



NDL Industries

CO₂ Valves Product Guide

High-Quality CO₂ Refrigeration Components for
Commercial, Industrial, and Residential Applications





CO₂ Valves

Table of Contents

Product Information	1, 2
C194 Copper Ball Valves	3
C194 Copper Check Valves	3
Stainless Steel Ball Valves	4
Stainless Steel Service Ball Valves	4
Stainless Steel Check Valves	5





CO₂ Valves

Innovative Refrigeration Products with High-Quality Performance

- NDL is the first manufacturer of the CRN approved ball valve, which can also hold five times their maximum working pressure, netting a tremendous safety margin for any ball valve used in CO₂ systems.
- A wide range of sizes and connection types makes our valves compatible with main pipe types manufactured from copper iron alloys and stainless steel.
- Each valve is helium tested at the factory to guarantee leak-free performance.
- The NDL CO₂ valves feature a stainless steel body for stainless steel and copper-iron alloy connections.
- Reduce service calls, refrigerant loss, and environmental contamination with our cone-shaped 100% virgin Teflon seals and seats that will not shrink or leak, eliminating seal replacement during changeovers.
- Our stem placement is engineered from the bottom up. If there is an accidental over-pressurization in the valve, it will not blow the stem out with resulting loss of the charge.
- Our two-year warranty proves confidence. Every valve is tested and serial number stamped. Valves are cleanly packaged in a poly-bag and boxed to prevent.

Certifications and Approvals

- CE
- RoHS
- UL-listed
- CRN-approved (Select Models)





CO₂ Valves

Operating Specifications

C194 Copper Ball Valves

- Continuous operating temperature (COT): -40 °C to 150 °C (-40 °F to 302 °F)
- Maximum working pressure (MWP): 120-140 BAR (1740-2030 PSI)
- Compatible with CO₂ (R744), HCFC, HFC, HFO refrigerants, and oils

C194 Copper Check Valves

- Continuous operating temperature (COT): -40 °C to 150 °C (-40 °F to 302 °F)
- Maximum working pressure: 140 BAR (2030 PSI)
- Standard spring minimum opening pressure differential = 0.3 BAR (4.35 PSI)
- Compatible with CO₂ (R744), HCFC, HFC, HFO refrigerants, and oils

Stainless Steel Ball Valves

- Continuous operating temperature (COT): -40 °C to 150 °C (-40 °F to 302 °F)
- Maximum working pressure (MWP): 125-140 BAR (1813-2030 PSI)
- Compatible with CO₂ (R744), Ammonia (R717), HCFC, HFC, HFO refrigerants, and oils

Stainless Steel Check Valves

- Continuous operating temperature (COT): -40 °C to 150 °C (-40 °F to 302 °F)
- Maximum working pressure: 140 BAR (2030 PSI)
- Standard spring minimum opening pressure differential = 0.3 BAR (4.35 PSI)
- Compatible with CO₂ (R744), HCFC, HFC, HFO refrigerants, and oils

Stainless Steel Service Valves

- Continuous operating temperature (COT): -40 °C to 150 °C (-40 °F to 302 °F)
- Maximum working pressure: 140 BAR (2030 PSI)
- Compatible with CO₂ (R744), Ammonia (R717), HCFC, HFC, HFO refrigerants, and oils





C194 Copper Ball Valves

PART #	CONNECTIONS W	BALL PORT SIZE	KV	CV	MAXIMUM OPERATING PRESSURE		CRN
	MM NPS, IN	MM	M3/H	GPM	BAR	PSI	
CO2-02C	0.25"	10	0.8	0.9	140	2030	Approved
CO2-03C	0.375"	10	3	3.5	140	2030	Approved
CO2-04C	0.5"	10	5	5.8	140	2030	Approved
CO2-05C	0.625"	14	17	19.7	140	2030	Approved
CO2-06C	0.75"	18	17	19.7	140	2030	Approved
CO2-07C	0.875"	19	29	33.5	140	2030	Approved
CO2-09C	1.125"	25	51	59.0	140	2030	Approved
CO2-11C	1.375"	31	81	93.6	140	2030	Approved
CO2-13C	1.625"	37	105	121.4	120	1740	Approved
CO2-17C	2.125"	50	214	247.4	120	1740	Approved



C194 Copper Check Valves

PART #	CONNECTIONS W	KV	CV	MAXIMUM OPERATING PRESSURE		CRN
	IN	M3/H	GPM	BAR	PSI	
CO2-CVK014	0.25"	2	2.3	140	2030	Pending
CO2-CVK038	0.375"	2	2.3	140	2030	Pending
CO2-CVK012	0.5"	2	2.3	140	2030	Pending
CO2-CVK058	0.625"	3.6	4.2	140	2030	Pending
CO2-CVK034	0.75"	3.6	4.2	140	2030	Pending
CO2-CVK078	0.875"	8.5	9.8	140	2030	Pending
CO2-CVK118	1.125"	19	22.0	140	2030	Pending
CO2-CVK138	1.375"	29	33.5	140	2030	Pending
CO2-CVK158	1.625"	38	43.9	140	2030	Pending





