordance with API 602 ix. Relevant technical literature must be provided for all items along-with quotations		
03.	Pre-Shipment Inspection				
,	ensures before dis At least one/two p testing standards, • Material • Dimensio • Hydrosta • Pressure Supplier shall be	tic testing & temperature rating and ot responsible to provide all w	would be tested in accord API 598, in respect of: her technical parameters	dance with internationa	
04.	prior to dispatch o	of consignment.	European/ America	n/Iananese	

Sr. No.	Description					
का:	Gate Valves (Welded)					
	Туре	Gate valve				
	Line Schedule	408				
	Application	Normally Open or Close				
	Ambient conditions	10 to 60 °C				
	Pressure Rating	Class 600	Class 150			
	Physical State	Liquid	Liquid			
	Fluid to be controlled	R-134a	DMW			
	Specific Gravity	1.2	1.0			
	Quantity w.r.t Line size and Class DN 20		12			
	End connection	Welded	Welded			
	Design Pressure (MPa)	7	1.1			
	Design Temperature (°C)	150	66			
	Hydrostatic Test Pressure (MPa)	9	1.3			
	Fluid Entry	Bi-Directional	Bi-Directional			
	Orientation	Horizontal	Horizontal			
	Actuator Type	Manual	Manual			
	Material of Construction (Body, Bonnet, Stem, Flanges, Plugs, Seat ring, upper/lower guides, Tubing/Fitting) SS-304/9		/SS-316			
	Fire Protection	IP-65				
02.	Terms and conditions – documentation required					
•	 x. 3.1 B Material test certificate. xi. Liquid penetrant Test. xii. Seat leakage Test xiii. Standard QA certificate should be provided. xiv. Hydrostatic Test 	xv. Fugitive Emission Test xvi. Diagnostic Test xvii. Compliance Certificate in accorda with API 602 xviii. Relevant technical literature must provided for all items along-with quotations				
03.	Pre-Shipment Inspection	quotations				
:	Pre-shipment inspection by third party at the manufacturer's premises for all items must be ensures before dispatch of shipment.					
	prior to dispatch of consignment.	4 (
04.	Make	European/ American/	Japanese			