

Regulator Flow Curves
For
Bulk Gas Systems, Cylinder Gas Cabinets and Gas Distribution Systems
Report # 30008300 Rev 5
August 28, 2017

Scope: This document is a reference guide to help customers determine an appropriate AP Tech pressure regulator model based on system flow requirements. It is an array of regulator flow curves for the most popular AP Tech pressure regulators used in bulk gas systems, cylinder gas cabinets and gas distribution systems. For information and specifications related to the specific model regulator, please refer to the catalog data sheet.

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General Recommendations				
Regulator Series	Maximum Source Pressure psig (bar)	Maximum Outlet Pressure psig (bar)	Flow Coefficient, Cv	Recommended Maximum Flow (slpm nitrogen)
AP1010 (AZ1010, AK1010)	3,500 (241 bar)	100 (7 bar)	0.09	100
AP1010 HF (AZ1010 HF, AK1010 HF)	3,500 (241 bar)	100 (7 bar)	0.15	200
AP1101 (AZ1101, AK1101)	300 (21 bar)	10 (0.7 bar)	0.05	1
AP1101 HF (AZ1101 HF, AK1101 HF)	300 (21 bar)	10 (0.7 bar)	0.12	2.5
AP1210 (AZ1210, AK1210)	1,700 (117 bar)	100 (7 bar)	0.9	800
AP1210 HF (AZ1210 HF, AK1210 HF)	1,700 (117 bar)	100 (7 bar)	1.2	1,000
AP1210 FC (AZ1210 FC, AK1210 FC)	300 (21 bar)	100 (7 bar)	0.65	1,500
AP1310 (AZ1310, AK1310)	300 (21 bar)	100 (7 bar)	1.1	1,000
AP1402 TA (AZ1402 TA, AK1402TA)	300 (21 bar)	30 (2 bar)	0.45	6
AP1410T (AZ1410T, AK1410T)	2,300 (159 bar)	100 (7 bar)	0.45	400

General Recommendations				
AP1510 (AZ1510, AK1510)	3,500 (241 bar)	100 (7 bar)	0.09	100
AP1710 (AK1710)	3,500 (241 bar)	100 (7 bar)	0.05	100
AP1910 HF	3,500 (241 bar)	100 (7 bar)	0.17	400
AP9010	1,700 (117 bar)	100 (7 bar)	3.0	2,000
AP9030	1,700 (117 bar)	300 (21 bar)	3.0	2,000
AP9110	800 (55 bar)	100 (7 bar)	4.0	5,000
AZ9210 (AK9210)	300 (21 bar)	100 (7 bar)	1.6	2,000

Mini Regulator Recommendations				
Regulator Series	Maximum Source Pressure psig (MPa)	Maximum Outlet Pressure psig (MPa)	Flow Coefficient, Cv	Recommended Maximum Flow (slpm nitrogen)
AK110	150 psig (1 MPa)	100 psig (.7 MPa)	0.04	10 slpm
AP210	150 psig (1 MPa)	100 psig (.7 MPa)	0.035	5 slpm
AP510	150 psig (1 MPa)	100 psig (.7 MPa)	0.06	15 slpm
AP510 HF	150 psig (1 MPa)	100 psig (.7 MPa)	0.10	50 slpm
SL5210	150 psig (1 MPa)	100 psig (.7 MPa)	0.07	30 slpm
SL5201A	150 psig (1 MPa)	10 psig (.07 MPa)	0.07	3 slpm
SL5210 HF	150 psig (1 MPa)	100 psig (.7 MPa)	0.15	130 slpm
SL5201A HF	150 psig (1 MPa)	10 psig (.07 MPa)	0.15	10 slpm

General Notes

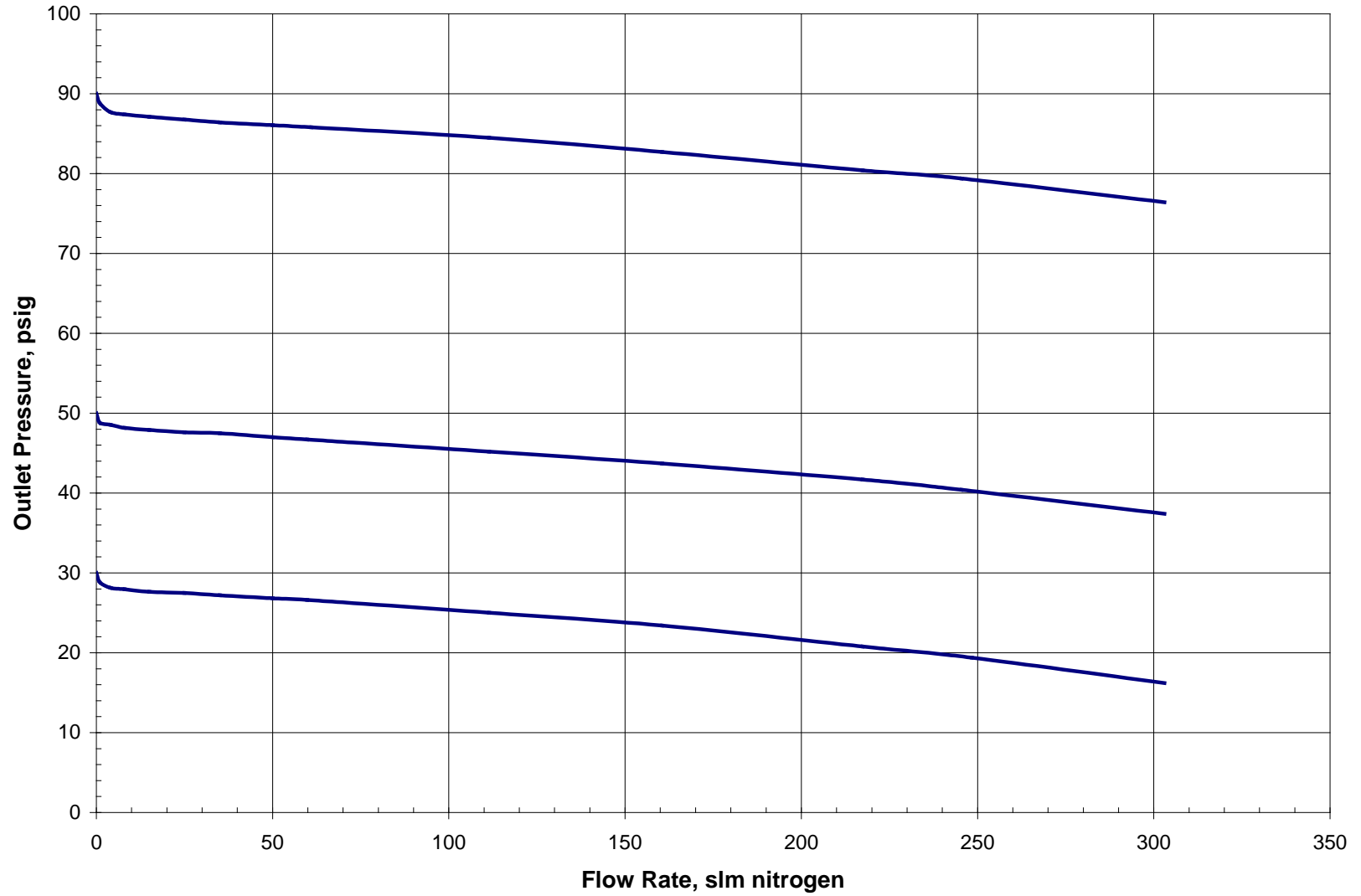
1. AZ and AK series regulators have the same flow performance as their AP counterpart (e.g. for an AK1010 regulator refer to the AP1010 flow curves and for an AZ1210 regulator refer to the AP1210 flow curves).
2. The recommended maximum flow might not be achievable depending on the inlet pressure. Please refer to specific flow curve conditions.
3. For applications where the inlet pressure is above 600 psig, use the 600 psig inlet pressure flow curve as the change in flow performance due to higher inlet pressure will not significantly change the shape of the flow curve.
4. Most regulator series are available with higher outlet pressure ranges although the source pressure may be lowered for certain models. Refer to the data sheet for the specific regulator or consult the factory to determine availability and specifications.
5. Some regulators have options that can affect the maximum source pressure, maximum outlet pressure, and recommended maximum flow rate.
6. In general, it is recommended that the regulator that meets the flow conditions and has the smallest flow coefficient be selected. Typically, this regulator would have better performance in other characteristics and cost less.

AP1010 Flow Curve Index

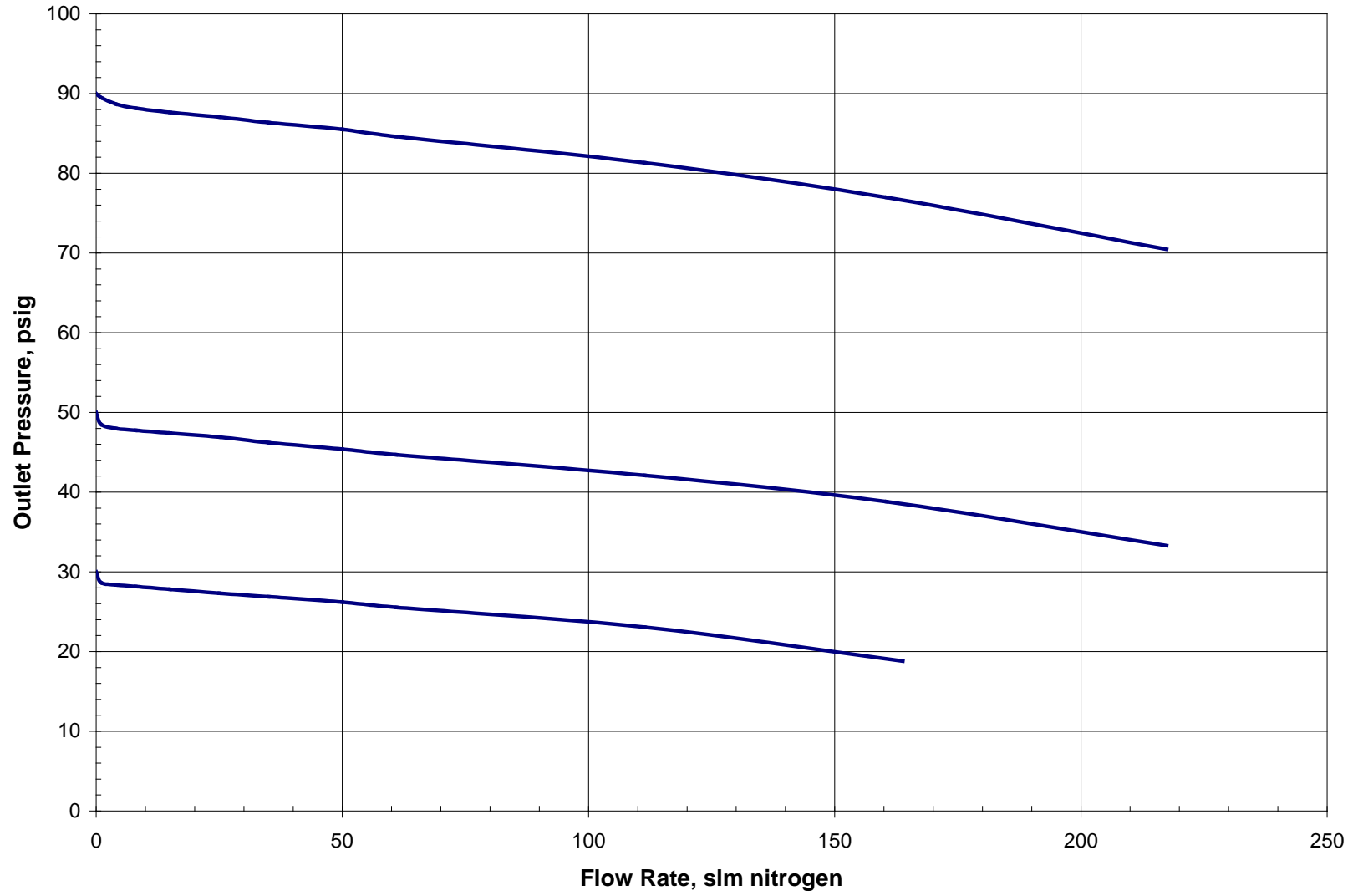
Series	Inlet Pressure psig (bar)	Outlet Pressures psig (bar)	Connection Size	Flow Curve Number
AP1010 AZ1010 AK1010	600 (41 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	<u>AP1010-001</u>
	300 (21 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	<u>AP1010-002</u>
	150 (10.3 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	<u>AP1010-003</u>
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	1/4 inch	<u>AP1010-004</u>
	50 (3.4 bar)	30 (2 bar)	1/4 inch	<u>AP1010-005</u>

AP1010S 2PW FV4 FV4

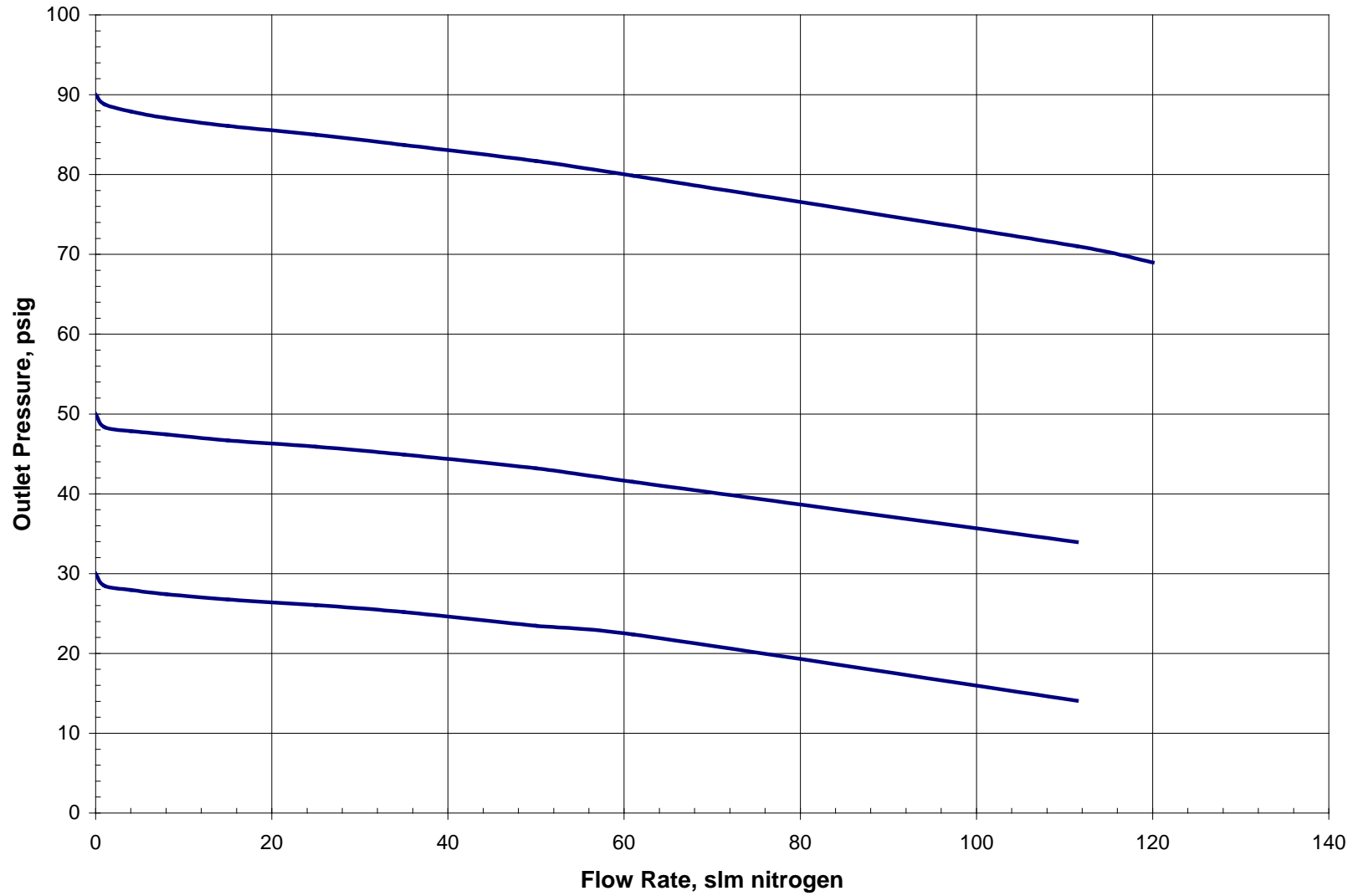
Flow Curve at 600 psig Inlet Pressure



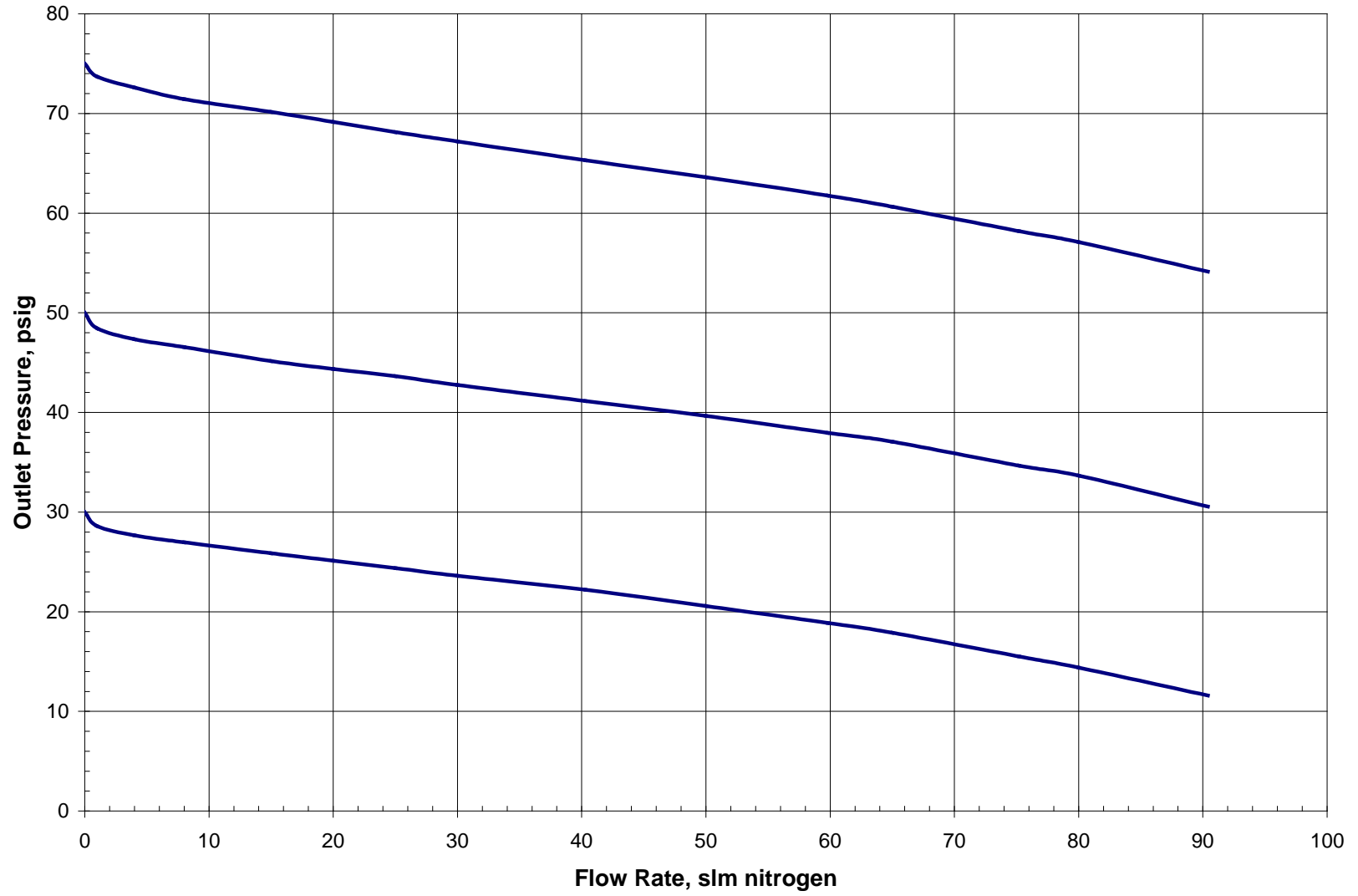
AP1010S 2PW FV4 FV4
Flow Curve at 300 psig Inlet Pressure



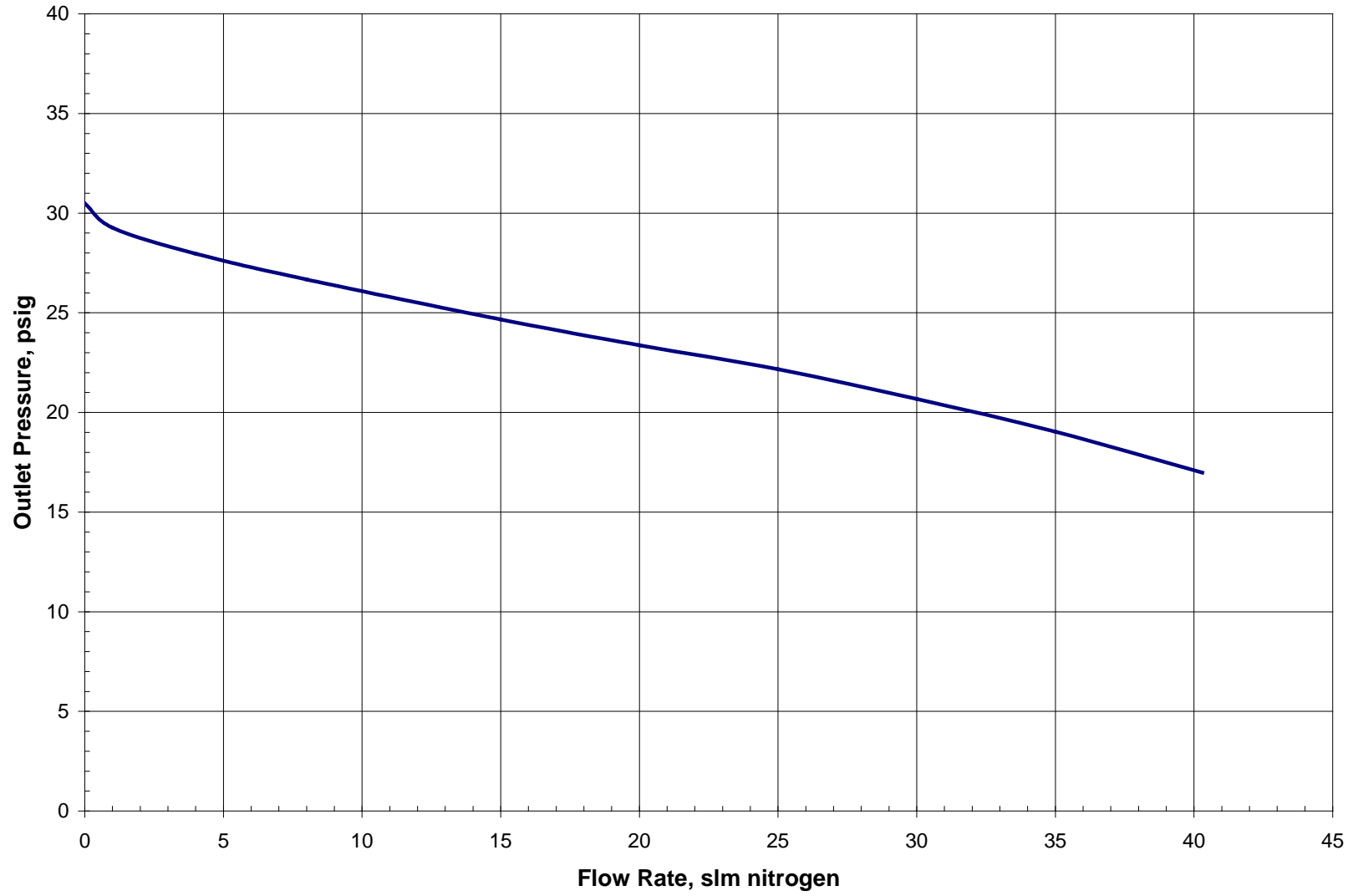
AP1010S 2PW FV4 FV4
Flow Curve at 150 psig Inlet Pressure



AP1010S 2PW FV4 FV4
Flow Curve at 100 psig Inlet Pressure



AP1010S 2PW FV4 FV4
Flow Curve at 50 psig Inlet Pressure

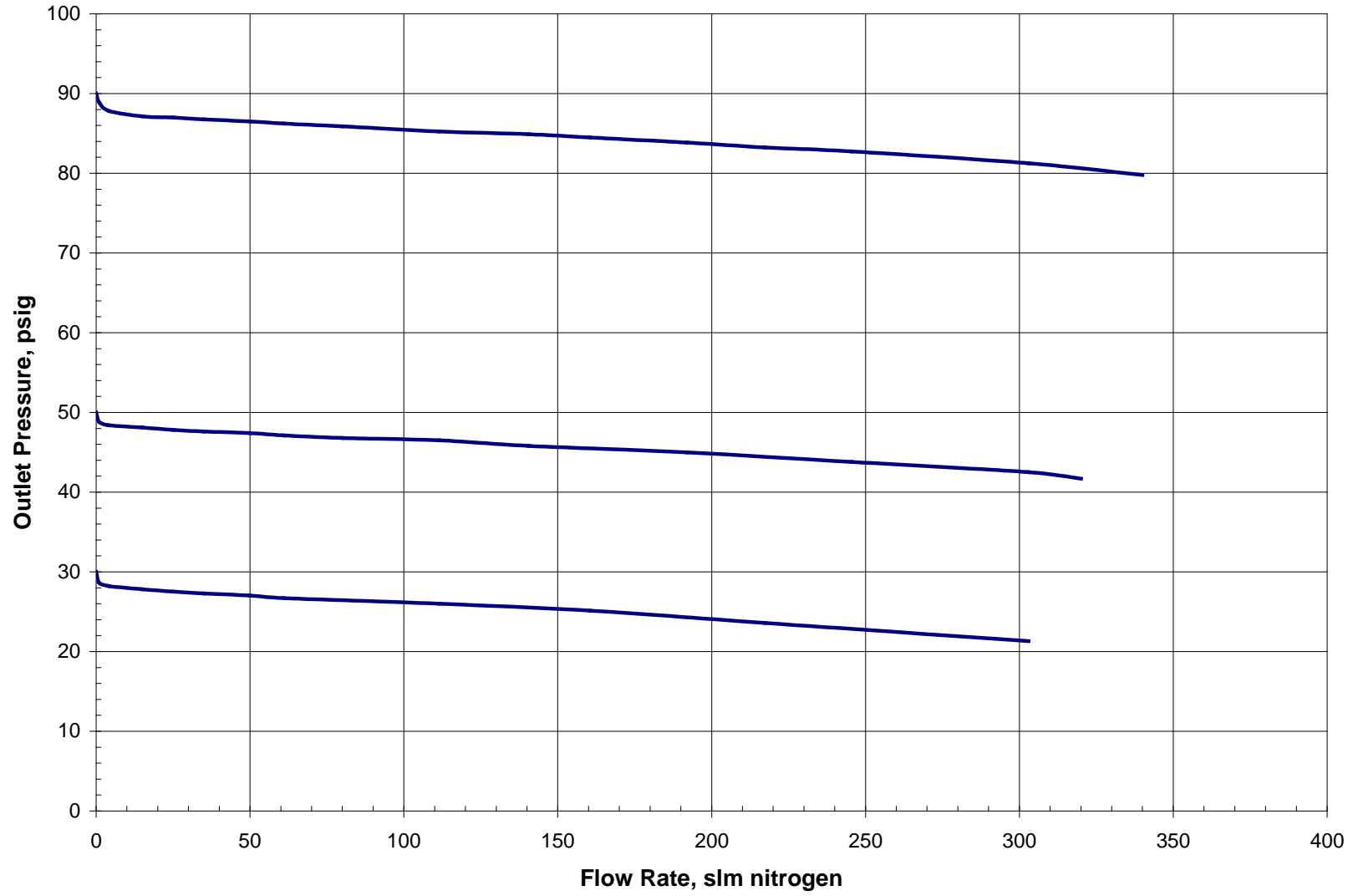


AP1010 HF Flow Curve Index

Series	Inlet Pressure psig (bar)	Outlet Pressures psig (bar)	Connection Size	Flow Curve Number
AP1010 HF AZ1010 HF AK1010 HF	600 (41 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1010HF-001
	300 (21 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1010HF-002
	150 (10.3 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1010HF-003
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	1/4 inch	AP1010HF-004
	50 (3.4 bar)	30 (2 bar)	1/4 inch	AP1010HF-005

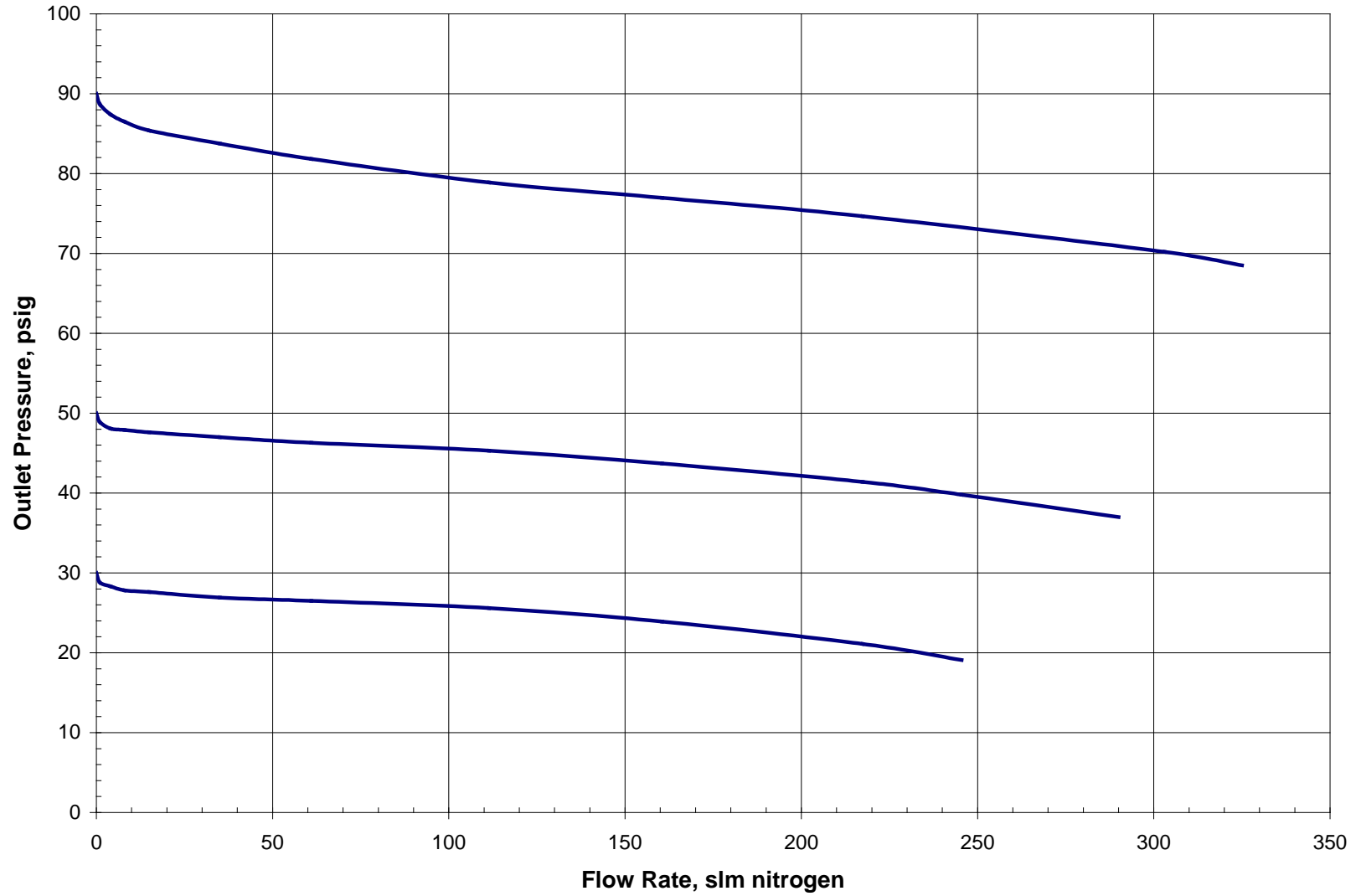
AP1010S 2PW FV4 FV4 HF

Flow Curve at 600 psig Inlet Pressure

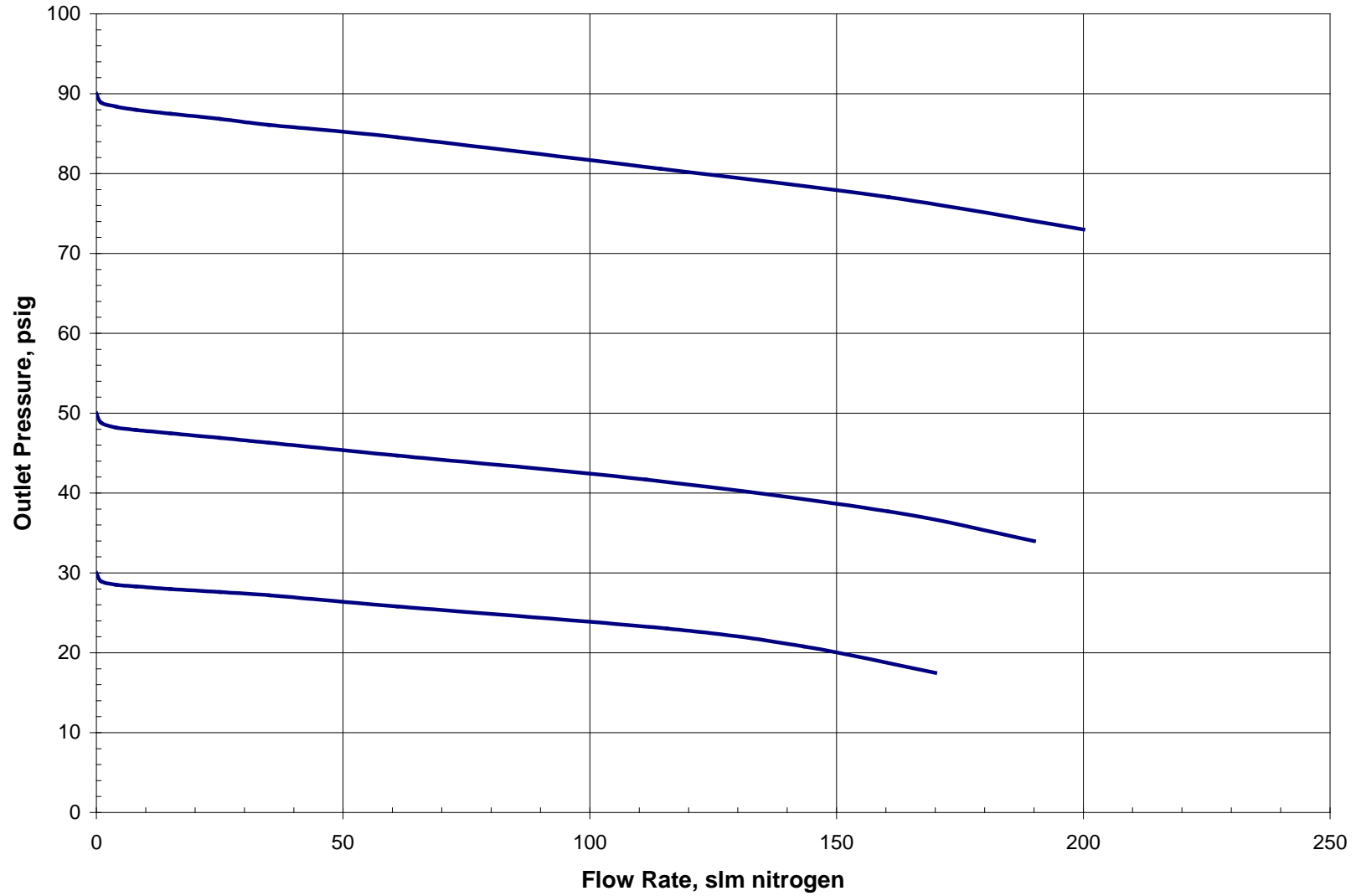


AP1010S 2PW FV4 FV4 HF

Flow Curve at 300 psig Inlet Pressure

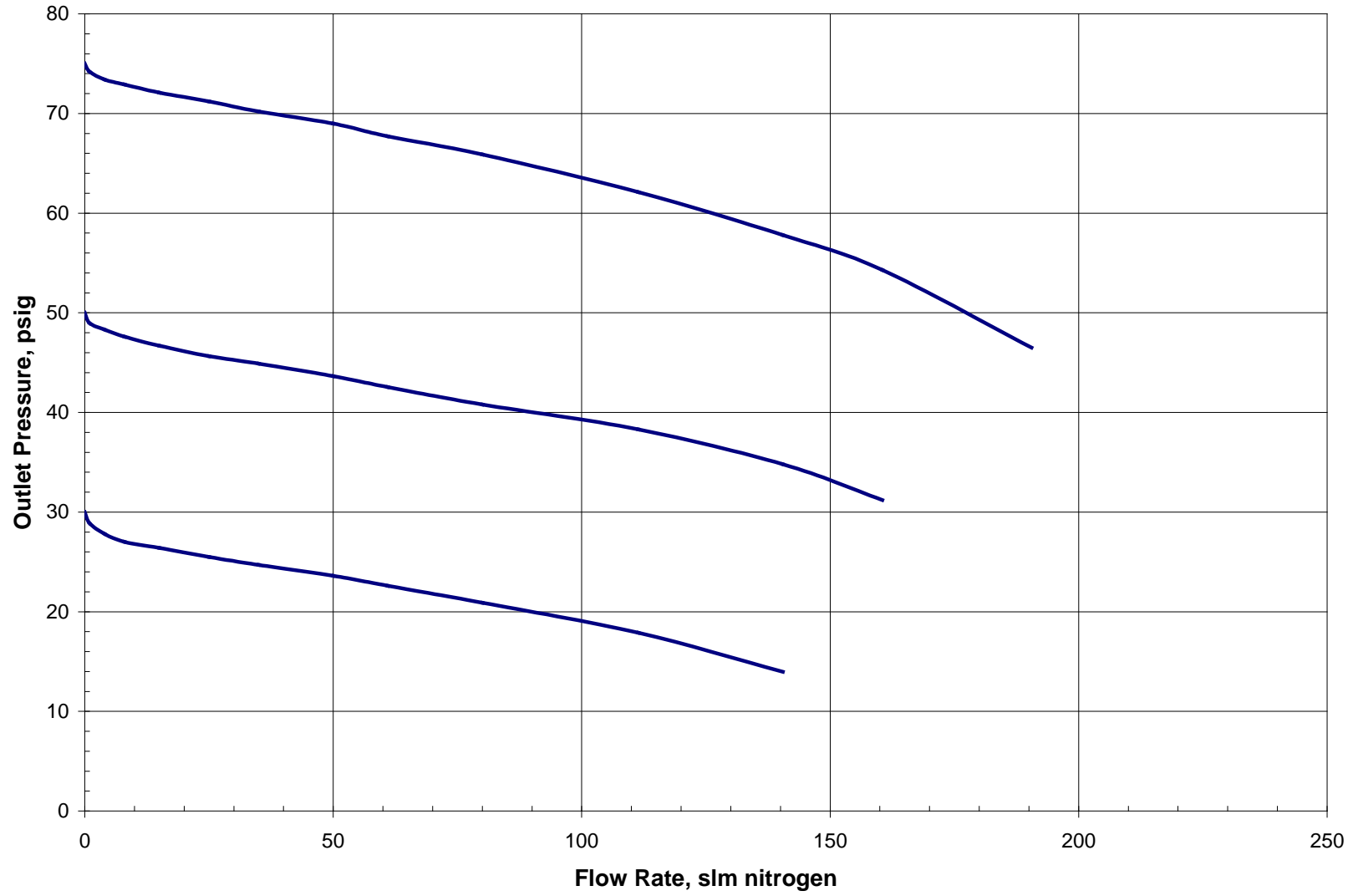


AP1010S 2PW FV4 FV4 HF
Flow Curve at 150 psig Inlet Pressure



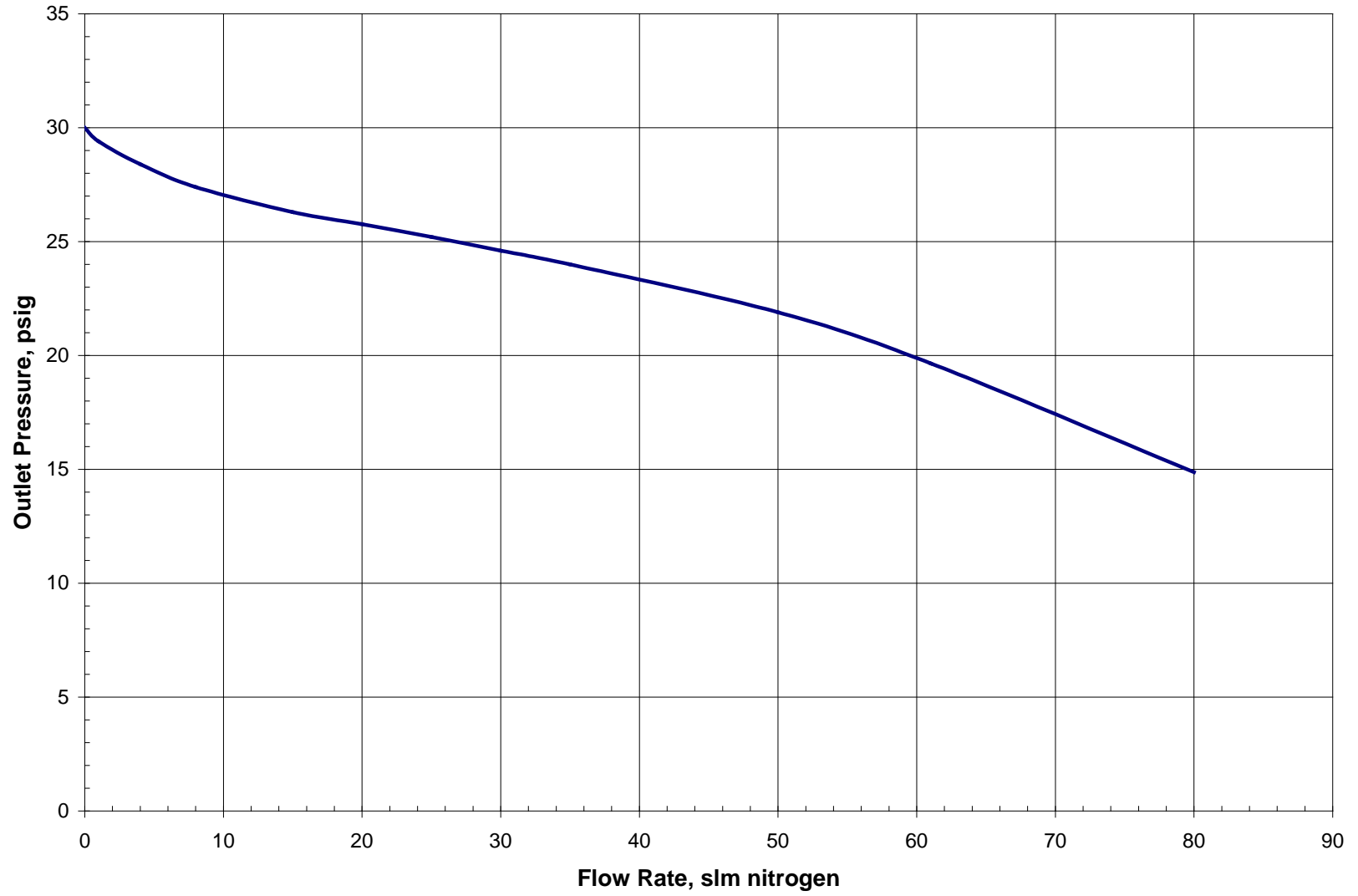
AP1010S 2PW FV4 FV4 HF

Flow Curve at 100 psig Inlet Pressure



AP1010S 2PW FV4 FV4 HF

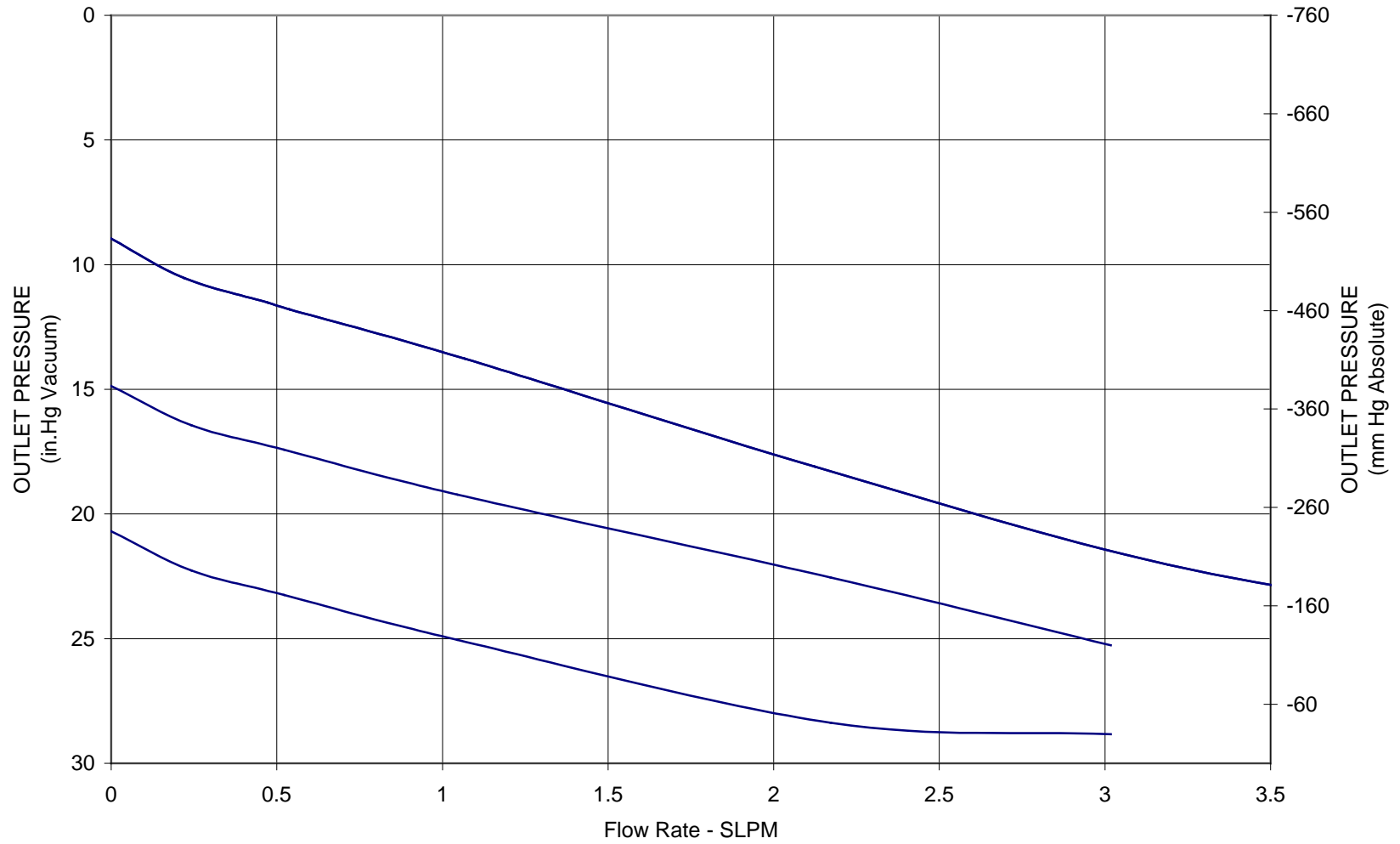
Flow Curve at 50 psig Inlet Pressure



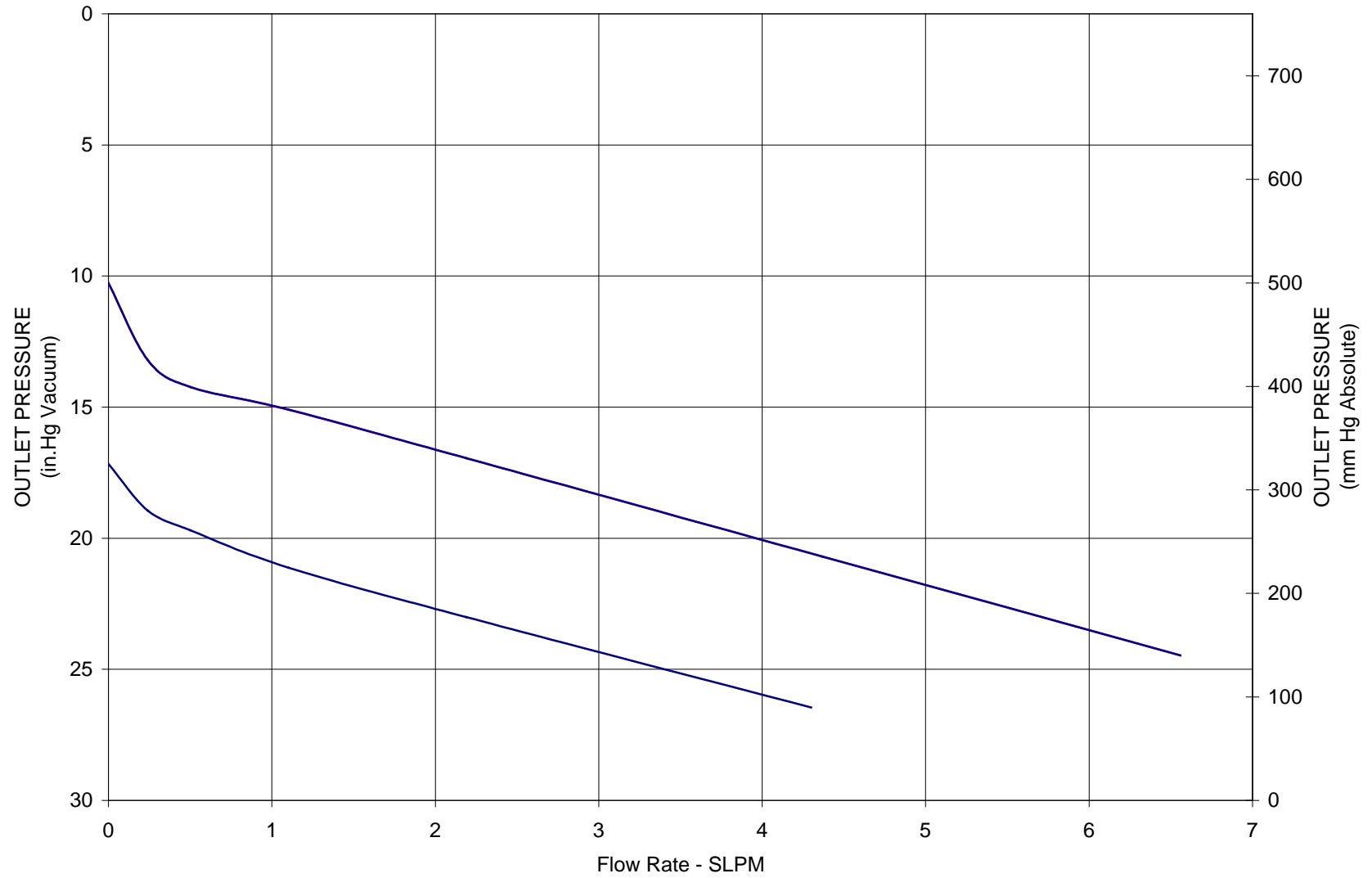
AP1101 Flow Curve Index

Series	Inlet Pressure psig (bar)	Outlet Pressures (in Hg)	Connection Size	Flow Curve Number
AP1101 AZ1101	1.45 (0.1 bar)	9, 15, 21	1/4 inch	AP1101_c
AP1101 HF	2 (0.14 bar)	10, 17	1/4 inch	AP1101HF_a

