



SUPREME ENTERPRISE

Industrial Valves

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Rev.	A			Date	13-Jun-2026
Alloy 20 Valve (UNS N08020 / CN7M) -- Technical Datasheet					
R	REFERENCES & RELATED DOCUMENTS				
R1	P&ID / Process Diagram	N/A -- Product Datasheet	Piping Material Spec.	N/A -- Product Datasheet	
R2	Project Standard / Spec.	ASME B16.34, API 600, API 602, API 603, API 598			
1	GENERAL				
2	P&ID No. / Tag No.	N/A -- Product Datasheet	Piping Class	Class 150 / 300 (PN16 / PN25)	
3	Valve Tag / Item No.	N/A -- Product Datasheet	Quantity Required	As required	
4	Design Standard	ASME B16.34, API 600, API 602, API 603, API 598	Pressure Class / Rating	Class 150 / 300 (PN16 / PN25)	
5	Valve Size, Inlet x Outlet	1/2" to 24" (DN15 – DN600)	End Connection	Flanged RF per ASME B16.5 / Screwed / Socket Weld	
6	Valve Type / Model	Alloy 20 Valve (UNS N08020 / CN7M)	Operation Mode	Alloy 20 (high Cr-Ni-Mo with copper) resists pitting, crevice corrosion, and stress-corrosion cracking in hot sulfuric acid -- supplied as gate, globe, ball, or wafer check for acid and mining service	
6A	Service / Application	Sulfuric Acid Service, Mining & Pickling, Pharmaceutical, Chemical Processing	Fluid State	Liquid / Gas / Steam (as applicable)	
7	DESIGN CONDITIONS				
8	Design Pressure	Class 150 / 300 (PN16 / PN25)	Design Temp. Min / Max	-29°C to +425°C (standard) -- higher/lower on request	
9	Operating Pressure	Class 150 / 300 (PN16 / PN25)	Operating Temp.	Ambient to +200°C (standard) -- project-specific on request	
10	Set / Relief Pressure	N/A -- Product Datasheet	Back Pressure	N/A -- Product Datasheet	
11	Fluid Handled / Service	Sulfuric Acid Service, Mining & Pickling, Pharmaceutical, Chemical Processing	Corrosion Allowance	As per project specification	
12	Required Capacity / Flow Rate	As per valve size and pressure class	Location / Installation	Indoor / Outdoor / Offshore / Marine (as applicable)	
13	VALVE OPERATION REQUIREMENT				
14	Type of Valve Operator	Alloy 20 (high Cr-Ni-Mo with copper) resists pitting, crevice corrosion, and stress-corrosion cracking in hot sulfuric acid -- supplied as gate, globe, ball, or wafer check for acid and mining service	Actuator Specification	ISO 5211 pad (actuated) -- Electric / Pneumatic / Hydraulic on request	
15	Fail-Safe Position	As per project / application requirements	Accessories Required	Limit switches, positioners, solenoid valves, manual override -- on request	
16	VALVE MATERIAL SPECIFICATION (EQUIVALENT OR SUPERIOR)				
	Valve Part	Specified Material	Proposed Material (Supreme Valves India)		
	Body	As per project specification	Alloy 20 (Carpenter 20) -- ASTM A351 CN7M (cast, UNS J95150) / B473 N08020 (wrought)		
	Bonnet / Cover	As per standard	As per standard / matching body grade		
	Trim (Disc / Seat)	As per standard	Alloy 20 (CN7M / N08020) / Alloy 20 / PTFE / RPTFE		
	Stem / Spindle	As per standard	Alloy 20 (B473 N08020)		
	Gasket / Packing	As per standard	PTFE / Spiral wound PTFE-filled		
	Bolting / Nuts	As per standard	Alloy 20 / ASTM A193 B8M		
17	TESTING, INSPECTION & CERTIFICATION REQUIREMENTS				
18	Hydrostatic Shell Test	Hydrostatic 3.1 MPa (450 psi)	Seat / Pneumatic Test	Hydrostatic 2.2 MPa (320 psi)	
19	NDT Requirements	100% MPI / DPT on machined surfaces (if specified) -- Radiography / Ultrasonic on request			
20	Required Certificates / MTC	EN 10204 3.1 MTC (standard) -- EN 10204 3.2 / third-party inspection on request			
21	Witness / Inspection Agency	Client / TPI representative (if specified)	Third Party Inspection	TUV / SGS / BV / Lloyds Register (client cost)	
22	PAINTING, PRESERVATION & PACKING				
23	Painting / Coating Specification	Standard: one coat primer + two coats synthetic enamel (colour per client spec) -- special coatings (epoxy, PTFE, rubber lining) on request			
24	Packing Requirement	Wooden cases / pallets with VCI protection -- sea-worthy packing for export on request			
26	NOTES				

1. This datasheet covers standard specifications for Alloy 20 Valve (UNS N08020 / CN7M).
2. Design Standard: ASME B16.34, API 600, API 602, API 603, API 598.
3. Application / Service: Sulfuric Acid Service, Mining & Pickling, Pharmaceutical, Chemical Processing.
4. Size Range: 1/2" to 24" (DN15 – DN600). Pressure Rating: Class 150 / 300 (PN16 / PN25).
5. All valves are manufactured new and unused by an ISO 9001 compliant foundry.
6. Material Test Certificates (MTC) per EN 10204 3.1 provided as standard; EN 10204 3.2 available on request at additional cost.
7. Testing performed per ISO 5208 / API 598: shell test at 1.5x rated pressure, seat test at 1.1x rated pressure -- bubble-tight zero leakage.
8. Face-to-face dimensions per ASME B16.10 / BS 2080 / manufacturer standard unless otherwise specified.
9. Marking per MSS SP-25: Size, Pressure Class, Material, Heat Number, Tag Number, Serial Number, Flow Direction.
10. Alternative / upgraded materials: Available as Gate, Globe, Ball, and Wafer Check patterns; Hastelloy / Monel upgrades on request.
11. Actuated valves (electric, pneumatic, hydraulic) supplied with ISO 5211 mounting pad and position indicator.
12. Third-party inspection by TUV, SGS, Bureau Veritas, or Lloyds Register available on request at client cost.
13. This datasheet is for general reference. Firm specifications to be confirmed upon receipt of confirmed Purchase Order with technical requirements.
14. For specific project requirements, deviation forms, or material substitutions, please contact our engineering team.

RH REVISION HISTORY			
Rev.	Date	Description of Change	Prepared / Reviewed / Approved
A	13-Jun-2026	Initial issue -- Product datasheet generated from standard catalogue	Supreme Valves India -- Technical Department
AP DOCUMENT APPROVAL			
PREPARED BY Supreme Valves India -- Technical Department, Ahmedabad _____ Signature / Date		REVIEWED BY _____ Name / Signature / Date	APPROVED BY _____ Name / Signature / Date