Stainless Steel Ball Valves

PART #	CONNECTIONS W		BALL PORT SIZE	KV	CV	MAXIMUM OPERATING PRESSURE		CRN
	MM	NPS, IN	MM	M3/H	GPM	BAR	PSI	
CO2-02S^	6	-	10	0.8	0.9	140	2030	Approved
CO2-03S	10	-	10	3	3.5	140	2030	Approved
CO2-04S	12	-	10	5	5.8	140	2030	Approved
CO2-05S	16	-	14	17	19.7	140	2030	Approved
CO2-06S	18	-	16.5	17	19.7	140	2030	Approved
CO2-07S	22	-	18	29	33.5	140	2030	Approved
CO2-09S	28	-	25	51	59.0	140	2030	Approved
CO2-11S	35	-	31	81	93.6	140	2030	Approved
CO2-13S	42	-	37	105	121.4	130	1740	Approved
CO2-03D	DN08	0.25"	10	3	3.5	140	2030	Approved
CO2-04D	DN10	0.375"	14	9.8	11.3	140	2030	Approved
CO2-05D	DN15	0.5"	18	17	19.7	140	2030	Approved
CO2-07D	DN20	0.75"	25	40	46.2	140	2030	Approved
CO2-09D	DN25	1"	31	59	68.2	140	2030	Approved
CO2-11D	DN32	1.25"	37	105	121.4	130	1885	Approved
CO2-13D	DN40	1.5"	37	105	121.4	130	1885	Approved
CO2-17D	DN50	2"	50	214	247.4	125	1813	Approved
CO2-21D	DN65	2.5"	60	310	358	130	1885	Pending



Stainless Steel Service Ball Valves

PART #	CONNECTIONS		BALL PORT SIZE	KV	CV	MAXIMUM OPERATING PRESSURE		CRN
	W, MM	SAE, IN	MM	M3/H	GPM	BAR	PSI	
CO2-HS10	10	0.25"	10	1.1	1.3	140	2030	Approved
CO2-HS12	12	0.25"	10	1.1	1.3	140	2030	Approved





Stainless Steel Check Valves

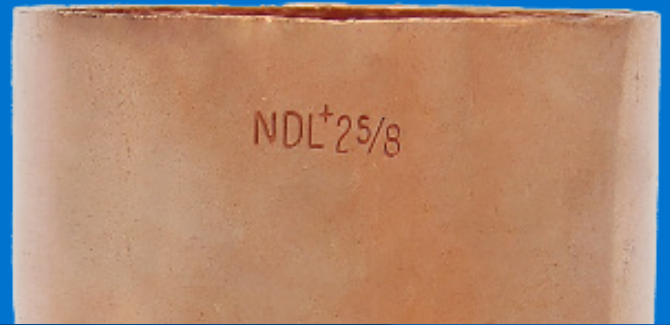
PART #	CONNECTIONS W	KV	CV	MAXIMUM OPERATING PRESSURE		CRN
	MM	M3/H	GPM	BAR	PSI	
CO2-CVS10M	10	2	2.3	140	2030	Approved
CO2-CVS12M	12	2	2.3	140	2030	Approved
CO2-CVS16M	16	3.6	4.2	140	2030	Pending
CO2-CVS18M	18	3.6	4.2	140	2030	Pending
CO2-CVS22M	22	8.5	9.8	140	2030	Pending
CO2-CVS28M	28	19	22.0	140	2030	Pending
CO2-CVS32M	32	29	33.5	140	2030	Pending
CO2-CVS42M	42	38	43.9	140	2030	Pending





QUALITY STAMP

Only after our products pass strict and rigorous quality tests will the NDL name be stamped on them. The NDL Quality Stamp is our seal of approval that our products can be trusted in the field.



We Focus on Quality and Service So You Can Install with Confidence.

Since 1998, our mission has been to stay ahead of the curve as an industry leader in the HVAC, Refrigeration, and Hydronic markets. We have achieved this over the years by heavily emphasizing quality, innovation, and maintaining a global team of experienced professionals to deliver top-notch service. We continue to hold ourselves to the highest standards, never sacrificing the quality of our products or the commitment to our customers that has made us the company we are today.

What you can expect from us:

- Fast order turnaround
- Real-time order communications
- Field-experienced sales and technical support
- Parts packaged in contractor-friendly sized bags
- High-quality control standards for superior fit and finish



Global Team with Fast Order Turnaround

With distribution centers strategically located worldwide, we ensure fast order fulfillment while maintaining the exceptional customer service that has earned us our trusted reputation.

Locations:

- Southaven, Mississippi (United States)
- Vancouver, British Columbia (Canada)
- Milton Keynes, Buckinghamshire (Europe)



Explore our full line of high-quality HVAC-R, CO₂ Refrigeration, and Hydronic products.

ndlindustries.com | 1-866-635-6888 | sales@ndlinc.com

@ndlindustries