AP 1101S FV4 FV4 Inlet Pressure = 1.45 psig (.01 Mpa)



AP 1101S HF FV4 FV4 Inlet Pressure 2 psig (.01 Mpa)

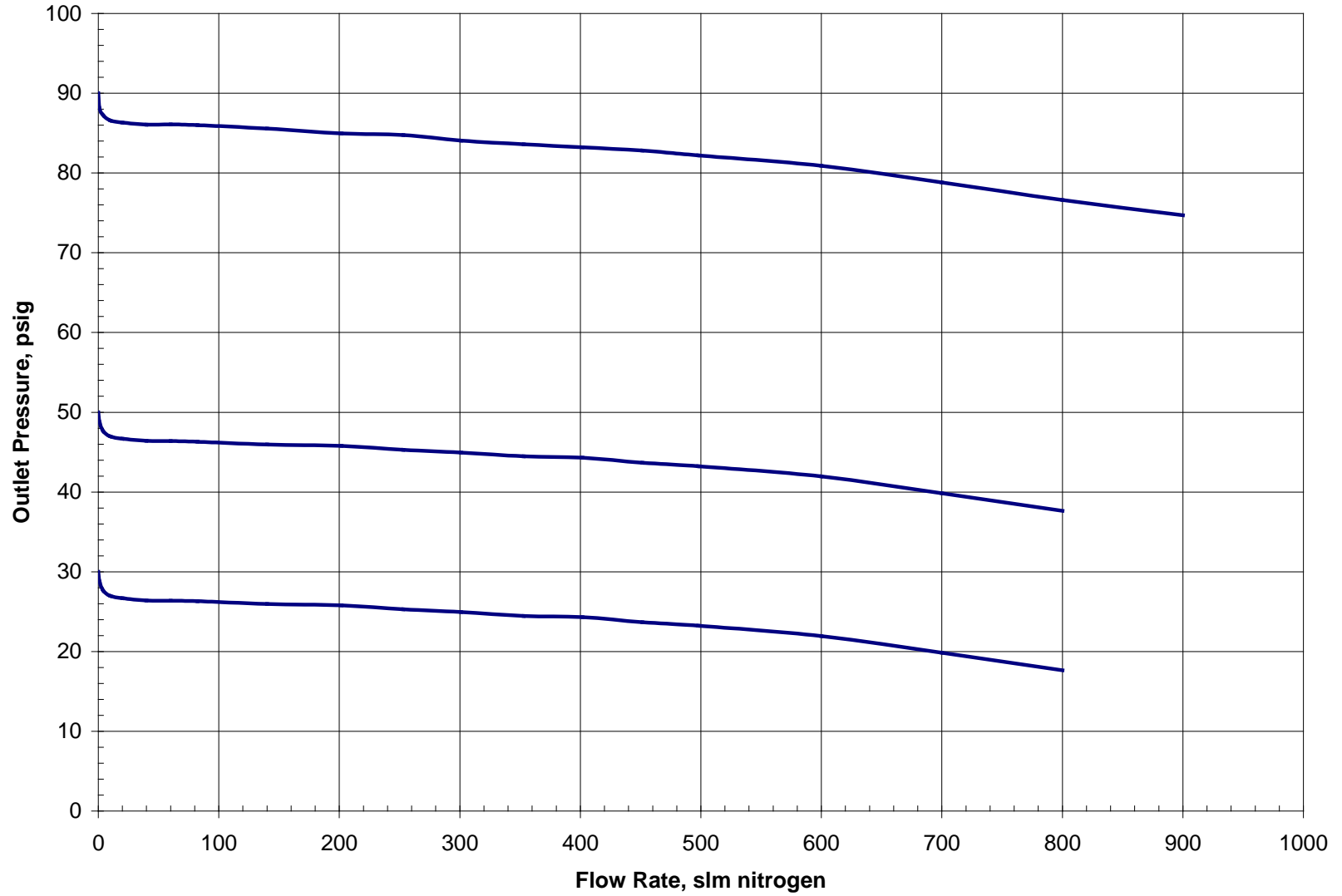


AP1210 Flow Curve Index

Series	Inlet Pressure psig (bar)	Outlet Pressures psig (bar)	Connection Size	Flow Curve Number
AP1210 AZ1210 AK1210	600 (41 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/2 inch	AP1210-001
			3/4 inch	AP1210-002
	300 (21 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/2 inch	AP1210-003
			3/4 inch	AP1210-004
	150 (10.3 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/2 inch	AP1210-005
			3/4 inch	AP1210-006
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	1/2 inch	AP1210-007
			3/4 inch	AP1210-008
	50 (3.4 bar)	30 (2 bar)	1/2 inch	AP1210-009
			3/4 inch	AP1210-010

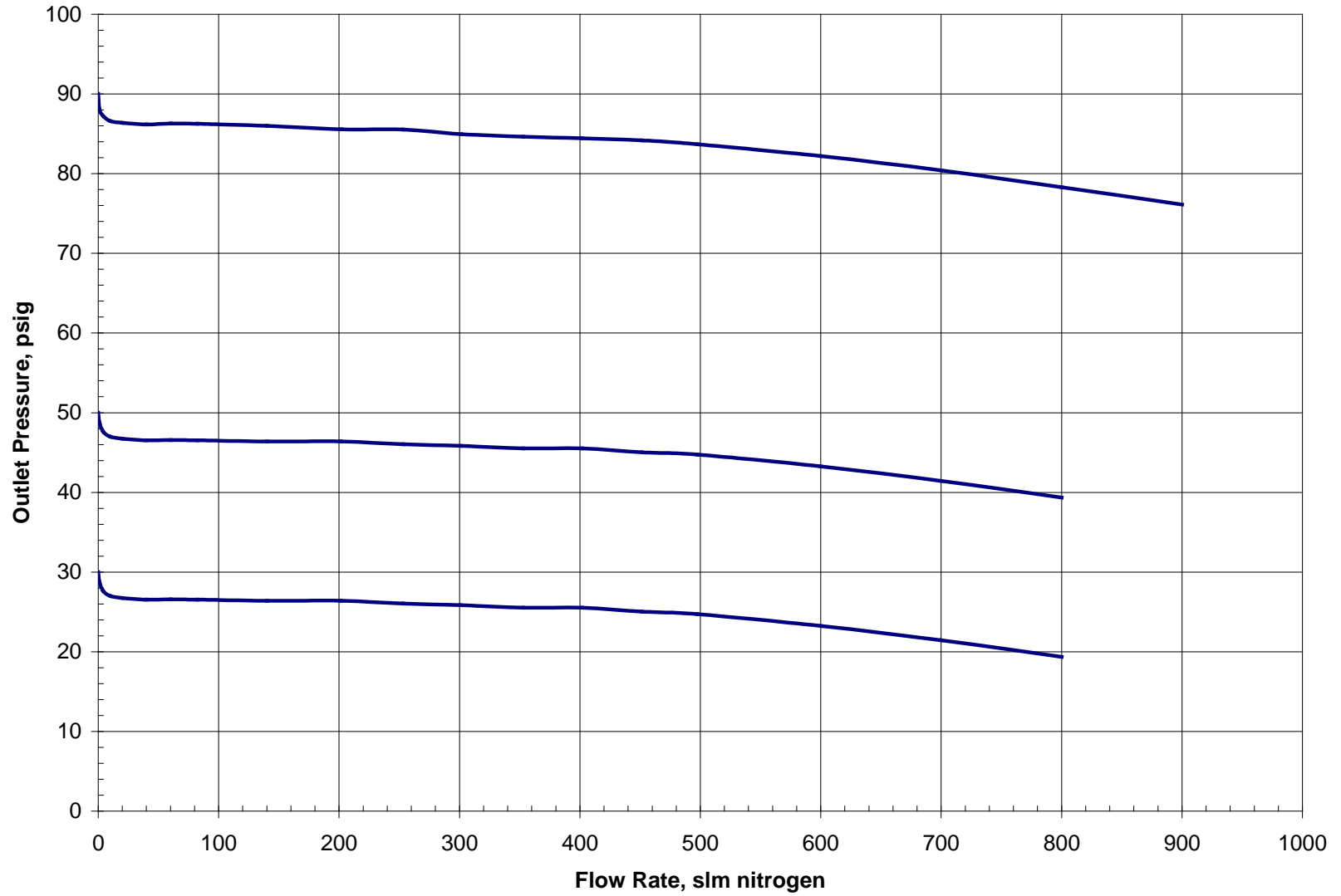
AP1210S 2PW FV8 FV8

Flow Curve at 600 psig Inlet Pressure



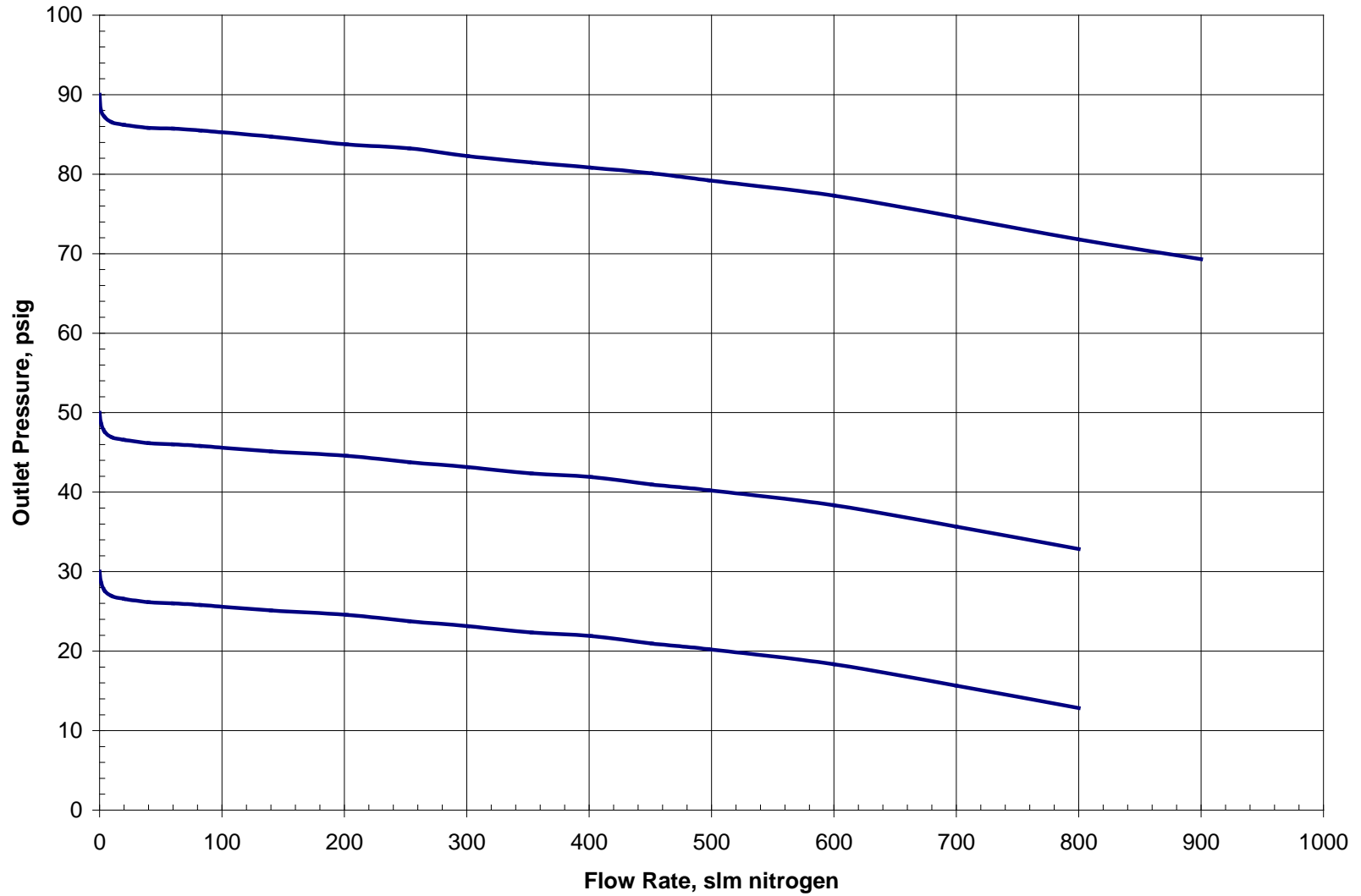
AP1210S 2PW FV12 FV12

Flow Curve at 600 psig Inlet Pressure

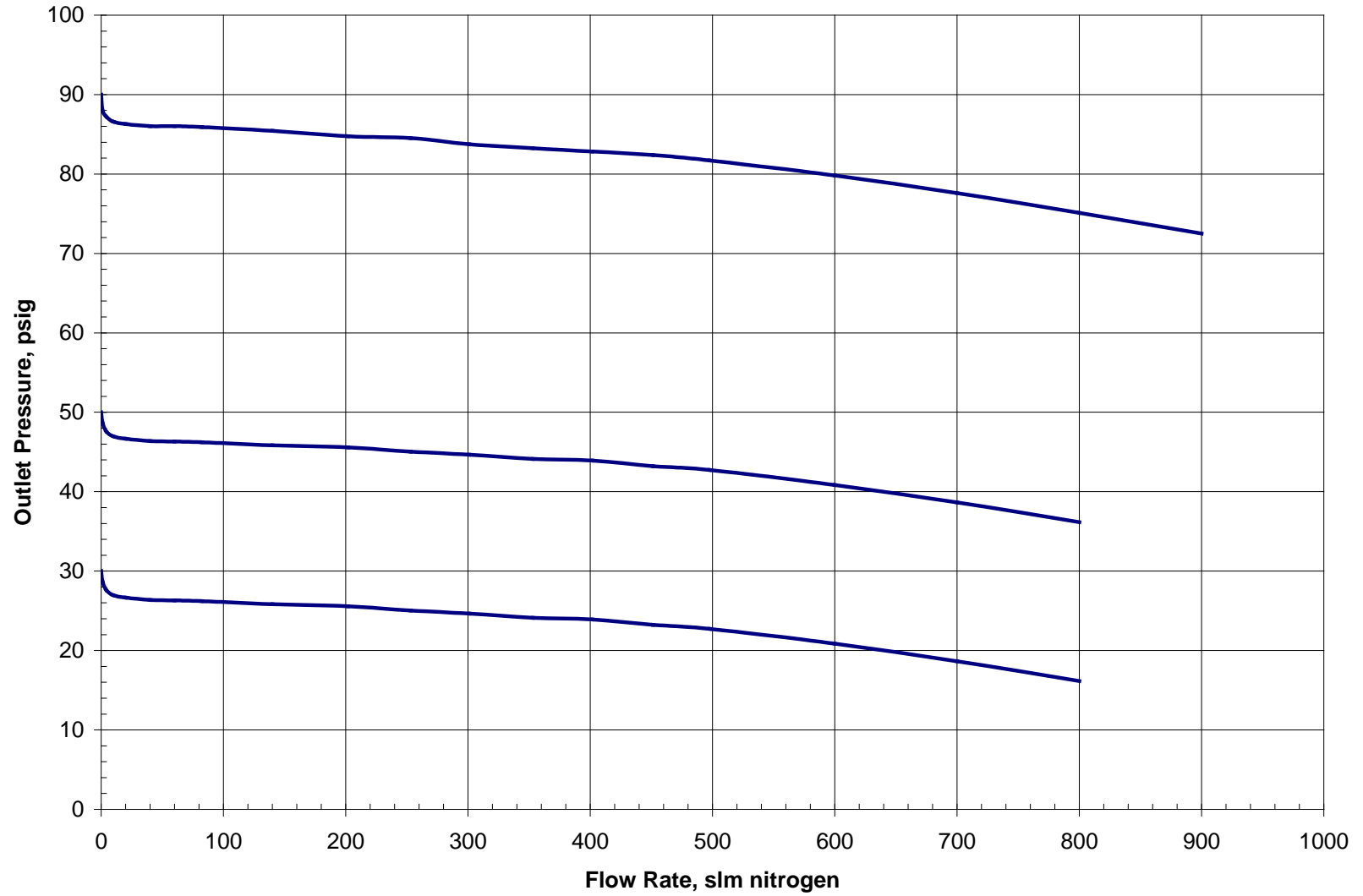


AP1210S 2PW FV8 FV8

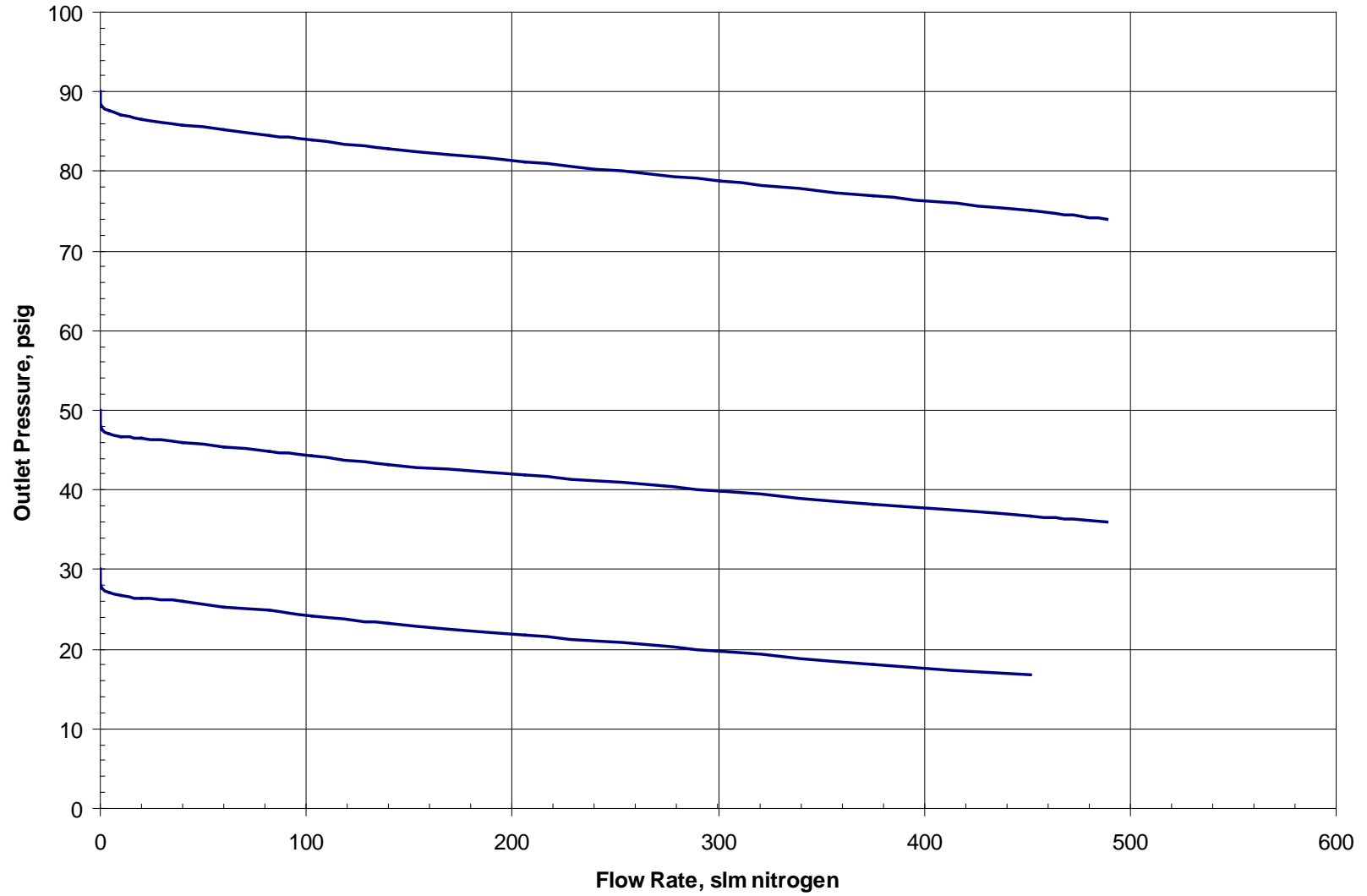
Flow Curve at 300 psig Inlet Pressure



AP1210S 2PW FV12 FV12
Flow Curve at 300 psig Inlet Pressure

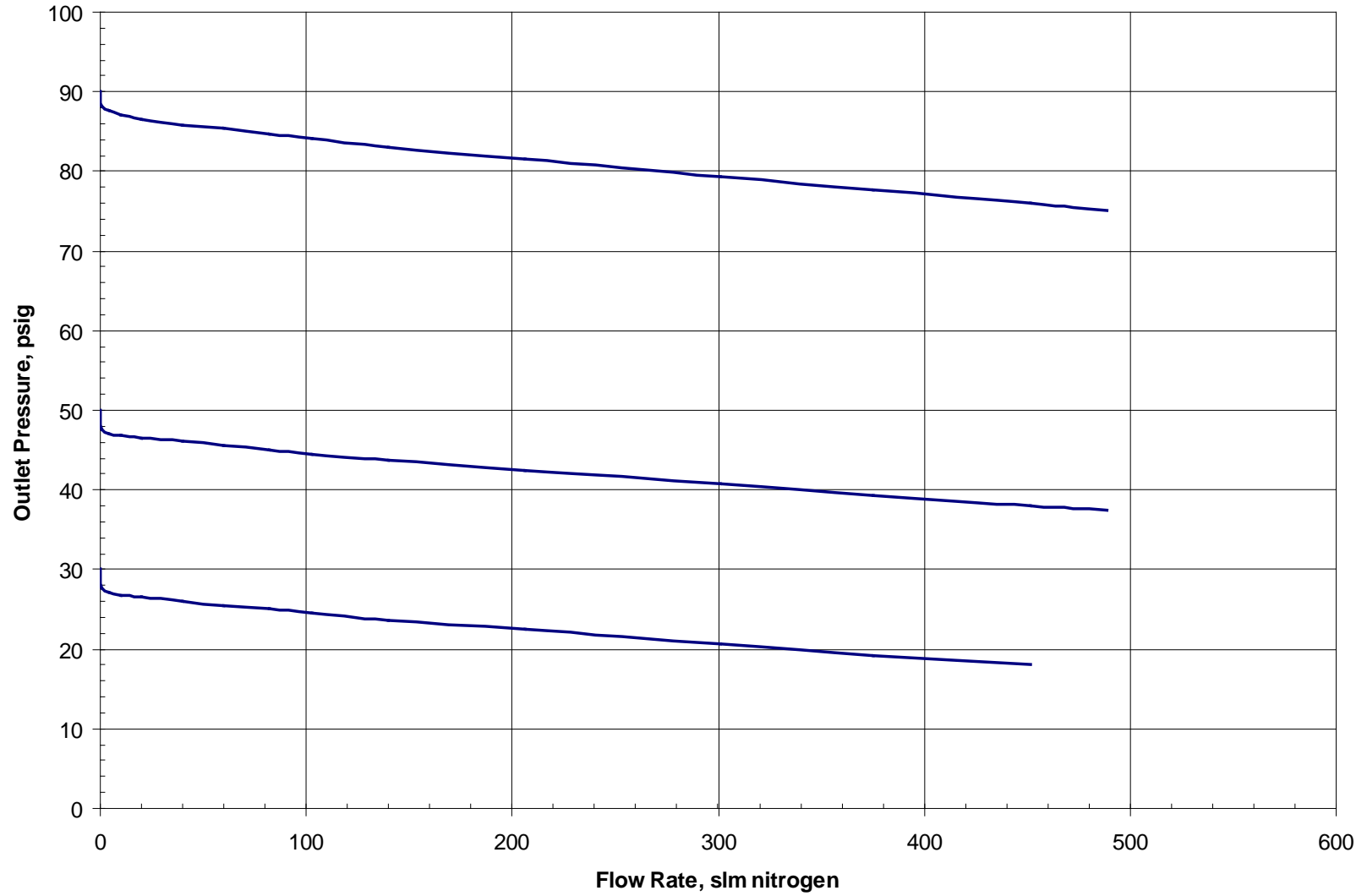


AP1210S 2PW FV8 FV8
Flow Curve at 150 psig Inlet Pressure

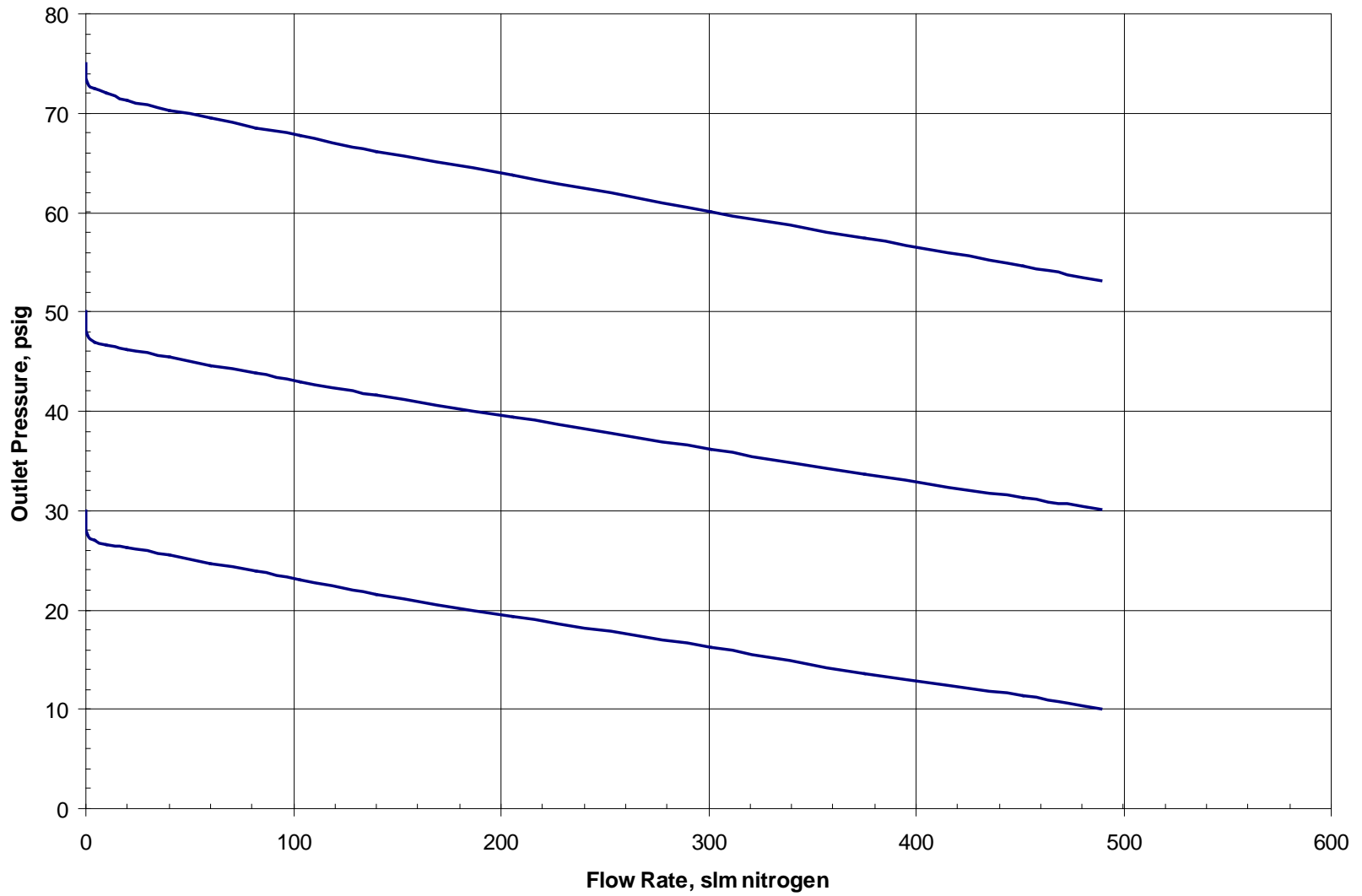


AP1210S 2PW FV12 FV12

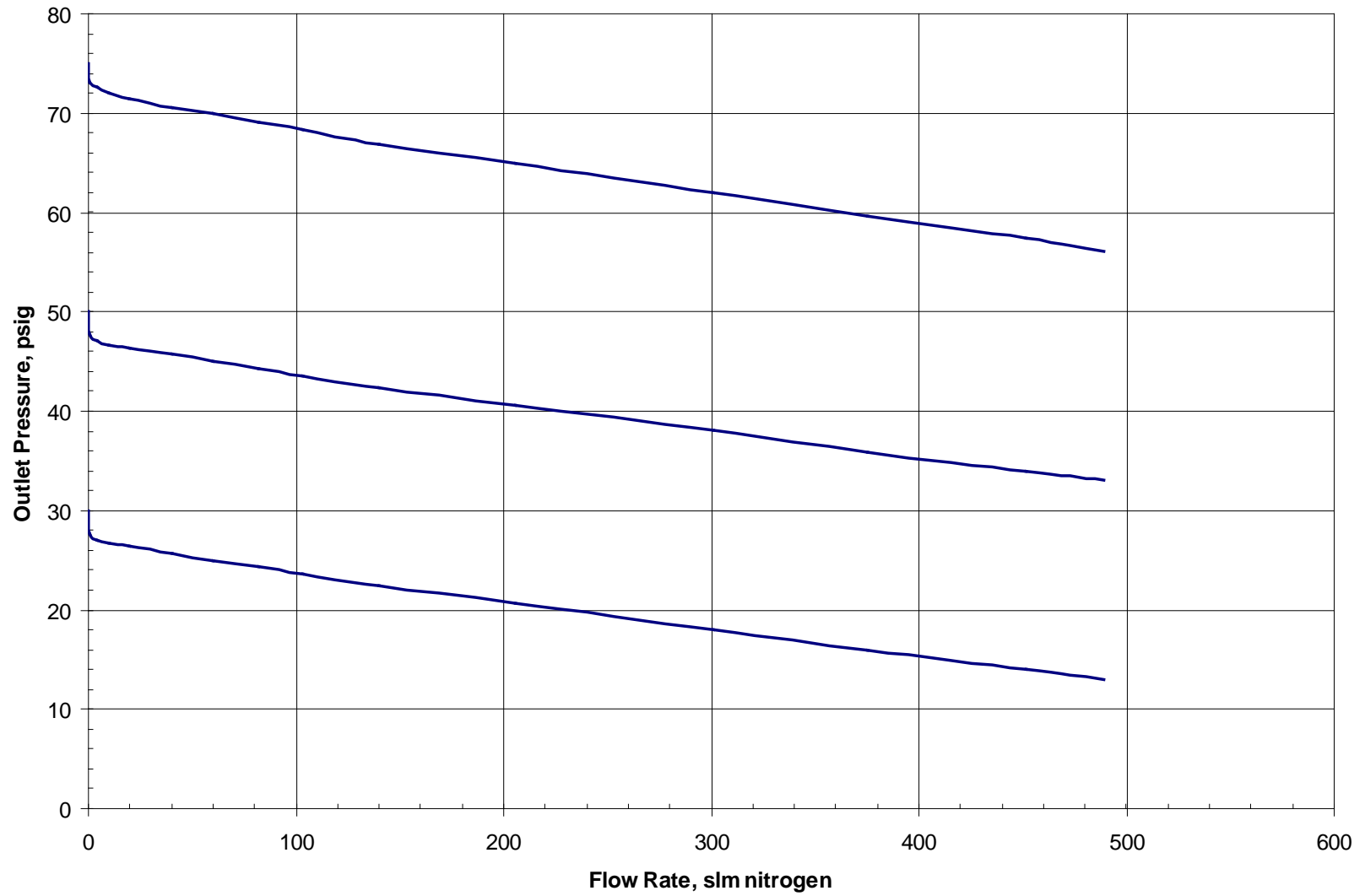
Flow Curve at 150 psig Inlet Pressure



AP1210S 2PW FV8 FV8
Flow Curve at 100 psig Inlet Pressure

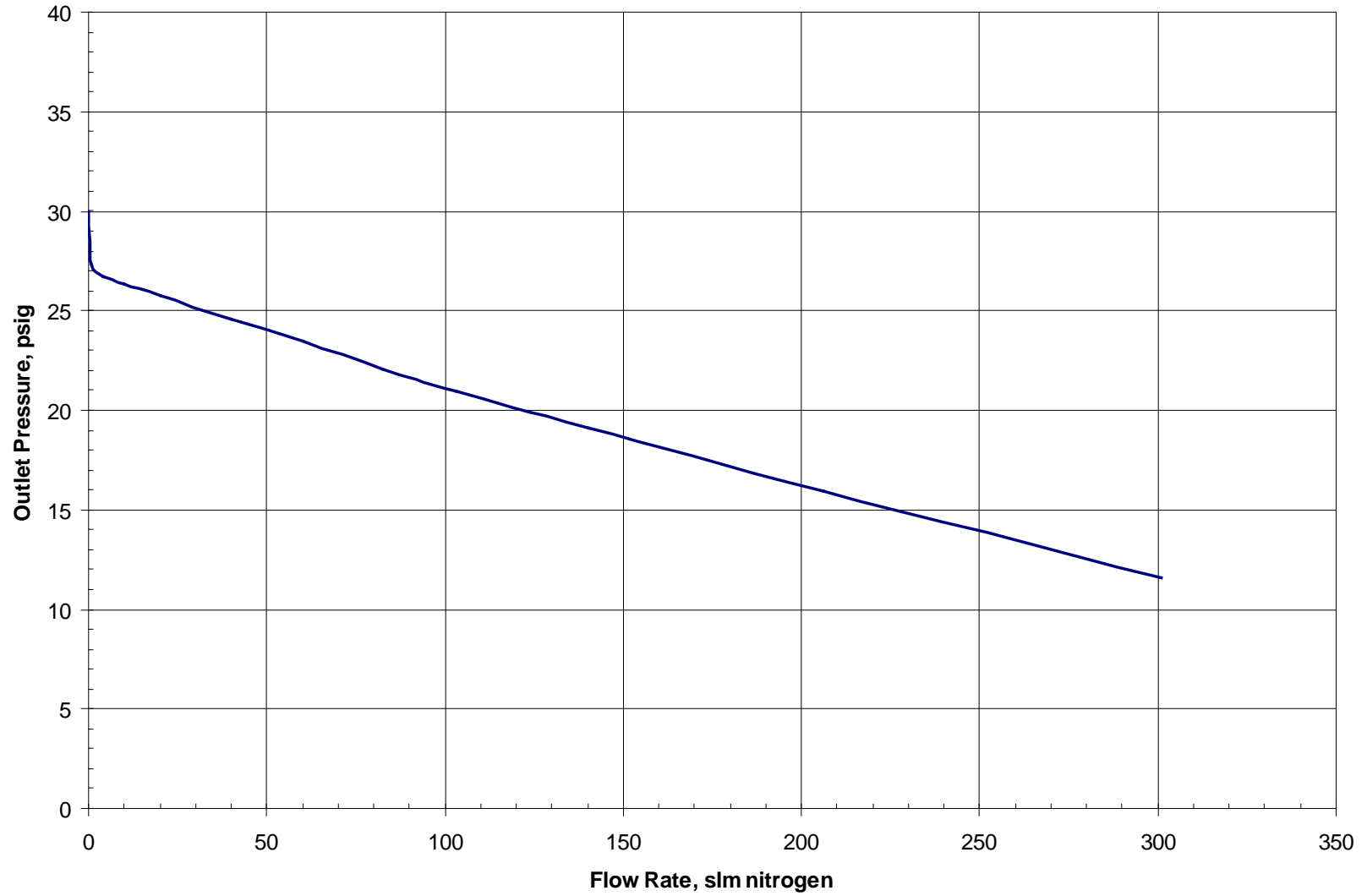


AP1210S 2PW FV12 FV12
Flow Curve at 100 psig Inlet Pressure



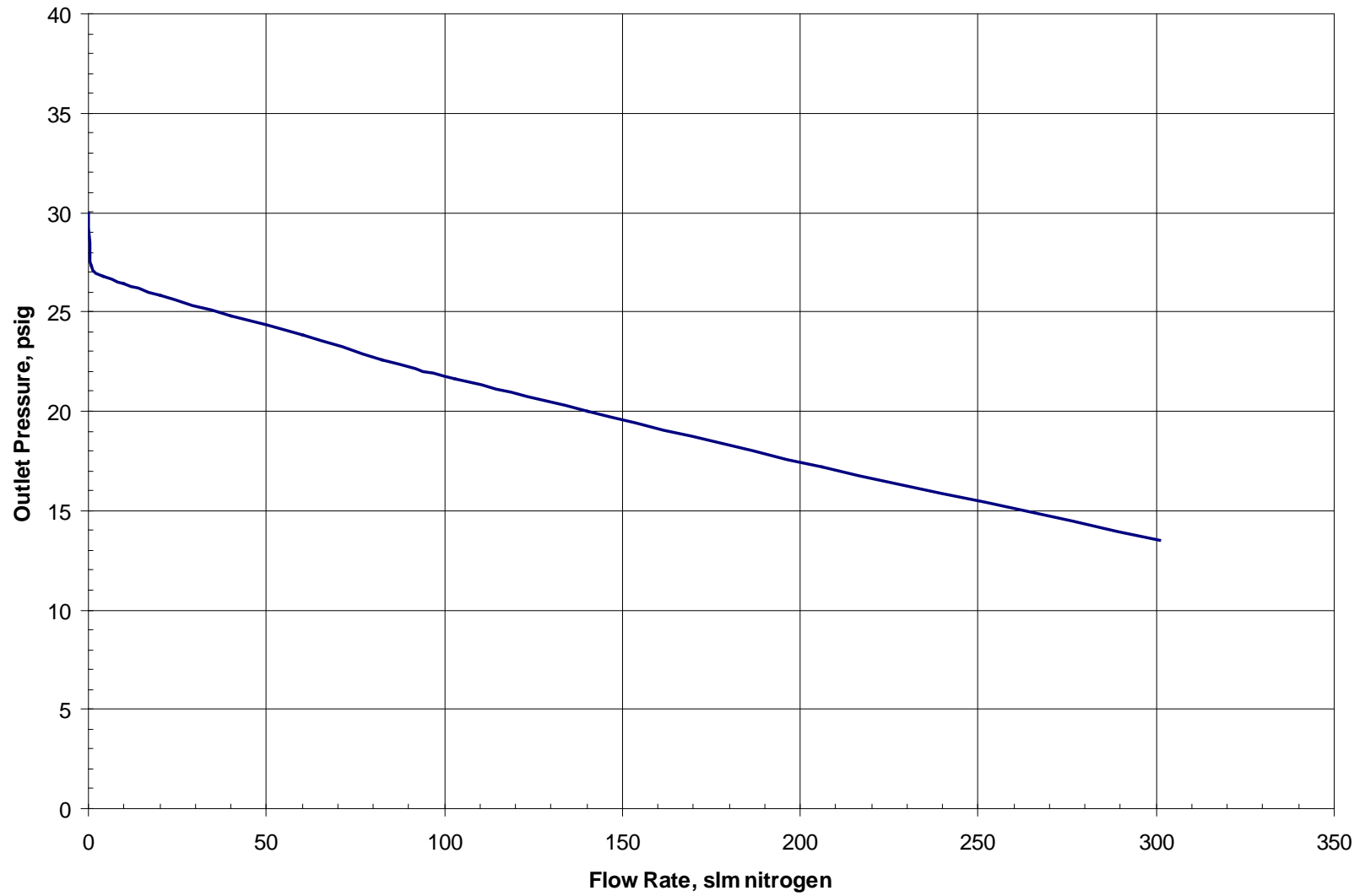
AP1210S 2PW FV8 FV8

Flow Curve at 50 psig Inlet Pressure



AP1210S 2PW FV12 FV12

Flow Curve at 50 psig Inlet Pressure

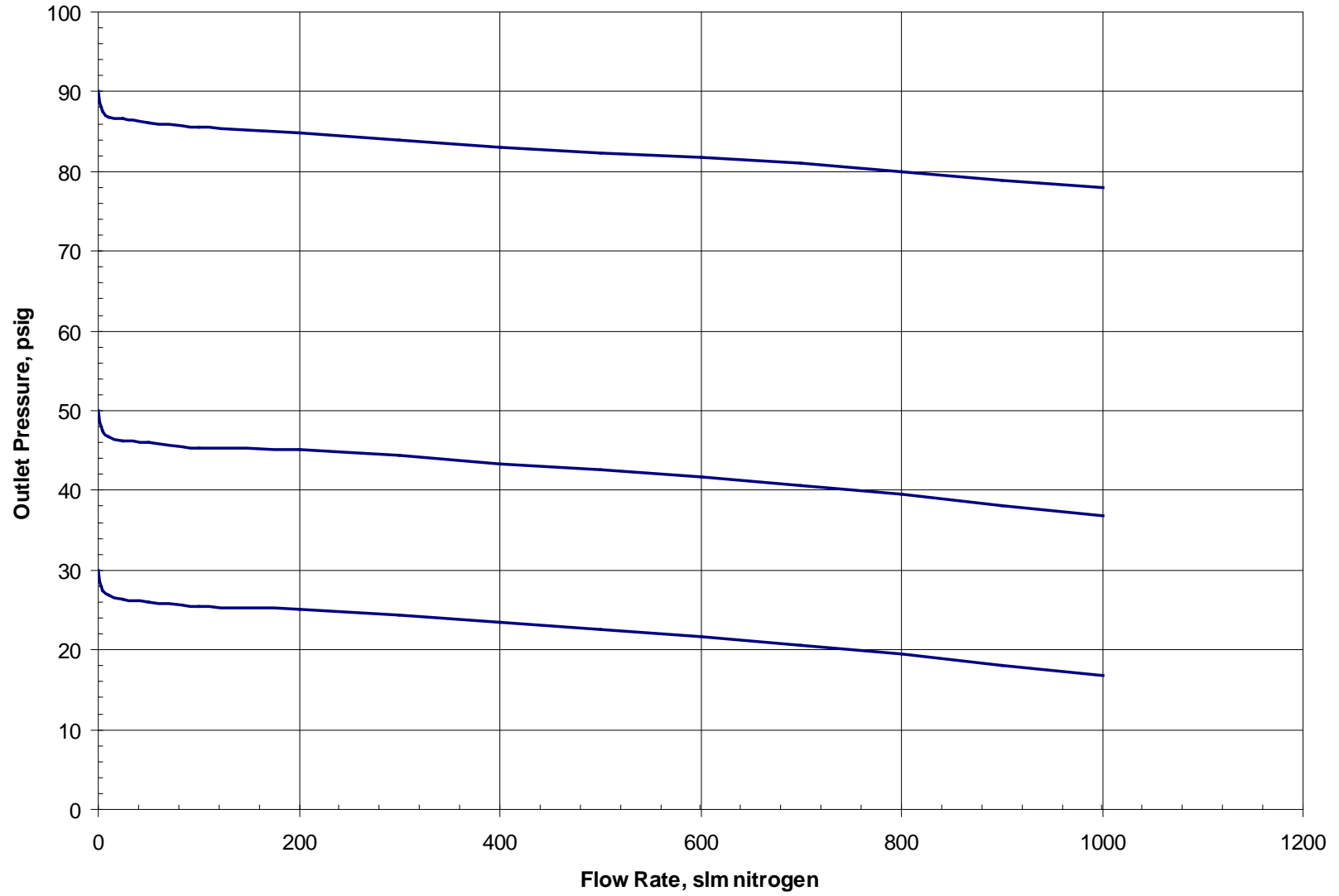


AP1210 HF Flow Curve Index

Series	Inlet Pressure psig (bar)	Outlet Pressures psig (bar)	Connection Size	Flow Curve Number
AP1210 HF AZ1210 HF AK1210 HF	600 (41 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/2 inch	AP1210HF-001
			3/4 inch	AP1210HF-002
	300 (21 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/2 inch	AP1210HF-003
			3/4 inch	AP1210HF-004
	150 (10.3 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/2 inch	AP1210HF-005
			3/4 inch	AP1210HF-006
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	1/2 inch	AP1210HF-007
			3/4 inch	AP1210HF-008
	50 (3.4 bar)	30 (2 bar)	1/2 inch	AP1210HF-009
			3/4 inch	AP1210HF-010

