

I. Technical Specification

1. Check Valve (Swing type)

Description:	<ul style="list-style-type: none"> Check valves or Non-return Valves (NRV) are a backflow prevention device designed to prevent liquid from flowing backwards into a vital process systems. Swing check valve are designed to close quickly and automatically with positive shut off in either horizontal or vertical (flow up) pipe runs. Inherently, swing check valve have a low pressure drop and are best suitable for velocity application.
Type:	<ul style="list-style-type: none"> Check valve or Non-return Valve (NRV) of Swing type
Design:	<ul style="list-style-type: none"> ❖ Body and Cover Connection: <ul style="list-style-type: none"> Standard body and Cover should be connected with threads (NPT as per ASME/ ANSI B1.20.1) with Teflon gasket. Full Bore design. ❖ Disc: <ul style="list-style-type: none"> Each disc's seating surface should be precise ground and mated to the seat ring for insurance of a positive shutoff. The disc is secured with disengagement mechanism during service. ❖ Seat Ring: <ul style="list-style-type: none"> Seat ring must provide reduce/low any turbulence and avoid any damages due to the corrosion. ❖ Rating: <ul style="list-style-type: none"> ANSI 300 CLASS ❖ Installation: <ul style="list-style-type: none"> Swing check valve are installed either Horizontal or Vertical Line.
End Connection:	<ul style="list-style-type: none"> End connection of check valve should be butt-welding ends (BW) that conforms to ASME/ ANSI B16.25.
End to End Dimension:	<ul style="list-style-type: none"> End to End Dimension of swing check valve as per ASME/ ANSI B16.10.
Fluid handled:	<ul style="list-style-type: none"> Water, steam and 6 molar HNO_3 Solution Working Temperature is 100°C Working pressure is 10 bar gauge

2. Y-Type Strainer

Description:	<ul style="list-style-type: none"> Strainers are used to remove foreign matter from pipelines and provides protection for pumps, meters, valves and other similar mechanical equipment. The strainer improve the clearance in the medium and prolong the life of valves, protect expensive pumps, meters and other equipment.
Type:	<ul style="list-style-type: none"> Type-Y
Fluid handled:	<ul style="list-style-type: none"> Water, steam and 6 molar HNO_3 Solution Working Temperature is 100°C Working pressure is 10 bar gauge

End Connection:	<ul style="list-style-type: none"> End connection of check valve should be butt-welding ends (BW) that conforms to ANSI/ASME B16.25.
Screen:	<ul style="list-style-type: none"> Standard screen perforated plate 0.8 mm diameter holes.
Dimension:	<ul style="list-style-type: none"> Compact end to end Dimension.
Design:	<ul style="list-style-type: none"> ❖ Body and Cover/Cap Connection: <ul style="list-style-type: none"> Standard body and Cover/Cap must be connected with plug blow-off connection are supplied as standard on all sizes and with Teflon gasket. Full Bore design. Very low pressure drop. ❖ Installation: <ul style="list-style-type: none"> A y-strainer can be installed in either horizontal or vertical position (downward flow) with the screen element pointing downward. ❖ Rating: <ul style="list-style-type: none"> ANSI 300 CLASS

3. Standard Parts and Material

S.No	Item Name	Parts	Materials
01.	Swing Check Valve	Body, Cover, Disc Arm, Disc nut, Washer, Split Pin & Hinge Pin	Cast Steel as per ASTM: A 351/A 351M -03 Grade CF3
		Seat Ring & Disc	Forged Steel as per ASTM: A 182/A 182M-04 Grade F304L
		Gasket	Teflon
02.	Strainer (Type-Y)	Strainer & Plug Cap	Cast Steel as per ASTM: A 351/A 351M-03 Grade CF3
		Screen	Forged Steel as per ASTM: A 182/A 182M-04 Grade F304L
		Gasket	Teflon

4. Bill of Quantity (BOQ)

S.No	Item Name	Connection Size	Quantity	Units
01.	Swing Check Valve	NPS 3/4" (20mm), Sch 40	10	Nos
		NPS 1" (25mm), Sch 40	40	
		NPS 1 ½" (40 mm) , Sch 40	30	
		NPS 2" (50mm) , Sch 40	15	
02.	Strainer (Type-Y)	NPS 3/4" (20mm), Sch 40	10	
		NPS 1" (25mm), Sch 40	40	
		NPS 1 ½" (40 mm) , Sch 40	30	
		NPS 2" (50mm) , Sch 40	15	
03.	Spares (Strainer Screen)	All above mentioned Sizes	05 Nos each	

II. Quality Assurance Plan (QAP)

Marking	<ul style="list-style-type: none">▪ Size and flow direction mark with arrow on the body surface must be respected.
Testing:	<ul style="list-style-type: none">▪ Testing must be performed as per API 598.
Certificate/Document submission	<ul style="list-style-type: none">▪ All the test reports & material test certificates corresponding all component of valve/strainer for chemical composition including carbon percentage must be provided at the time of supply.▪ All documents must be provided in English language.
Inspection	<ul style="list-style-type: none">▪ Pre dispatch Inspection will be carried out as per the plan given in quality assurance Plan (QAP).