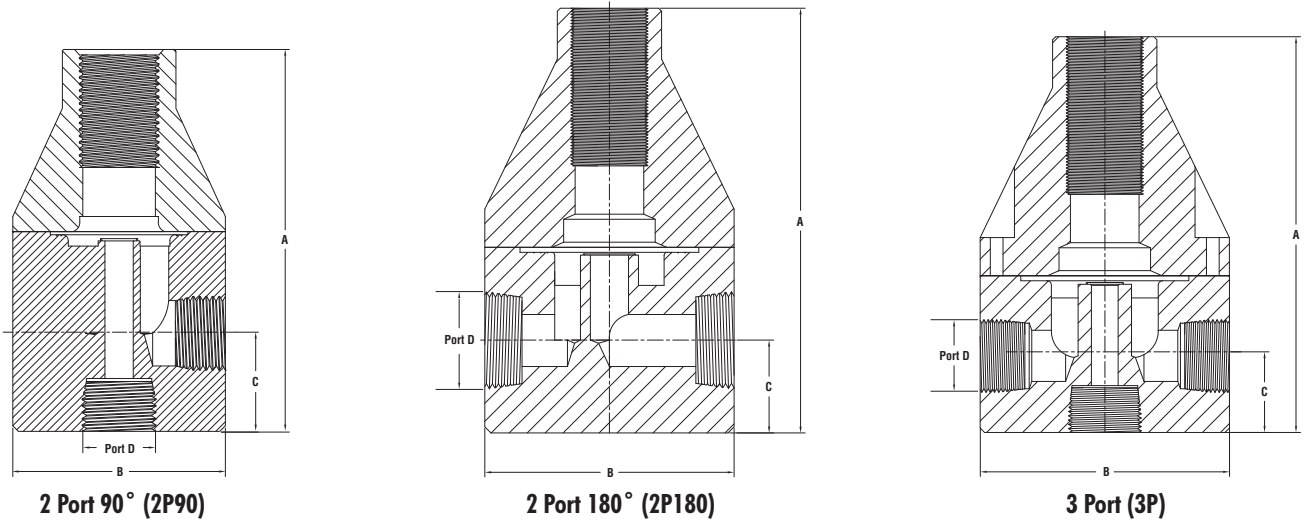


# Back Pressure and Pressure Relief Valves

Back pressure valves help ensure that your Hydra-Cell pump provides accurate and predictable flow. Pressure relief valves protect your pump and system from over-pressure situations.



## Dimensions and Port Configurations



Material	Port D	A		B		C	
		in	mm	in	mm	in	mm
Polypropylene/PVDF	3/8" (DN 10)	3.55	90.2	2.35	59.7	0.75	19.1
	1/2" (DN 15)	4.25	108.0	2.35	59.7	1.10	27.9
	3/4" (DN 20)	5.56	141.2	3.50	88.9	1.125	28.6
	1" StdFlo (DN 25)	5.86	148.8	3.50	88.9	1.25	31.8
	1" HiFlo (DN 25)	7.25	184.2	4.90	124.5	1.25	31.8
	2" (DN 50)	8.90	226.1	4.90	124.5	2.15	54.6
316 SST	1/4" High Pressure (DN 8)	4.25	108.0	2.35	59.7	1.10	27.9
	3/8" (DN 10)	3.55	90.2	2.35	59.7	0.75	19.1
	3/8" High Pressure (DN 10)	4.25	108.0	2.35	59.7	1.10	27.9
	1/2" (DN 15)	4.25	108.0	2.35	59.7	1.10	27.9
	1/2" High Pressure (DN 15)	4.25	108.0	2.35	59.7	1.10	27.9
	3/4" (DN 20)	5.56	141.2	3.50	149.9	1.125	28.6
	1" StdFlo (DN 25)	5.86	148.8	3.50	88.9	1.25	31.8
	1" HiFlo (DN 25)	7.25	184.2	4.90	124.5	1.25	31.8
	1" High Pressure (DN 25)	5.90	149.9	3.50	88.9	1.25	31.8
	2" (DN 50)	8.90	226.1	4.90	124.5	2.15	54.6
Hastelloy C	1/4" High Pressure (DN 8)	4.25	108.0	2.35	59.7	1.10	27.9
	3/8" (DN 10)	3.55	90.2	2.35	59.7	0.75	19.1
	3/8" High Pressure (DN 10)	4.25	108.0	2.35	59.7	1.10	27.9
	1/2" (DN 15)	4.25	108.0	2.35	59.7	1.10	27.9
	1/2" High Pressure (DN 15)	4.25	108.0	2.35	59.7	1.10	27.9
	3/4" (DN 20)	5.56	141.2	3.50	88.9	1.125	28.6
	1" StdFlo (DN 25)	5.86	148.8	3.50	88.9	1.25	31.8
	1" HiFlo (DN 25)	7.25	184.2	4.90	124.5	1.25	31.8
	1" High Pressure (DN 25)	5.90	149.9	3.50	88.9	1.25	31.8
	2" (DN 50)	8.90	226.1	4.90	124.5	2.15	54.6