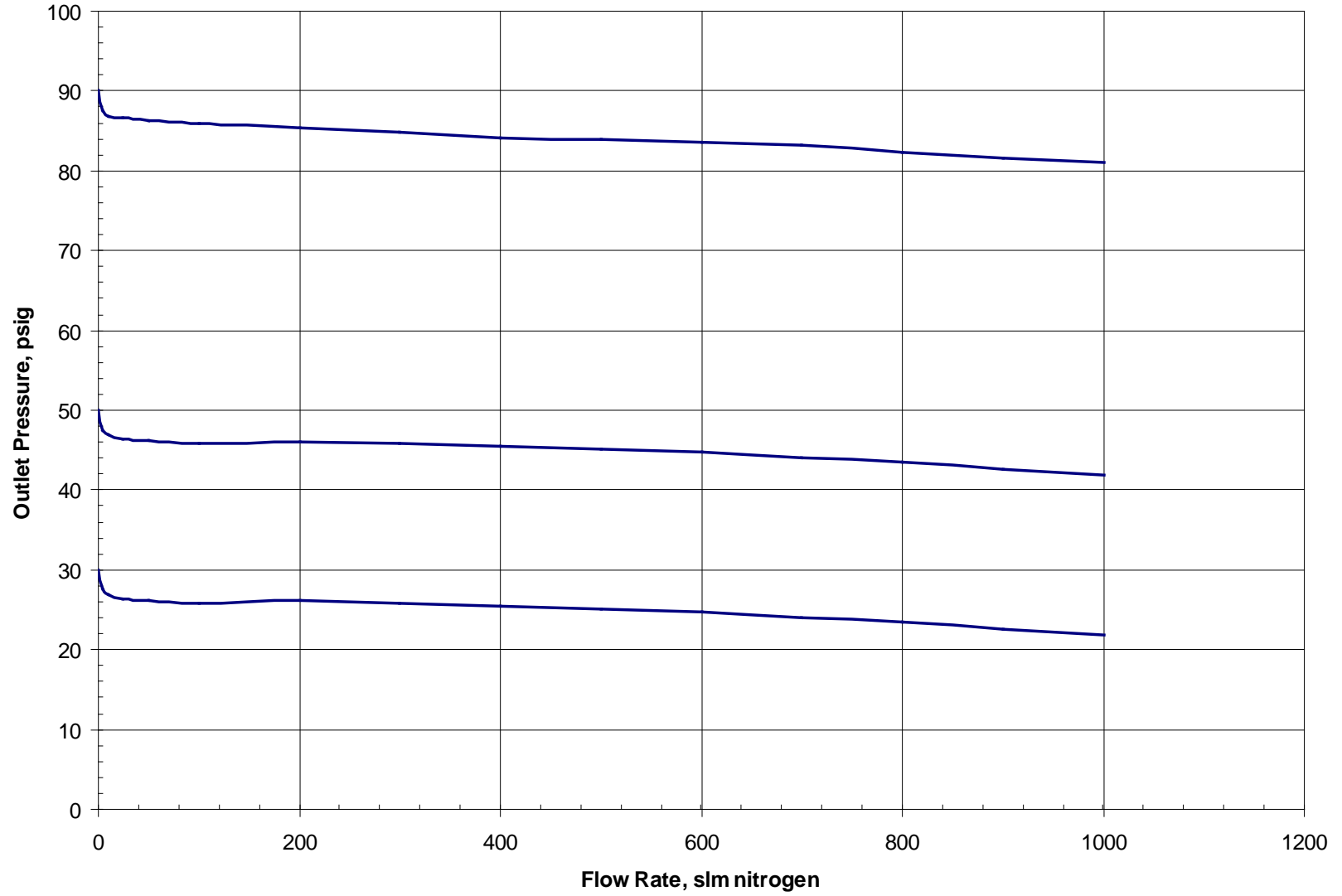
AP1210S 2PW FV8 FV8 HF

Flow Curve at 600 psig Inlet Pressure



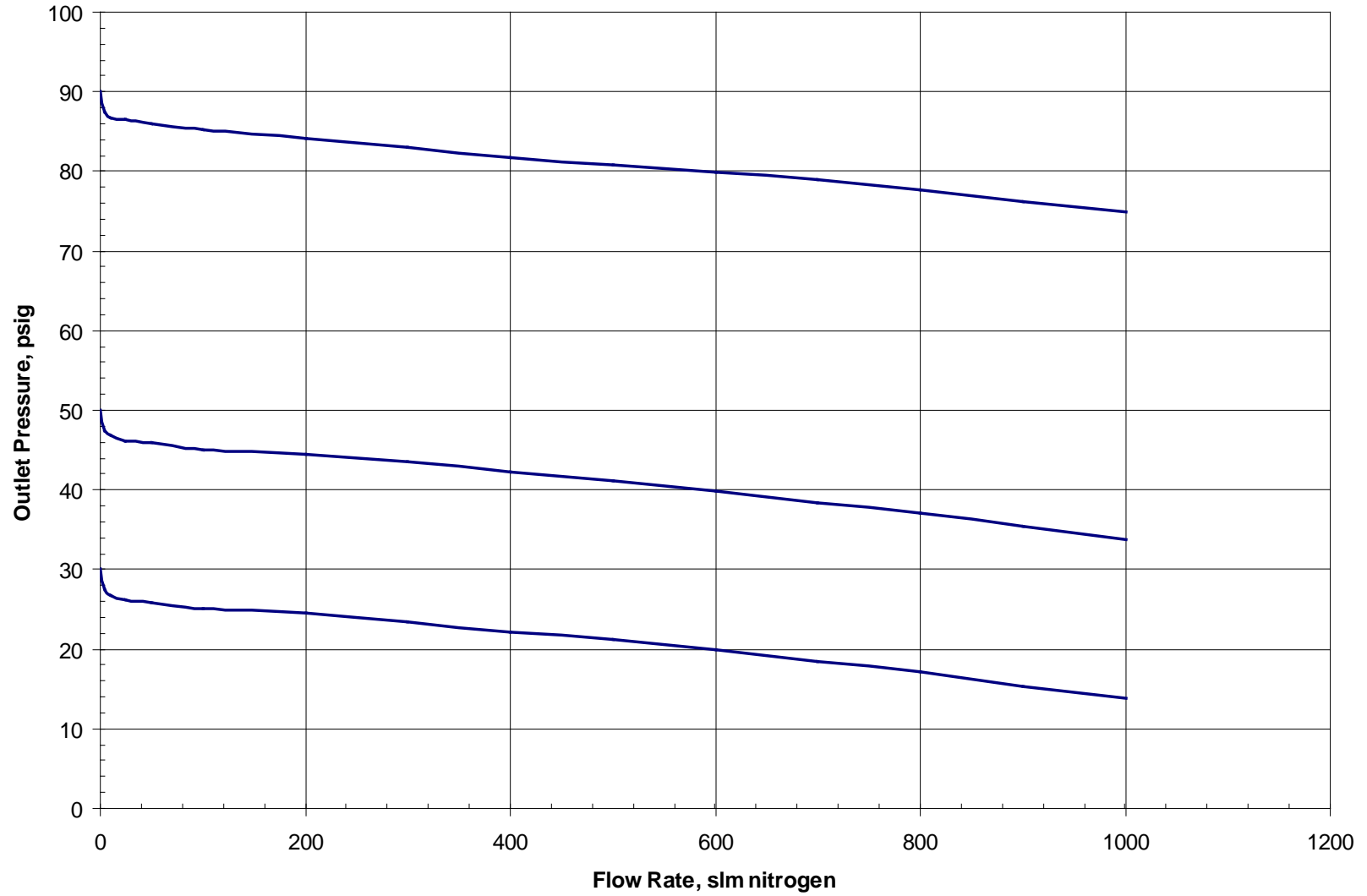
AP1210S 2PW FV12 FV12 HF

Flow Curve at 600 psig Inlet Pressure



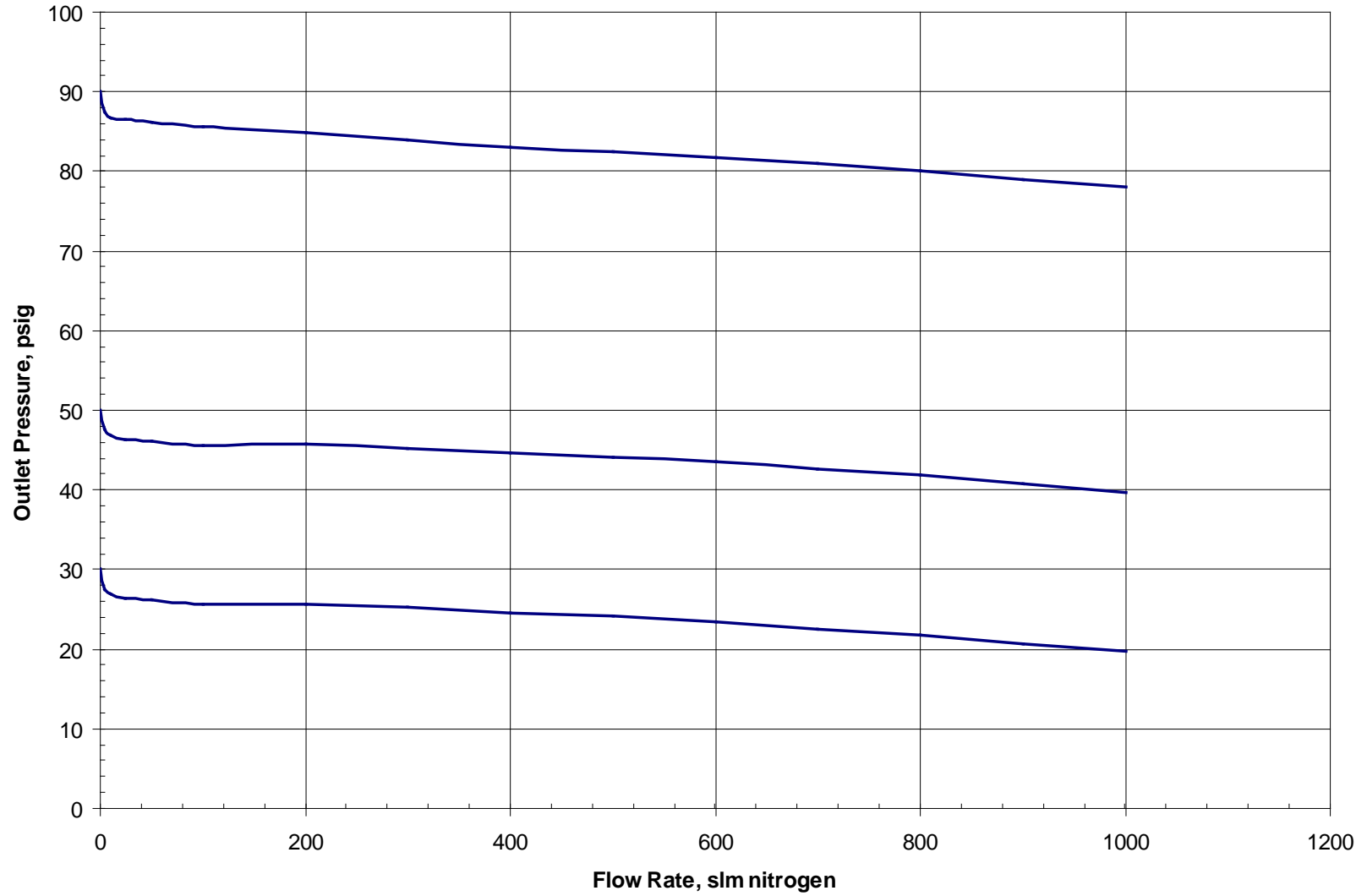
AP1210S 2PW FV8 FV8 HF

Flow Curve at 300 psig Inlet Pressure



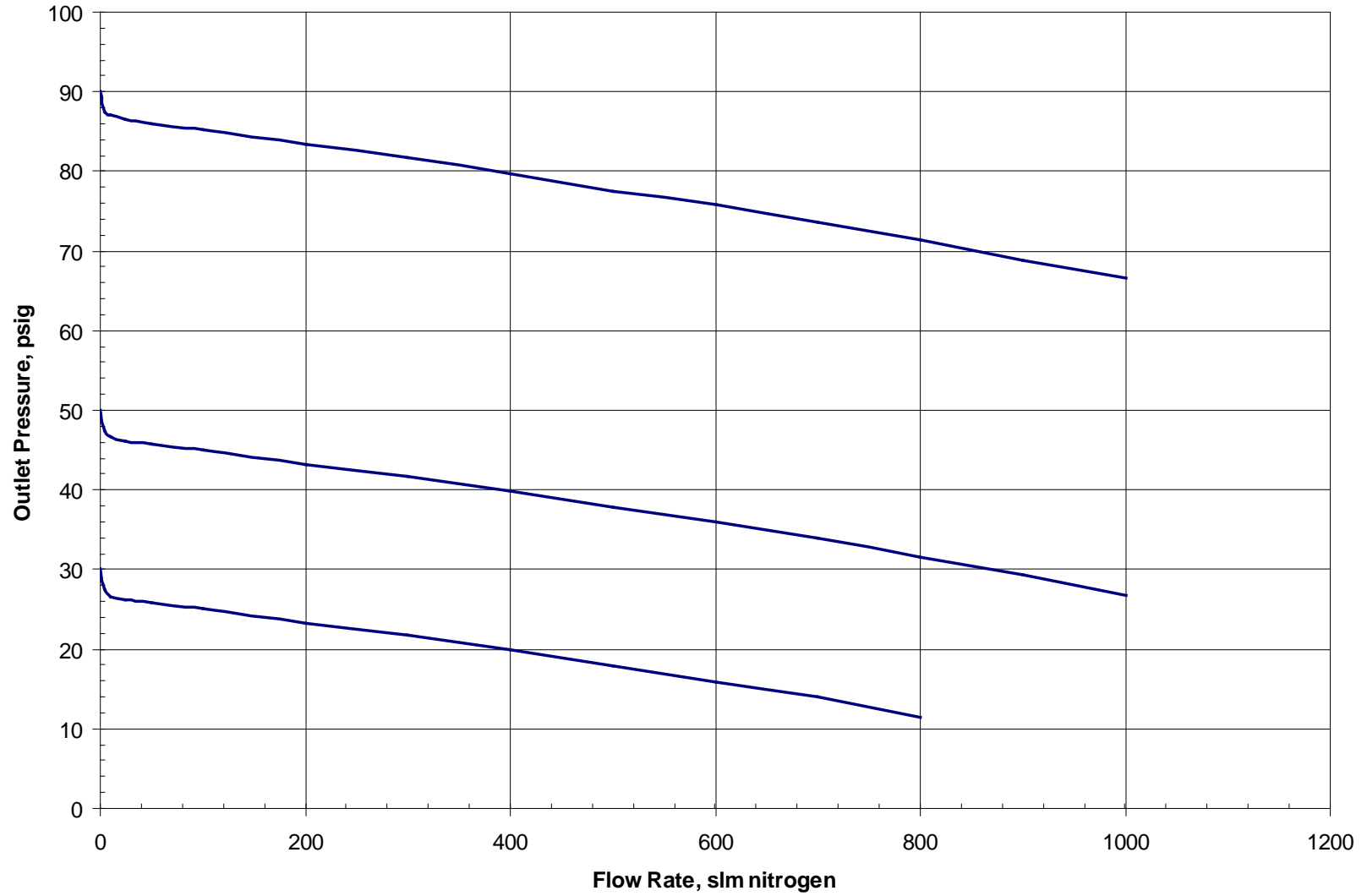
AP1210S 2PW FV12 FV12 HF

Flow Curve at 300 psig Inlet Pressure



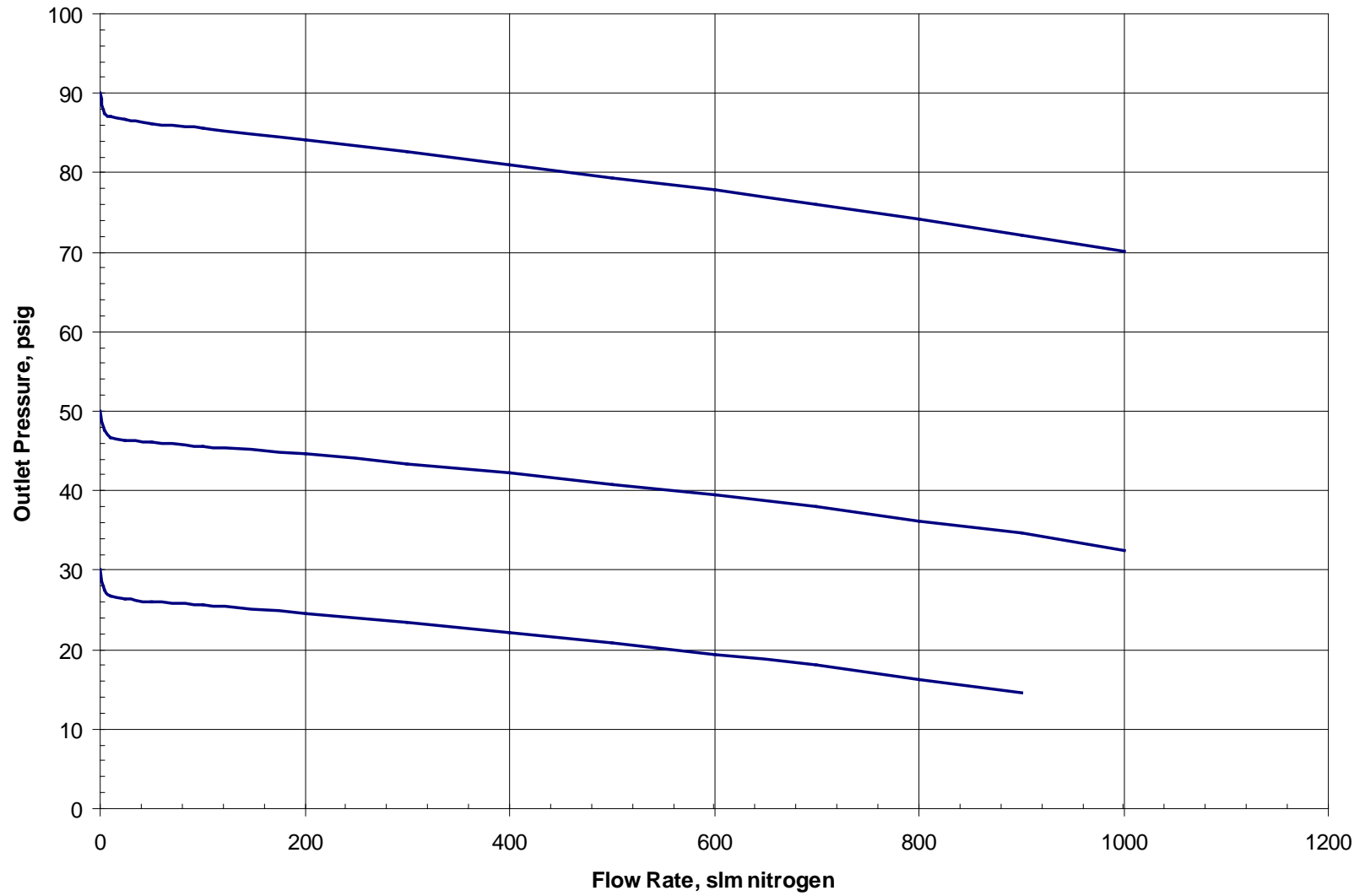
AP1210S 2PW FV8 FV8 HF

Flow Curve at 150 psig Inlet Pressure



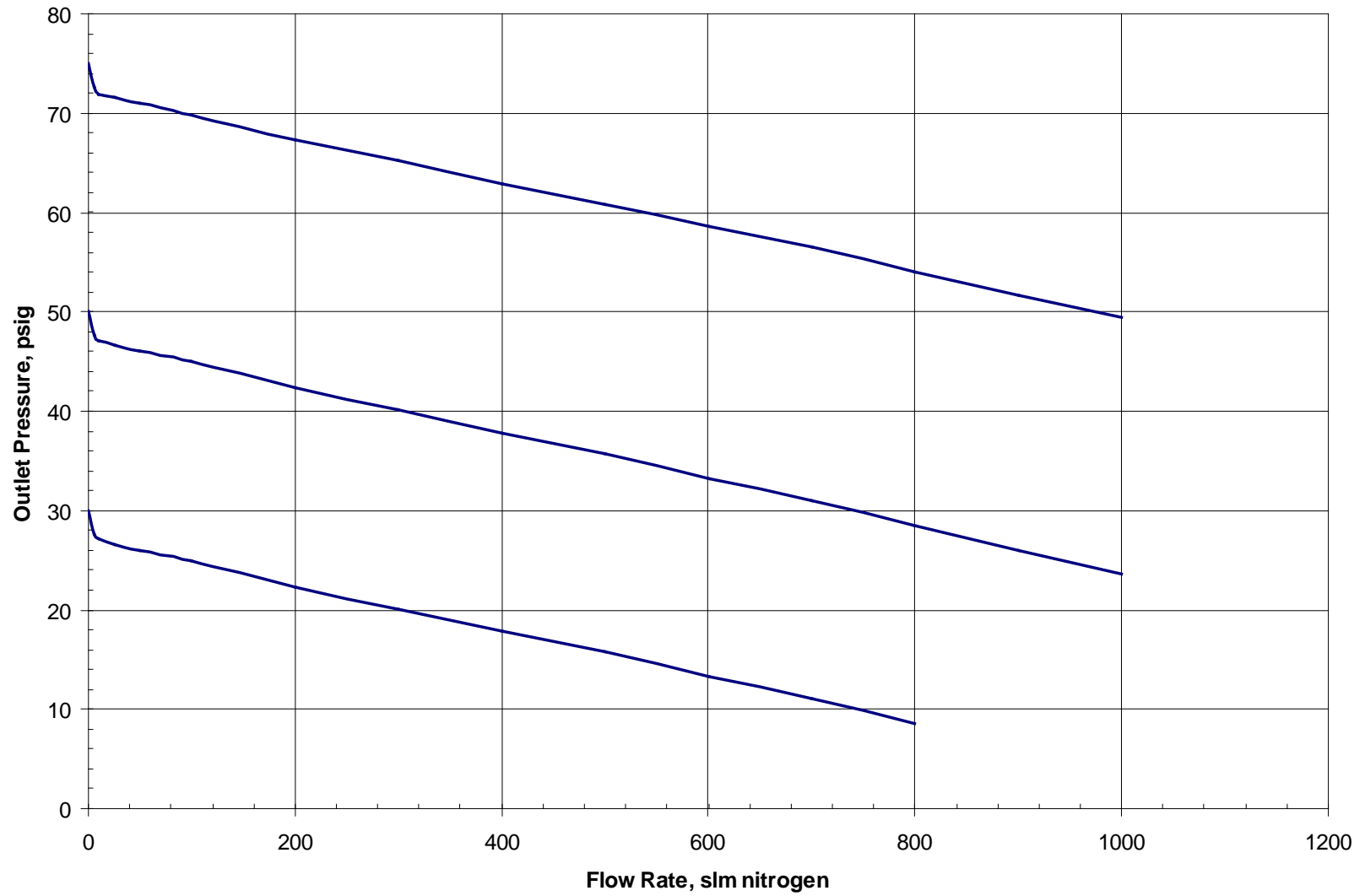
AP1210S 2PW FV12 FV12 HF

Flow Curve at 150 psig Inlet Pressure



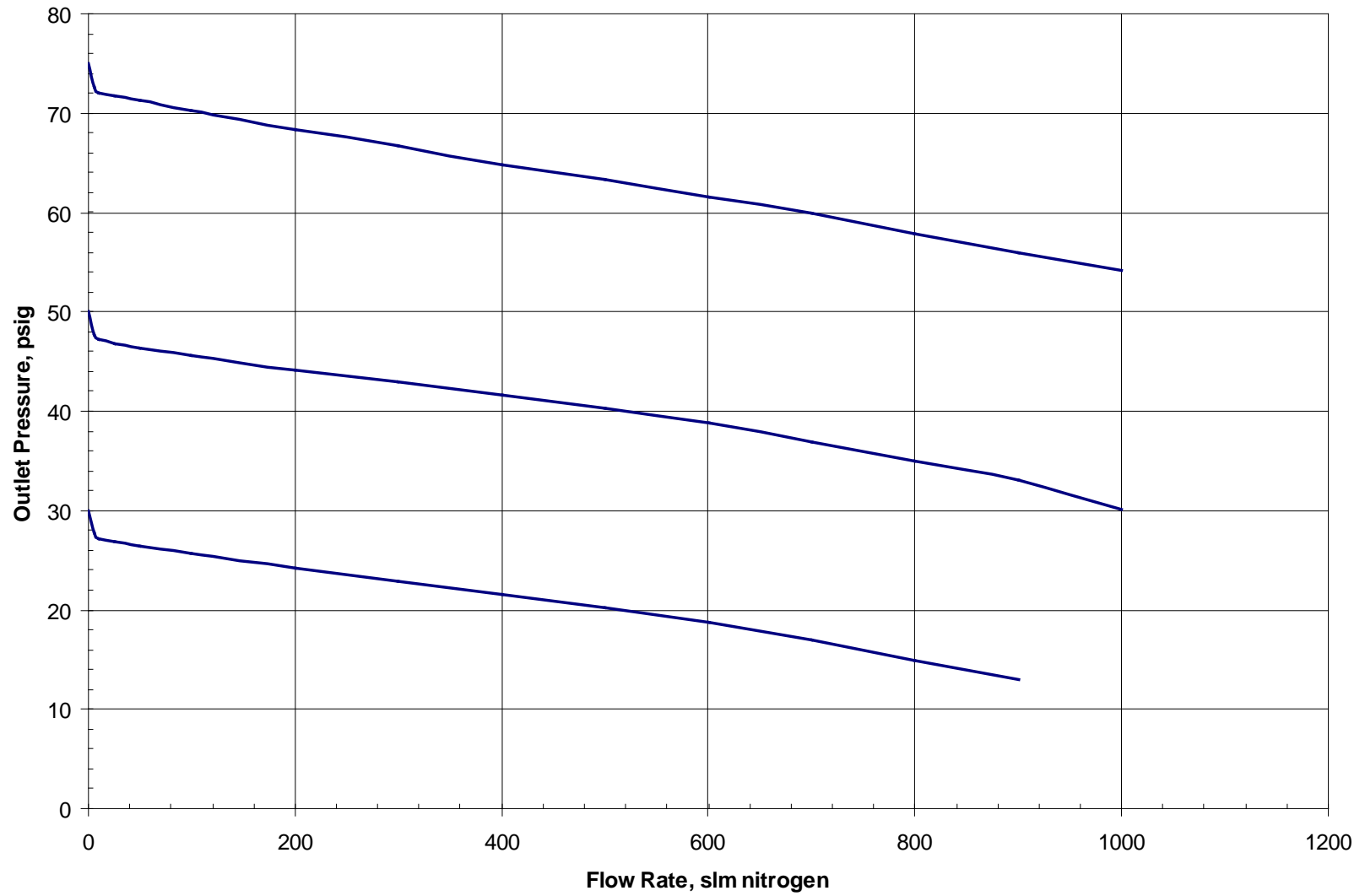
AP1210S 2PW FV8 FV8 HF

Flow Curve at 100 psig Inlet Pressure



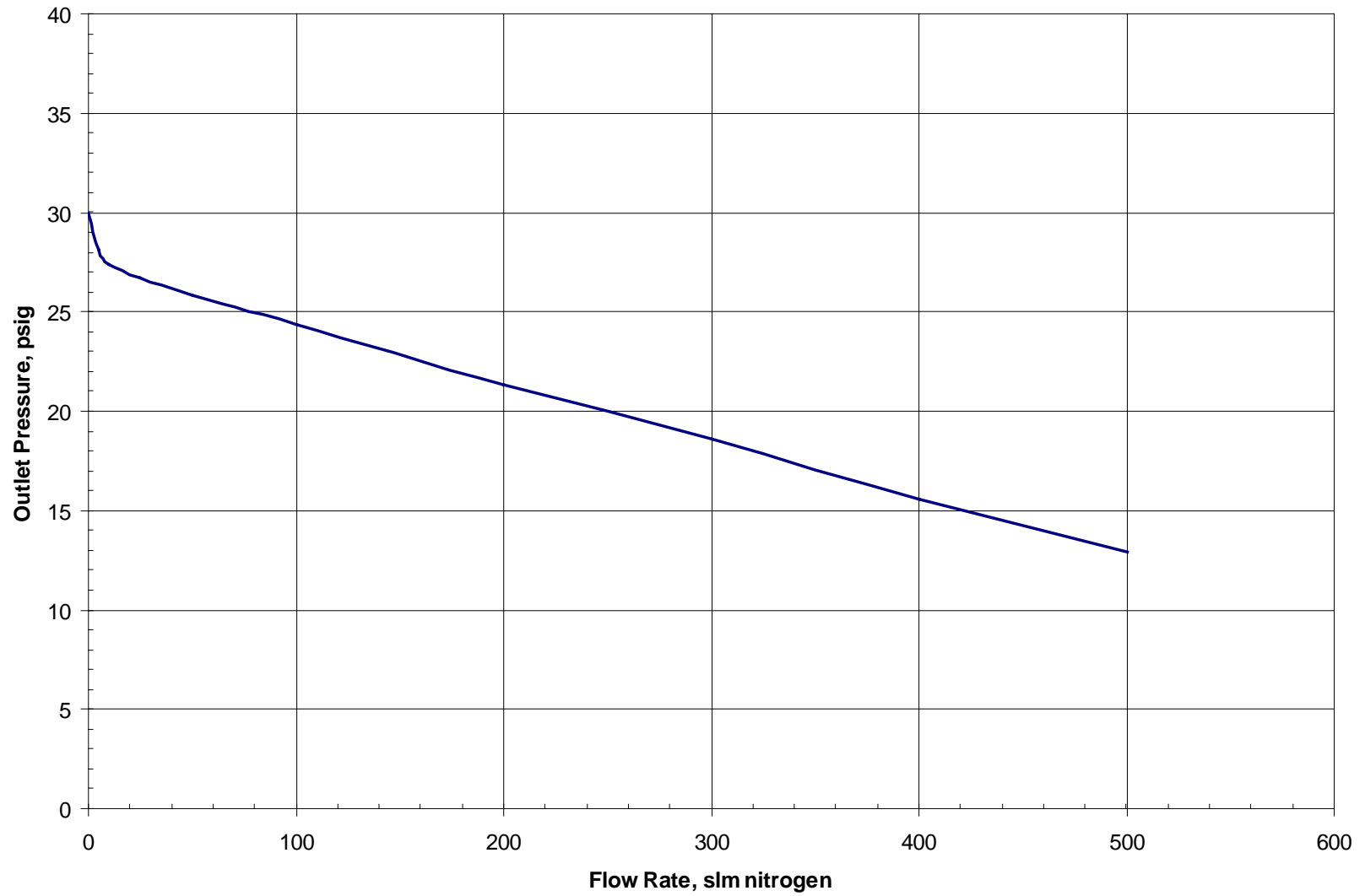
AP1210S 2PW FV12 FV12 HF

Flow Curve at 100 psig Inlet Pressure



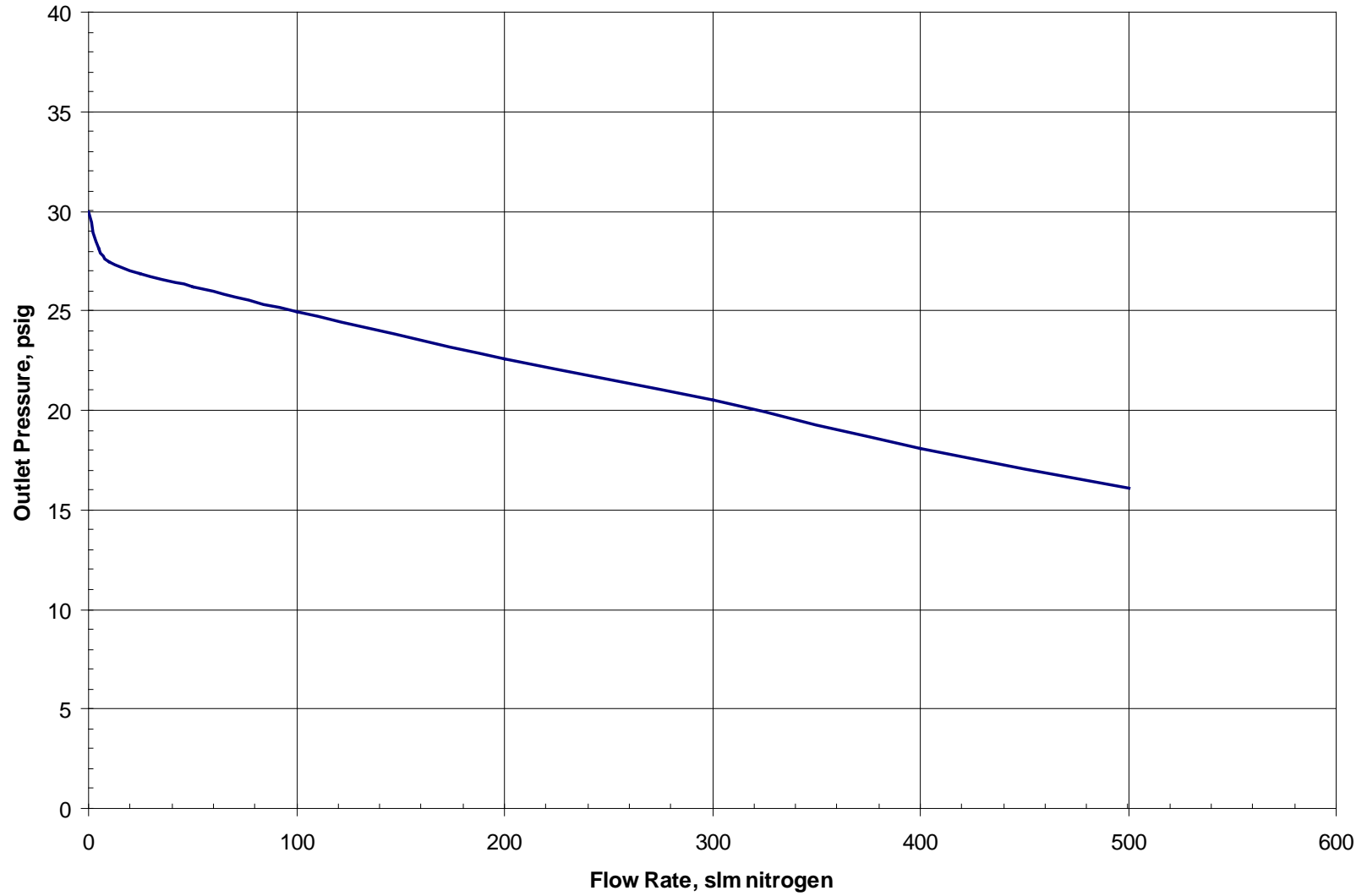
AP1210S 2PW FV8 FV8 HF

Flow Curve at 50 psig Inlet Pressure



AP1210S 2PW FV12 FV12 HF

Flow Curve at 50 psig Inlet Pressure

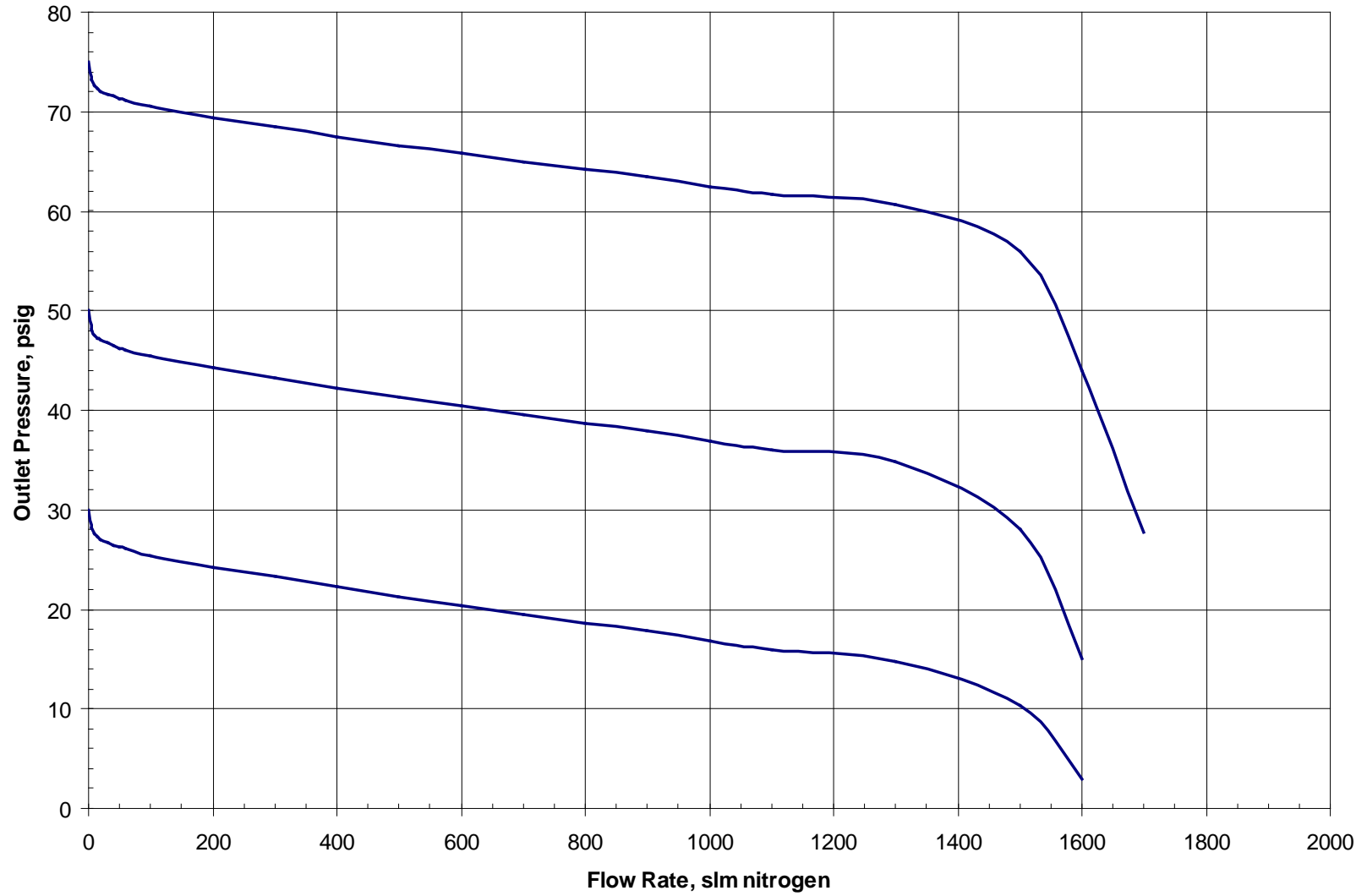


AP1210 FC Flow Curve Index

Series	Inlet Pressure psig (bar)	Outlet Pressures psig (bar)	Connection Size	Flow Curve Number
AP1210 FC AZ1210 FC AK1210 FC	150 (10.3 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	1/2 inch	AP1210FC-001
			3/4 inch	AP1210FC-002
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	1/2 inch	AP1210FC-003
			3/4 inch	AP1210FC-004
	50 (3.4 bar)	30 (2 bar)	1/2 inch	AP1210FC-005
			3/4 inch	AP1210FC-006

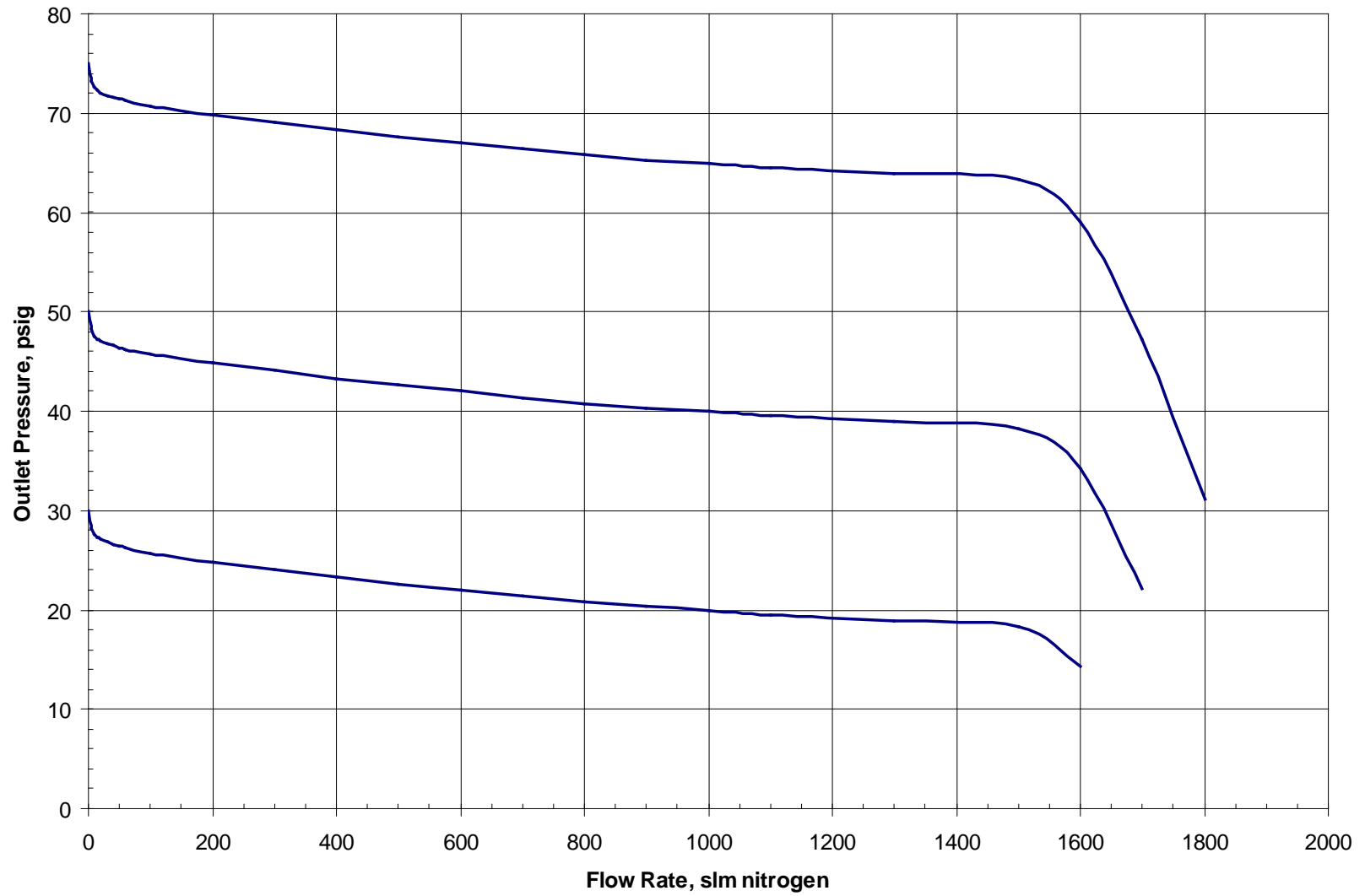
AP1210S 2PW FV8 FV8 FC

Flow Curve at 150 psig Inlet Pressure



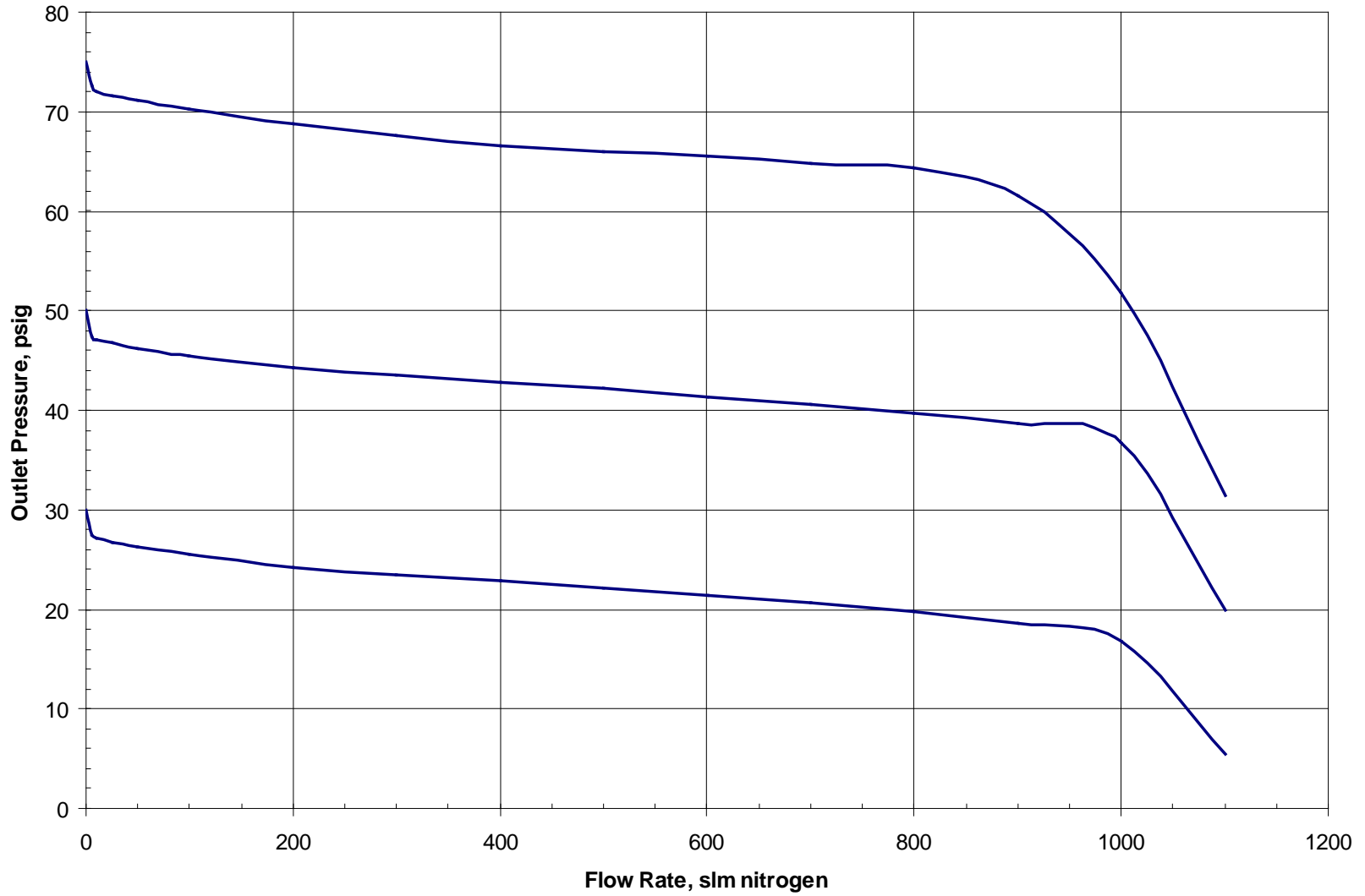
AP1210S 2PW FV12 FV12 FC

Flow Curve at 150 psig Inlet Pressure



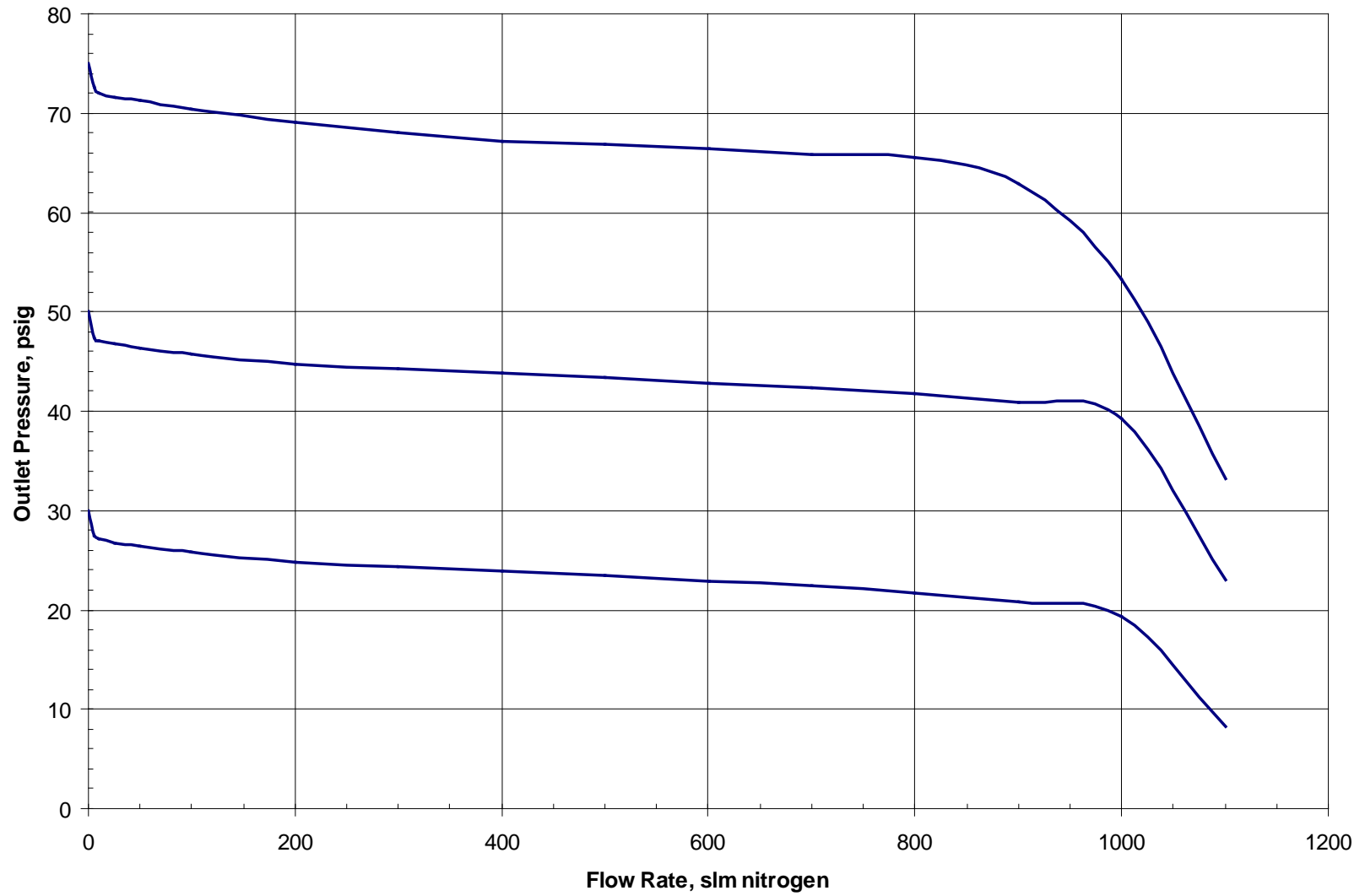
AP1210S 2PW FV8 FV8 FC

Flow Curve at 100 psig Inlet Pressure



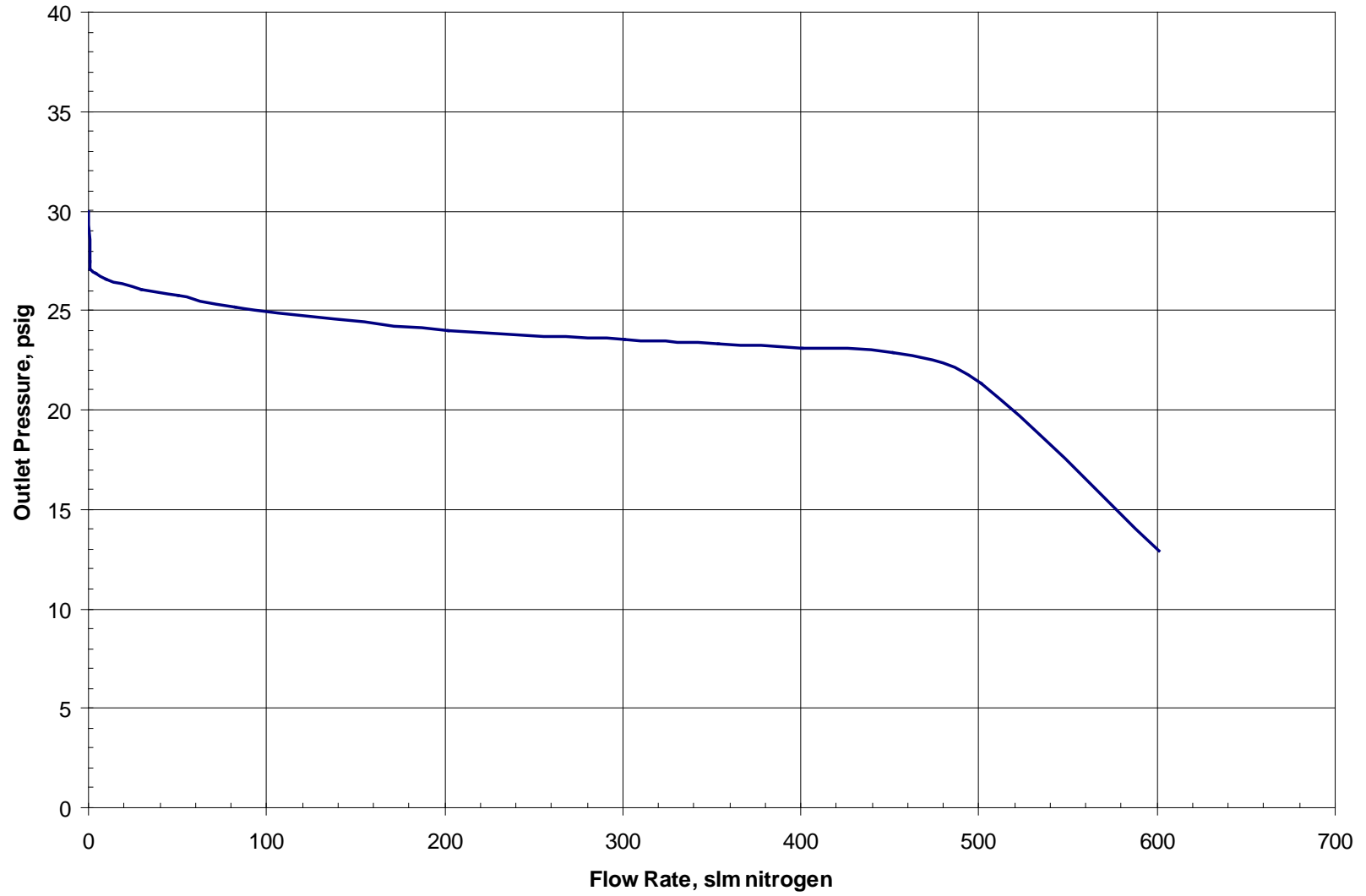
AP1210S 2PW FV12 FV12 FC

Flow Curve at 100 psig Inlet Pressure



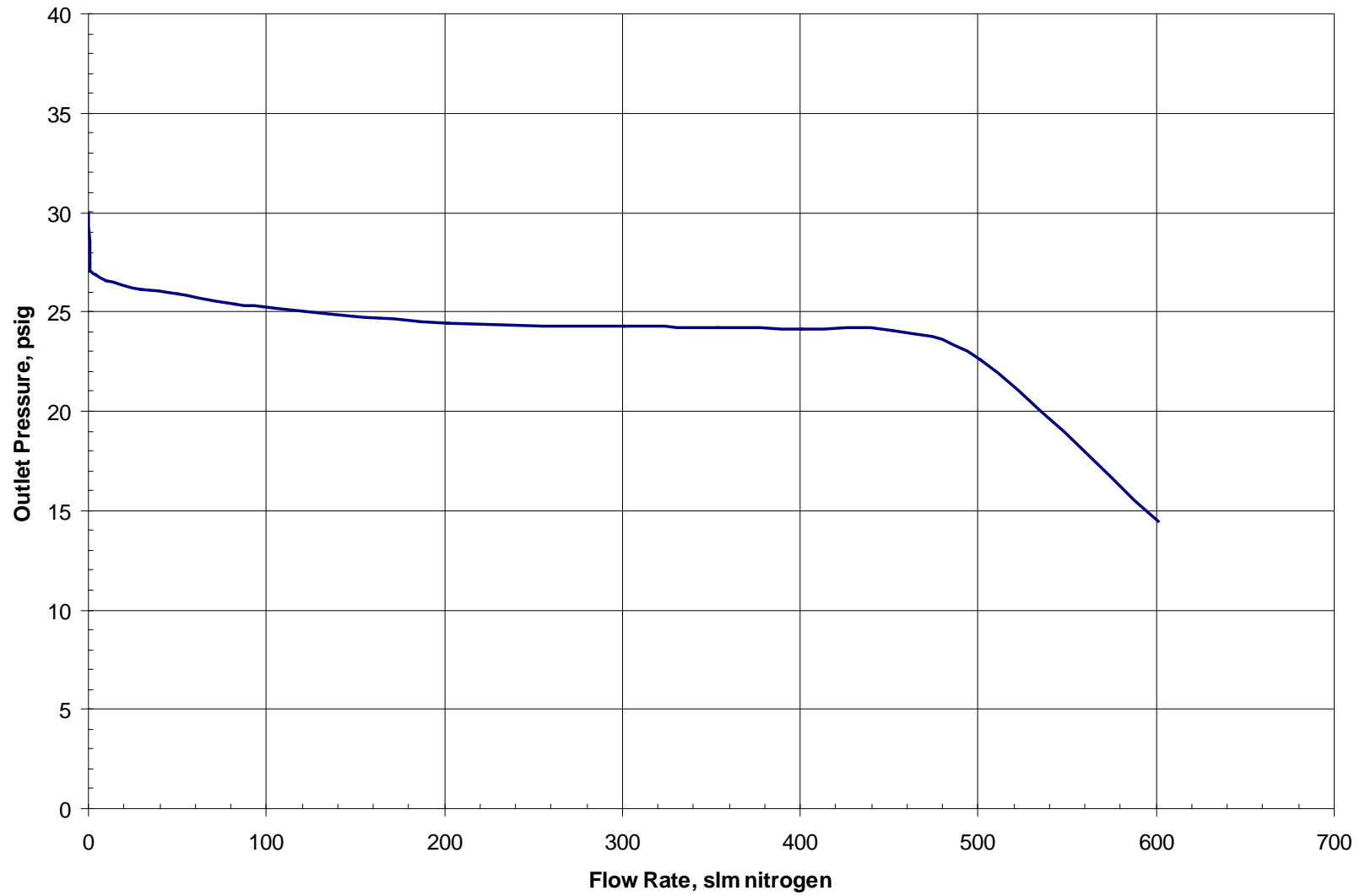
AP1210S 2PW FV8 FV8 FC

Flow Curve at 50 psig Inlet Pressure



AP1210S 2PW FV12 FV12 FC

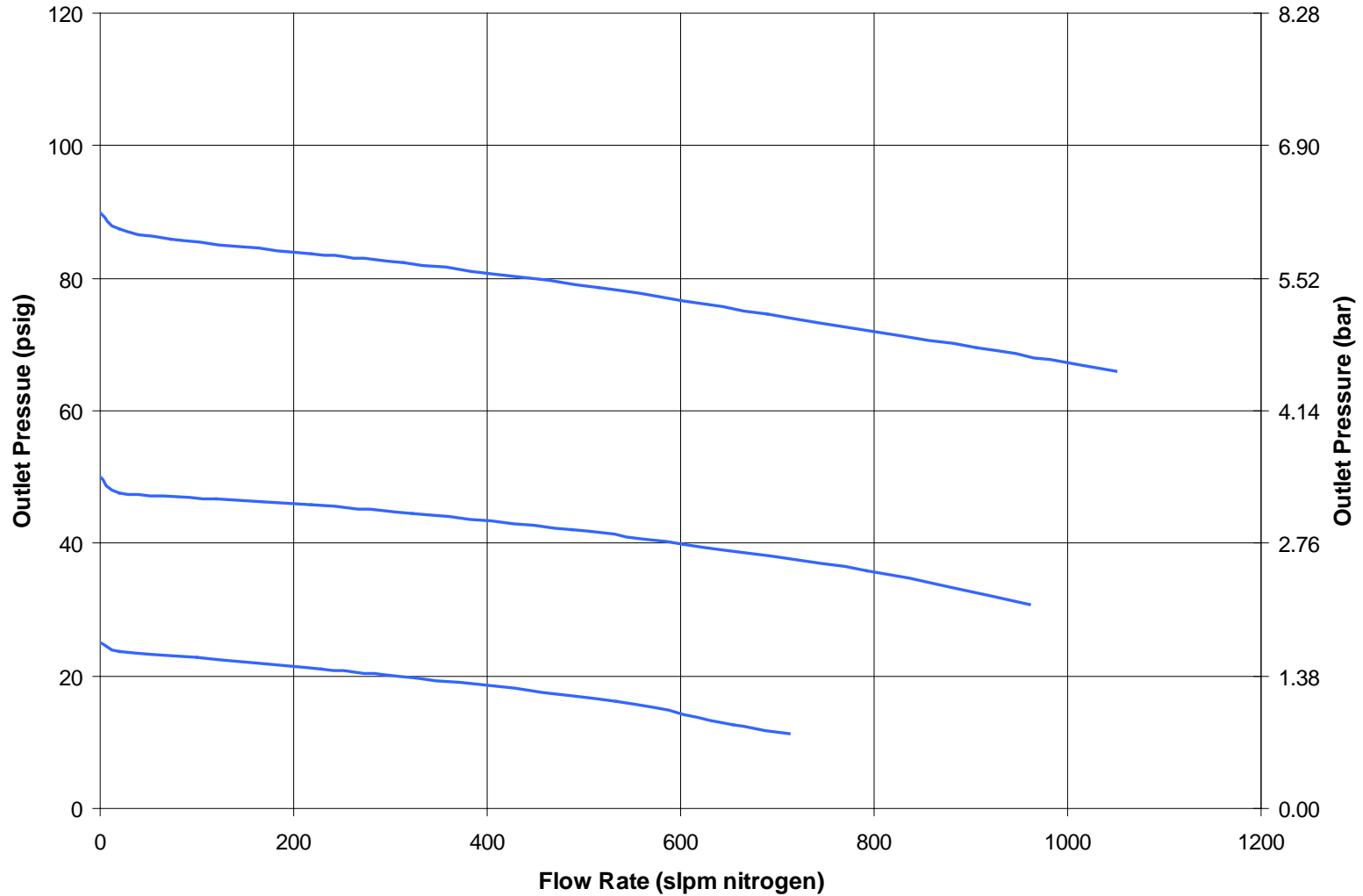
Flow Curve at 50 psig Inlet Pressure



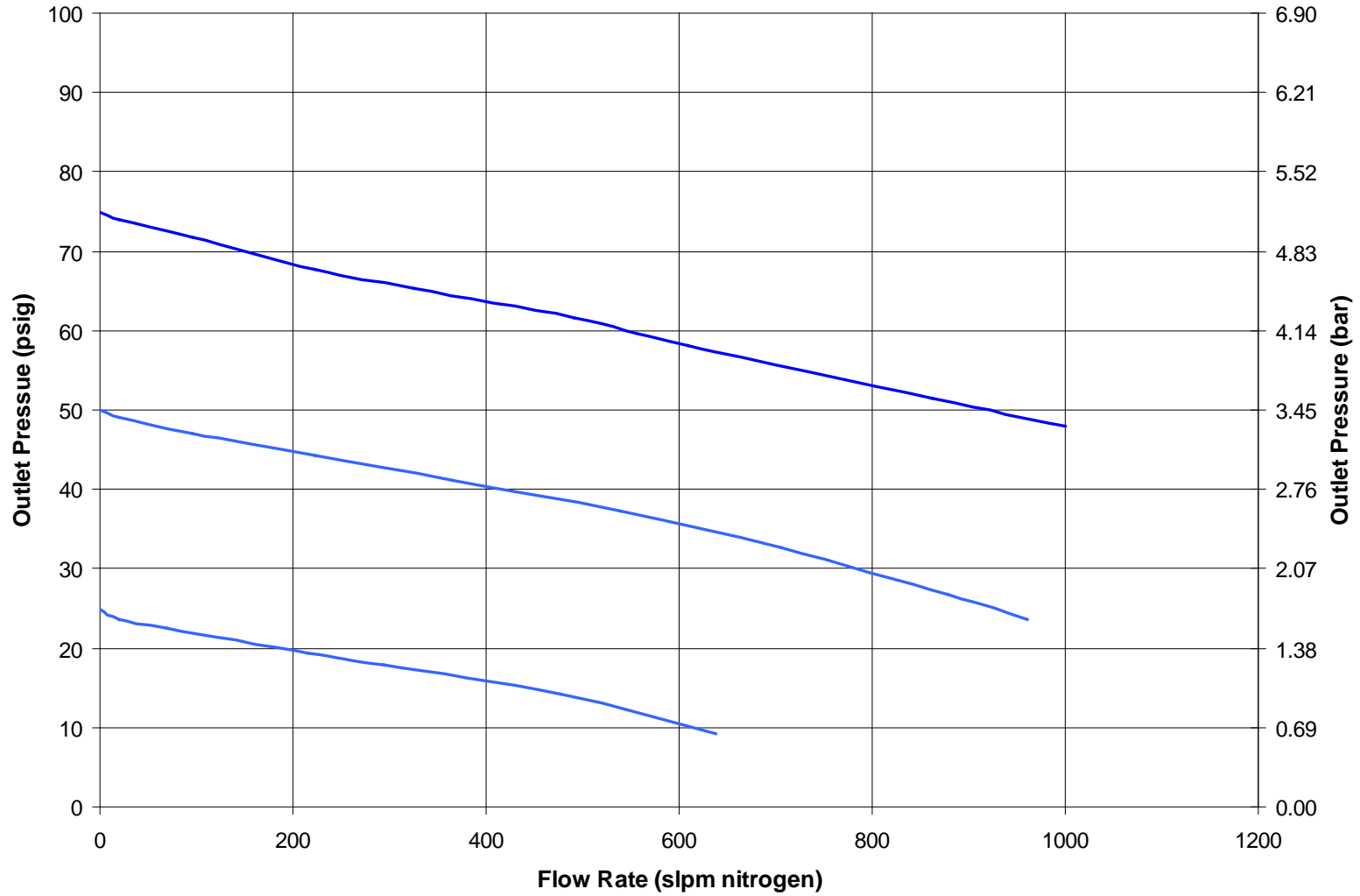
AP1310 Flow Curve Index

Series	Inlet Pressure, psig (bar)	Outlet Pressures, psig (bar)	Connection Size	Flow Curve Number
AP1310 AZ1310 AK1310	150 (10.3 bar)	90, 50, 25 (6.2, 3.4, 1.7 bar)	1/2 inch	AZ1310-01
	100 (6.9 bar)	75, 50, 25 (5.2, 3.4, 1.7 bar)	1/2 inch	AZ1310-02
	75 (5.2 bar)	50, 25 (3.4, 1.7 bar)	1/2 inch	AZ1310-03
	50 (3.4 bar)	25 (1.7 bar)	1/2 inch	AZ1310-04

