CO_2 Valves

Design Features and Specifications

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 CO_2 systems. These valves feature a versatile bi-flow design, allowing for flexible installation options. Our two-year warranty proves that we have confidence in our valves, and that they can be trusted in the field. Every valve is tested and serial number stamped. Our CO_2 Valves hold these certifications and approvals: *CE; RoHS Compliant; CRN-Approved; UL-Listed*.

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 CO_2 (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 CO_2 (R744), HCFC, HFC, HFO refrigerants, and oils

Stainless Steel Service Ball Valves

- Continuous operating temperature (COT): - 40˚C to 150˚C (-40˚F to 302˚F).
- Maximum working pressure: 140 BAR (2030 PSI)
- Compatible with CO_2 (R744), Ammonia (R717), HCFC, HFC, HFO refrigerants, and oils

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 CO_2 (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 CO_2 (R744), HCFC, HFC, HFO refrigerants, and oils

Product Numbers and Dimensions

Stainless Steel Ball Valves

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

Stainless Steel Check Valves

PART #	CONNECTION W	KV	CV	MAXIMUM OPERATING PRESSURE	
	MM	M3/H	GPM	BAR	PSI
CO2-CVS10M	10	3	3.5	140	2030
CO2-CVS12M	12	5	5.8	140	2030
CO2-CVS16M	16	17	19.7	140	2030
CO2-CVS22M	22	29	33.5	140	2030
CO2-CVS28M	28	51	59.0	140	2030
CO2-CVS35M	32	29	33.5	140	2030
CO2-CVS42M	42	38	43.9	140	2030

C194 Copper Ball Valves

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

C194 Copper Check Valves

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

Stainless Steel Service Ball Valves

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