# Back Pressure Valves

## Selection Process

1. Use the Valve Port Size “D” chart below to determine the valve port size with the appropriate maximum flow rate to match the Hydra-Cell pump selected: gpm and l/min are Continuous Flow; gph and lph are Pulsating Flow.
  2. For Back Pressure Valves, use the chart on this page to select the appropriate valve. For Pressure Relief Valves, use the chart on the following page.
- (Note: The maximum flow rates are guidelines. Consult factory for specific recommendations.)

### Valve Port Size “D”

		LoFlo		StdFlo			HiFlo		High Pressure	
		3/8"	1/2"	3/4"	1"	2"	3/4"	1"	1/4"-3/8"-1/2"	3/4"-1"
Maximum Flow		(DN 10)	(DN 15)	(DN 20)	(DN 25)	(DN 50)	(DN 20)	(DN 25)	(DN 8 - DN 10 - DN 15)	(DN 20 - DN 25)
Pulsating	gph	200	260	300	500	2350	600	1000	700	1200
	lph	757	984	1135	1890	8892	2271	3785	2650	4542
Continuous	gpm	10	15	21	26	120	30	54	35	60
	l/min	37	57	80	98	454	114	204	132	227

Port “D”	Wetted Materials*	Pressure Adjustment Range		Maximum Temperature		Port Configuration	Model Number	
		psi	bar	°F	°C		NPT Ports	BSPT Ports
3/8" LoFlo (DN 10)	Polypropylene	10 - 150	0.7 - 10.3	195	90	2P180	111-101	111-101-B
	PVDF	10 - 150	0.7 - 10.3	195	90	2P180	111-103	111-103-B
	316 SST	10 - 150	0.7 - 10.3	300	149	2P180	111-106	111-106-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-110	111-110-B
	316 SST	50 - 350	3.5 - 24	300	149	2P180	111-107	111-107-B
	Hastelloy C	50 - 350	3.5 - 24	300	149	2P180	111-111	111-111-B
1/2" LoFlo (DN 15)	Polypropylene	10 - 150	0.7 - 10.3	195	90	2P180	111-121	111-121-B
	PVDF	10 - 150	0.7 - 10.3	195	90	2P180	111-123	111-123-B
	316 SST	10 - 150	0.7 - 10.3	300	149	2P180	111-126	111-126-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-130	111-130-B
	316 SST	50 - 350	3.5 - 24	300	149	2P180	111-127	111-127-B
	Hastelloy C	50 - 350	3.5 - 24	300	149	2P180	111-131	111-131-B
3/4" StdFlo (DN 20)	Polypropylene	10 - 150	0.7 - 10.3	195	90	2P180	111-341	111-341-B
	PVDF	10 - 150	0.7 - 10.3	195	90	2P180	111-343	111-343-B
	316 SST	10 - 150	0.7 - 10.3	300	149	2P180	111-346	111-346-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-350	111-350-B
1" StdFlo (DN 25)	Polypropylene	10 - 150	0.7 - 10.3	195	90	2P180	111-261	111-261-B
	PVDF	10 - 150	0.7 - 10.3	195	90	2P180	111-263	111-263-B
	316 SST	10 - 150	0.7 - 10.3	300	149	2P180	111-266	111-266-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-270	111-270-B
	316 SST	50 - 350	3.5 - 24	300	149	2P180	111-267	111-267-B
	Hastelloy C	50 - 350	3.5 - 24	300	149	2P180	111-271	111-271-B
1" HiFlo (DN 25)	Polypropylene	10 - 150	0.7 - 10.3	195	90	2P180	111-361	111-361-B
	PVDF	10 - 150	0.7 - 10.3	195	90	2P180	111-363	111-363-B
	316 SST	10 - 150	0.7 - 10.3	300	149	2P180	111-366	111-366-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-370	111-370-B
2" StdFlo (DN 50)	Polypropylene	10 - 150	0.7 - 10.3	195	90	2P180	111-281	111-281-B
	PVDF	10 - 150	0.7 - 10.3	195	90	2P180	111-283	111-283-B
	316 SST	10 - 150	0.7 - 10.3	300	149	2P180	111-286	111-286-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-290	111-290-B
	316 SST	50 - 350	3.5 - 24	300	149	2P180	111-287	111-287-B
Hastelloy C	50 - 350	3.5 - 24	300	149	2P180	111-291	111-291-B	

\* Diaphragm material is PTFE on all models. Other materials available on request.