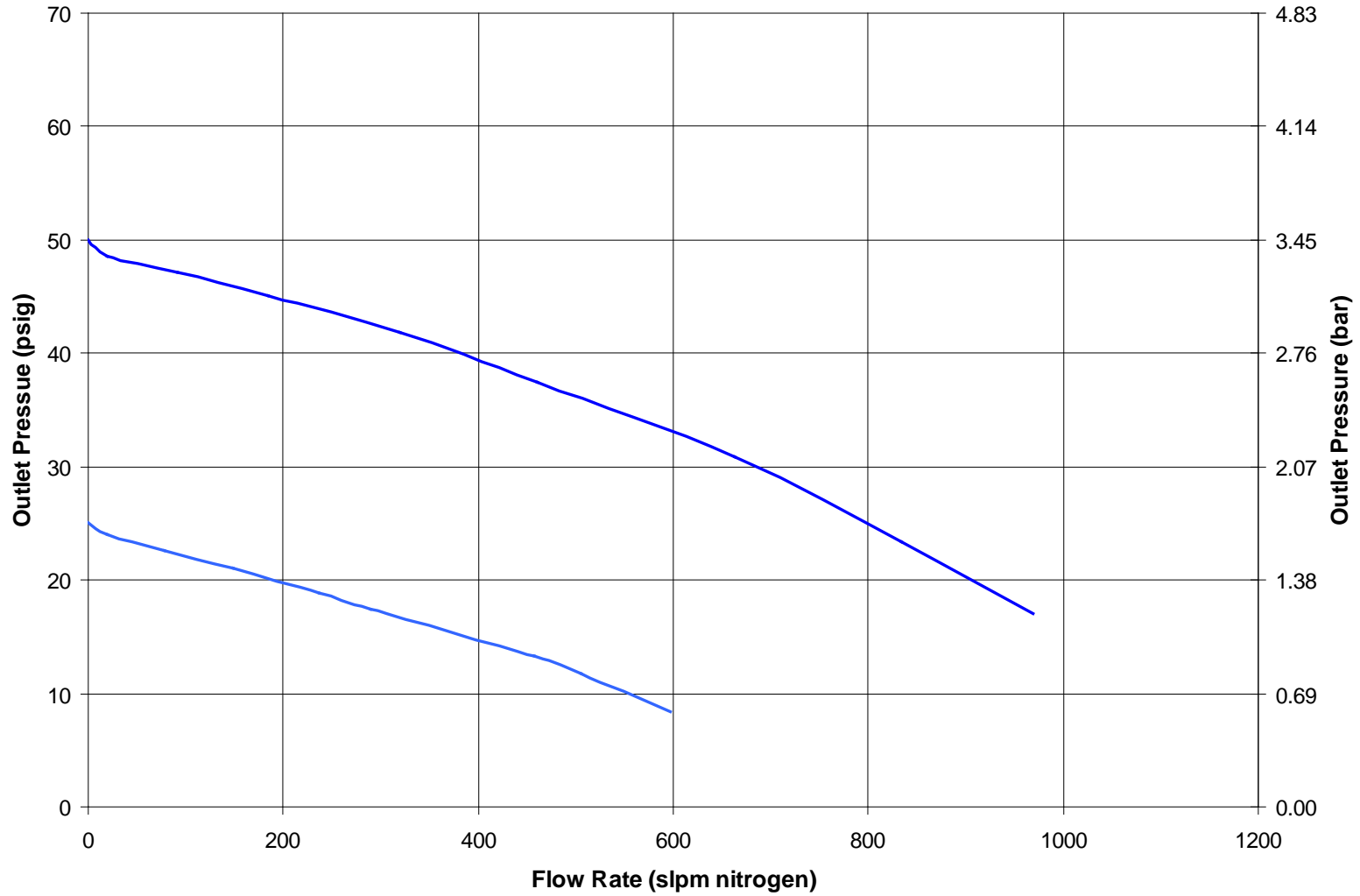
**AZ1310 and AK1310 (1/2 inch connections)
Flow Test at 150 psig (10.3 bar) Inlet Pressure**



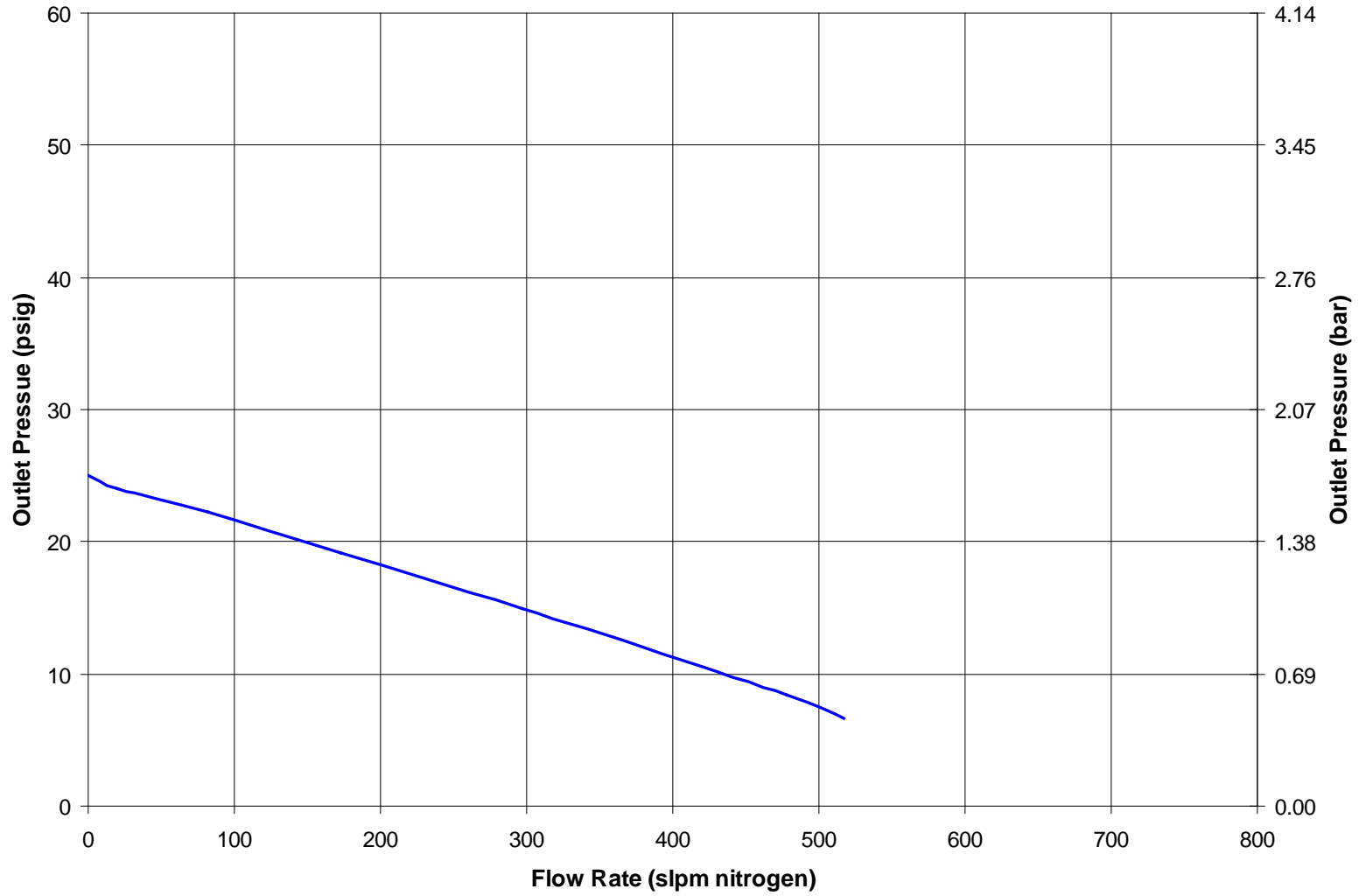
**AZ1310 and AK1310 (1/2 inch connections)
Flow Test at 100 psig (6.9 bar) Inlet Pressure**



**AZ1310 and AK1310 (1/2 inch connections)
Flow Test at 75 psig (5.2 bar) Inlet Pressure**



**AZ1310 and AK1310 (1/2 inch connections)
Flow Test at 50 psig (3.4 bar) Inlet Pressure**

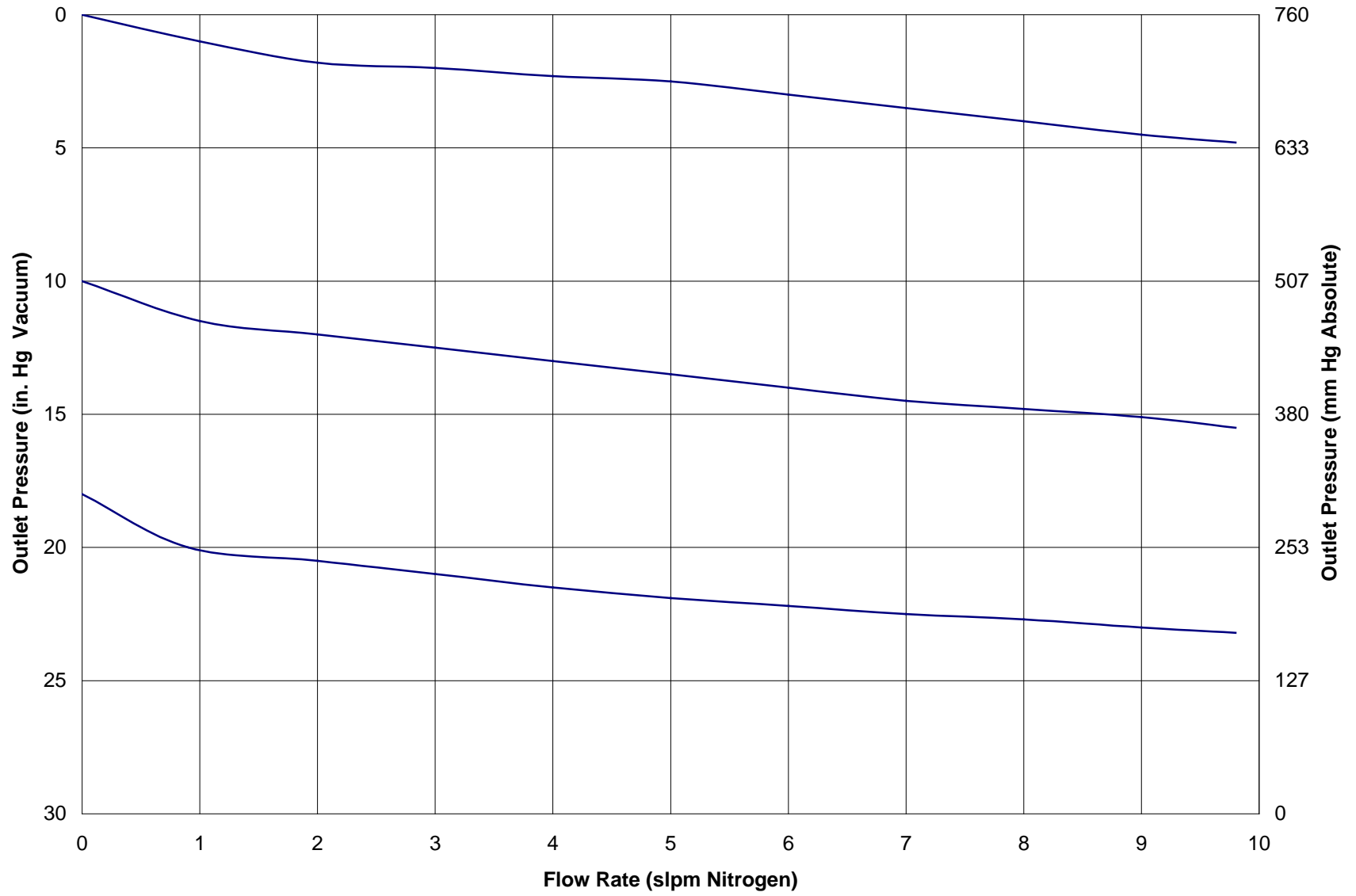


AP1402TA Flow Curve Index

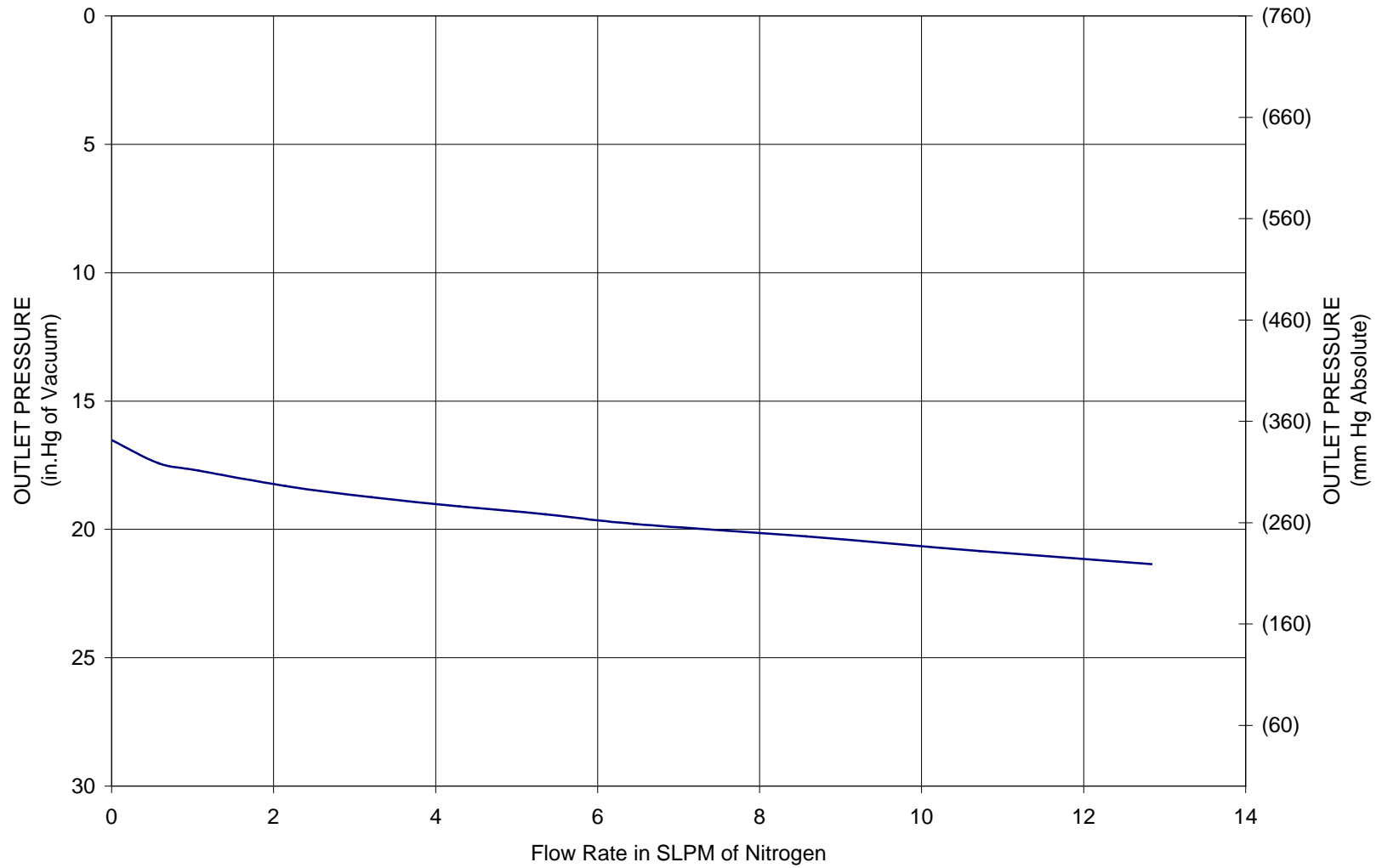
Series	Inlet Pressure psig (bar)	Outlet Pressures	Connection Size	Flow Curve Number
AP1402TA AK1402TA	0	0, 10, 18 in Hg (vac)	1/4 inch	AP1402TA
	2 (0.14 bar)	13.5 in Hg (vac)	1/4 inch	AP1402TA_a
	10 (0.7 bar)	0 in Hg (vac)	1/4 inch	AP1402TA_e
	30 (2 bar)	10 psig	1/4 inch	AP1402TA_c

AP 1402 TSA 2PW FV4 FV4

Inlet Pressure = 0 psig (760 mm Hg)

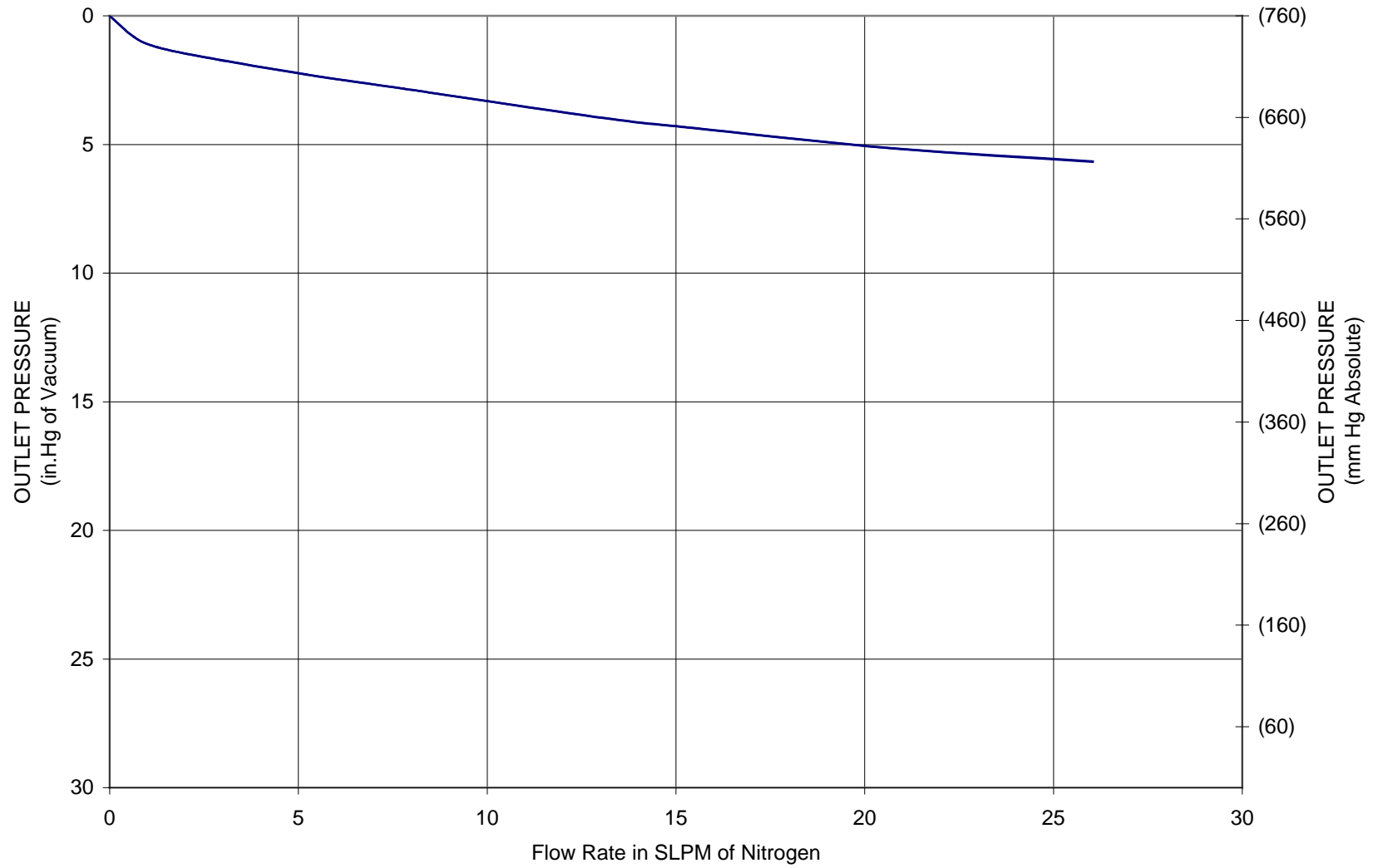


AP 1402 TSA 2PW FV4 FV4 Inlet Pressure - 2psig



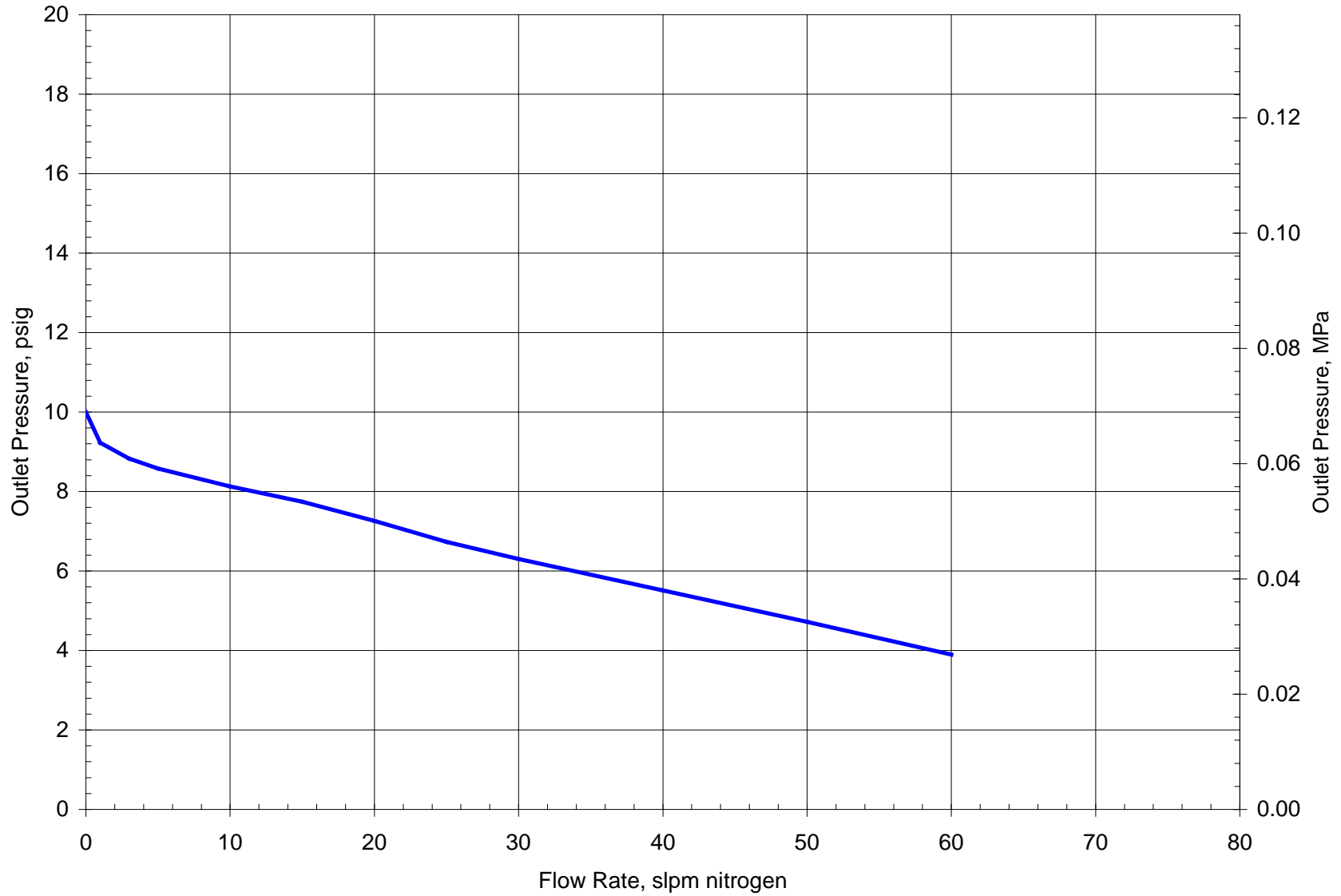
AP 1402 TSA 2PW FV4 FV4

Inlet Pressure - 10 psig



AP 1402 TSA 2PW FV4 FV4

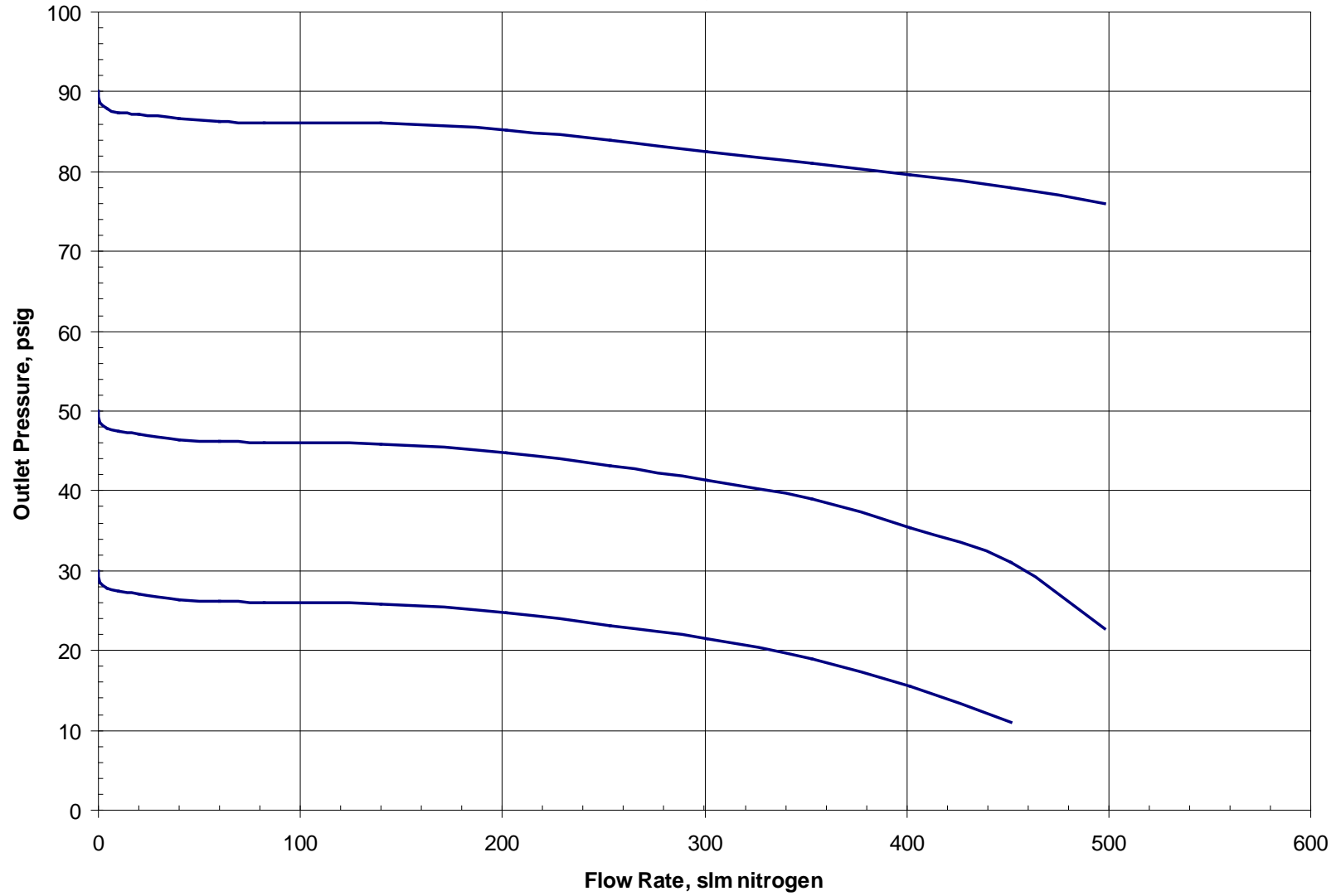
Inlet Pressure - 30 psig (0.2 MPa)



AP1410T Flow Curve Index

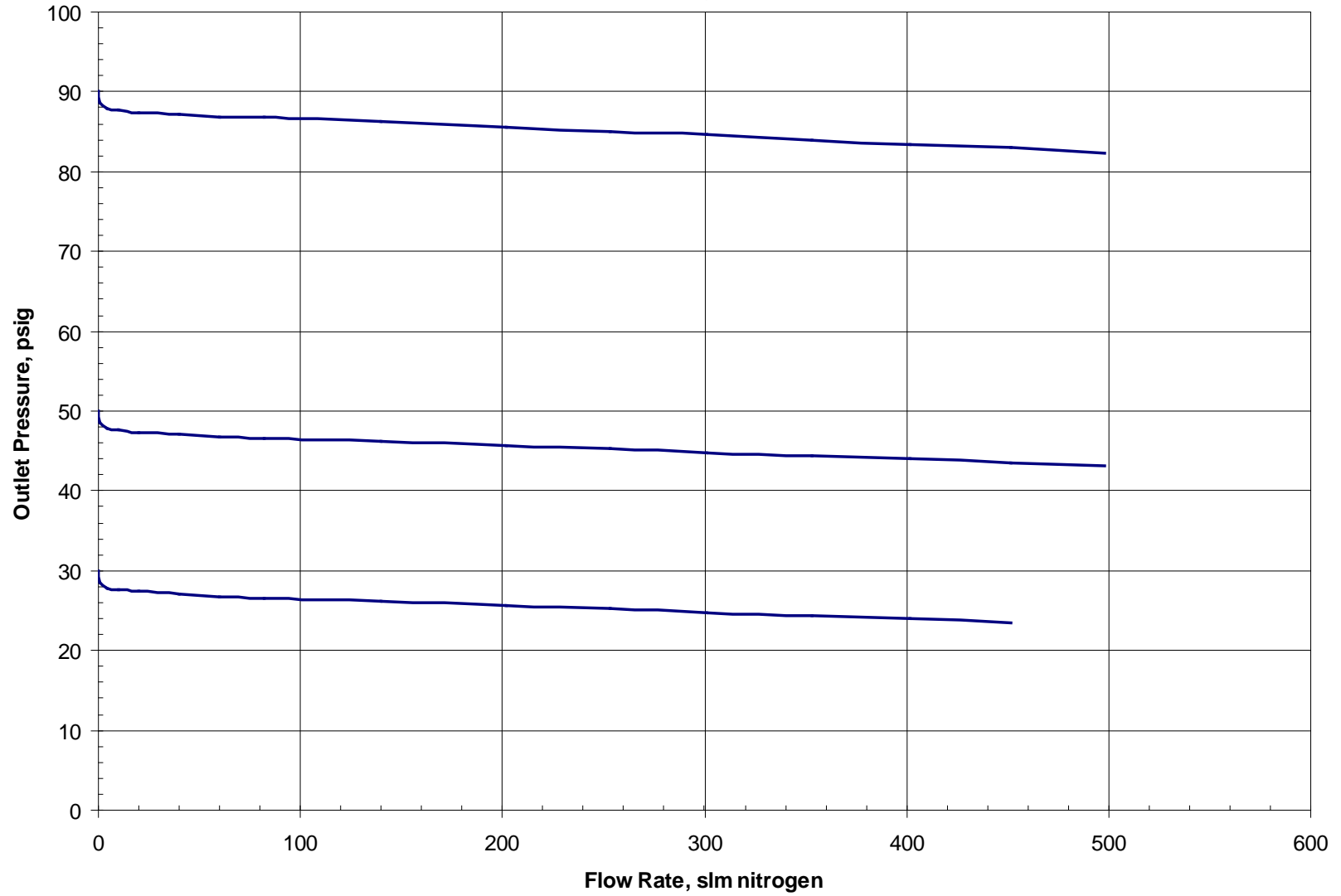
Series	Inlet Pressure psig (bar)	Outlet Pressures psig (bar)	Connection Size	Flow Curve Number
AP1410T AK1410T	600 (41 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1410T-001
			1/2 inch	AP1410T-002
	300 (21 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1410T-003
			1/2 inch	AP1410T-004
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	1/4 inch	AP1410T-005
			1/2 inch	AP1410T-006
	50 (3.4 bar)	30 (2 bar)	1/4 inch	AP1410T-007
			1/2 inch	AP1410T-008

AP1410TS 2PW FV4 FV4
Flow Curve at 600 psig Inlet Pressure

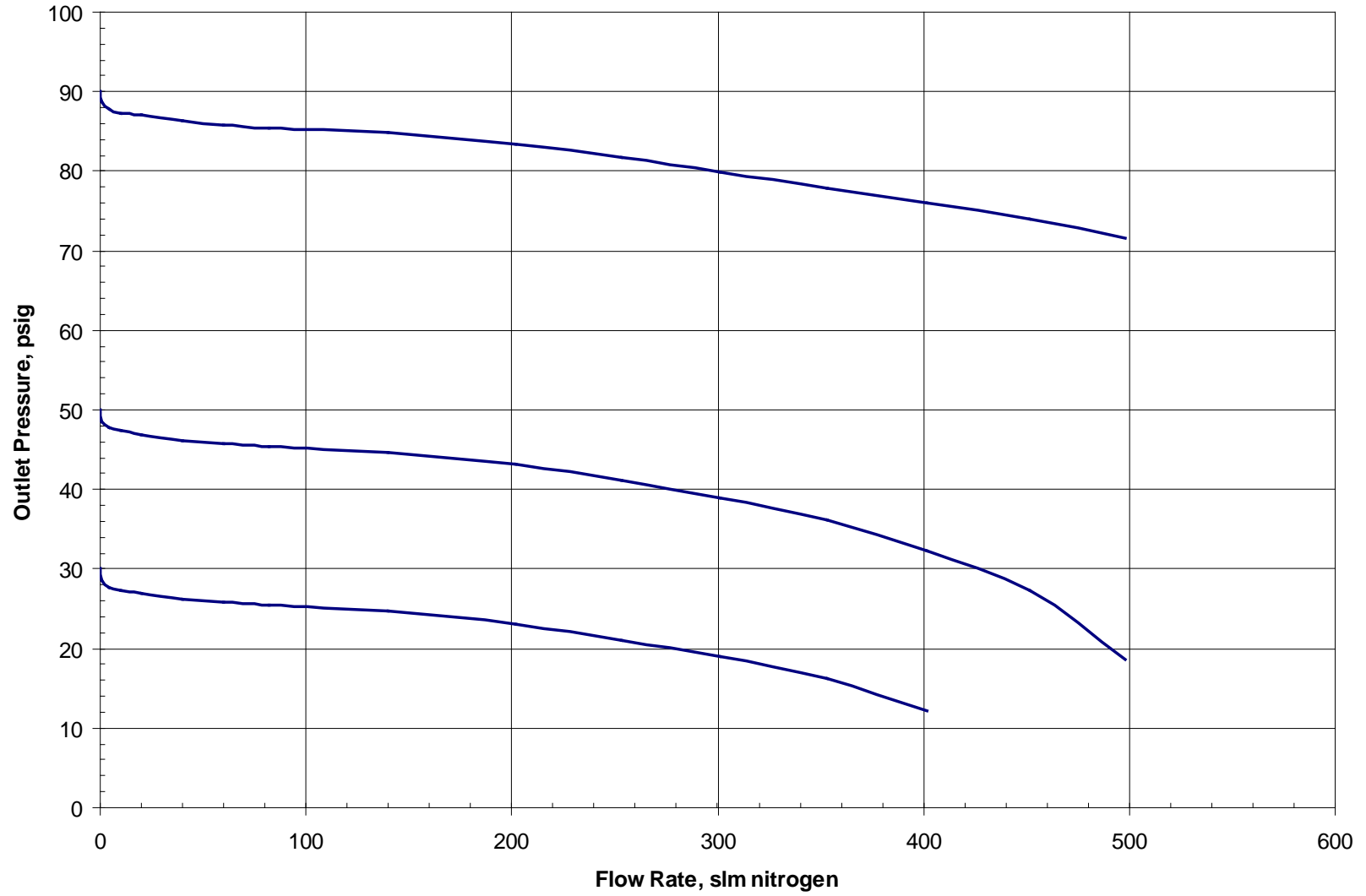


AP1410TS 2PW FV8 FV8

Flow Curve at 600 psig Inlet Pressure

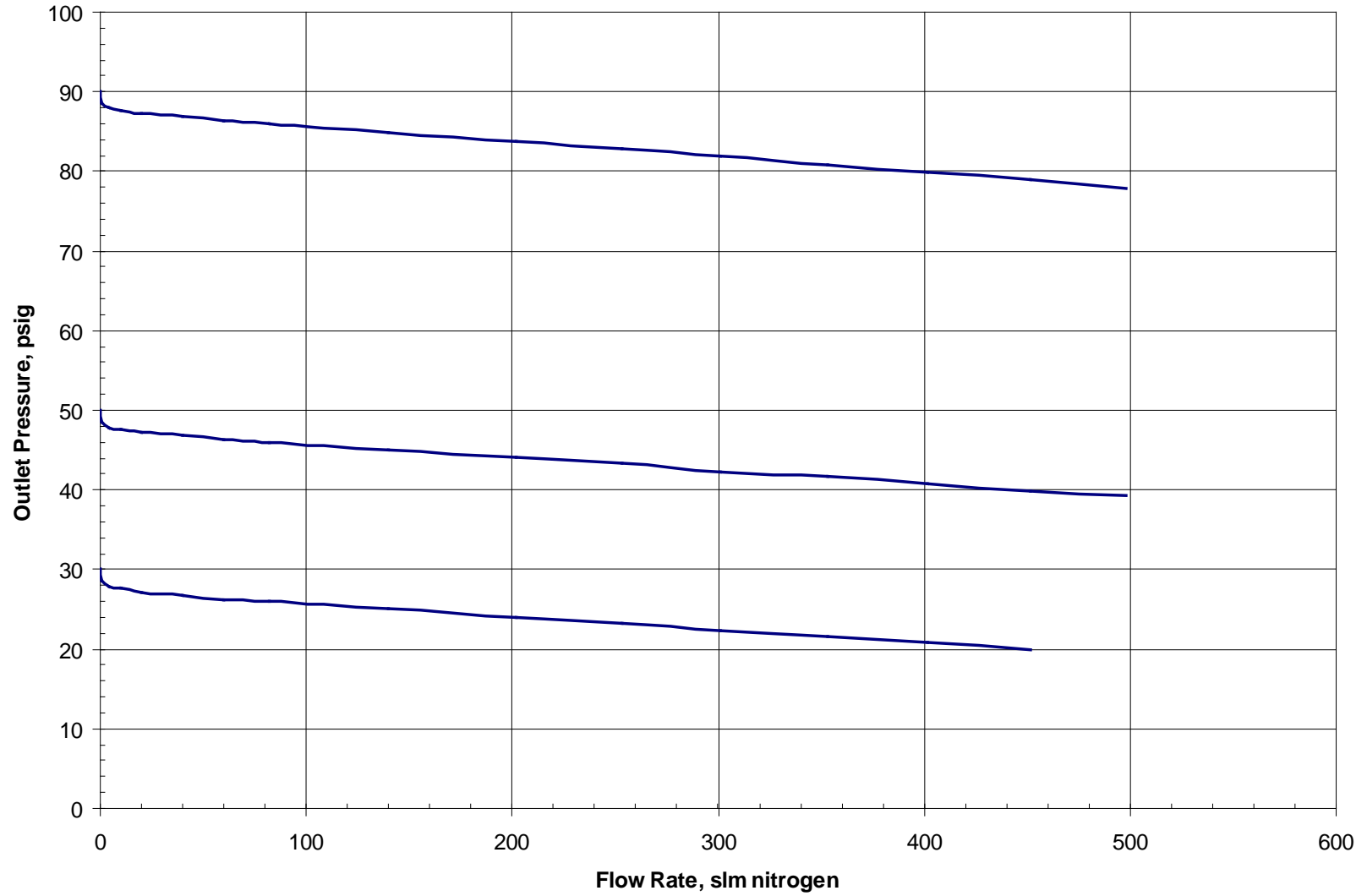


AP1410TS 2PW FV4 FV4
Flow Curve at 300 psig Inlet Pressure

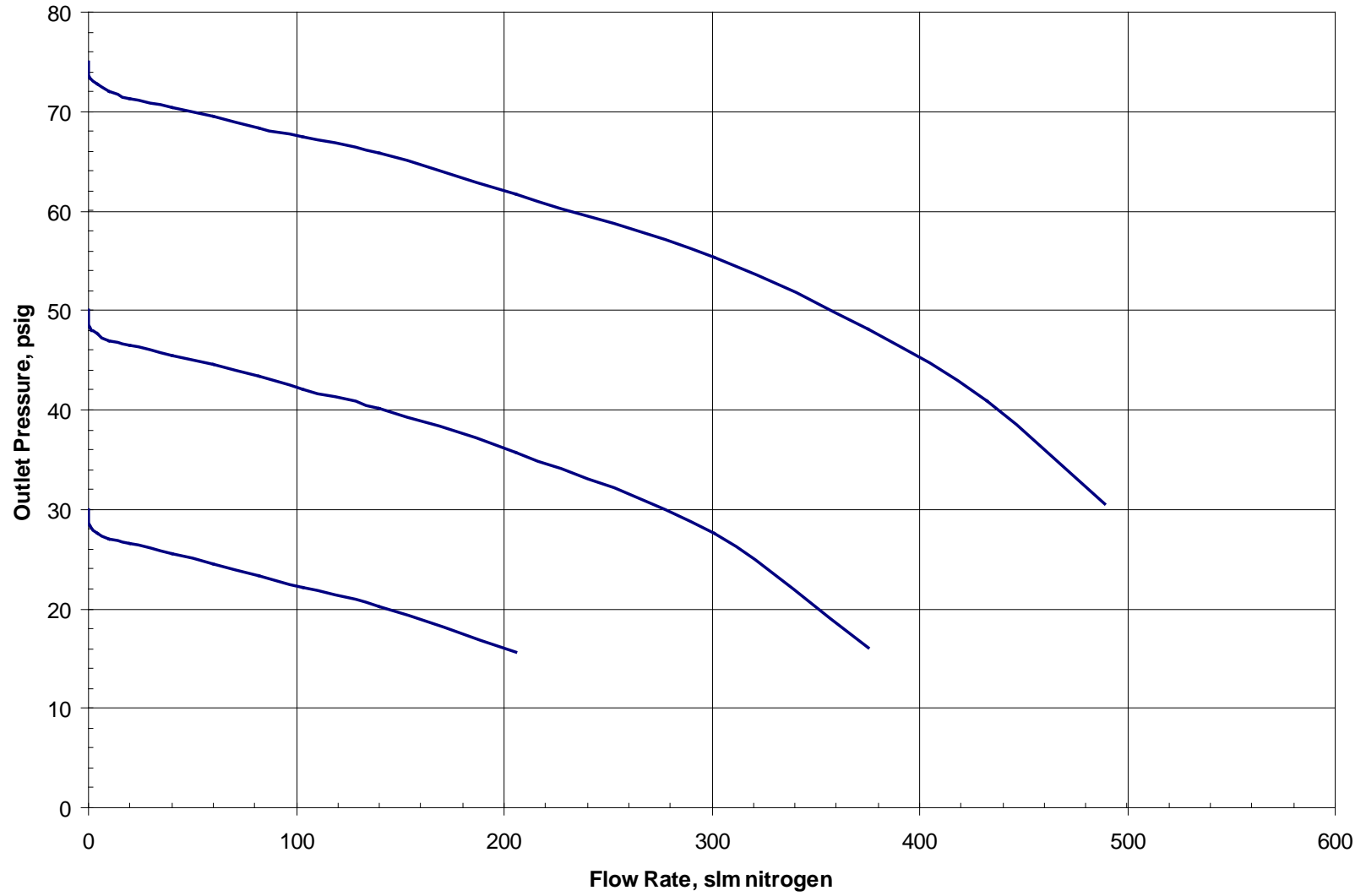


AP1410TS 2PW FV8 FV8

Flow Curve at 300 psig Inlet Pressure

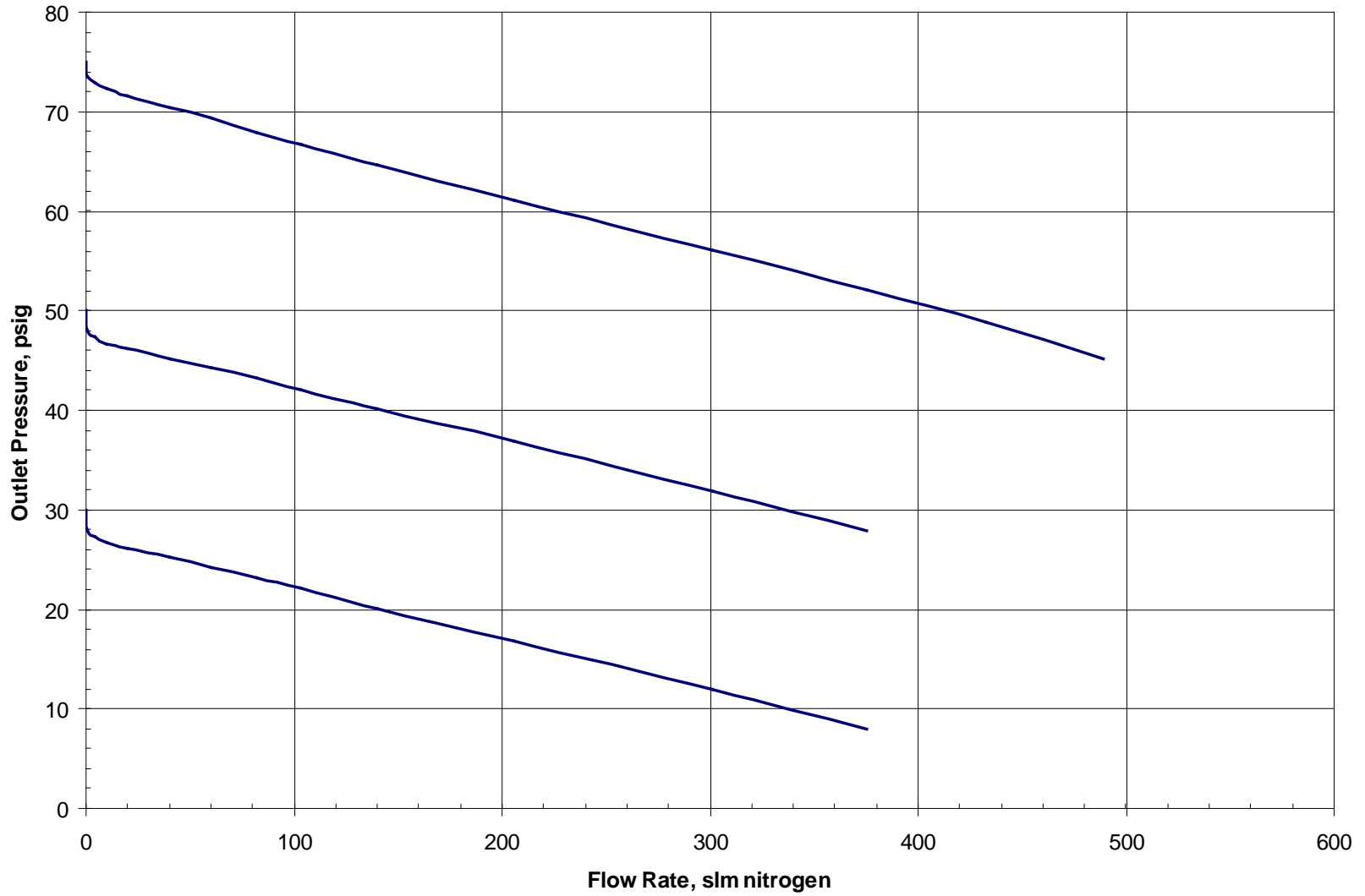


AP1410TS 2PW FV4 FV4
Flow Curve at 100 psig Inlet Pressure



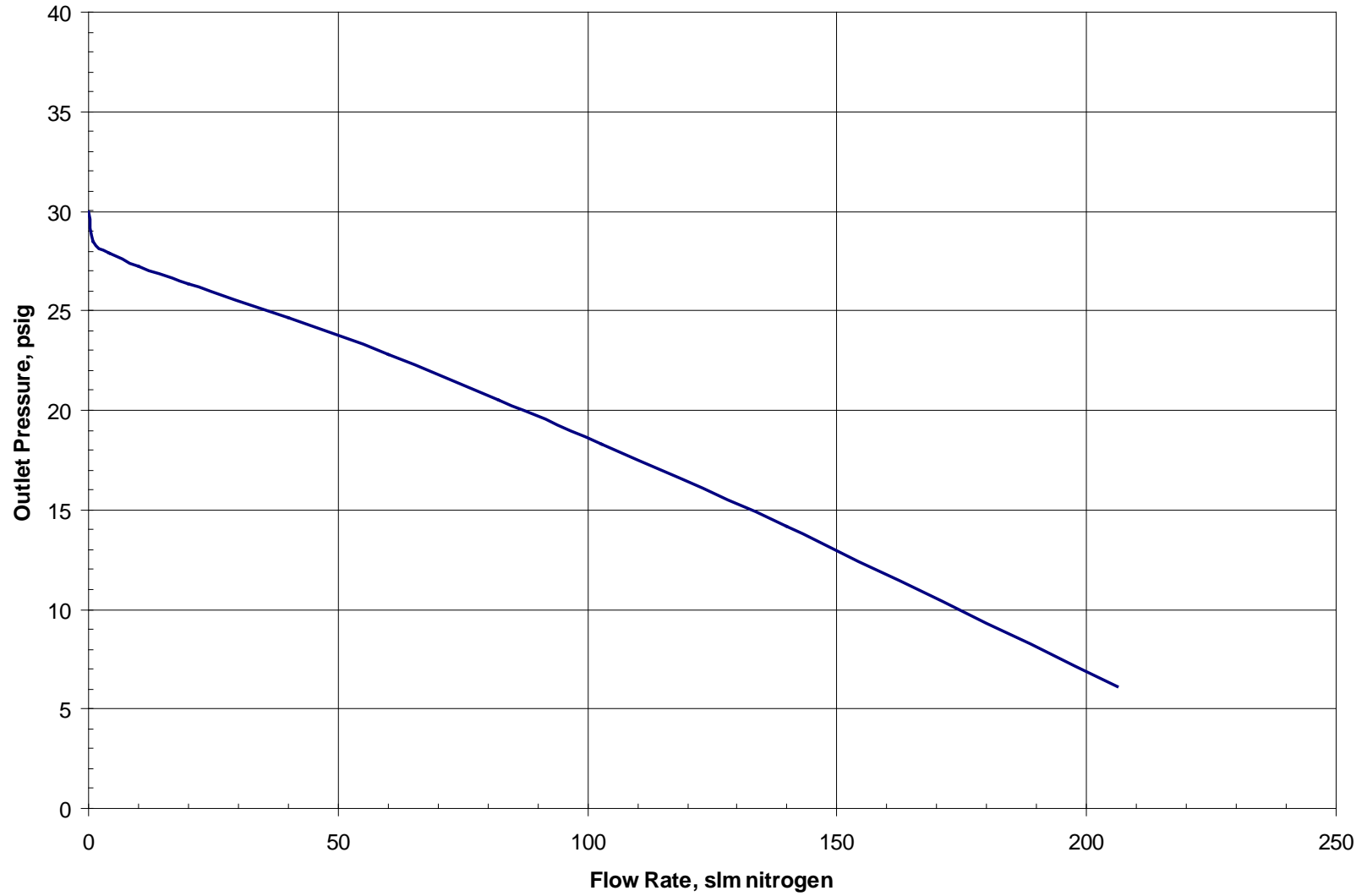
AP1410TS 2PW FV8 FV8

Flow Curve at 100 psig Inlet Pressure



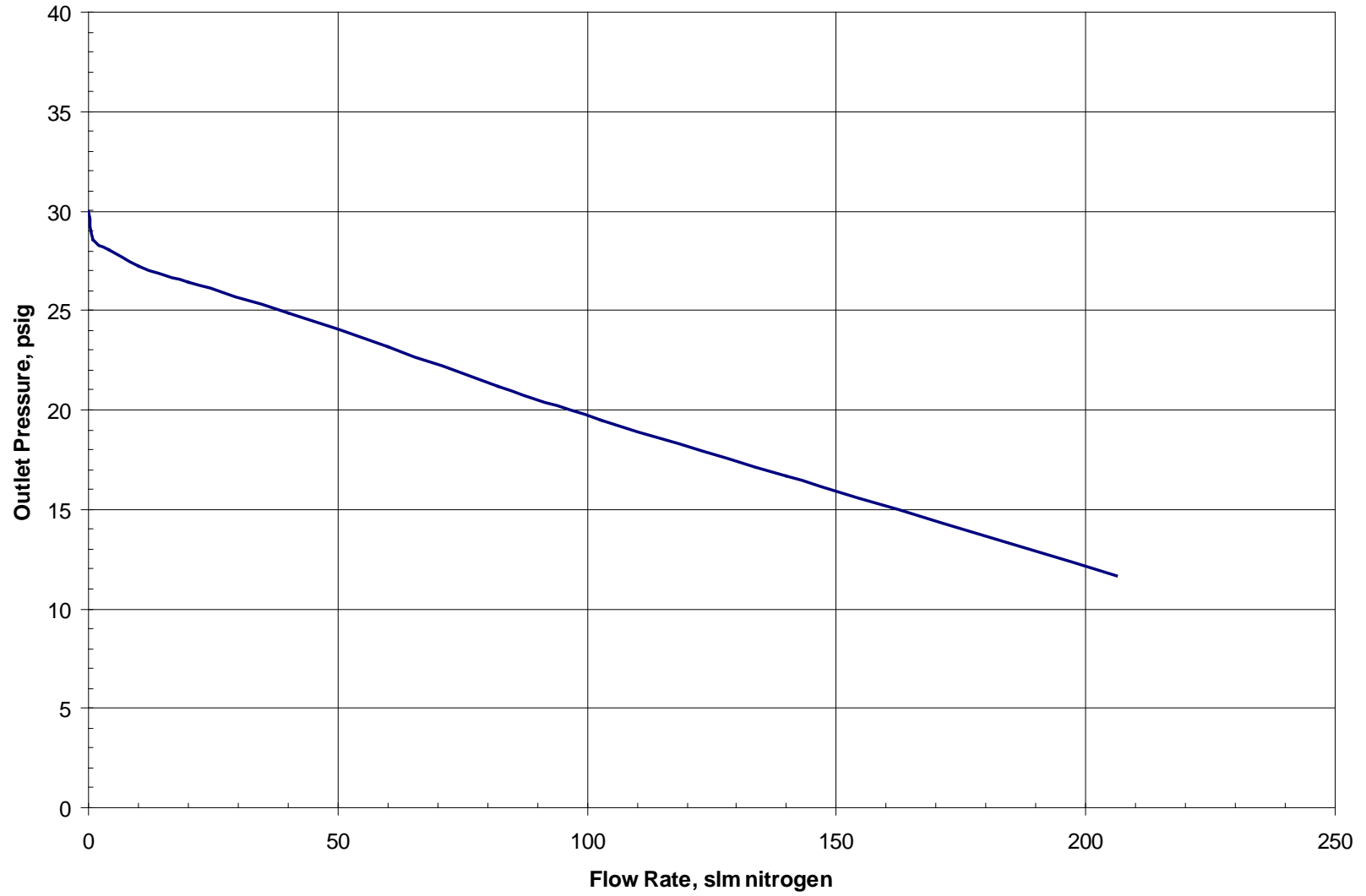
AP1410TS 2PW FV4 FV4

Flow Curve at 50 psig Inlet Pressure



AP1410TS 2PW FV8 FV8

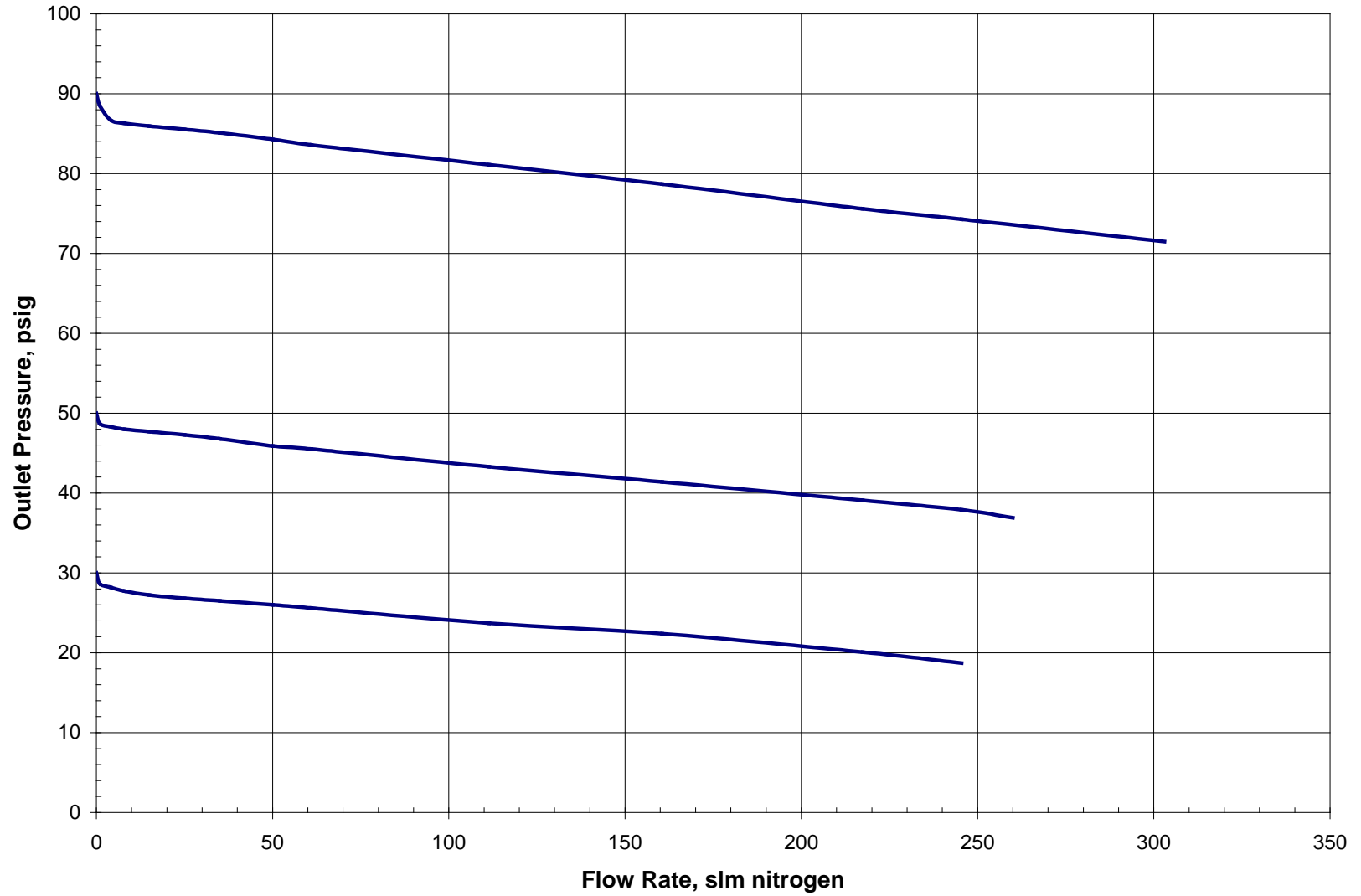
Flow Curve at 50 psig Inlet Pressure



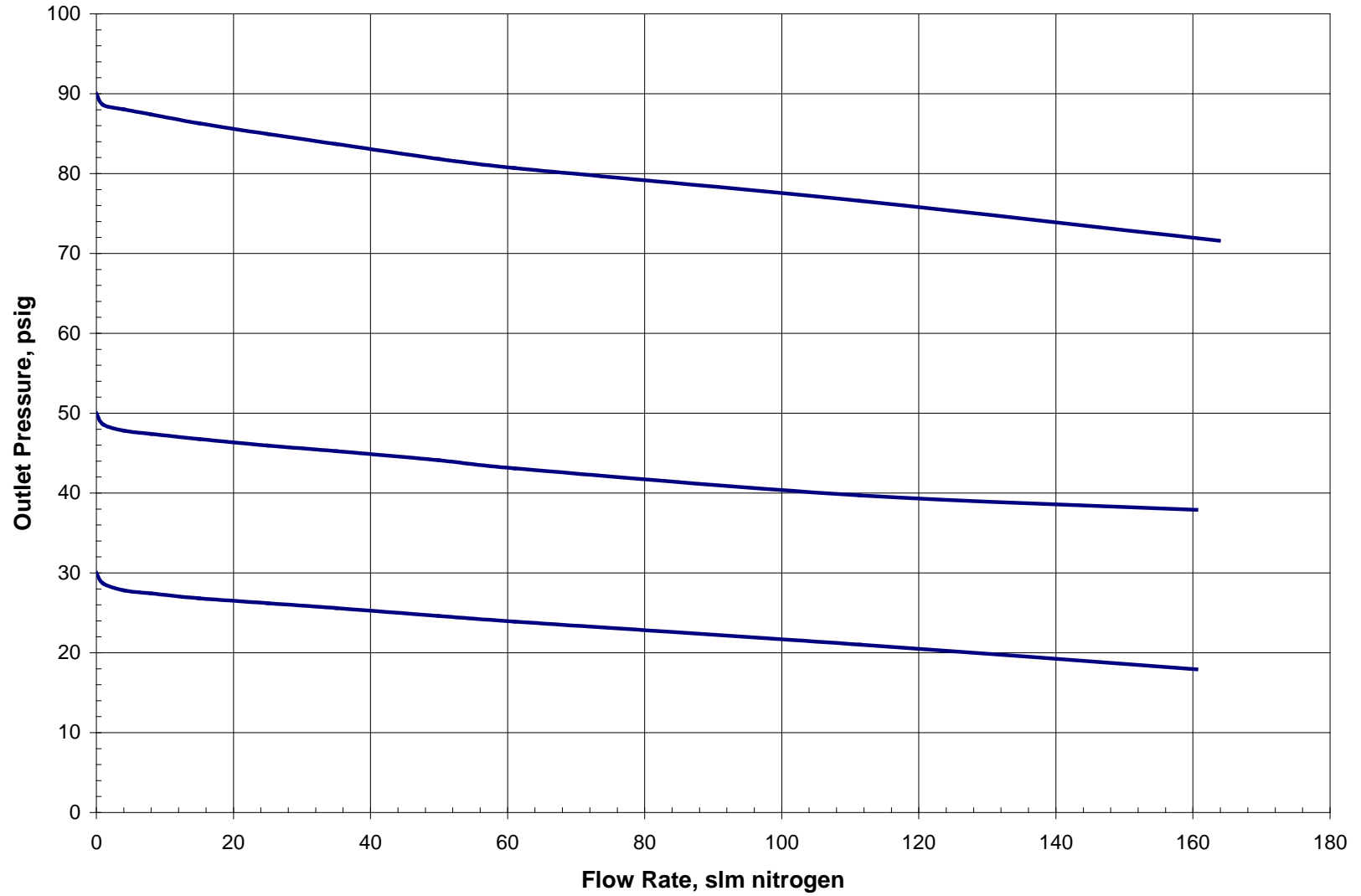
AP1510 Flow Curve Index

Series	Inlet Pressure (psig)	Outlet Pressures (psig)	Connection Size	Flow Curve Number
AP1510 AZ1510 AK1510	600 (41 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1510-001
	300 (21 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1510-002
	150 (10.3 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1510-003
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	1/4 inch	AP1510-004
	50 (3.4 bar)	30 (2 bar)	1/4 inch	AP1510-005

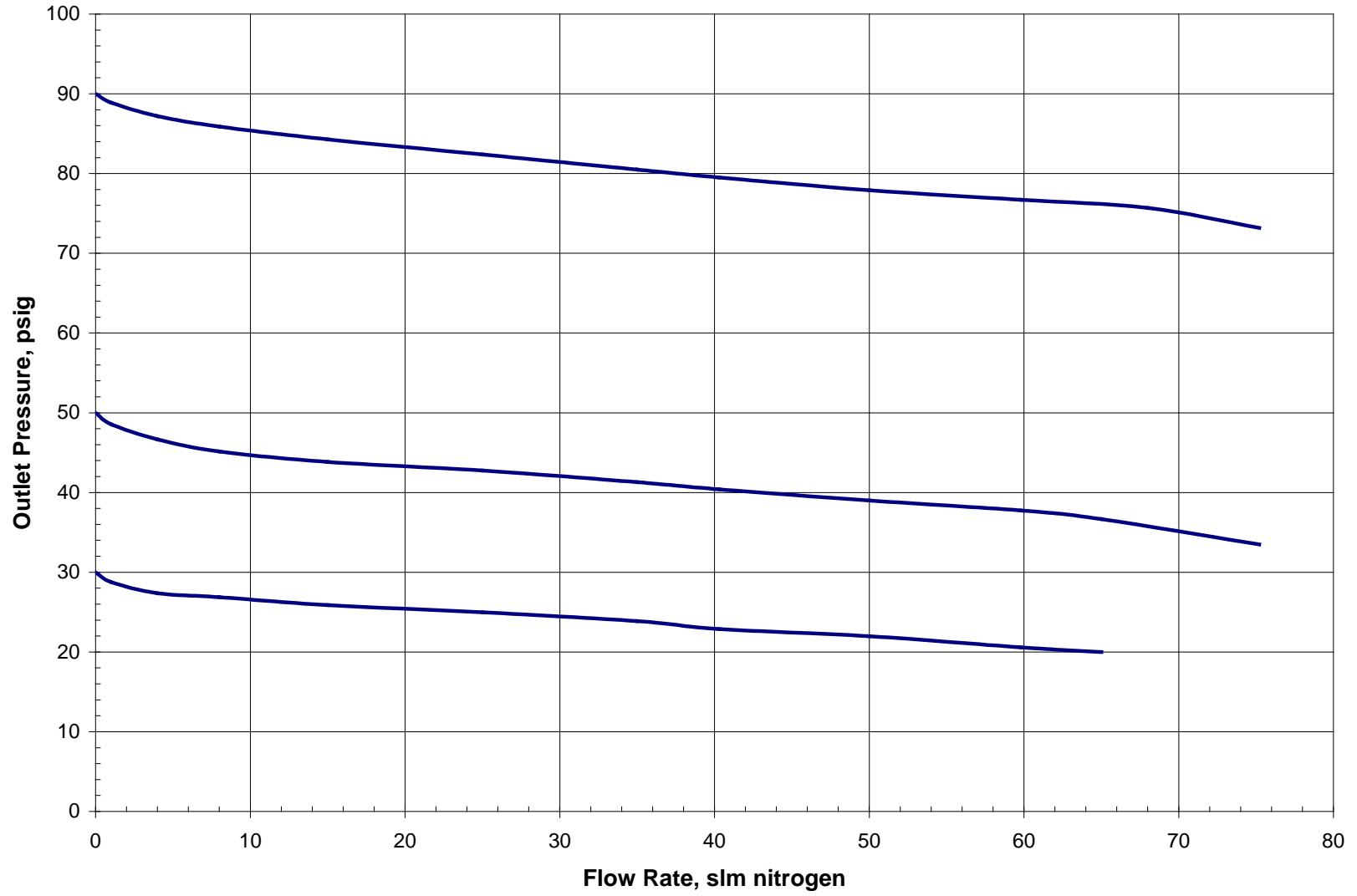
AP1510S 2PW FV4 FV4
Flow Curve at 600 psig Inlet Pressure



AP1510S 2PW FV4 FV4
Flow Curve at 300 psig Inlet Pressure

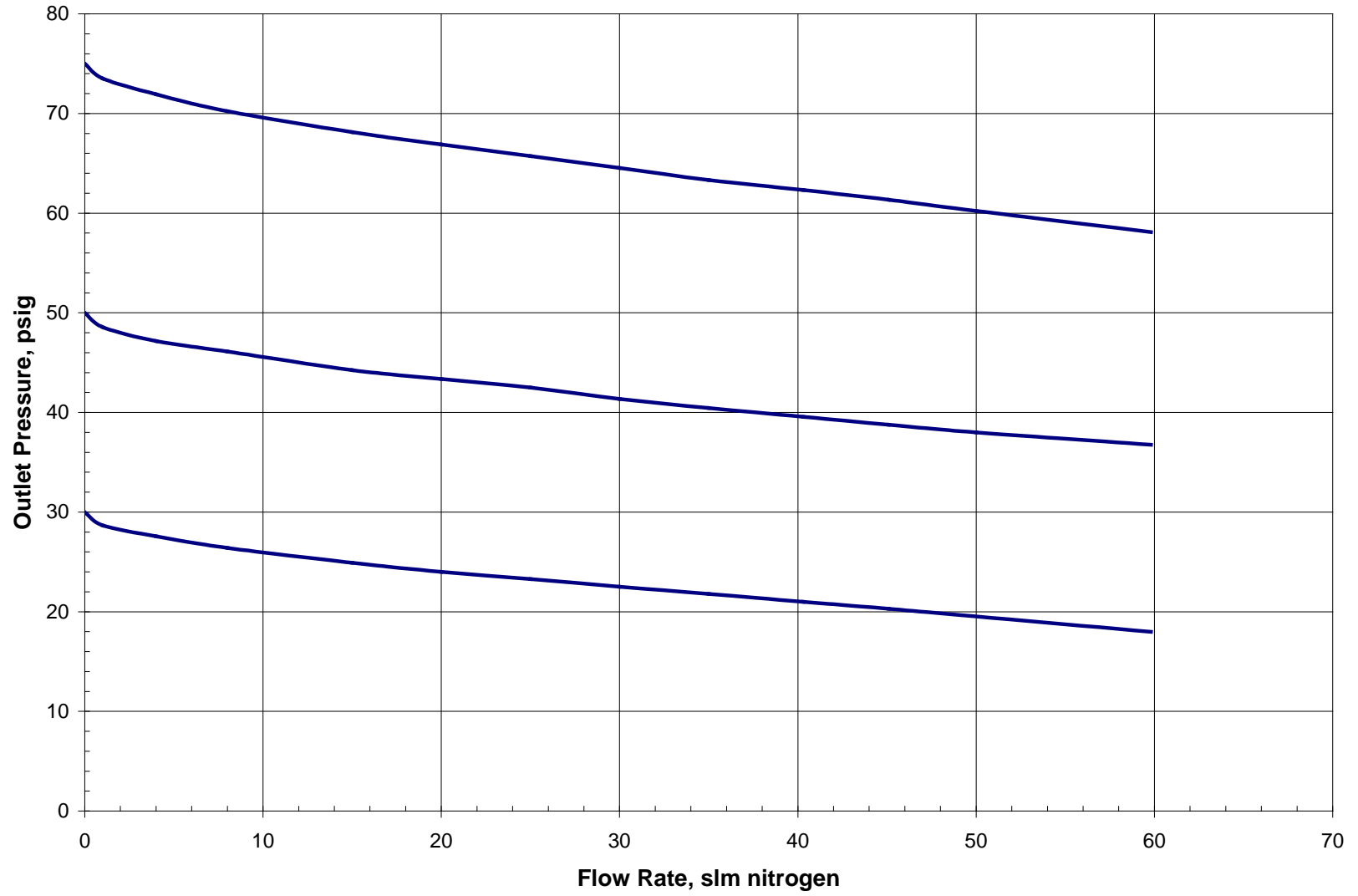


AP1510S 2PW FV4 FV4
Flow Curve at 150 psig Inlet Pressure

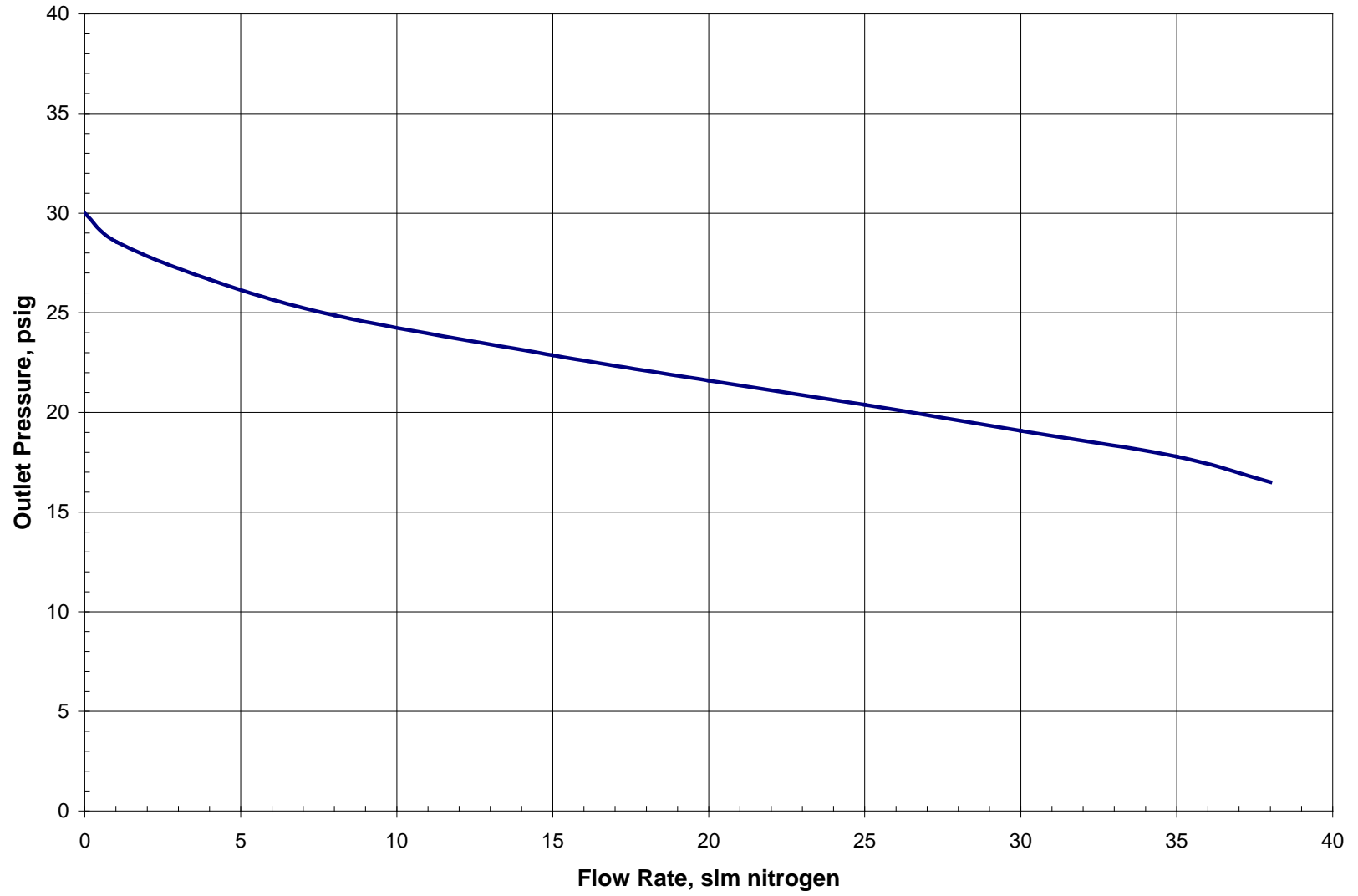


AP1510S 2PW FV4 FV4

Flow Curve at 100 psig Inlet Pressure



AP1510S 2PW FV4 FV4
Flow Curve at 50 psig Inlet Pressure

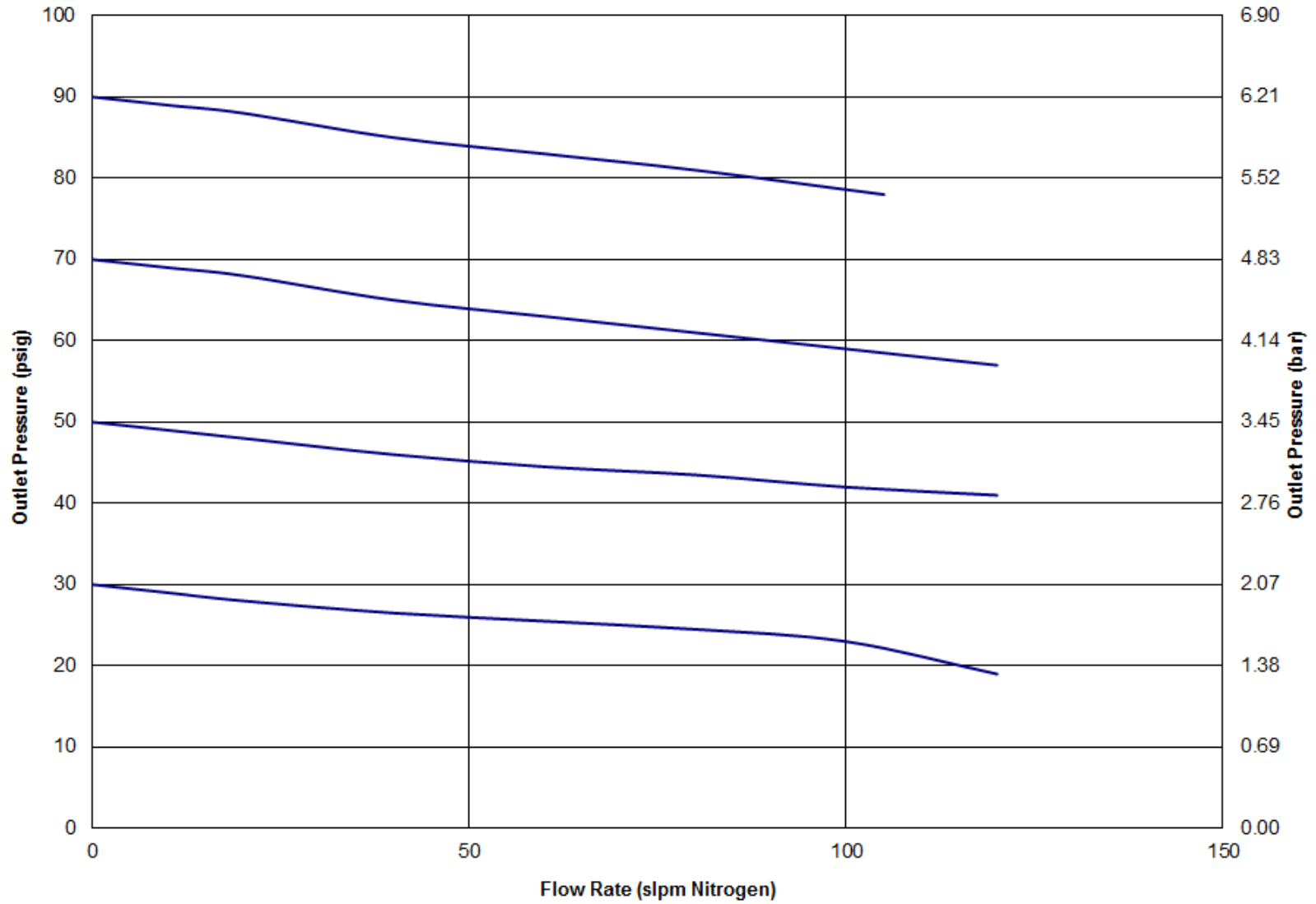


AP1710 Flow Curve Index

Series	Inlet Pressure psig (bar)	Outlet Pressures psig (bar)	Connection Size	Flow Curve Number
AP1710 AZ1710 AK1710	> 200 (14 bar)	90, 70, 50, 30 (6.2, 4.8, 3.4, 2 bar)	1/4 inch	AP1710-001

AP1700

Inlet Pressure 3000-200 psig (207-14 bar)

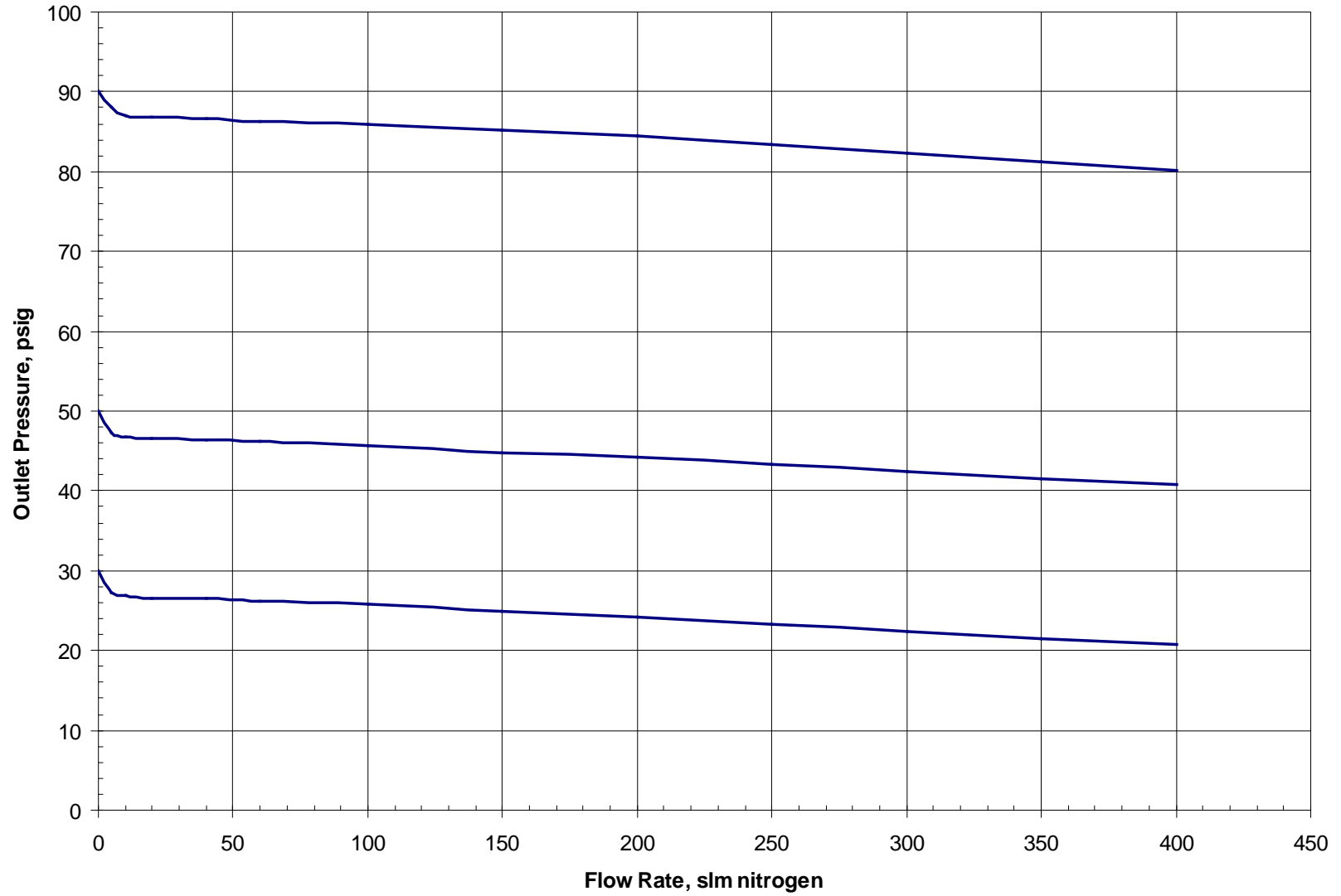


AP1910 HF Flow Curve Index

Series	Inlet Pressure psig (bar)	Outlet Pressures psig (bar)	Connection Size	Flow Curve Number
AP1910 HF	600 (41 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1910HF-001
			1/2 inch	AP1910HF-002
	300 (21 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	1/4 inch	AP1910HF-003
			1/2 inch	AP1910HF-004
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	1/4 inch	AP1910HF-005
			1/2 inch	AP1910HF-006