# Pressure Relief Valves

Port "D"	Wetted Materials*	Pressure Adjustment Range		Maximum Temperature		Port Configuration	Model Number	
		psi	bar	°F	°C		NPT Ports	BSPT Ports
1/4" High Pressure (DN 8)	316 SST	350 - 2000	24 - 172	300	149	2P90	111-800	111-800-B
	Hastelloy C	350 - 2000	24 - 172	300	149	2P90	111-804	111-804-B
3/8" LoFlo (DN 10)	Polypropylene	10 - 150	0.7 - 10.3	195	90	3P	111-401	111-401-B
	PVDF	10 - 150	0.7 - 10.3	195	90	3P	111-403	111-403-B
	316 SST	10 - 150	0.7 - 10.3	300	149	3P	111-406	111-406-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	3P	111-410	111-410-B
	316 SST	50 - 350	3.5 - 24	300	149	3P	111-407	111-407-B
	Hastelloy C	50 - 350	3.5 - 24	300	149	3P	111-411	111-411-B
3/8" High Pressure (DN 10)	316 SST	350 - 2000	24 - 172	300	149	2P90	111-706	111-706-B
	Hastelloy C	350 - 2000	24 - 172	300	149	2P90	111-710	111-710-B
1/2" LoFlo (DN 15)	Polypropylene	10 - 150	0.7 - 10.3	195	90	3P	111-421	111-421-B
	PVDF	10 - 150	0.7 - 10.3	195	90	3P	111-423	111-423-B
	316 SST	10 - 150	0.7 - 10.3	300	149	3P	111-426	111-426-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	3P	111-430	111-430-B
	316 SST	50 - 350	3.5 - 24	300	149	3P	111-427	111-427-B
	Hastelloy C	50 - 350	3.5 - 24	300	149	3P	111-431	111-431-B
1/2" High Pressure (DN 15)	316 SST	350 - 2000	24 - 172	300	149	2P90	111-726	111-726-B
	Hastelloy C	350 - 2000	24 - 172	300	149	2P90	111-730	111-730-B
3/4" StdFlo (DN 20)	Polypropylene	10 - 150	0.7 - 10.3	195	90	3P	111-541	111-541-B
	PVDF	10 - 150	0.7 - 10.3	195	90	3P	111-543	111-543-B
	316 SST	10 - 150	0.7 - 10.3	300	149	3P	111-546	111-546-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-550	111-550-B
3/4" HiFlo (DN 20)	Polypropylene	10 - 150	0.7 - 10.3	195	90	2P180	111-641	111-641-B
	PVDF	10 - 150	0.7 - 10.3	195	90	2P180	111-643	111-643-B
	316 SST	10 - 150	0.7 - 10.3	300	149	2P180	111-646	111-646-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-650	111-650-B
3/4" High Pressure (DN 20)	316 SST	350 - 2000	24 - 172	300	149	2P90	111-746	111-746-B
	Hastelloy C	350 - 2000	24 - 172	300	149	2P90	111-750	111-750-B
1" StdFlo (DN 25)	Polypropylene	10 - 150	0.7 - 10.3	195	90	3P	111-561	111-561-B
	PVDF	10 - 150	0.7 - 10.3	195	90	3P	111-563	111-563-B
	316 SST	10 - 150	0.7 - 10.3	300	149	3P	111-566	111-566-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-570	111-570-B
	316 SST	50 - 350	3.5 - 24	300	149	3P	111-567	111-567-B
	Hastelloy C	50 - 350	3.5 - 24	300	149	2P180	111-571	111-571-B
1" HiFlo (DN 25)	Polypropylene	10 - 150	0.7 - 10.3	195	90	2P180	111-661	111-661-B
	PVDF	10 - 150	0.7 - 10.3	195	90	2P180	111-663	111-663-B
	316 SST	10 - 150	0.7 - 10.3	300	149	2P180	111-666	111-666-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-670	111-670-B
1" High Pressure (DN 25)	316 SST	350 - 2000	24 - 172	300	149	2P180	111-766	111-766-B
	Hastelloy C	350 - 2000	24 - 172	300	149	2P90	111-770	111-770-B
2" StdFlo (DN 50)	Polypropylene	10 - 150	0.7 - 10.3	195	90	2P90	111-581	111-581-B
	PVDF	10 - 150	0.7 - 10.3	195	90	2P180	111-583	111-583-B
	316 SST	10 - 150	0.7 - 10.3	300	149	2P180	111-586	111-586-B
	Hastelloy C	10 - 150	0.7 - 10.3	300	149	2P180	111-590	111-590-B
	316 SST	50 - 350	3.5 - 24	300	149	2P180	111-587	111-587-B
	Hastelloy C	50 - 350	3.5 - 24	300	149	2P180	111-591	111-591-B

\* Diaphragm material is PTFE on all models. Other materials available on request.