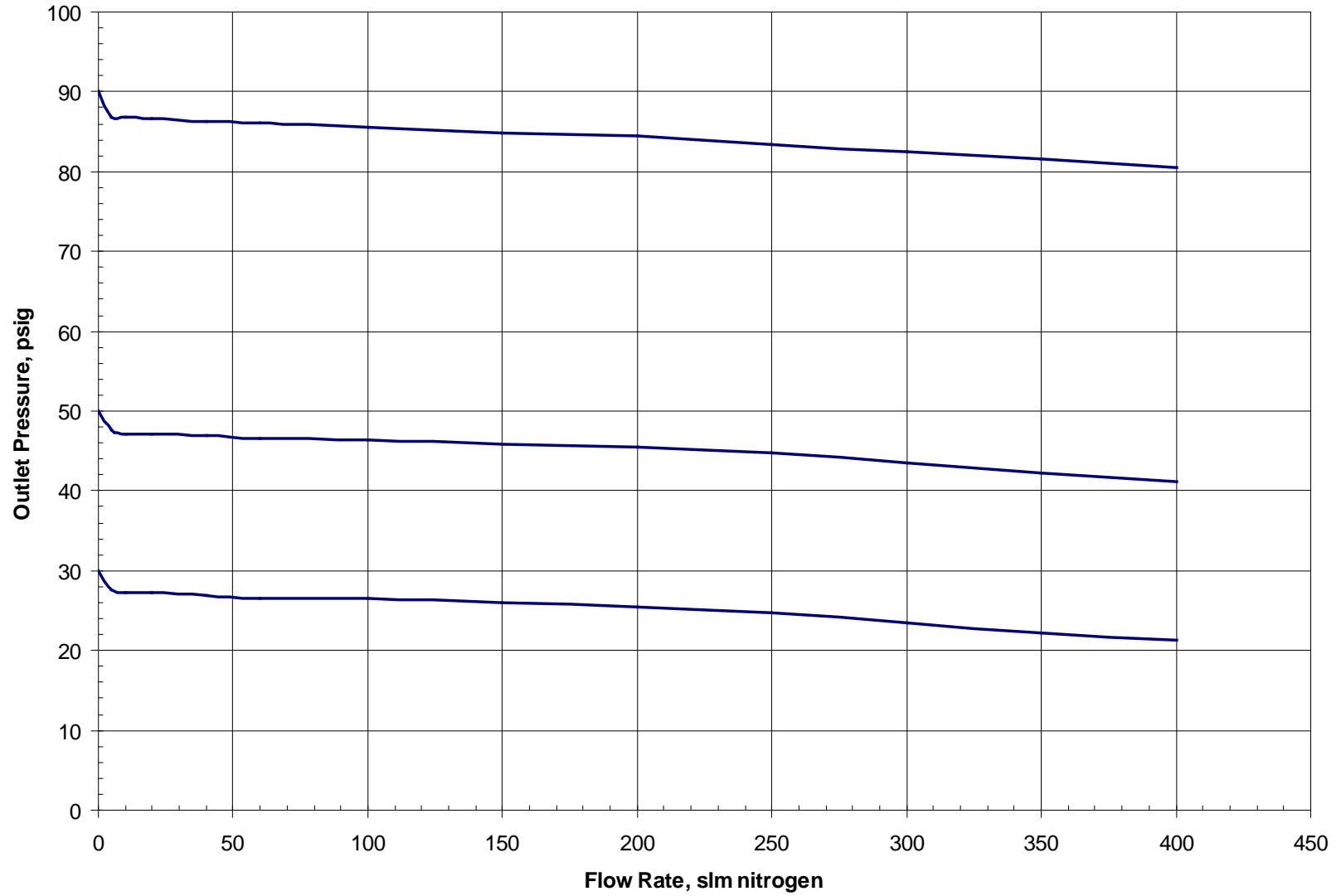
AP1910S 2PW FV4 FV4 HF

Flow Curve at 600 psig Inlet Pressure



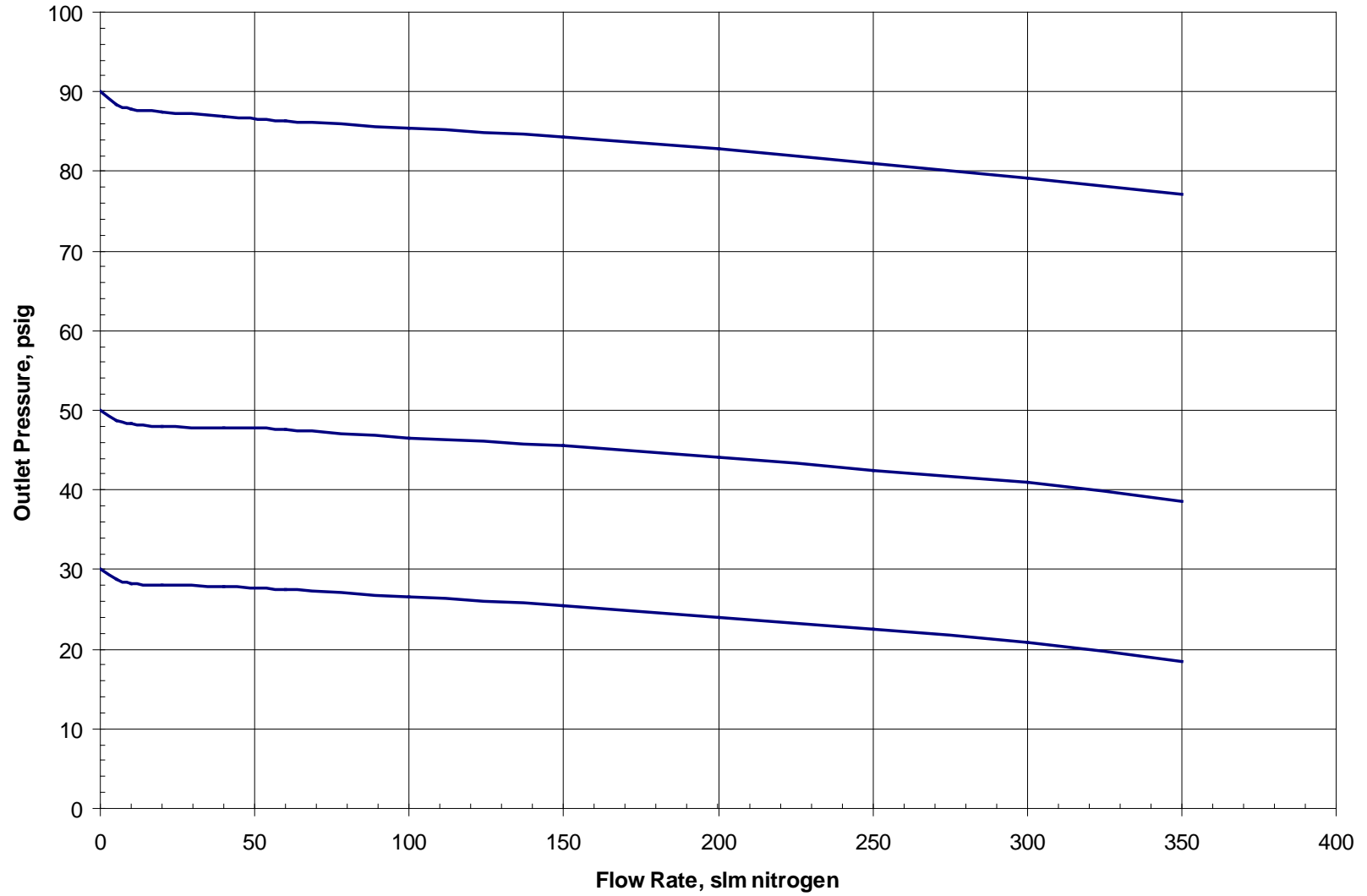
AP1910S 2PW FV8 FV8 HF

Flow Curve at 600 psig Inlet Pressure



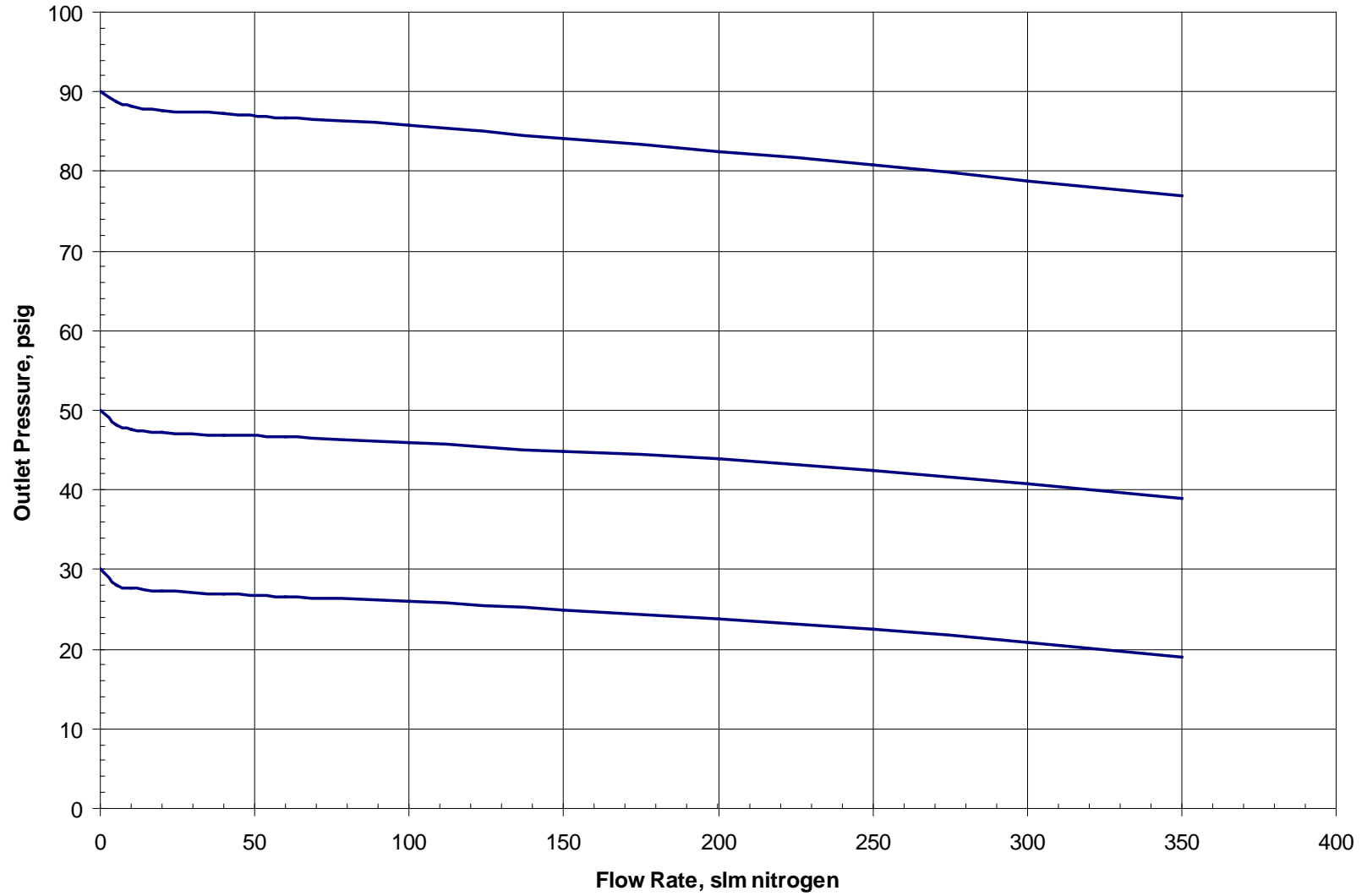
AP1910S 2PW FV4 FV4 HF

Flow Curve at 300 psig Inlet Pressure



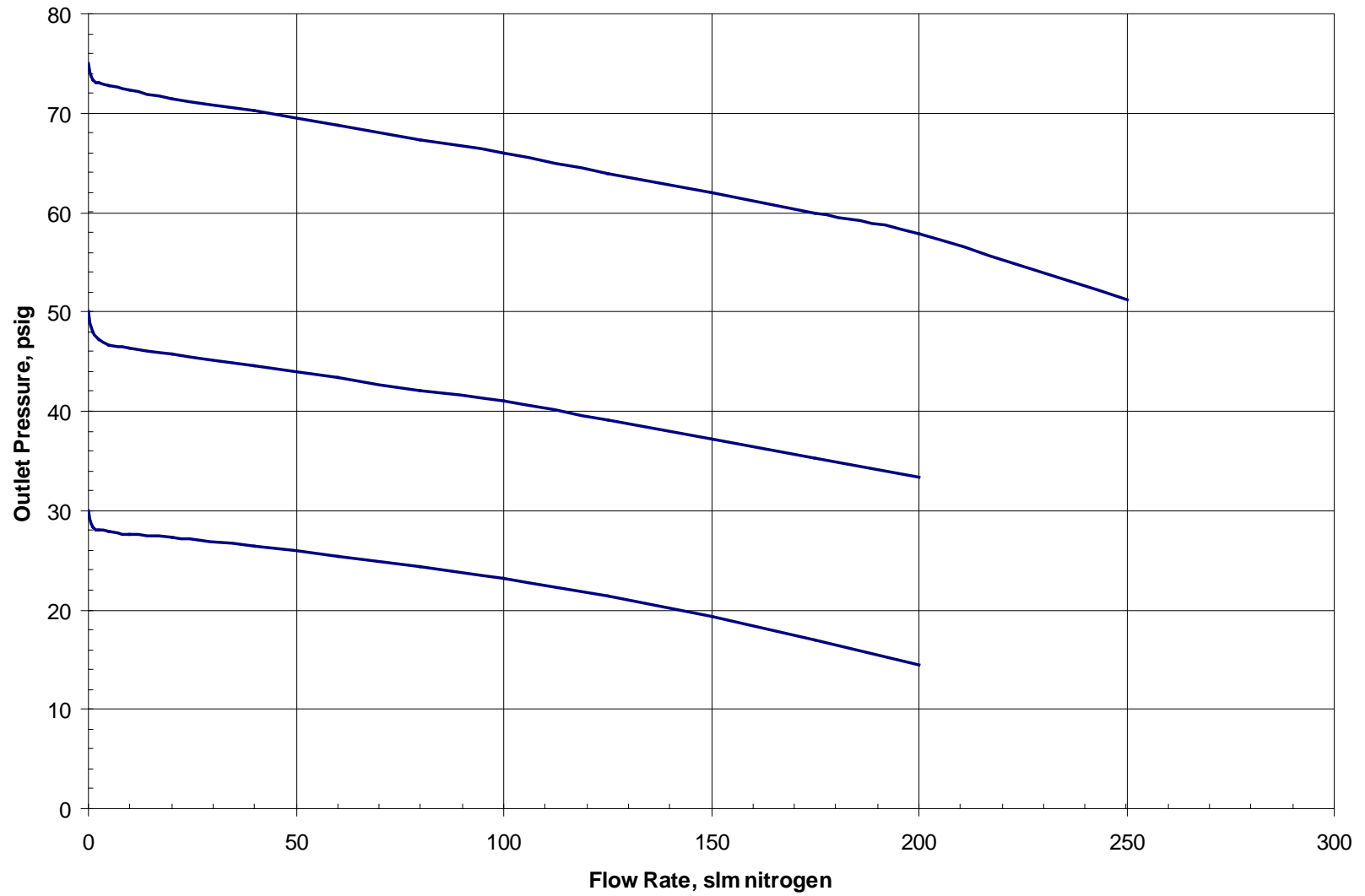
AP1910S 2PW FV8 FV8 HF

Flow Curve at 300 psig Inlet Pressure



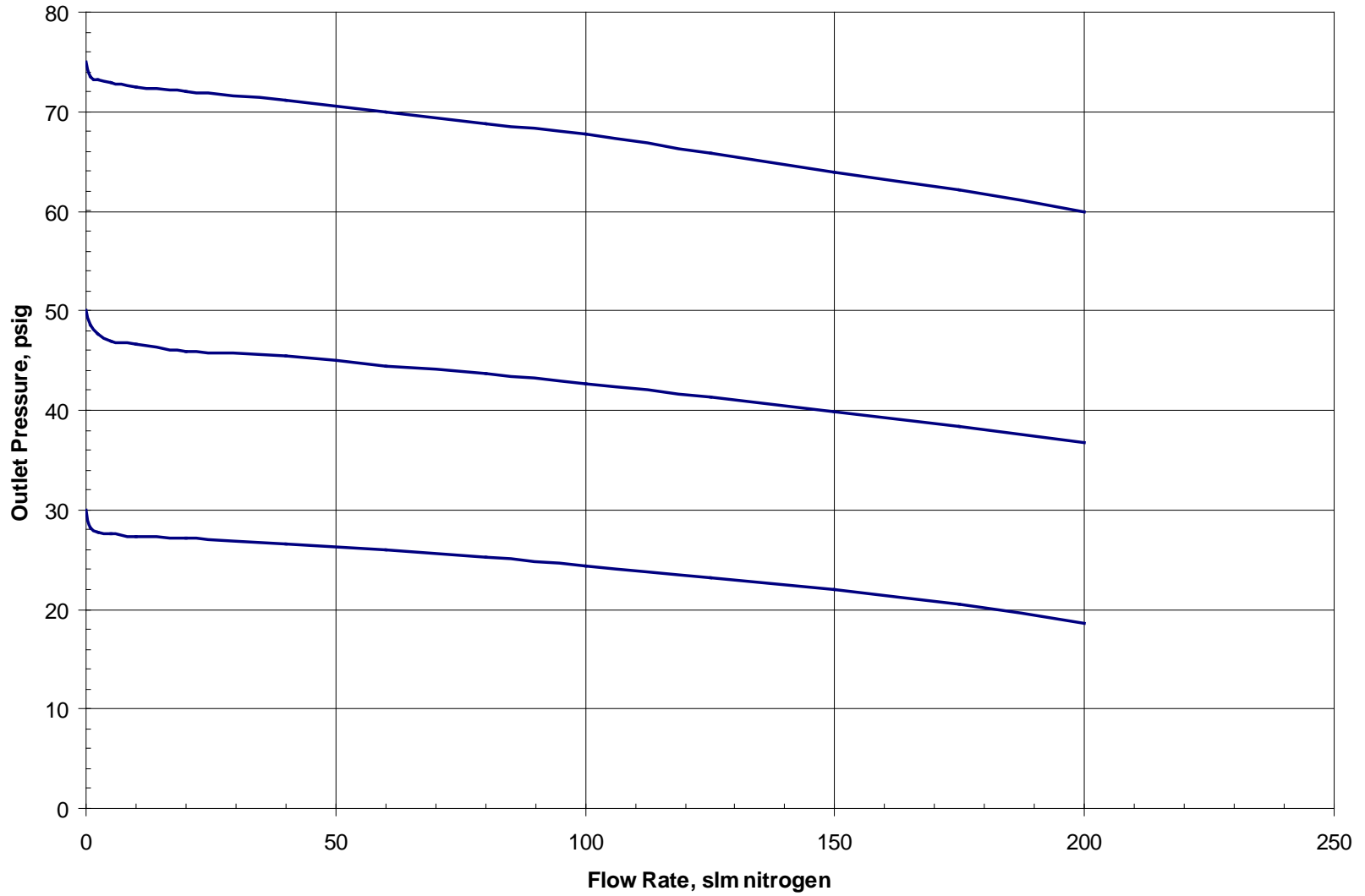
AP1910S 2PW FV4 FV4 HF

Flow Curve at 100 psig Inlet Pressure



AP1910S 2PW FV8 FV8 HF

Flow Curve at 100 psig Inlet Pressure

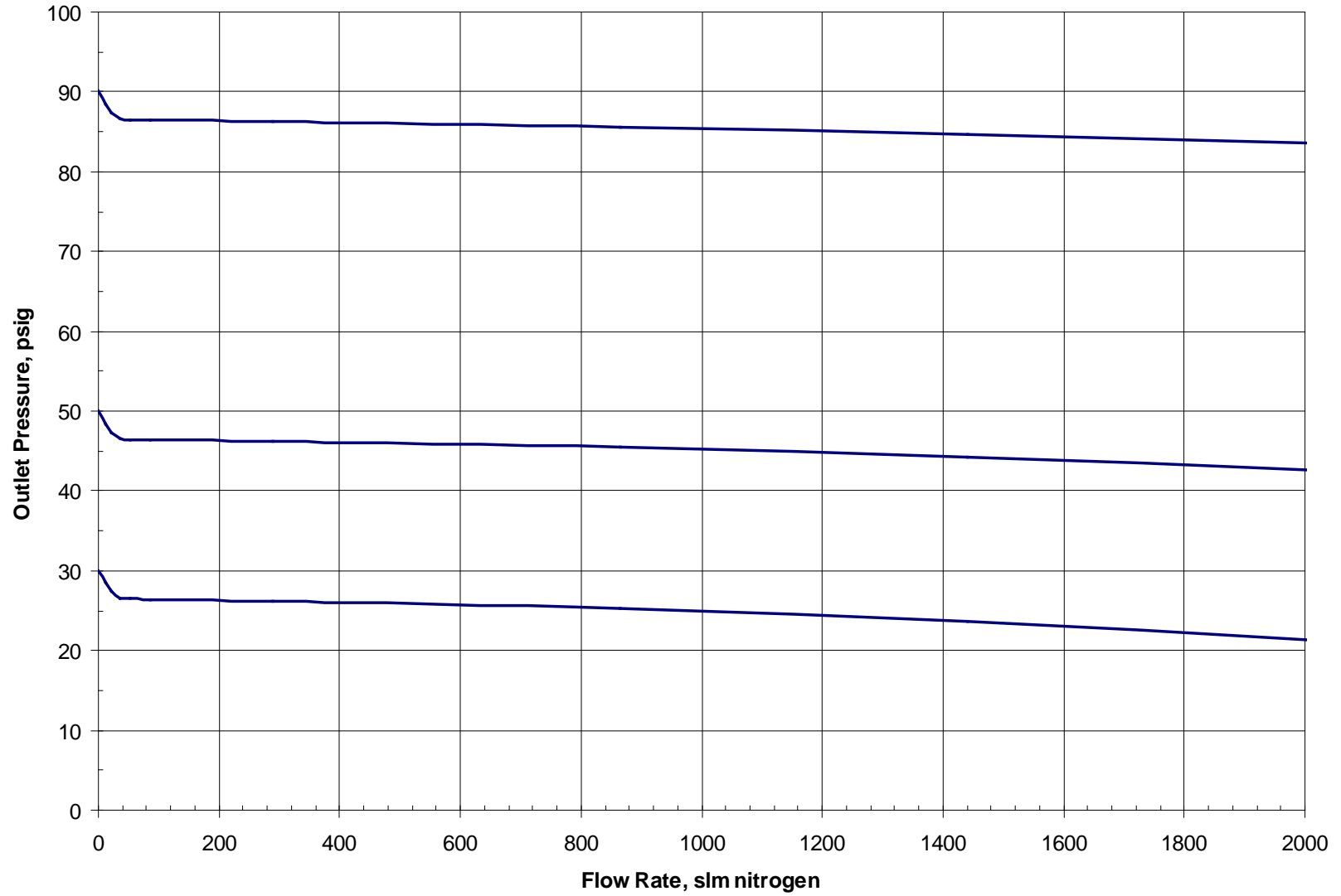


AP9000 Flow Curve Index

Series	Inlet Pressure (psig)	Outlet Pressures (psig)	Connection Size	Flow Curve Number
AP9010	600 (41 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	3/4 inch	AP9010-001
			1 inch	AP9010-002
	300 (21 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	3/4 inch	AP9010-003
			1 inch	AP9010-004
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	3/4 inch	AP9010-005
			1 inch	AP9010-006
AP9030	600 (41 bar)	250 (17.2 bar)	3/4 inch	AP9030-001
			1 inch	AP9030-002
AP9110	300 (21 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	3/4 inch	AP9110-001
			1 inch	AP9110-002
	150 (10.3 bar)	90, 50, 30 (6.2, 3.4, 2 bar)	3/4 inch	AP9110-003
			1 inch	AP9110-004
	100 (6.9 bar)	75, 50, 30 (5.2, 3.4, 2 bar)	3/4 inch	AP9110-005
			1 inch	AP9110-006

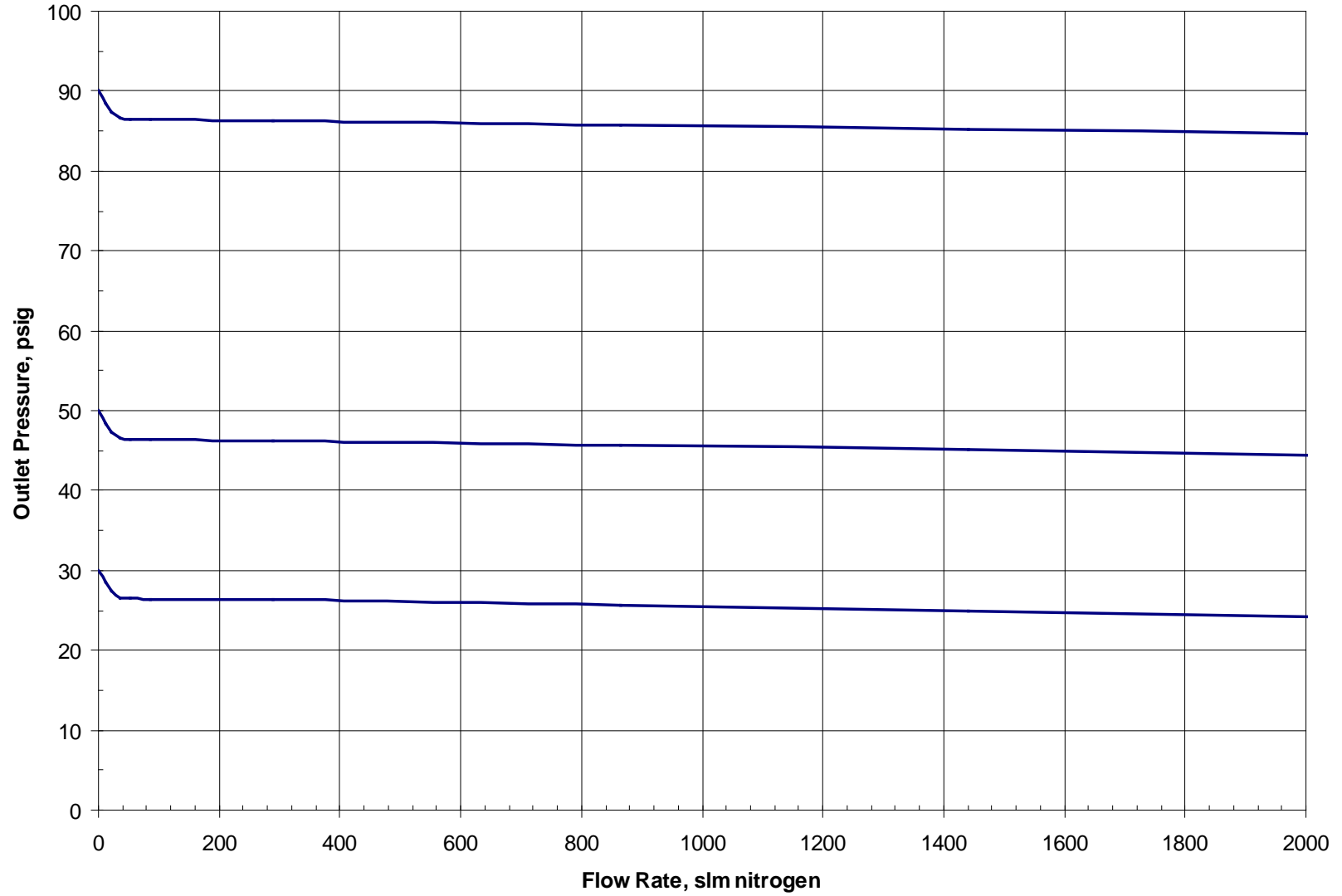
AP9010S 2PW FV12 FV12

Flow Curve at 600 psig Inlet Pressure



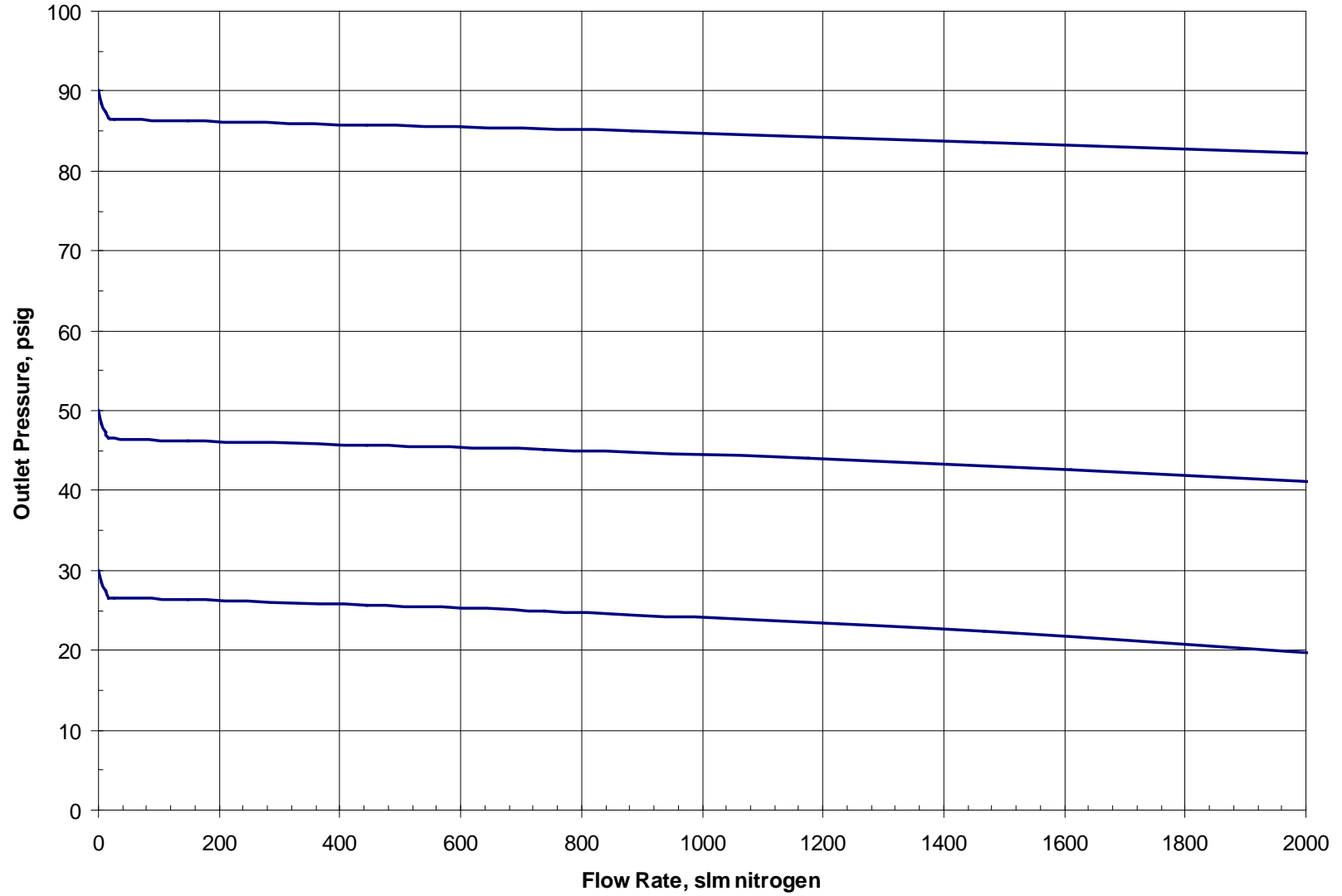
AP9010S 2PW FV16 FV16

Flow Curve at 600 psig Inlet Pressure

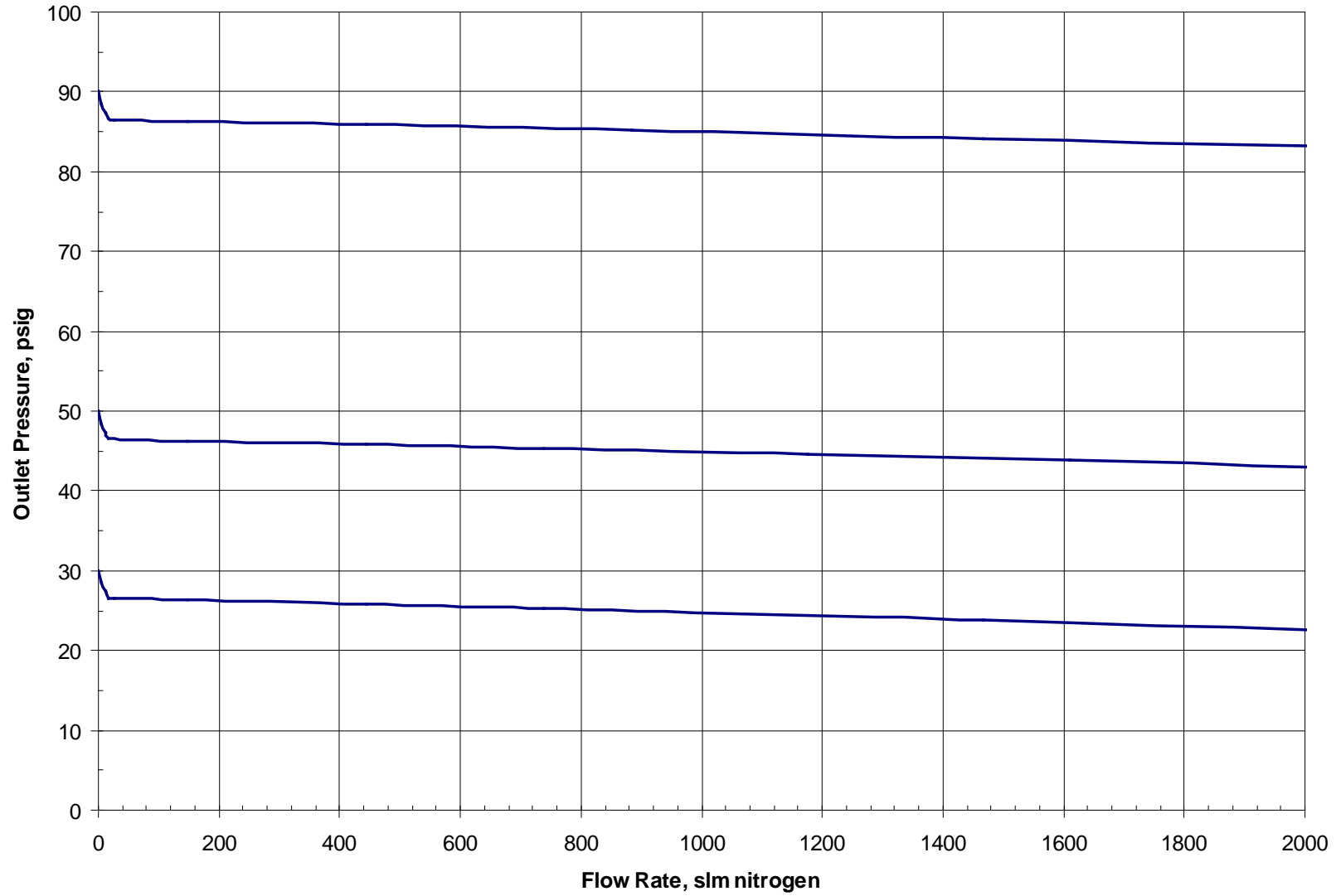


AP9010S 2PW FV12 FV12

Flow Curve at 300 psig Inlet Pressure

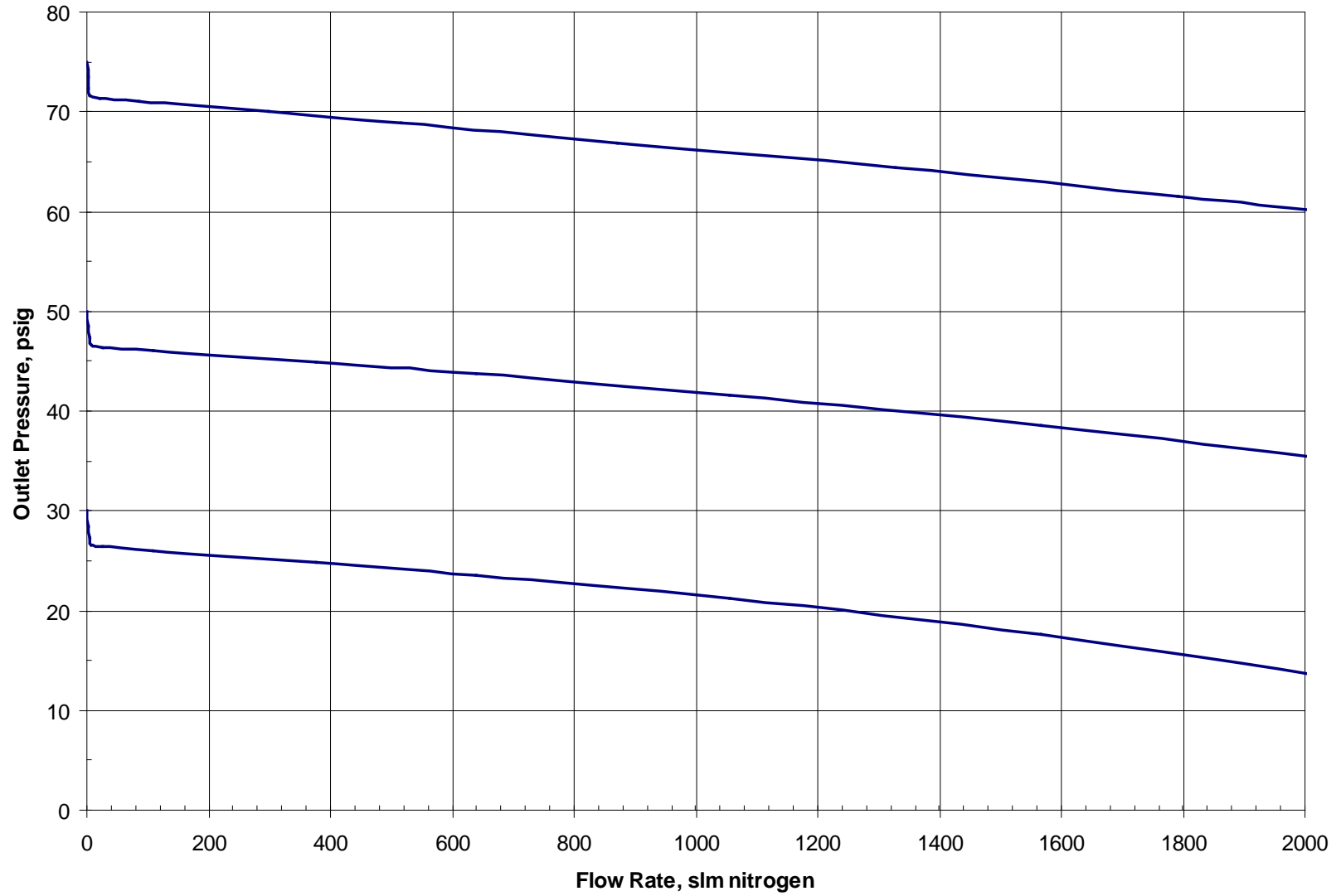


AP9010S 2PW FV16 FV16 Flow Curve at 300 psig Inlet Pressure



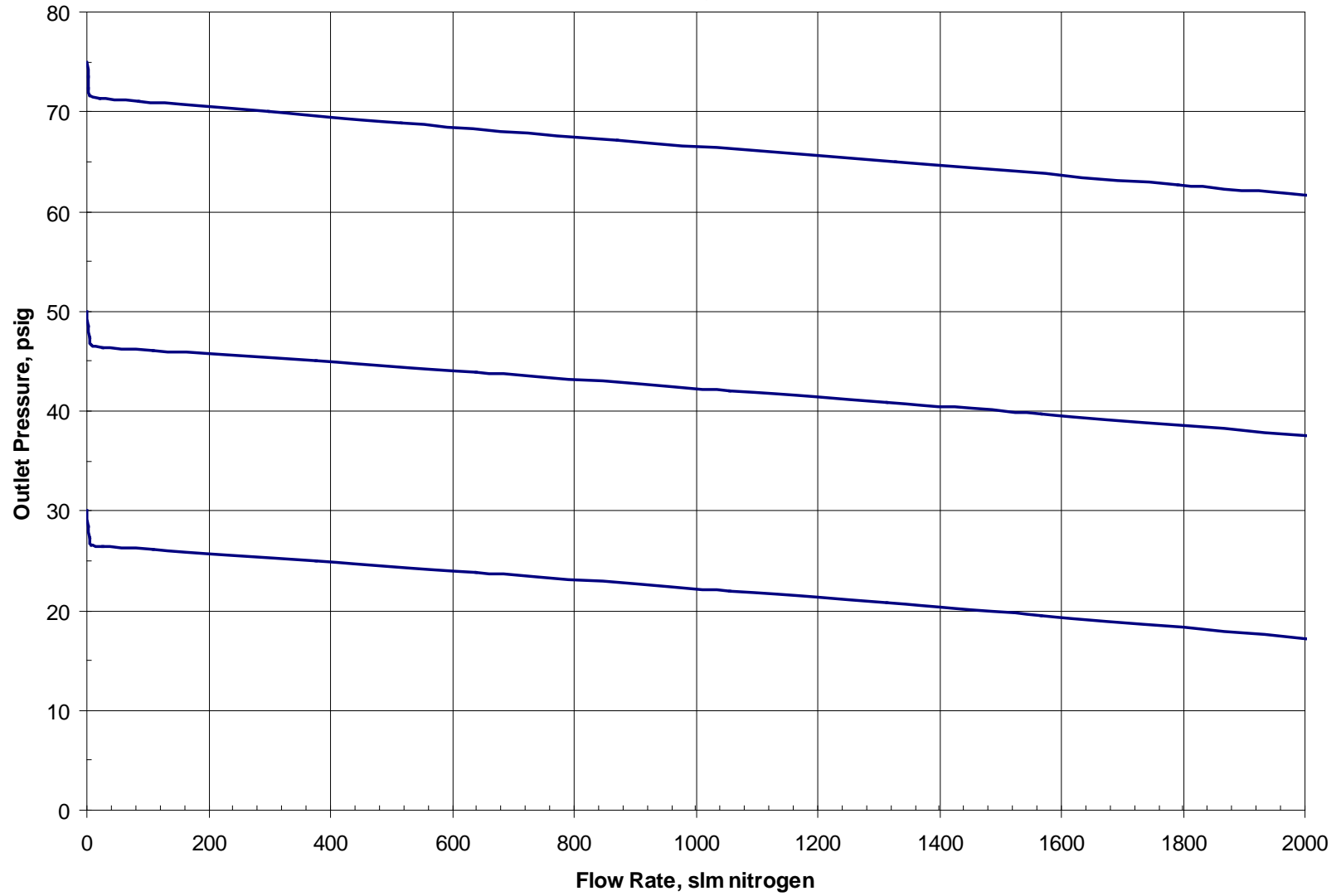
AP9010S 2PW FV12 FV12

Flow Curve at 100 psig Inlet Pressure

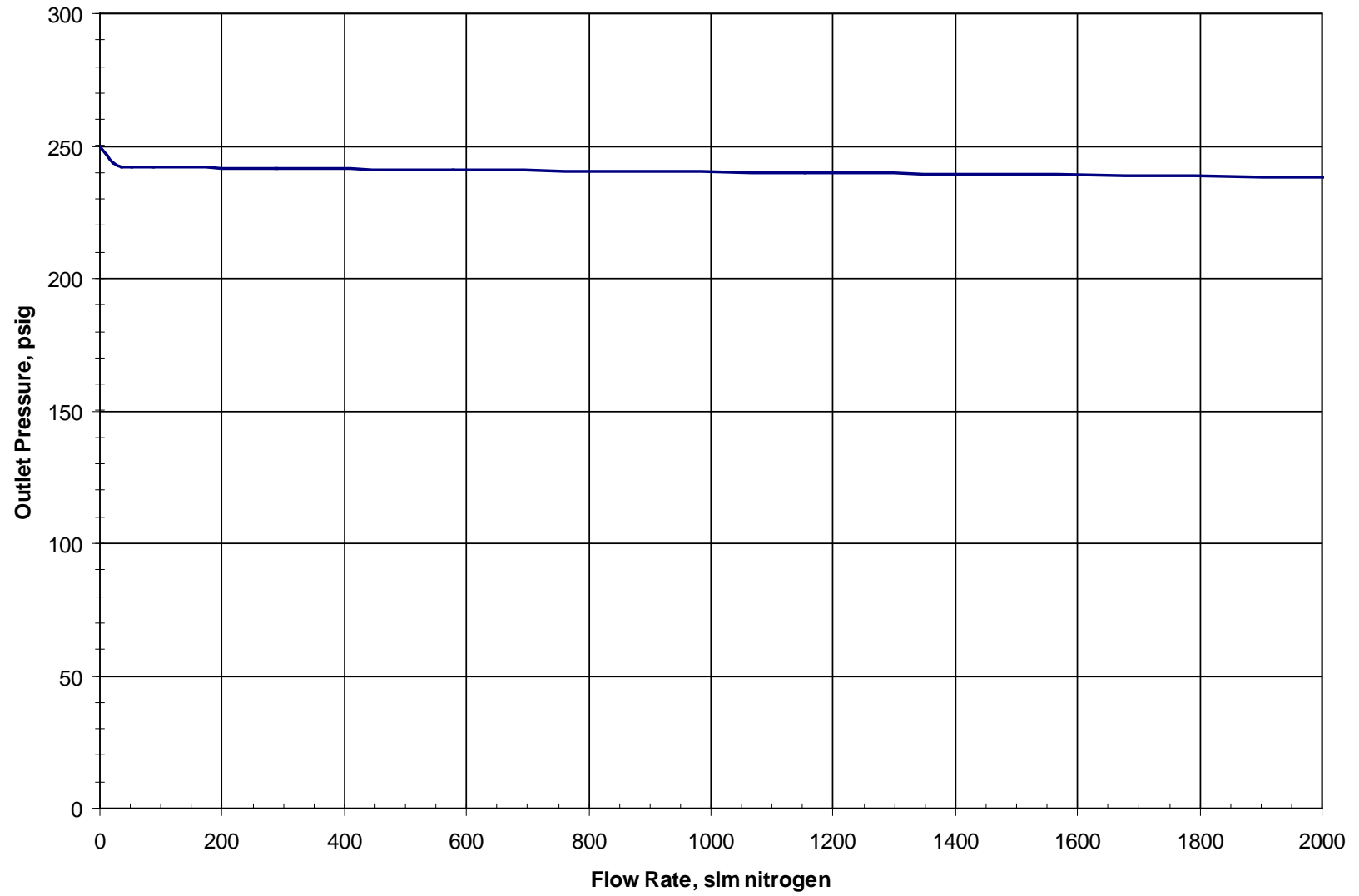


AP9010S 2PW FV16 FV16

Flow Curve at 100 psig Inlet Pressure

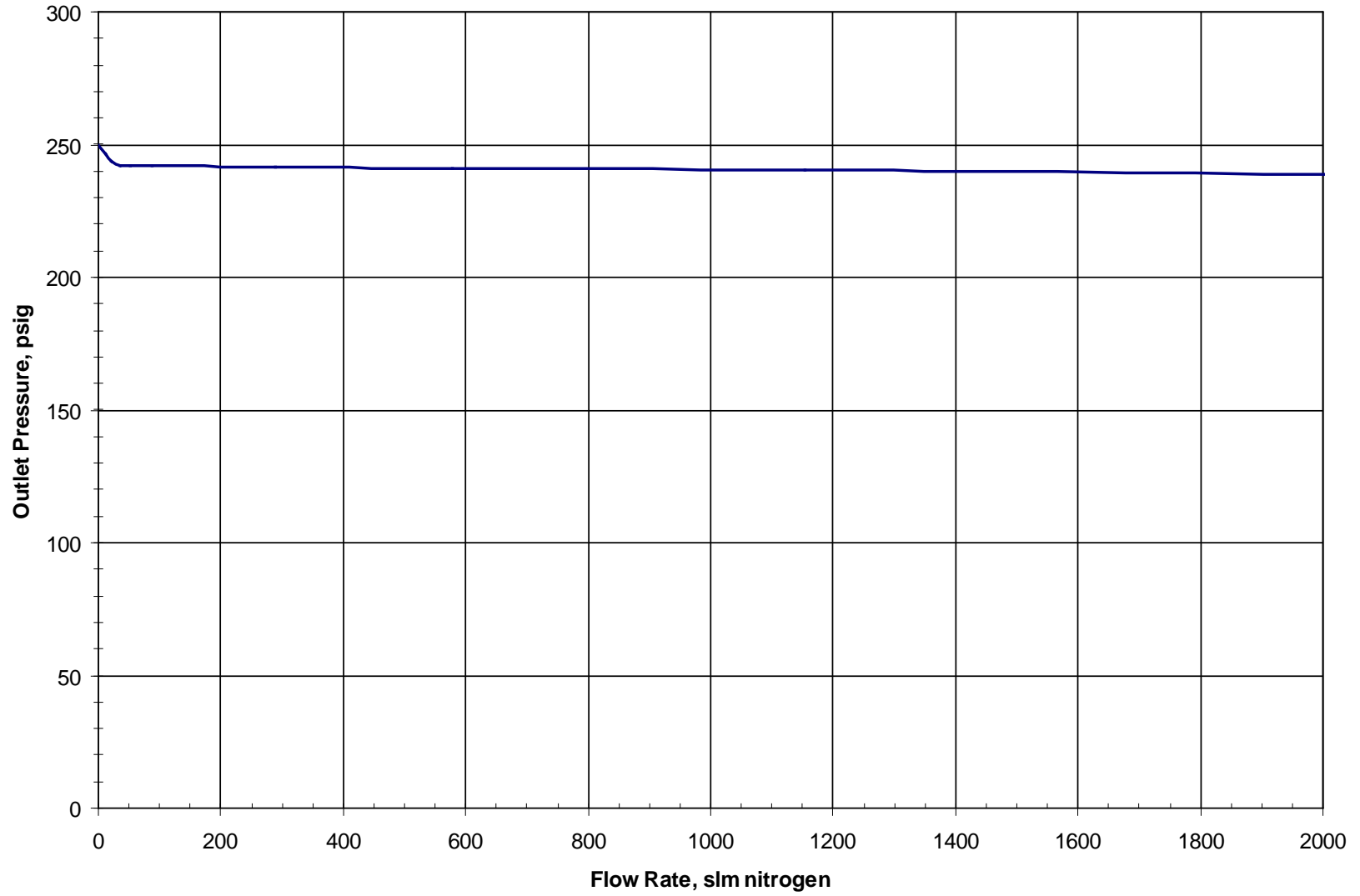


AP9030S 2PW FV12 FV12
Flow Curve at 600 psig Inlet Pressure



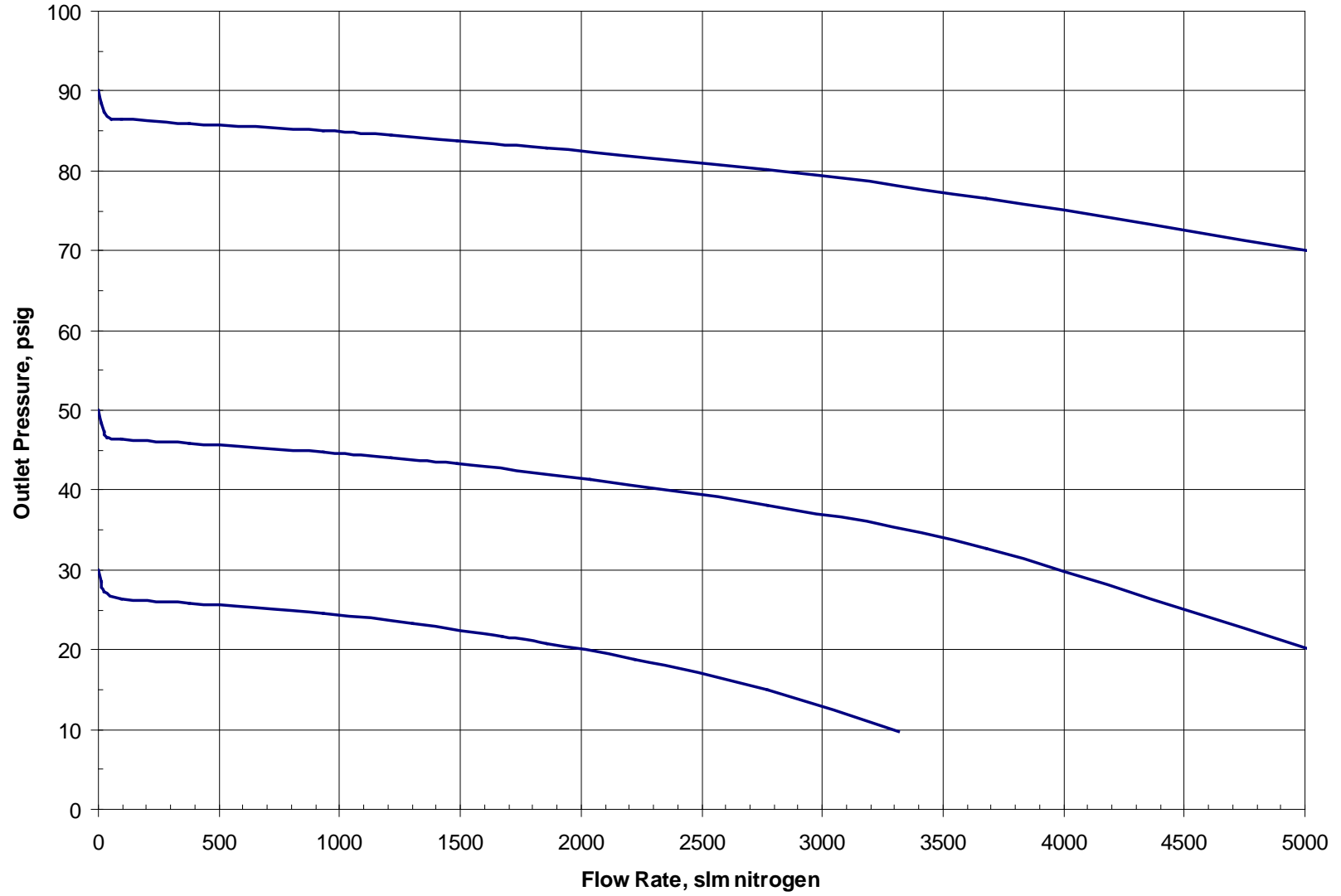
AP9030S 2PW FV16 FV16

Flow Curve at 600 psig Inlet Pressure



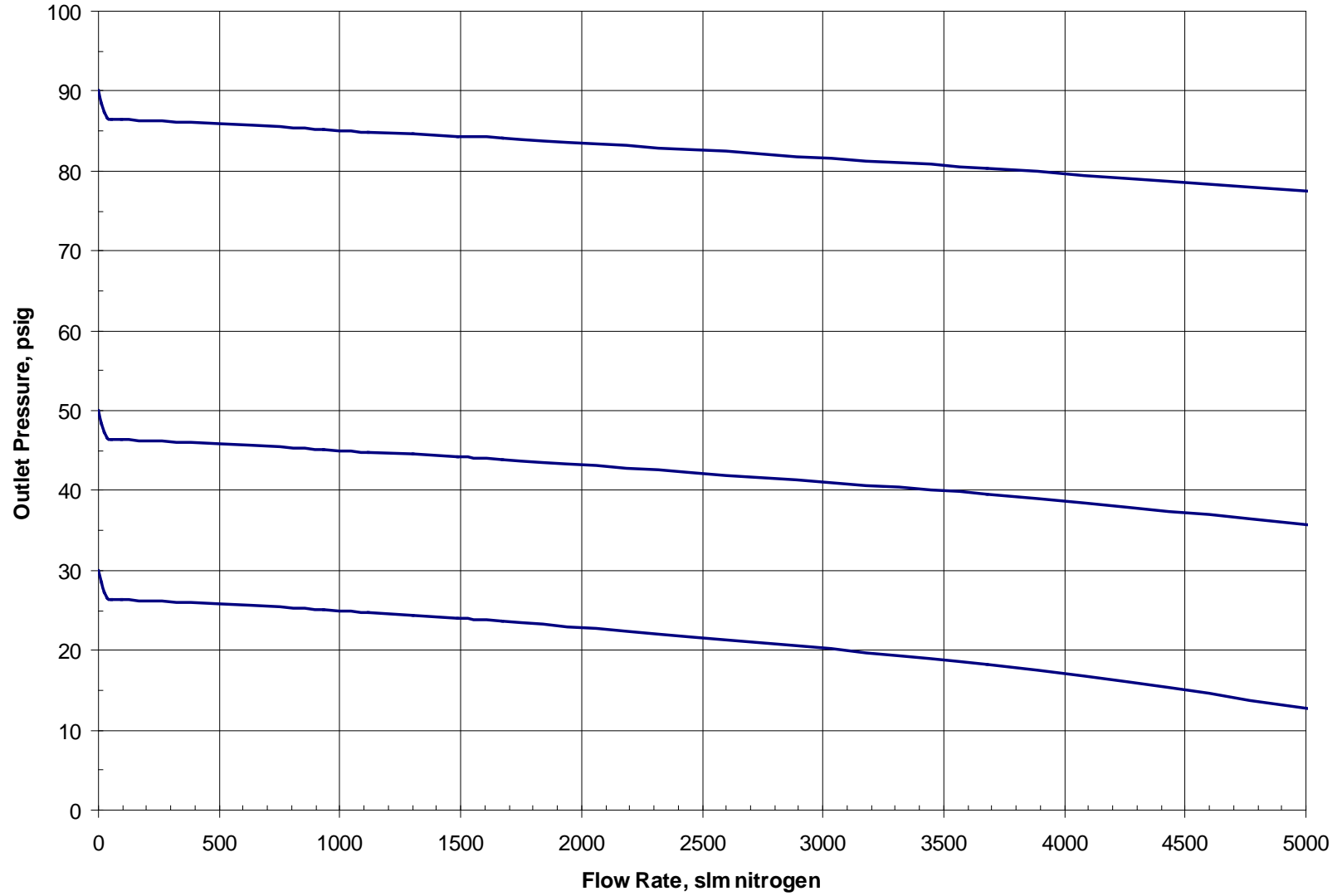
AP9110S 2PW FV12 FV12

Flow Curve at 300 psig Inlet Pressure

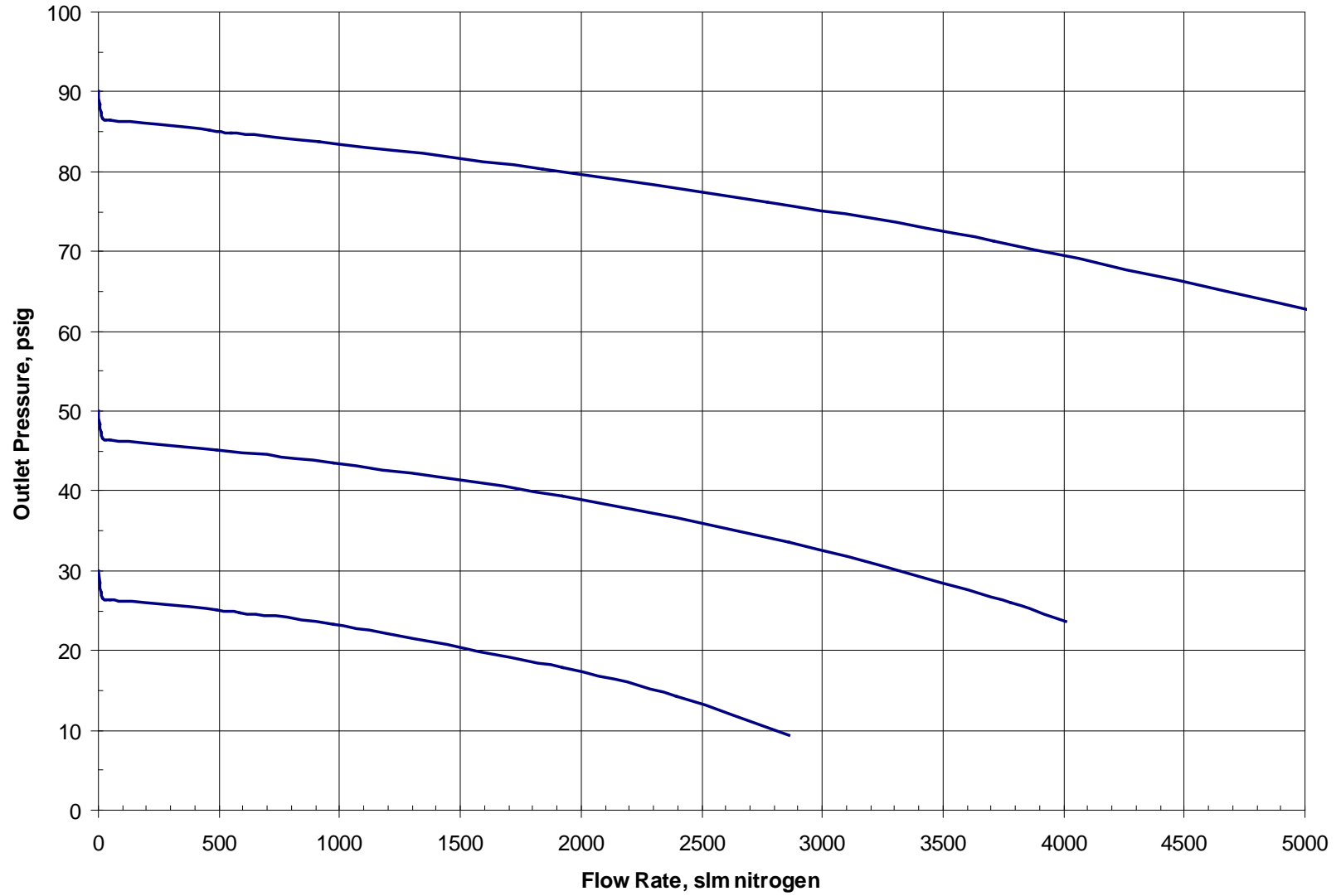


AP9110S 2PW FV16 FV16

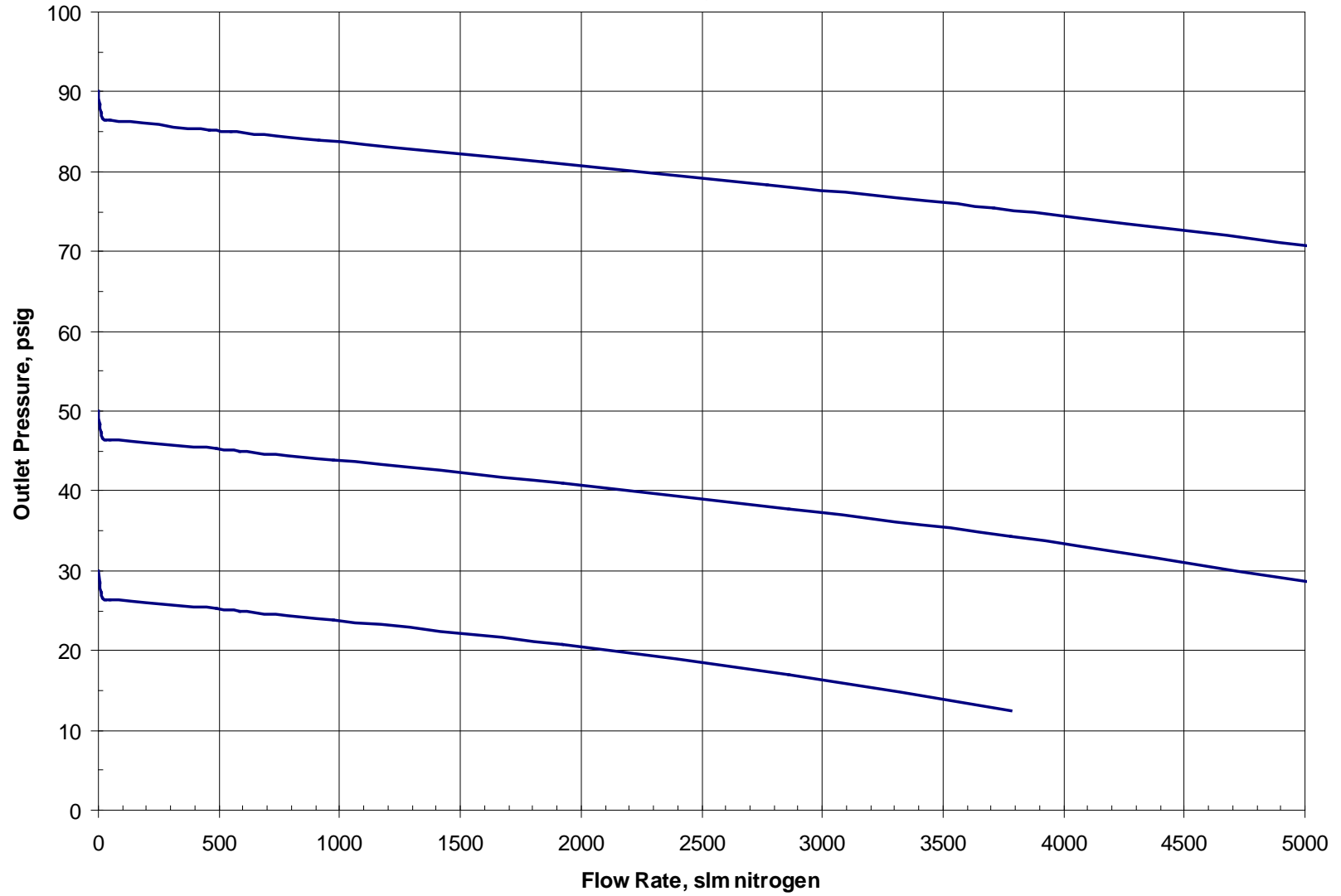
Flow Curve at 300 psig Inlet Pressure



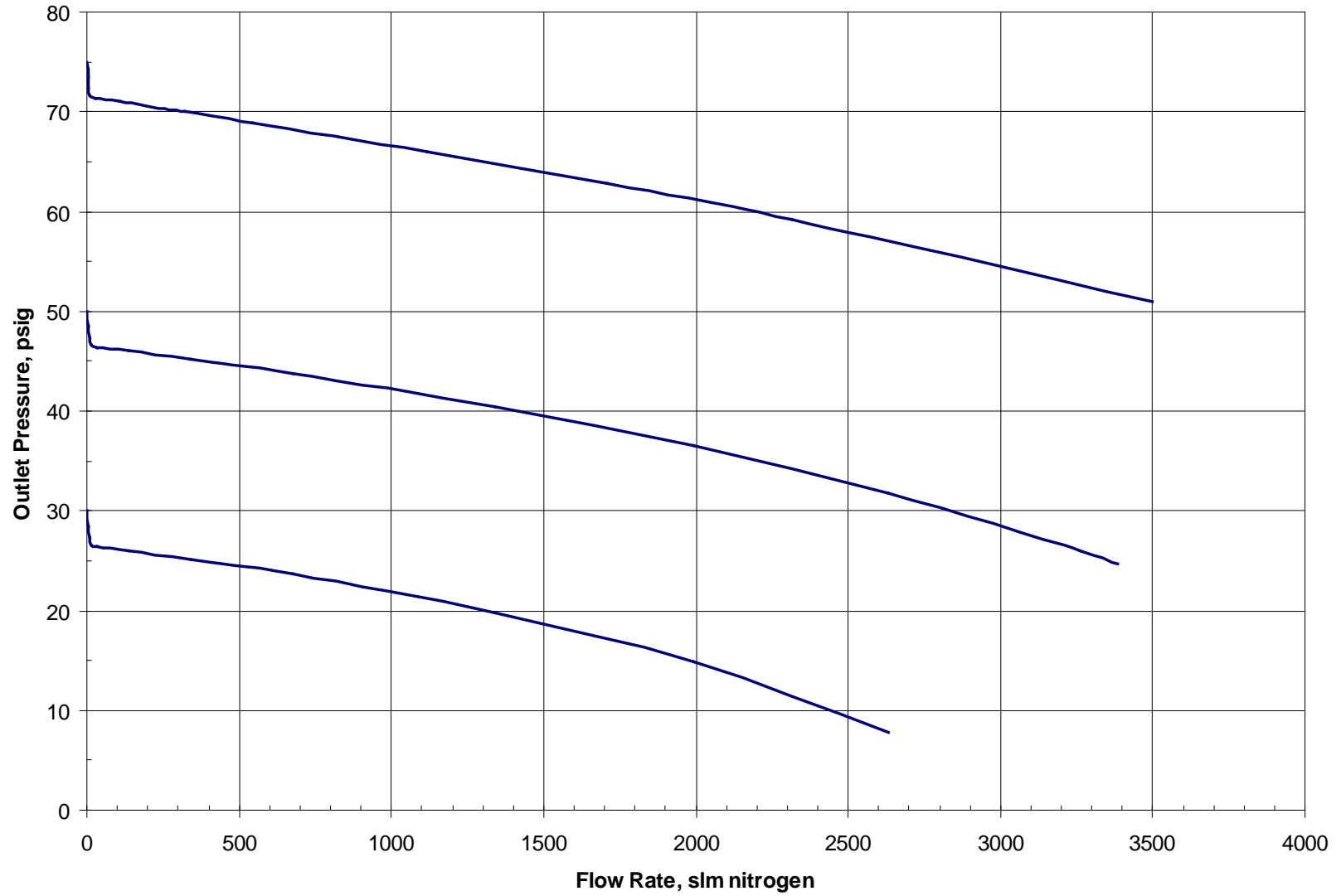
AP9110S 2PW FV12 FV12
Flow Curve at 150 psig Inlet Pressure



AP9110S 2PW FV16 FV16
Flow Curve at 150 psig Inlet Pressure

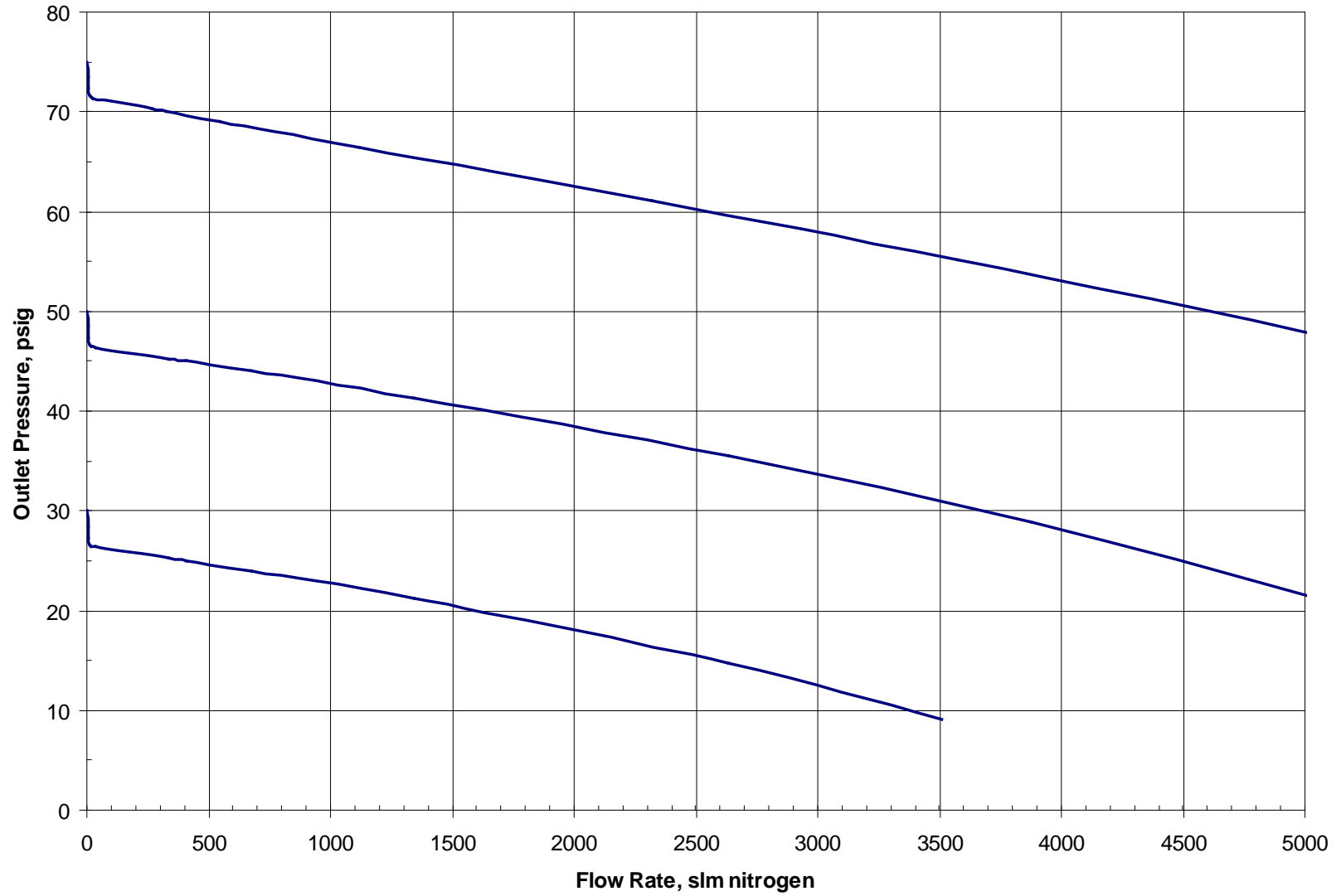


AP9110S 2PW FV12 FV12 Flow Curve at 100 psig Inlet Pressure



AP9110S 2PW FV16 FV16

Flow Curve at 100 psig Inlet Pressure

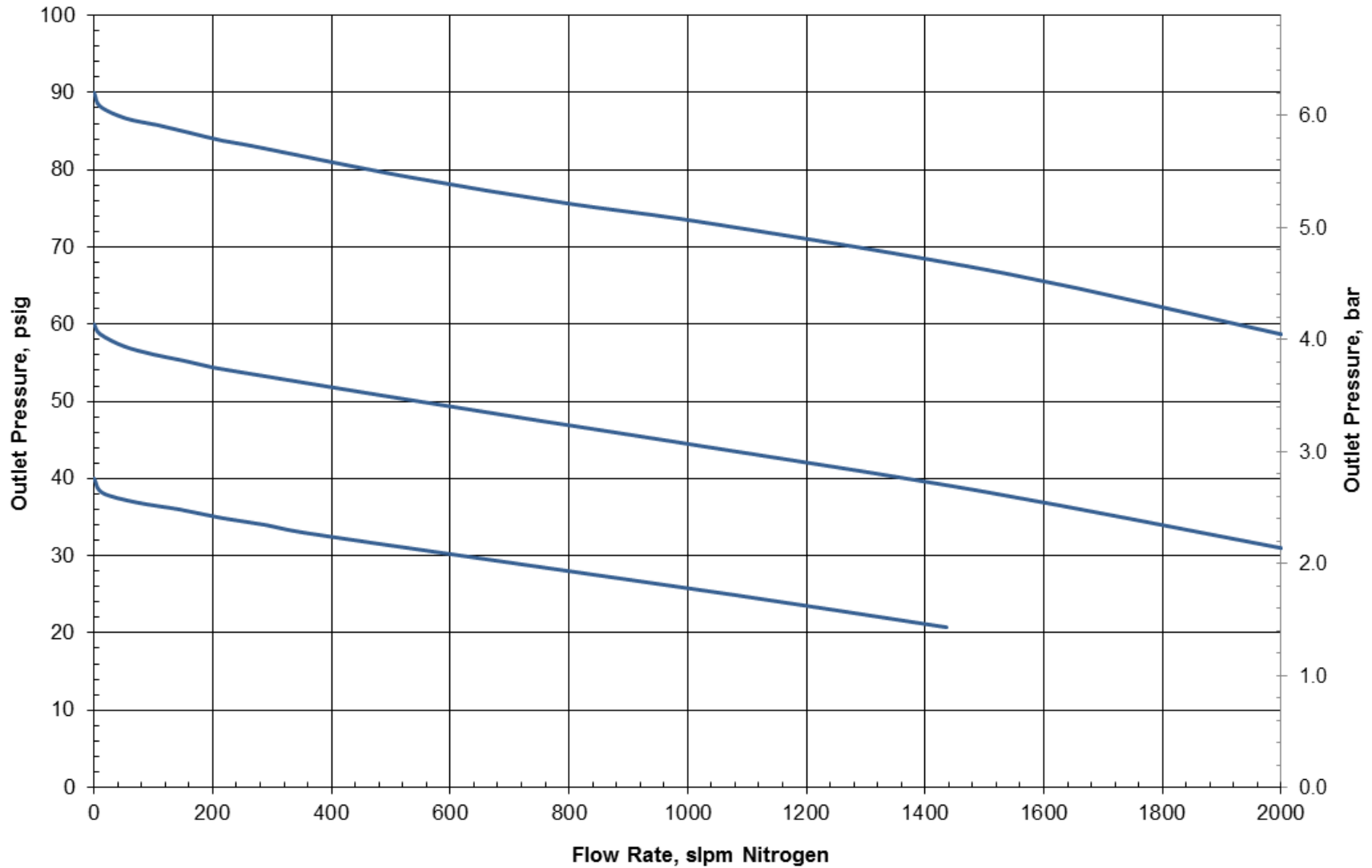


AZ9210 Flow Curve Index

Series	Inlet Pressure psig (bar)	Outlet Pressures psig (bar)	Connection Size	Flow Curve Number
AZ9210 AK9210	150 (10.3 bar)	90, 60, 40 (6.2, 4.1, 2.7 bar)	3/4 inch	AZ9210-001
	100 (6.9 bar)	90, 60, 40 (6.2, 4.1, 2.7 bar)	3/4 inch	AZ9210-002

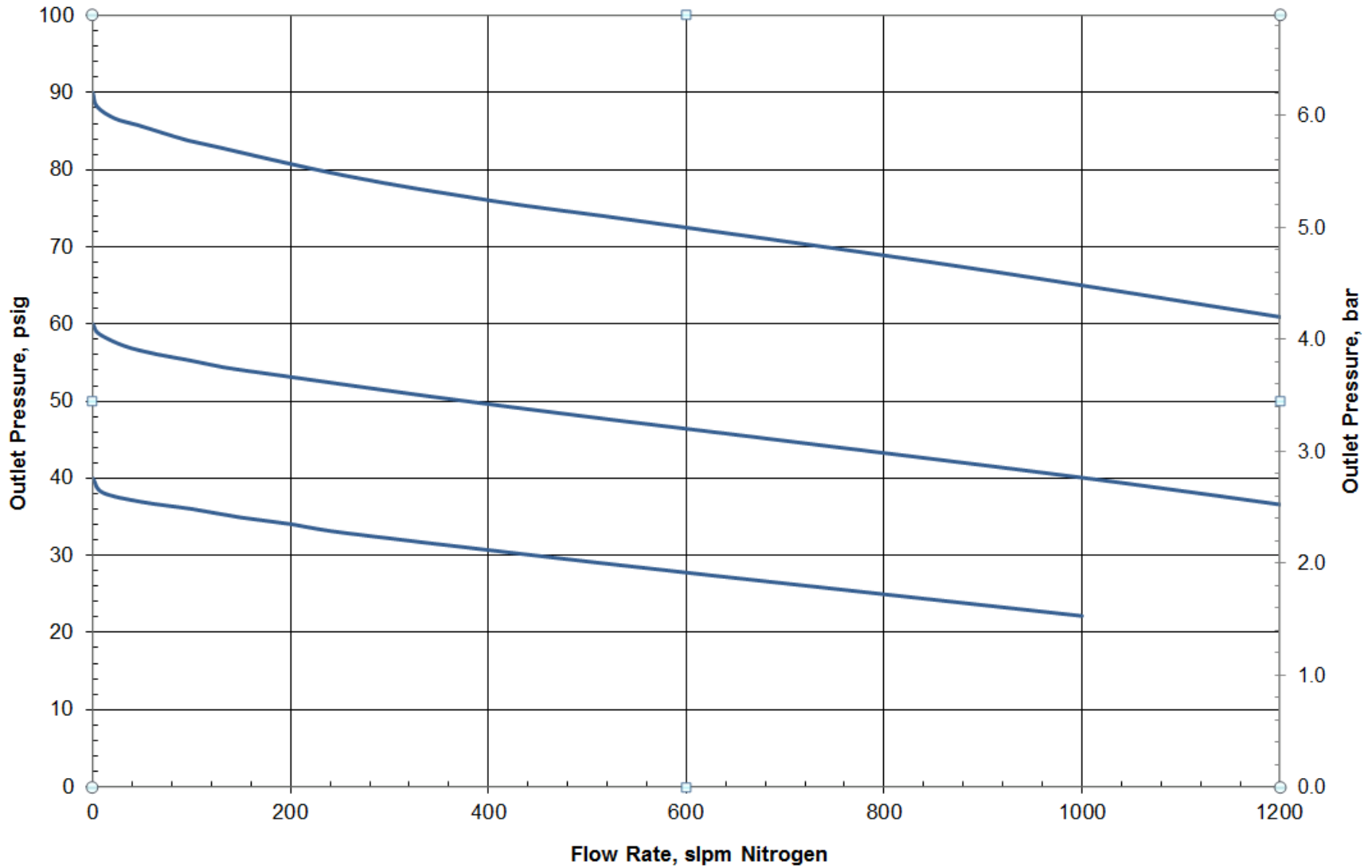
AZ9210 with 3/4 Inch Connections

Flow Curve at 150 psig (10.3 bar) Inlet Pressure.



AZ9210 with 3/4 Inch Connections

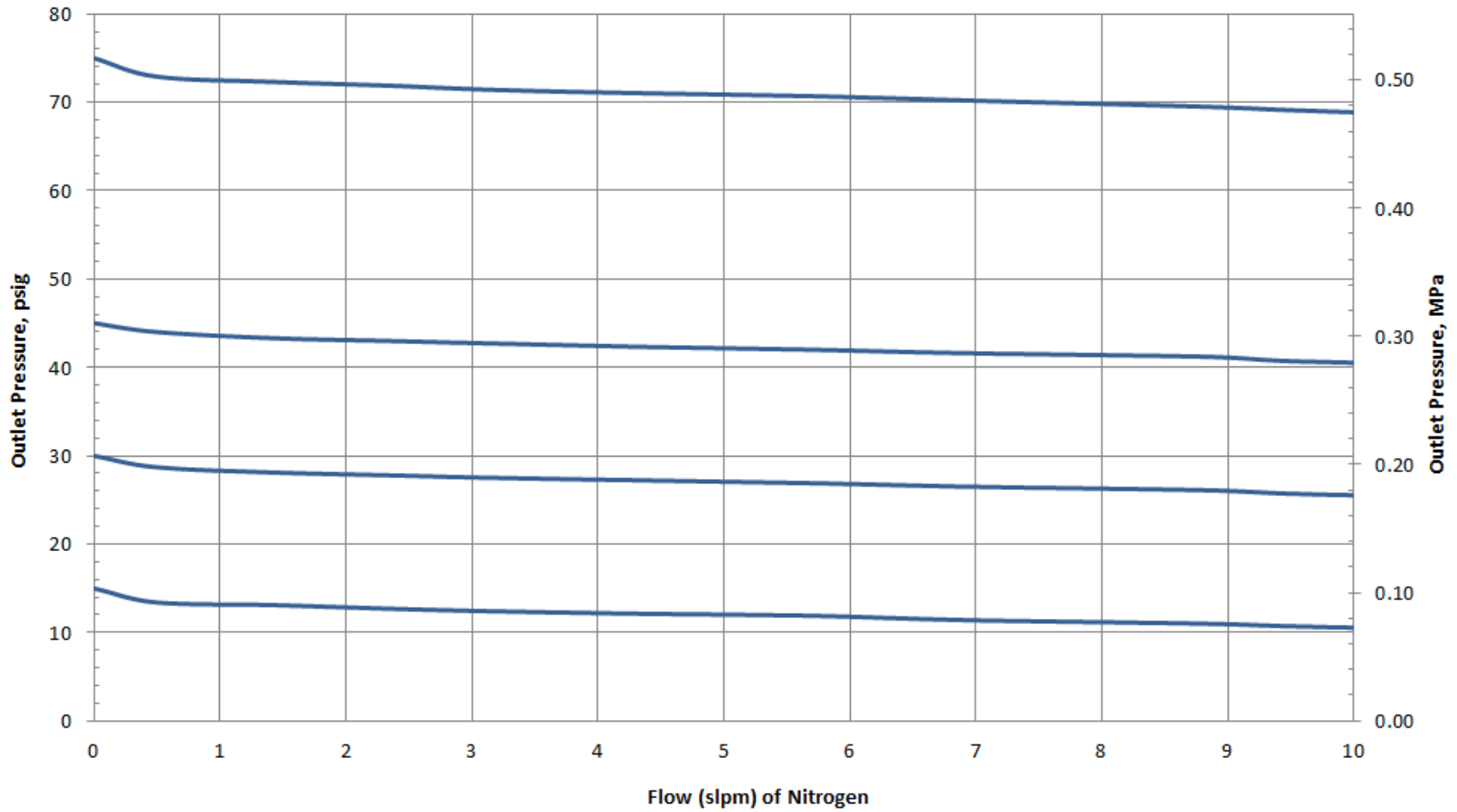
Flow Curve at 100 psig (6.9 bar) Inlet Pressure.



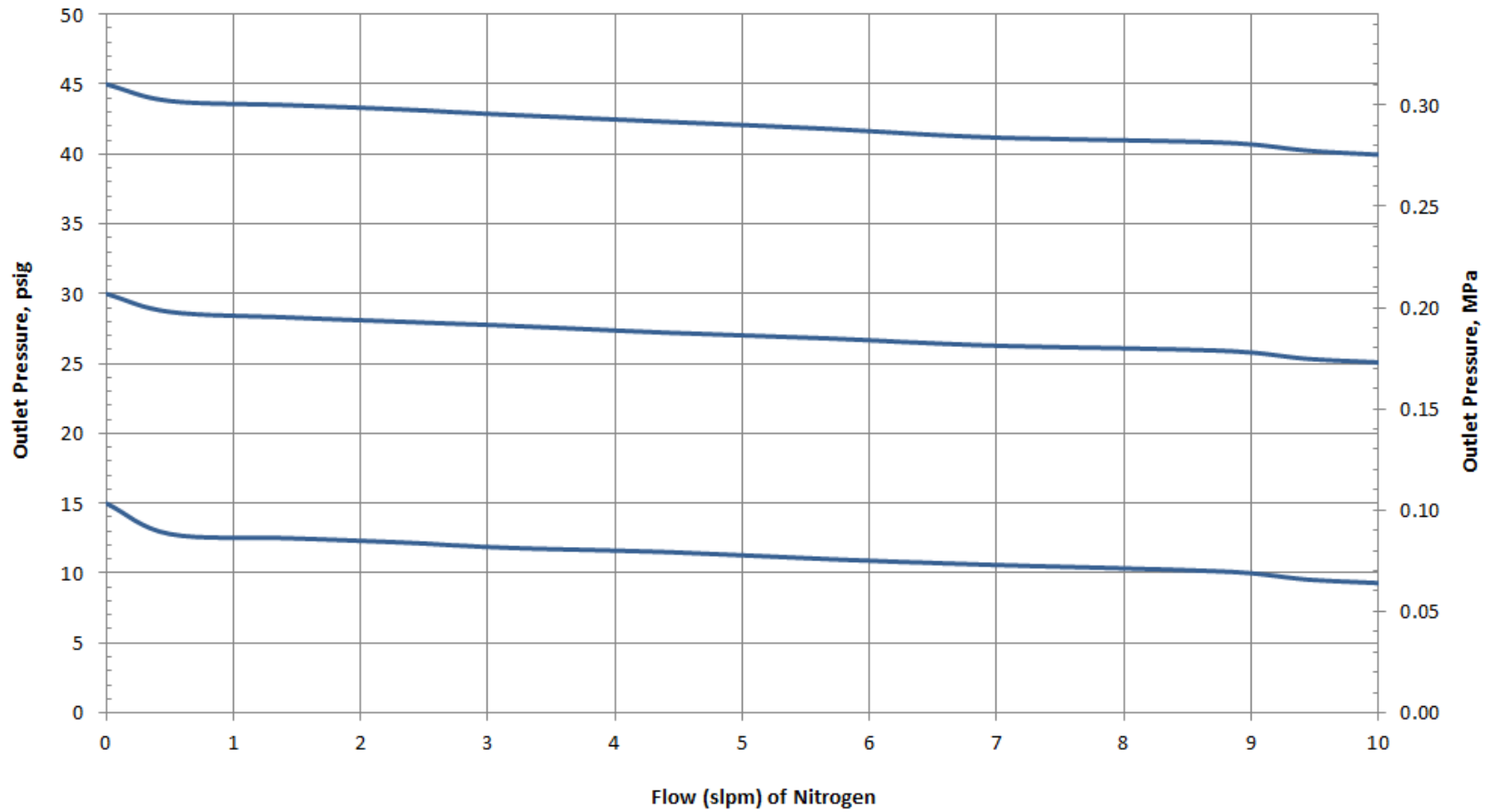
AK110 Flow Curve Index

Series	Inlet Pressure, psig (~MPa)	Outlet Pressures, psig (~MPa)	Connection Size	Flow Curve Number
AK110	100 psig (.7 MPa)	75, 45, 30, 15 psig (.5, .3, .2, .1 MPa)	1/4 NPT	AK110-001
	75 psig (.5 MPa)	45, 30, 15 psig (.3, .2, .1 MPa)	1/4 NPT	AK110-002
	45 psig (.3 MPa)	30, 15 psig (.2, .1 MPa)	1/4 NPT	AK110-003
	30 psig (.2 MPa)	15, 10 psig (.1, .07 MPa)	1/4 NPT	AK110-004

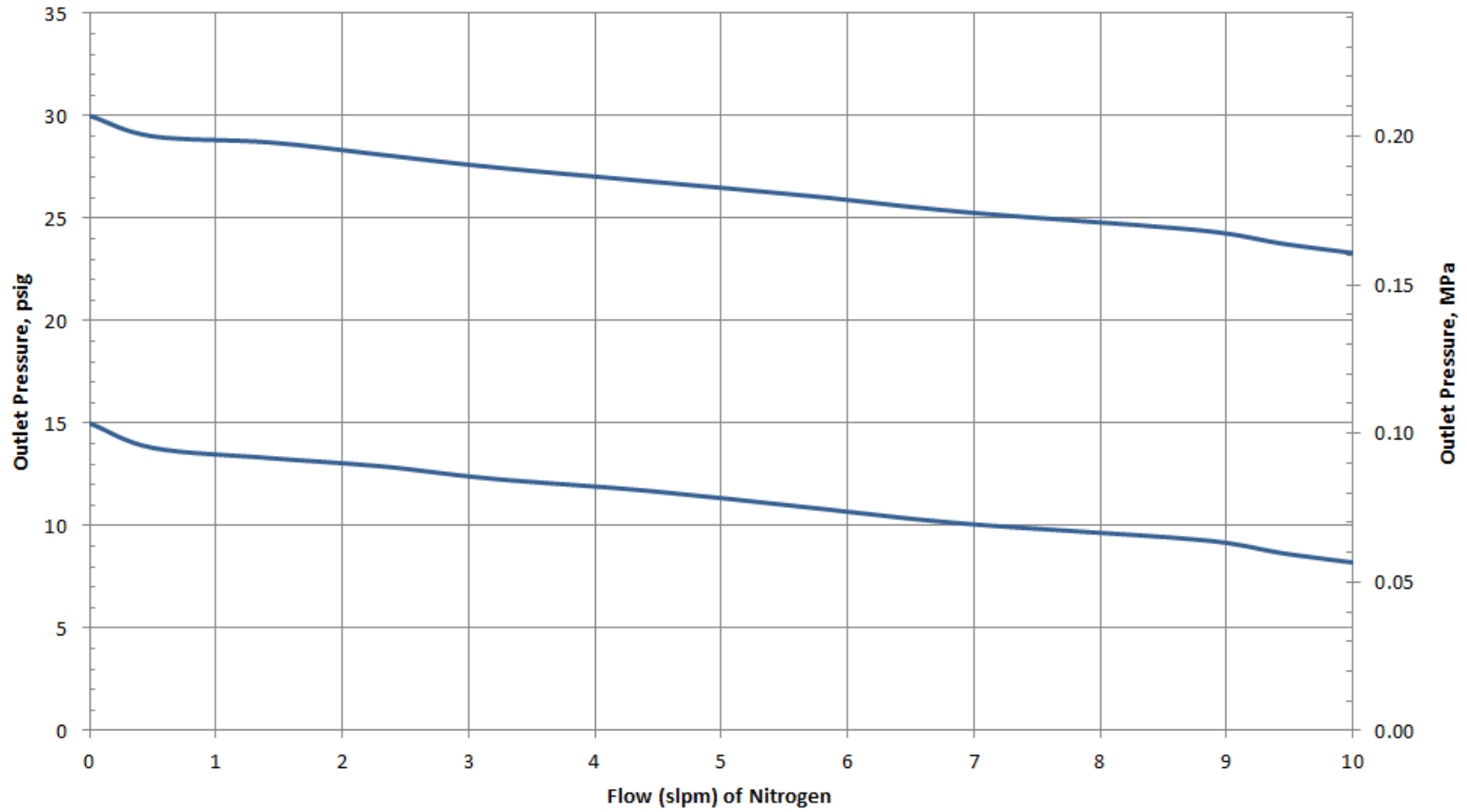
AK110 with 1/4 NPT Connections Flow Curve at 100 psig (0.69 MPa) Inlet Pressure



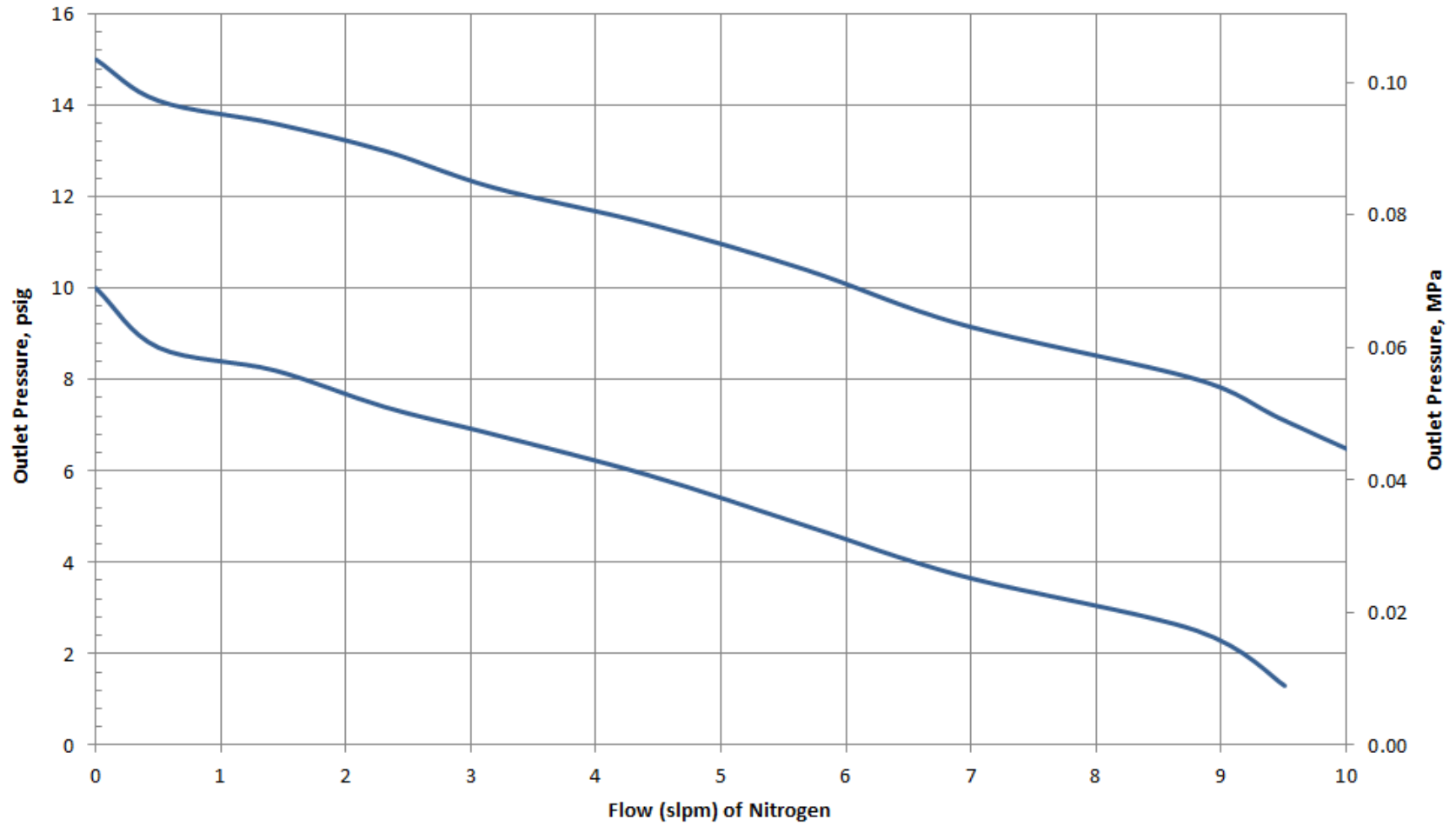
AK110 with 1/4 NPT Connections Flow Curve at 75 psig (0.52 MPa) Inlet Pressure



AK110 with 1/4 NPT Connections Flow Curve at 45 psig (0.31 MPa) Inlet Pressure



AK110 with 1/4 NPT Connections Flow Curve at 30 psig (0.21 MPa) Inlet Pressure

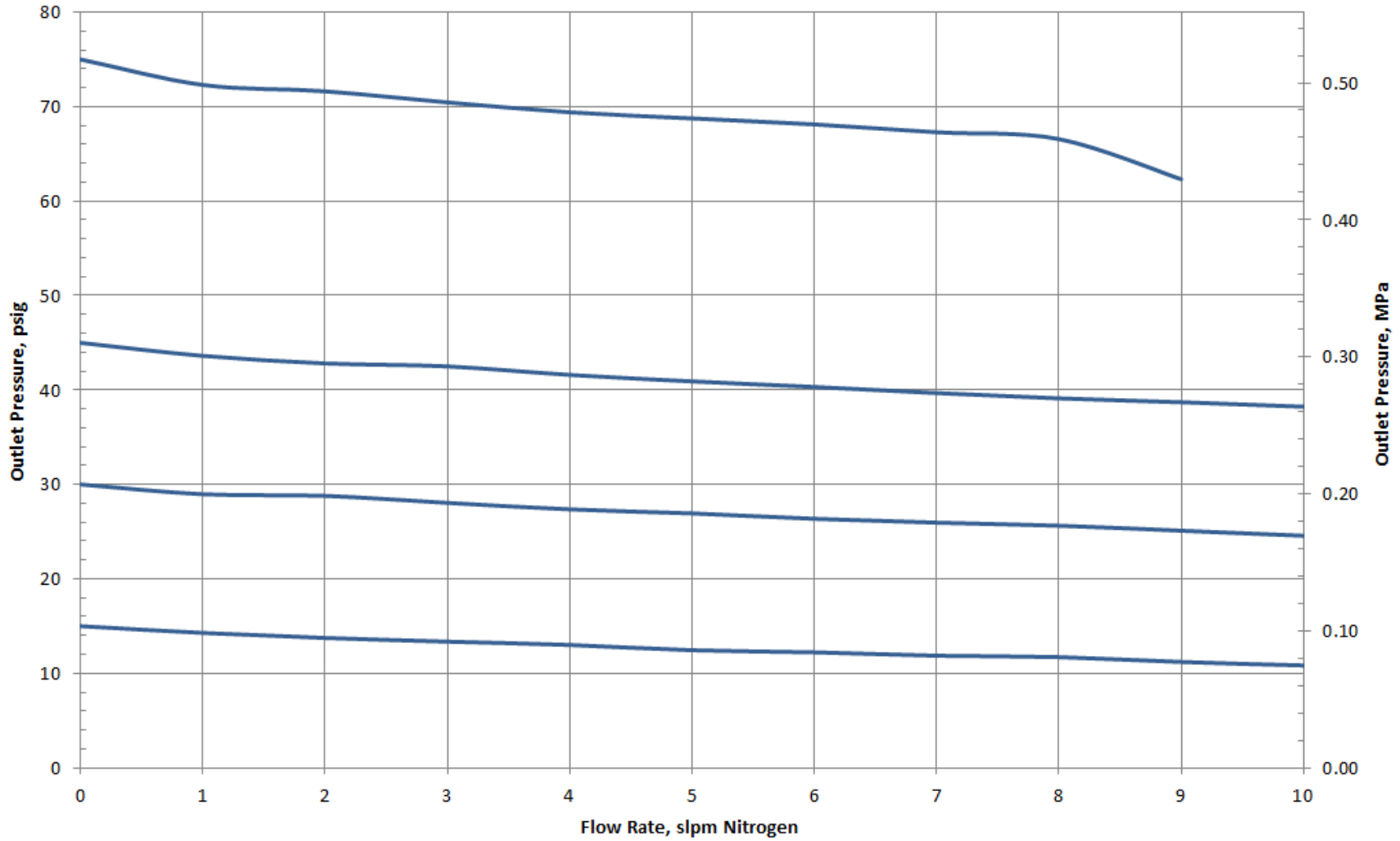


AP210 Flow Curve Index

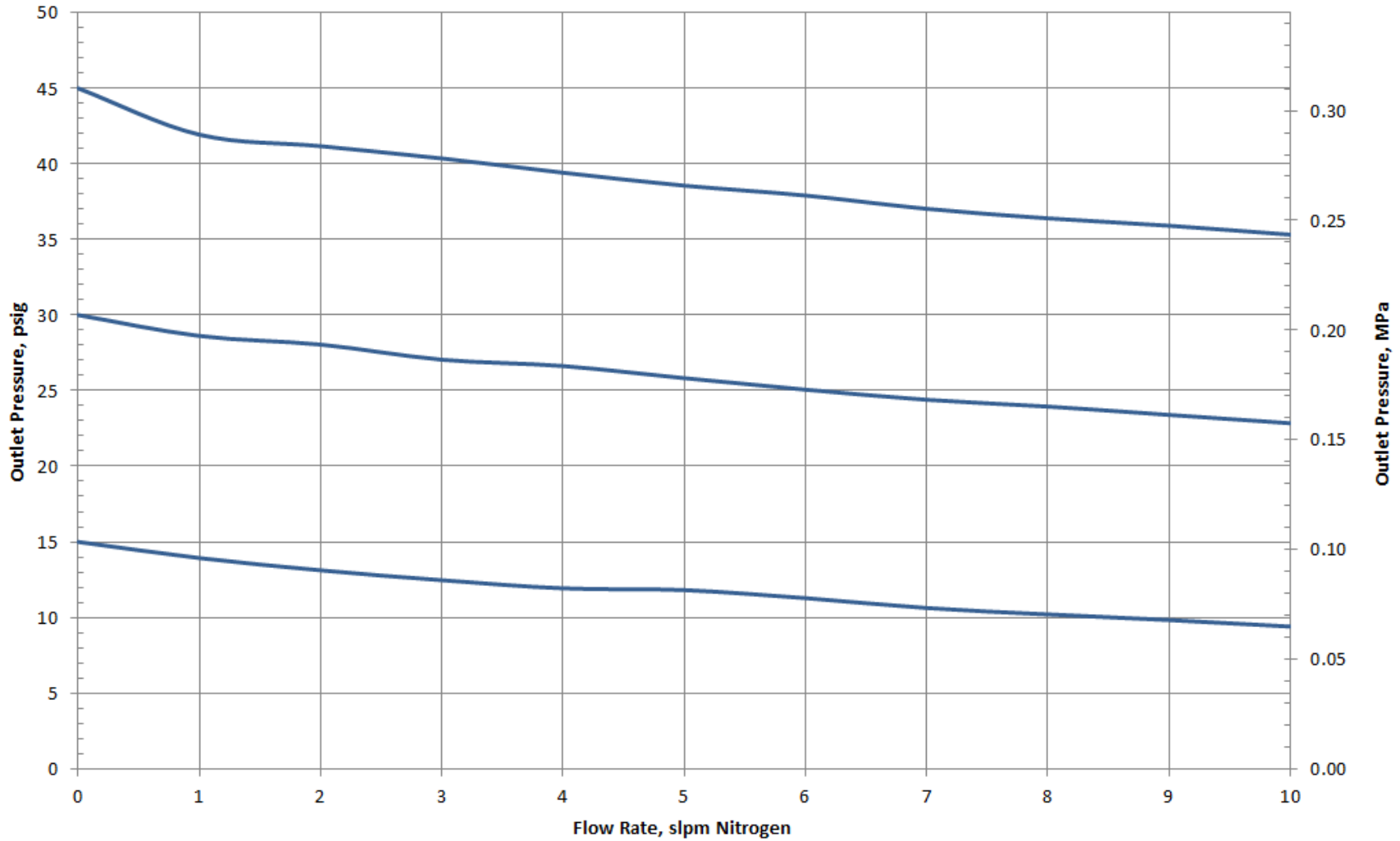
Series	Inlet Pressure, psig (~MPa)	Outlet Pressures, psig (~MPa)	Connection Size	Flow Curve Number
AP210	100 psig (.7 MPa)	75, 45, 30, 15 psig (.5, .3, .2, .1 MPa)	1/4 inch	AP210-001
	75 psig (.5 MPa)	45, 30, 15 psig (.3, .2, .1 MPa)	1/4 inch	AP210-002
AP202	45 psig (.3 MPa)	30, 15 psig (.2, .1 MPa)	1/4 inch	AP210-003
	30 psig (.2 MPa)	15, 10 psig (.1, .07 MPa)	1/4 inch	AP210-004

AP210S (1/4" Connections)

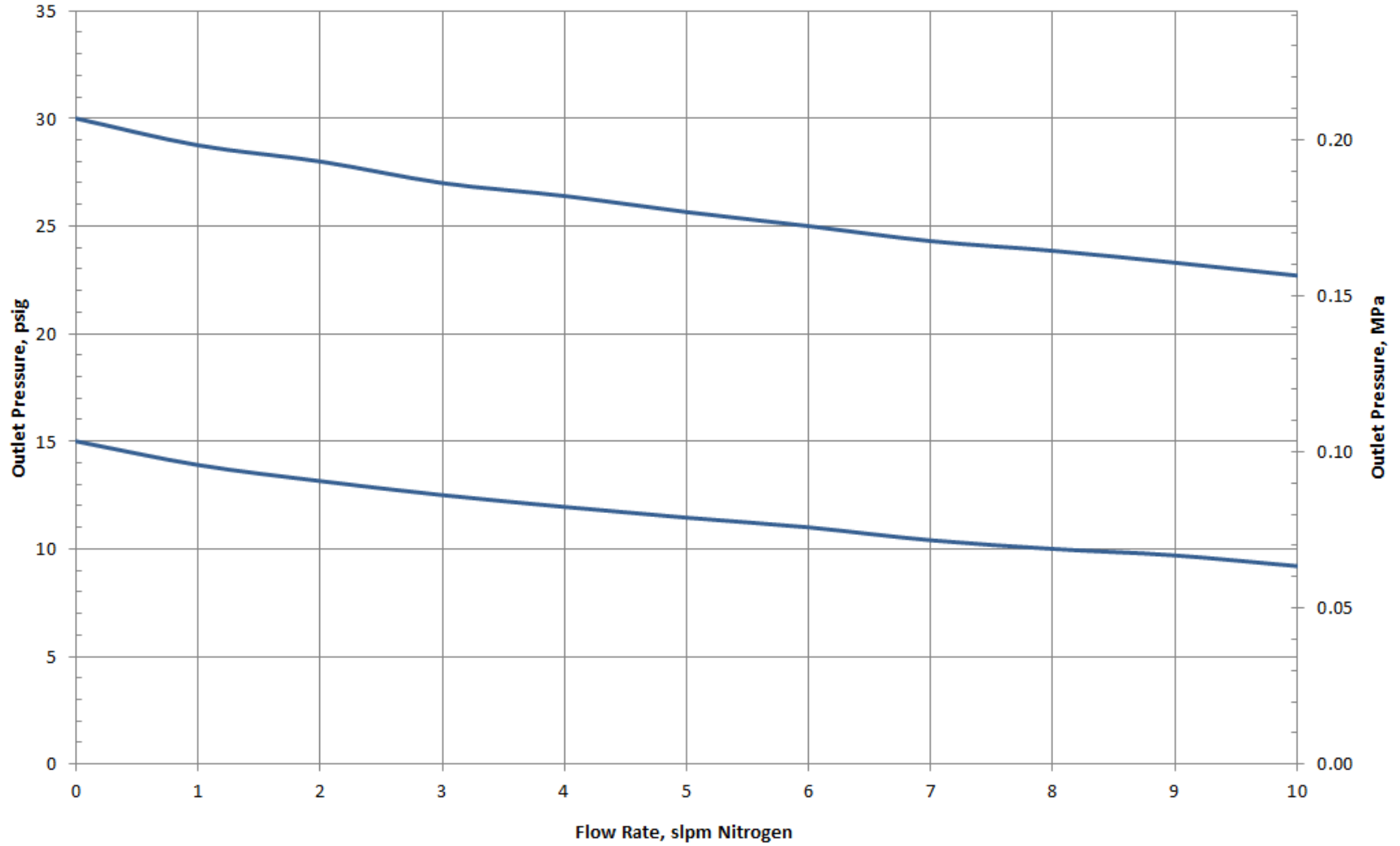
Flow Curve at 100 psig (.69 MPa) inlet pressure



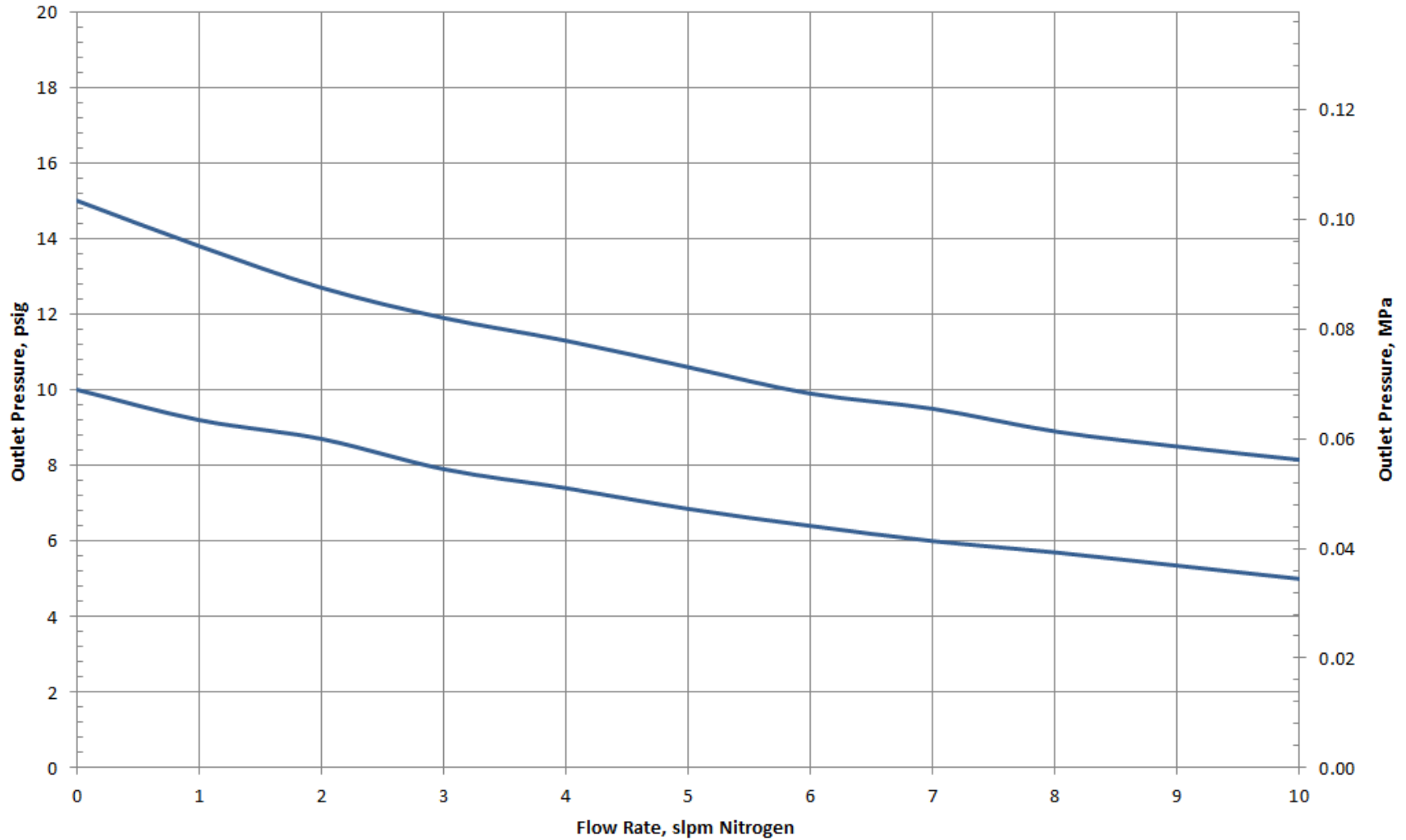
AP210S (1/4" Connections) Flow Curve at 75 psig (.52 MPa) inlet pressure



AP202S (1/4" Connections) Flow Curve at 45 psig (.31 MPa) inlet pressure



AP202S (1/4" Connections) Flow Curve at 30 psig (.21 MPa) inlet pressure

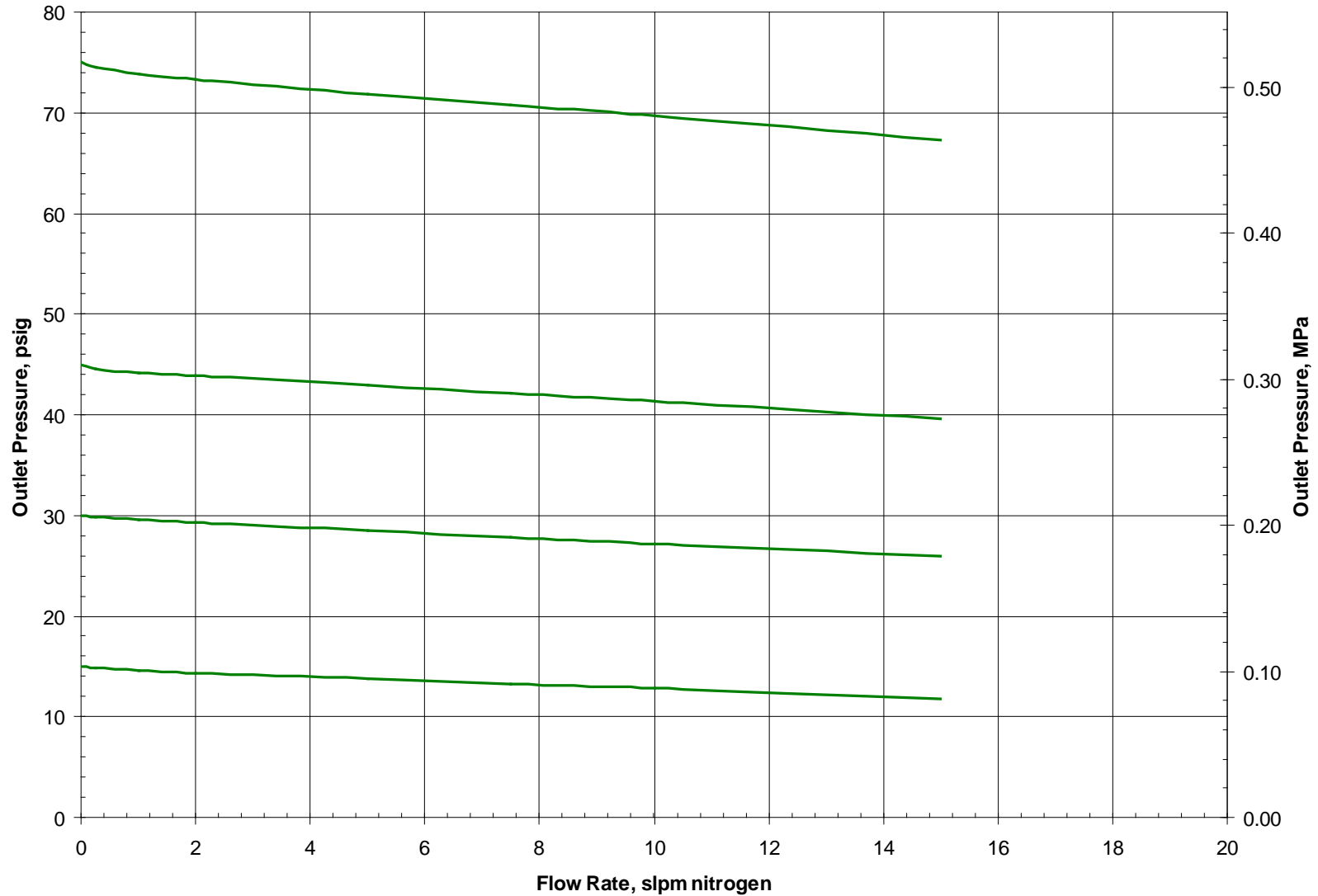


AP500 Flow Curve Index

Series	Inlet Pressure, psig (~MPa)	Outlet Pressures, psig (~MPa)	Connection Size	Flow Curve Number
AP500	100 psig (.7 MPa)	75, 45, 30, 15 psig (.5, .3, .2, .1 MPa)	1/4 inch	AP500-001
	75 psig (.5 MPa)	45, 30, 15 psig (.3, .2, .1 MPa)	1/4 inch	AP500-002
	45 psig (.3 MPa)	30, 15 psig (.2, .1 MPa)	1/4 inch	AP500-003
	30 psig (.2 MPa)	15, 10 psig (.1, .07 MPa)	1/4 inch	AP500-004

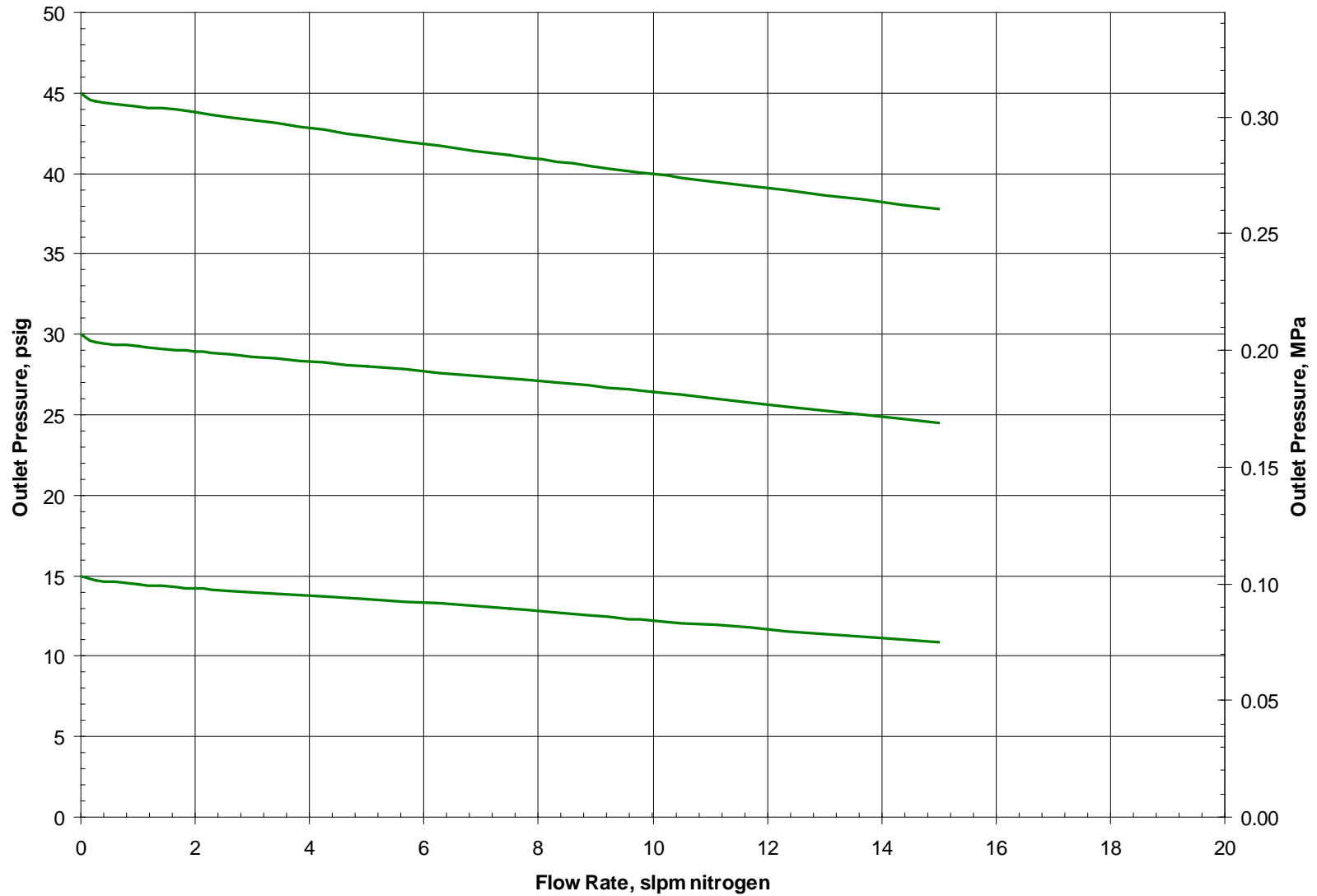
Flow Curve Number AP500-001

AP510S (1/4 inch connections)
Flow Curve at 100 psig (.69 MPa) Inlet Pressure



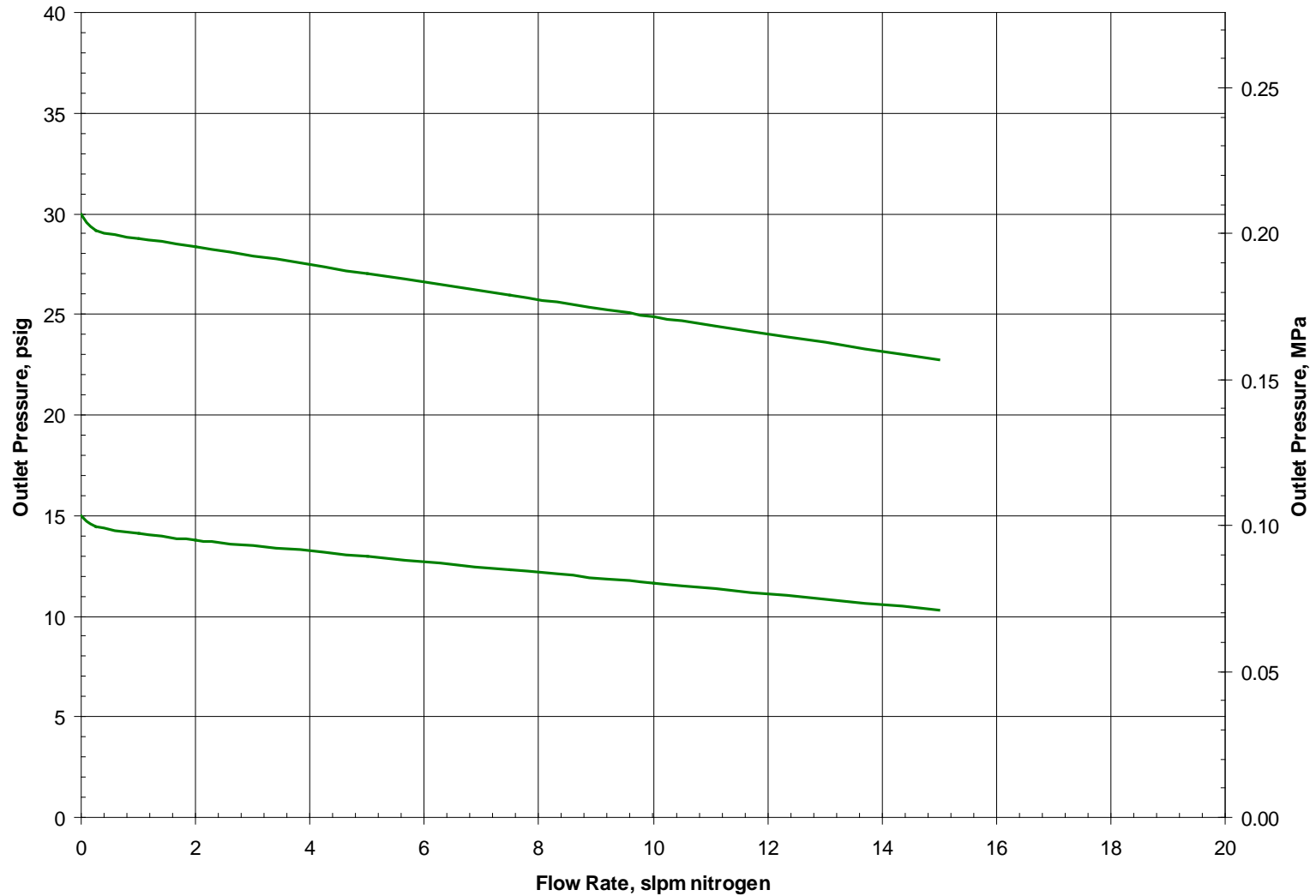
Flow Curve Number AP500-002

AP510S (1/4 inch connections)
Flow Curve at 75 psig (.52 MPa) Inlet Pressure



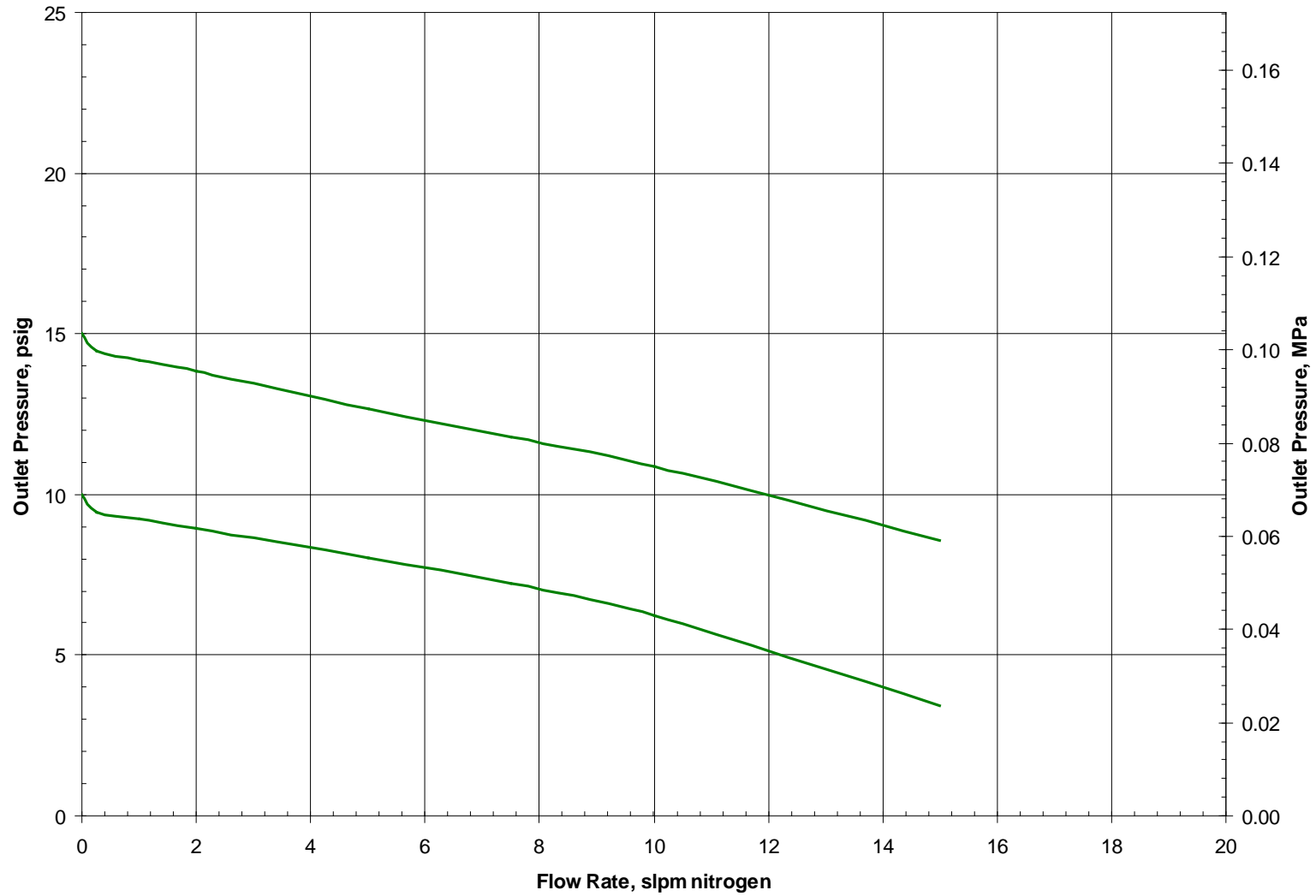
Flow Curve Number AP500-003

AP502S (1/4 inch connections)
Flow Curve at 45 psig (.31 MPa) Inlet Pressure



Flow Curve Number AP500-004

AP502S (1/4 inch connections)
Flow Curve at 30 psig (.21 MPa) Inlet Pressure



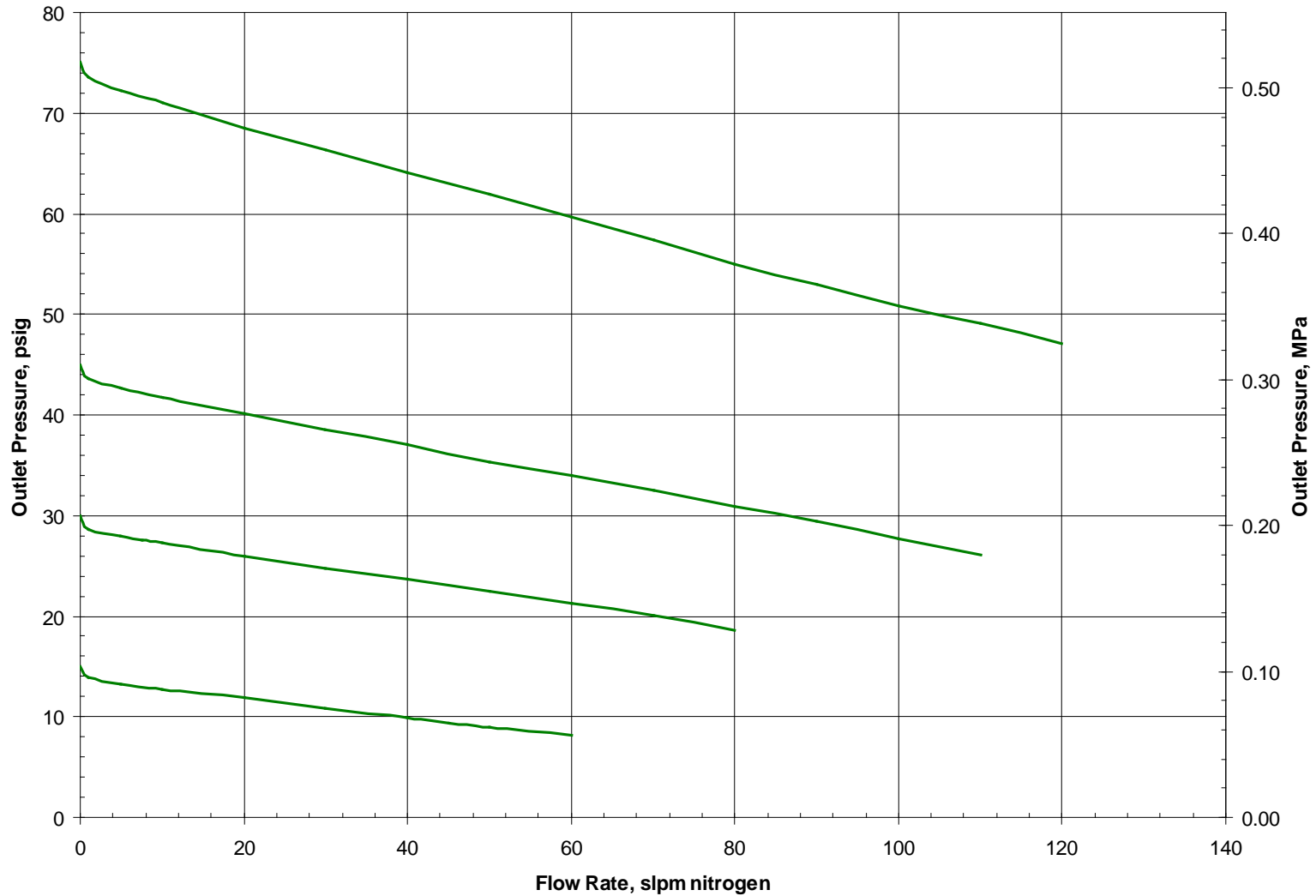
AP500 HF Flow Curve Index

Series	Inlet Pressure, psig (~MPa)	Outlet Pressures, psig (~MPa)	Connection Size	Flow Curve Number
AP500 HF	100 psig (.7 MPa)	75, 45, 30, 15 psig (.5, .3, .2, .1 MPa)	1/4 inch	AP500HF-001
	75 psig (.5 MPa)	45, 30, 15 psig (.3, .2, .1 MPa)	1/4 inch	AP500HF-002
	45 psig (.3 MPa)	25, 15 psig (.17, .1 MPa)	1/4 inch	AP500HF-003
	30 psig (.2 MPa)	15 psig (.1 MPa)	1/4 inch	AP500HF-004

Flow Curve Number AP500HF-001

AP510S HF (1/4 inch connections)

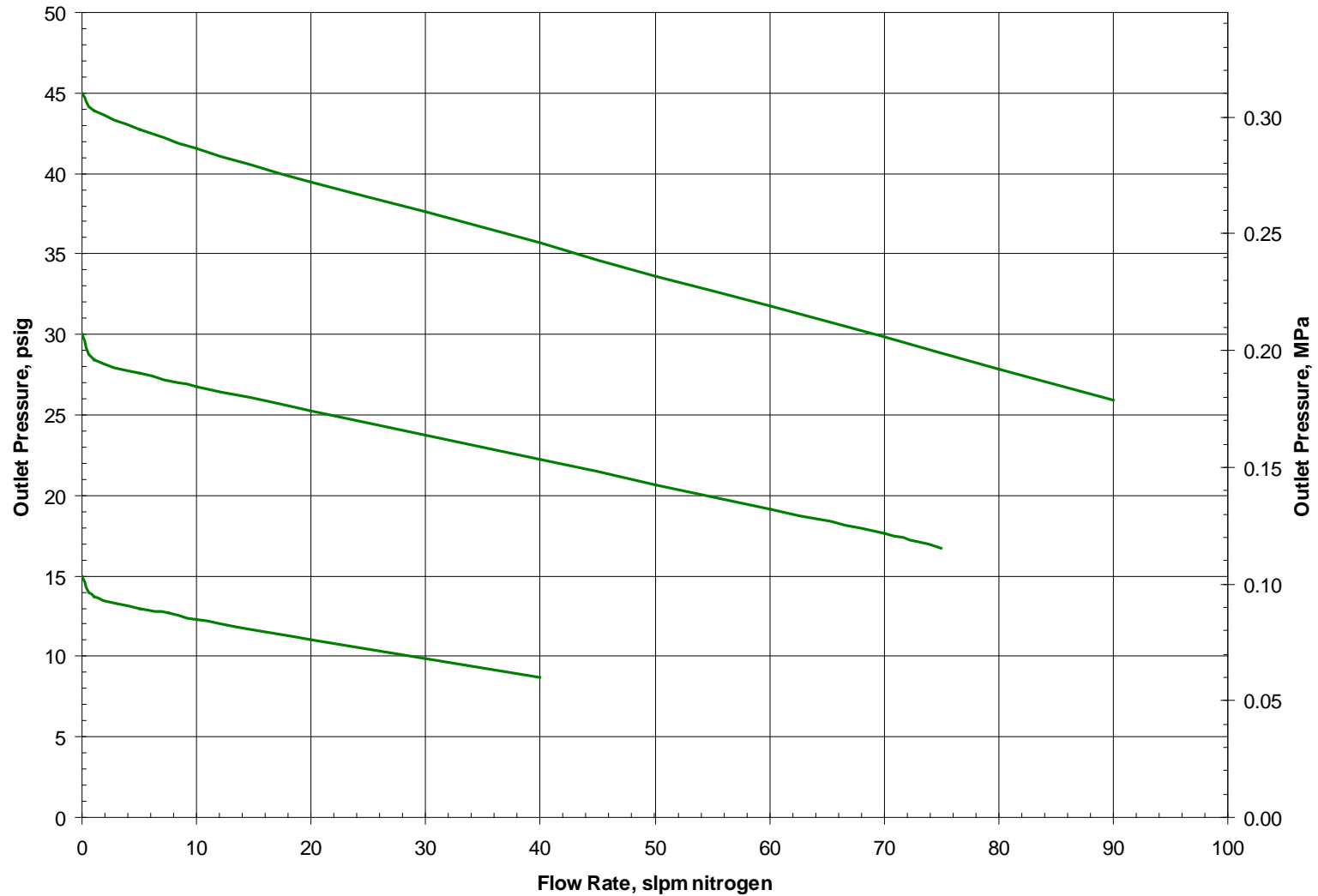
Flow Curve at 100 psig (.69 MPa) Inlet Pressure



Flow Curve Number AP500HF-002

AP510S HF (1/4 inch connections)

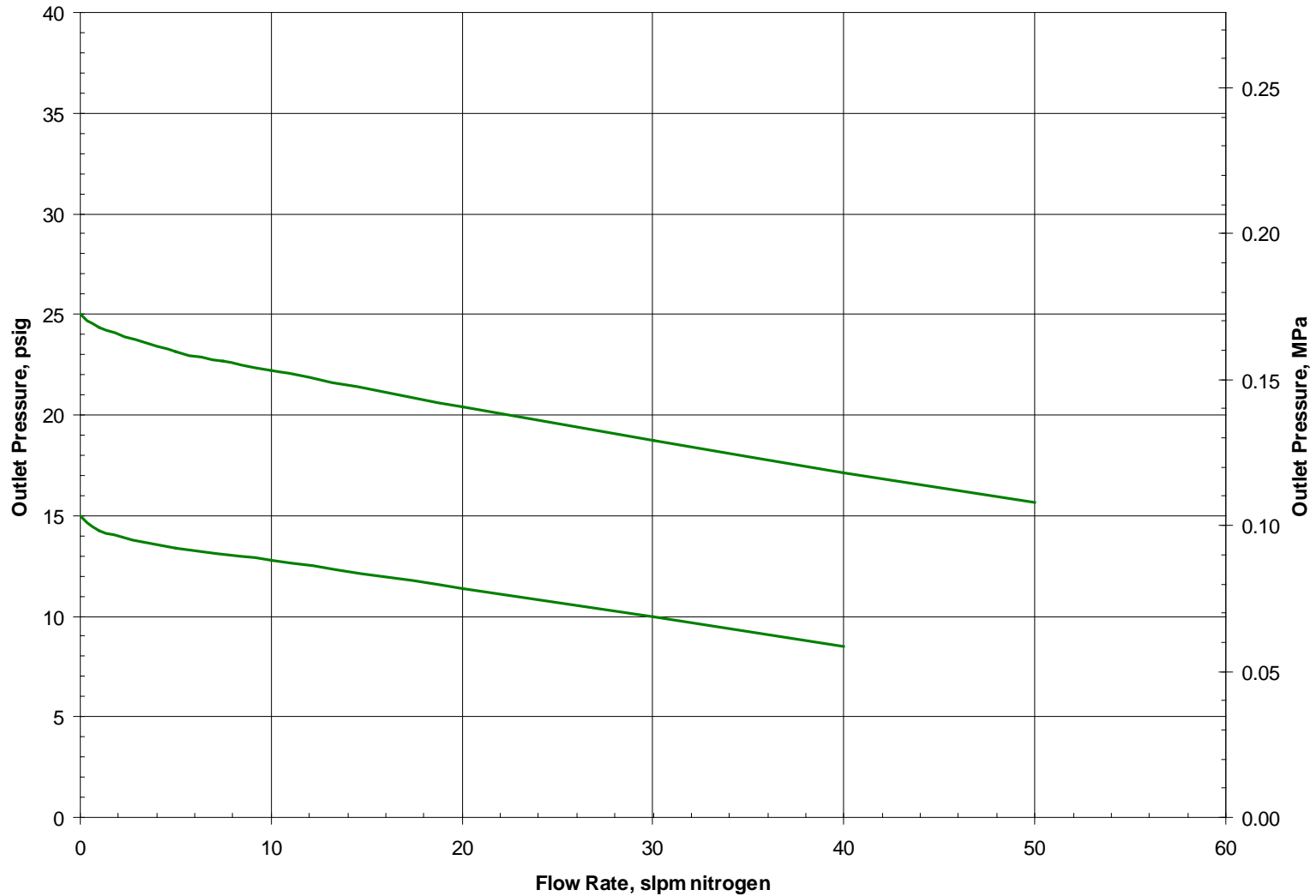
Flow Curve at 75 psig (.52 MPa) Inlet Pressure



Flow Curve Number AP500HF-003

AP502S HF (1/4 inch connections)

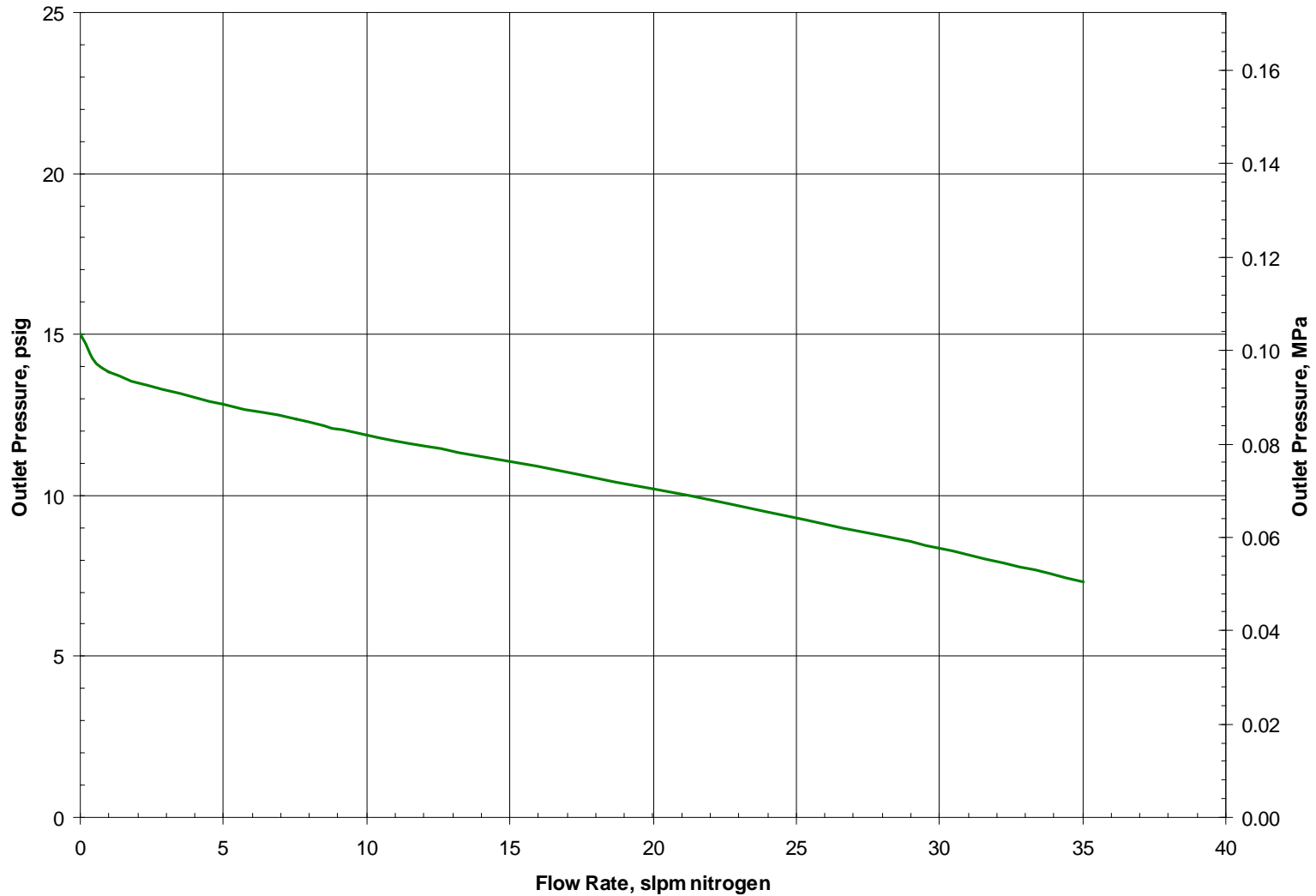
Flow Curve at 45 psig (.31 MPa) Inlet Pressure



Flow Curve Number AP500HF-004

AP502S HF (1/4 inch connections)

Flow Curve at 30 psig (.21 MPa) Inlet Pressure

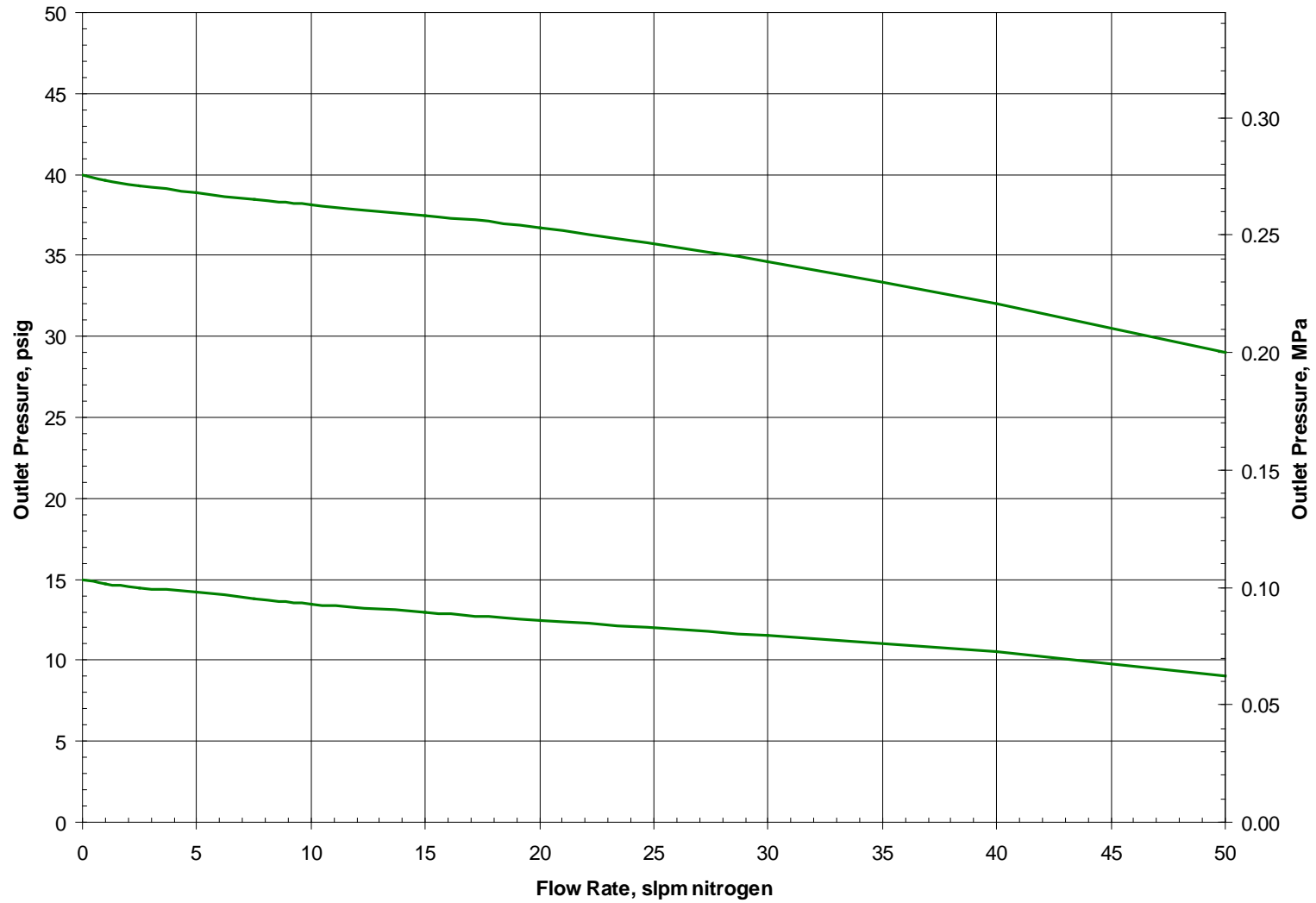


SL5200 Flow Curve Index

Series	Inlet Pressure, psig (~MPa)	Outlet Pressures, psig (~MPa)	Connection Size	Flow Curve Number
SL5200	100 psig (.7 MPa)	40, 15 psig (.28, .1 MPa)	1/4 inch	SL5200-001
	60 psig (.4 MPa)	30, 15 psig (.2, .1 MPa)	1/4 inch	SL5200-002
	30 psig (.2 MPa)	15, 10 psig (.1, .07 MPa)	1/4 inch	SL5200-003

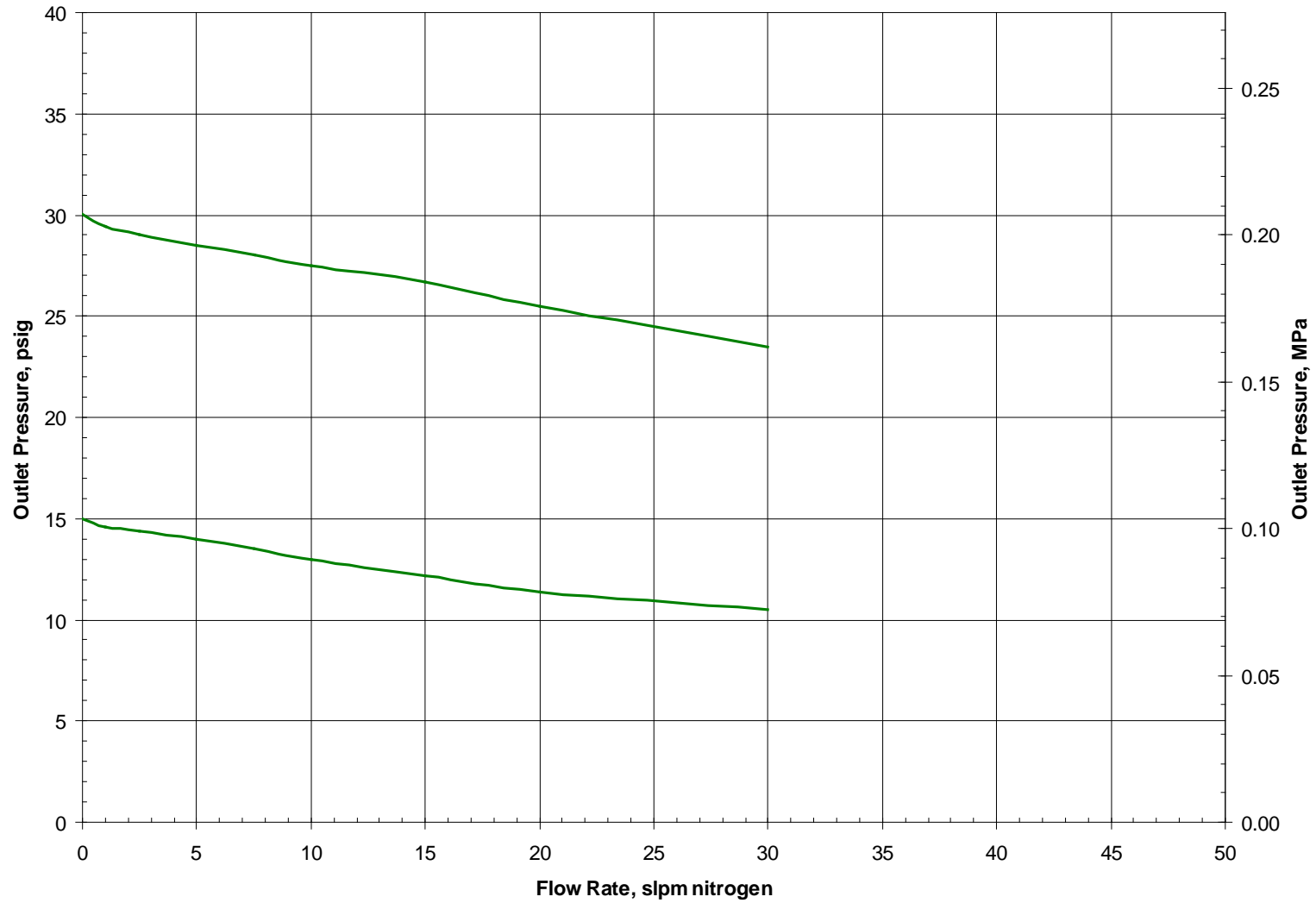
Flow Curve Number SL5200-001

SL5210 (1/4 inch connections)
Flow Curve at 100 psig (.69 MPa) Inlet Pressure



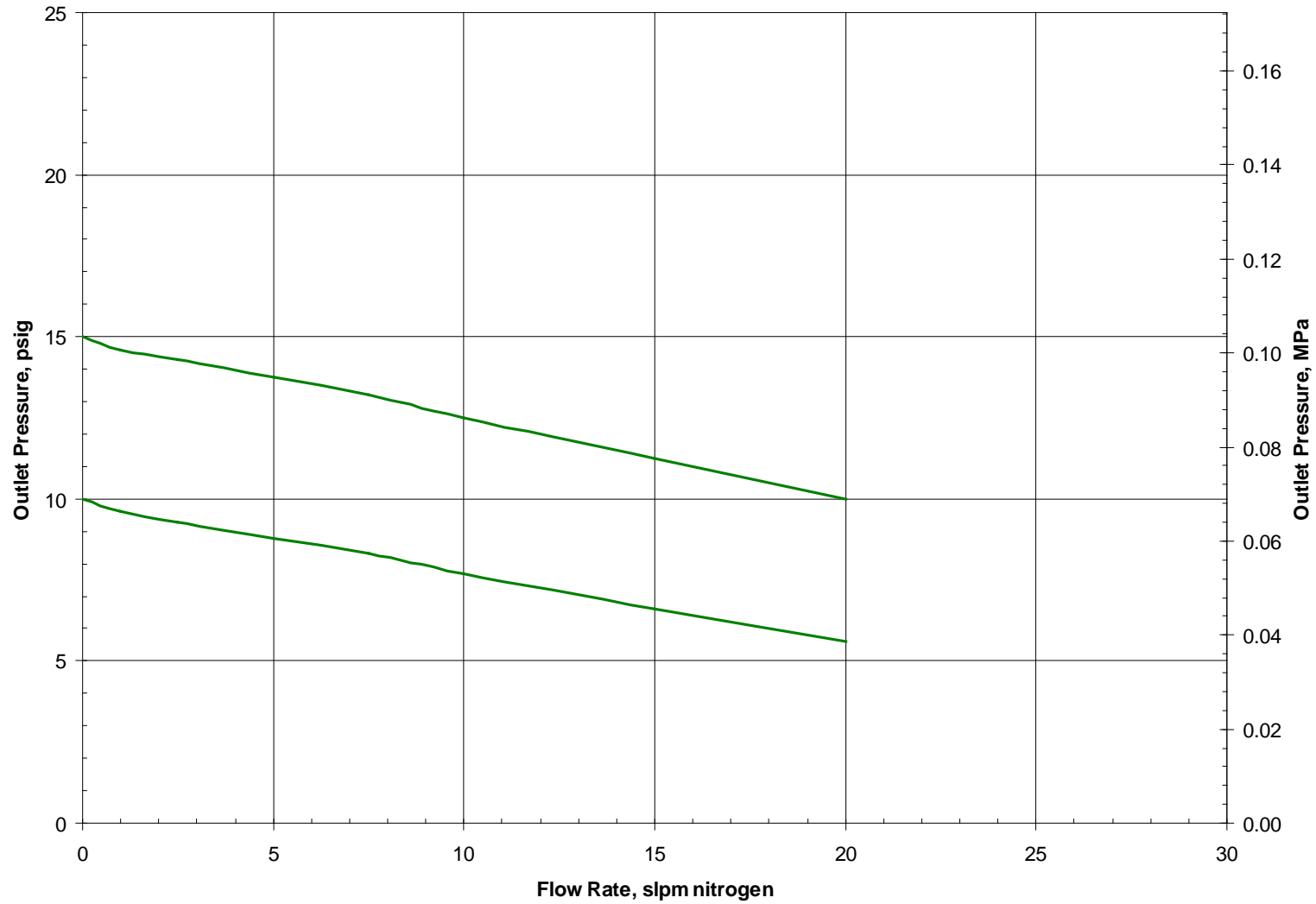
Flow Curve Number SL5200-002

SL5210 (1/4 inch connections)
Flow Curve at 60 psig (.41 MPa) Inlet Pressure



Flow Curve Number SL5200-003

SL5202 (1/4 inch connections)
Flow Curve at 30 psig (.21 MPa) Inlet Pressure

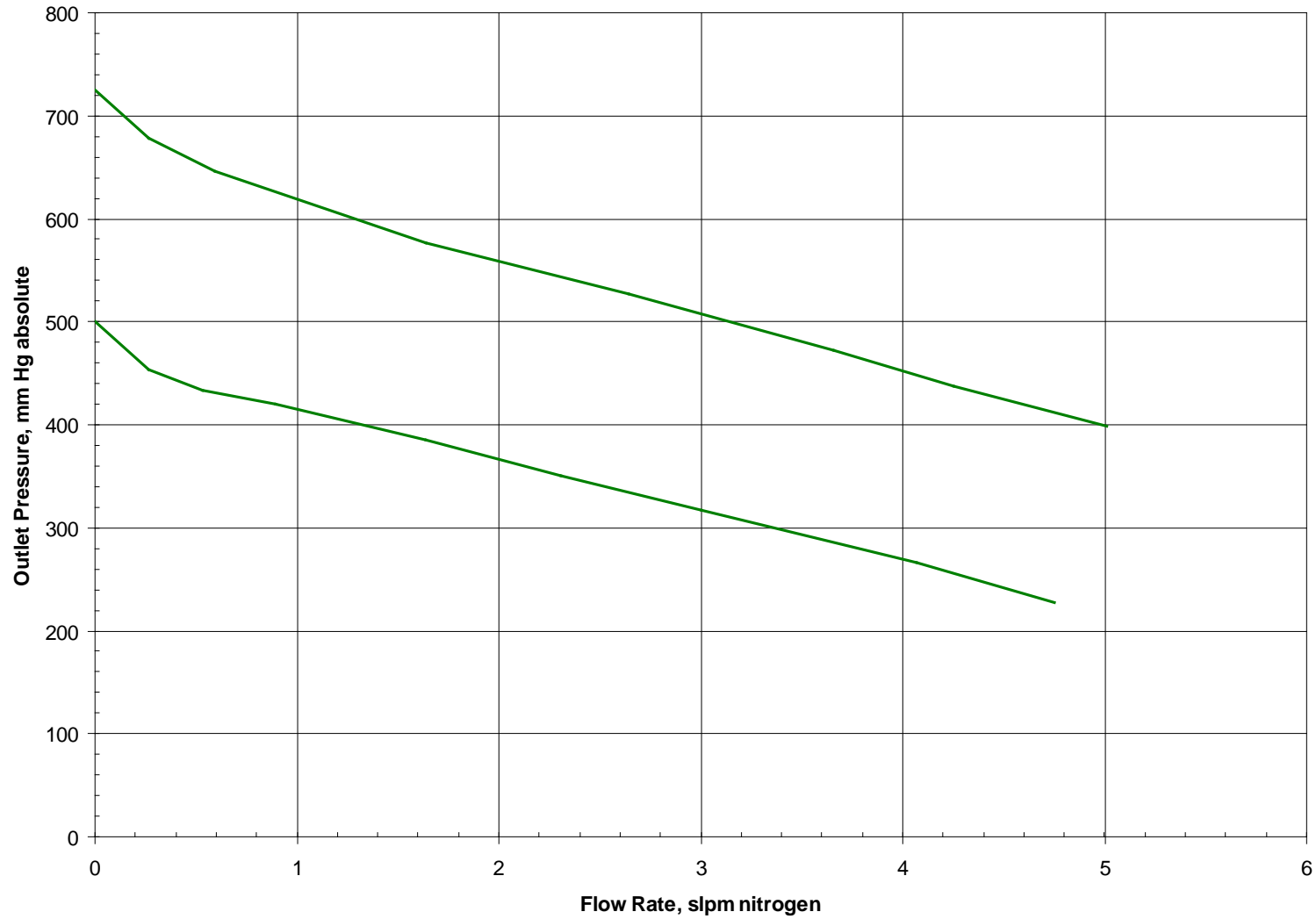


SL5201A Flow Curve Index

Series	Inlet Pressure, psig (~MPa)	Outlet Pressures, mm Hg	Connection Size	Flow Curve Number
SL5201A	2 psig (.014 MPa)	500, 725 mm Hg	1/4 inch	SL5201A-001

Flow Curve Number SL5201A-001

SL5201SA (1/4 inch connections)
Flow Curve at 2 psig (.014 MPa) Inlet Pressure

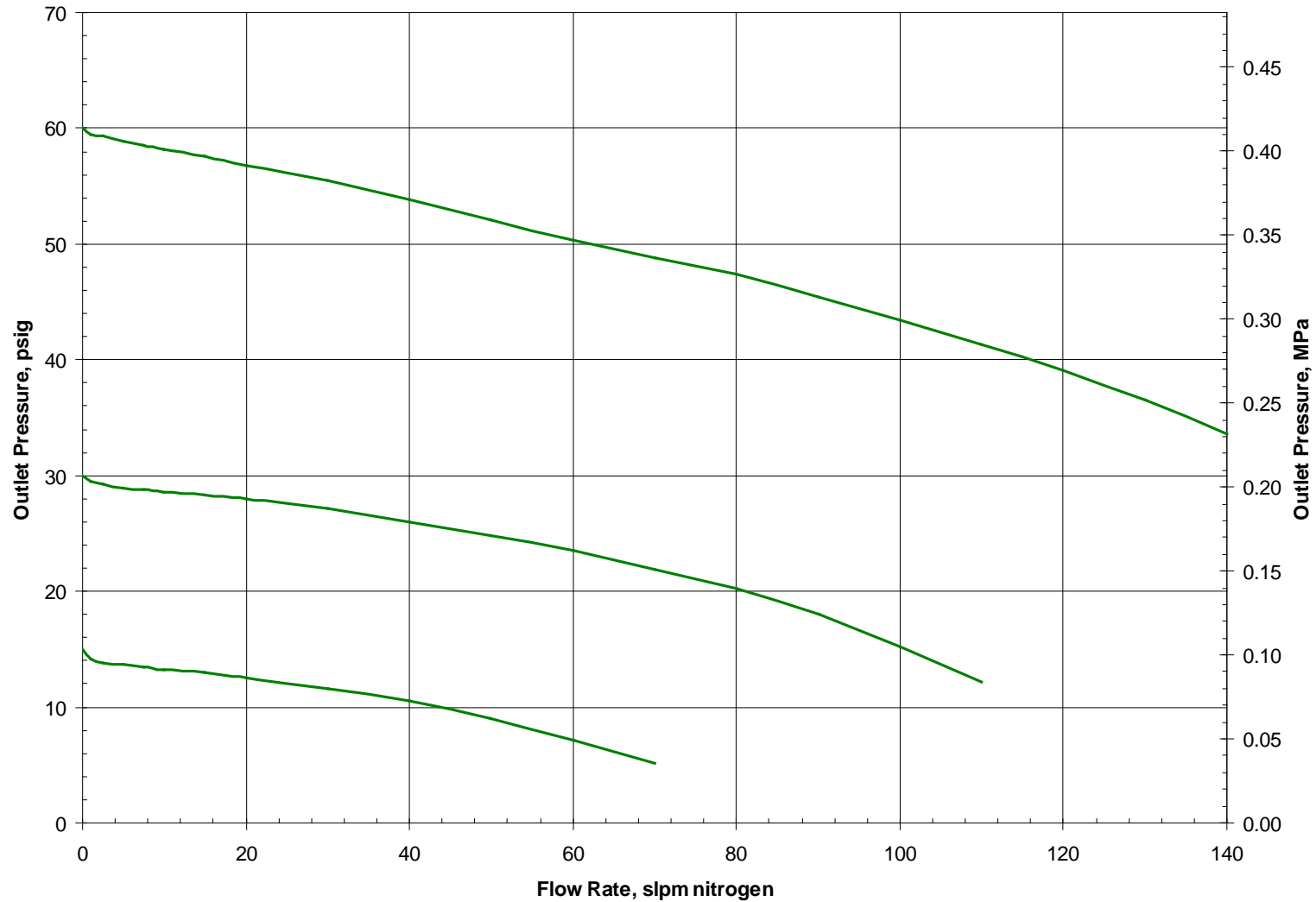


SL5200 HF Flow Curve Index

Series	Inlet Pressure, psig (~MPa)	Outlet Pressures, psig (~MPa)	Connection Size	Flow Curve Number
SL5200 HF	100 psig (.7 MPa)	60, 30, 15 psig (.4, .2, .1 MPa)	1/4 inch	SL5200HF-001
	50 psig (.34 MPa)	30, 15 psig (.2, .1 MPa)	1/4 inch	SL5200HF-002
	30 psig (.2 MPa)	15, 10 psig (.1, .07 MPa)	1/4 inch	SL5200HF-003

Flow Curve Number SL5200HF-001

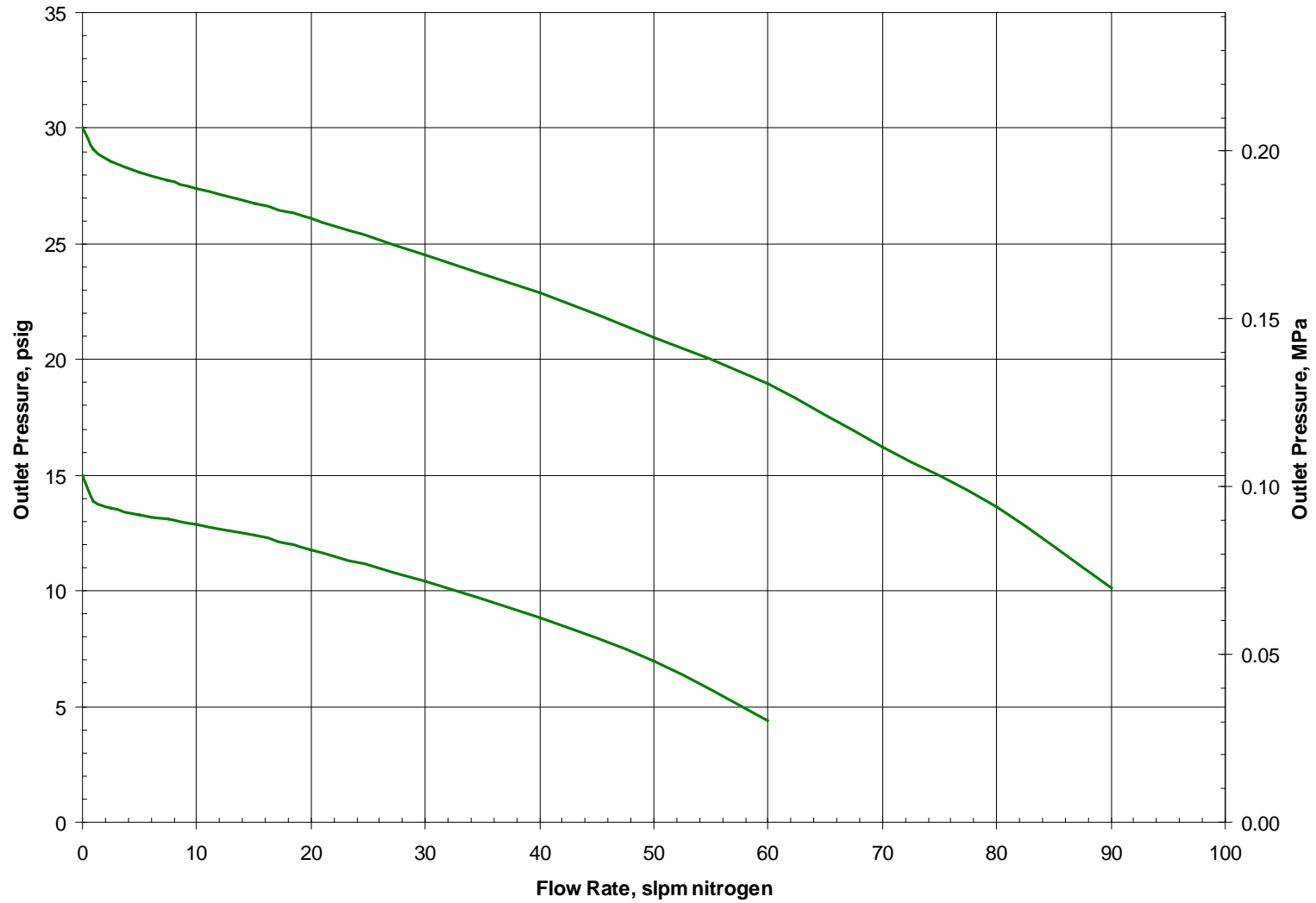
SL5210 HF (1/4 inch connections)
Flow Curve at 100 psig (.69 MPa) Inlet Pressure



Flow Curve Number SL5200HF-002

SL5210 HF (1/4 inch connections)

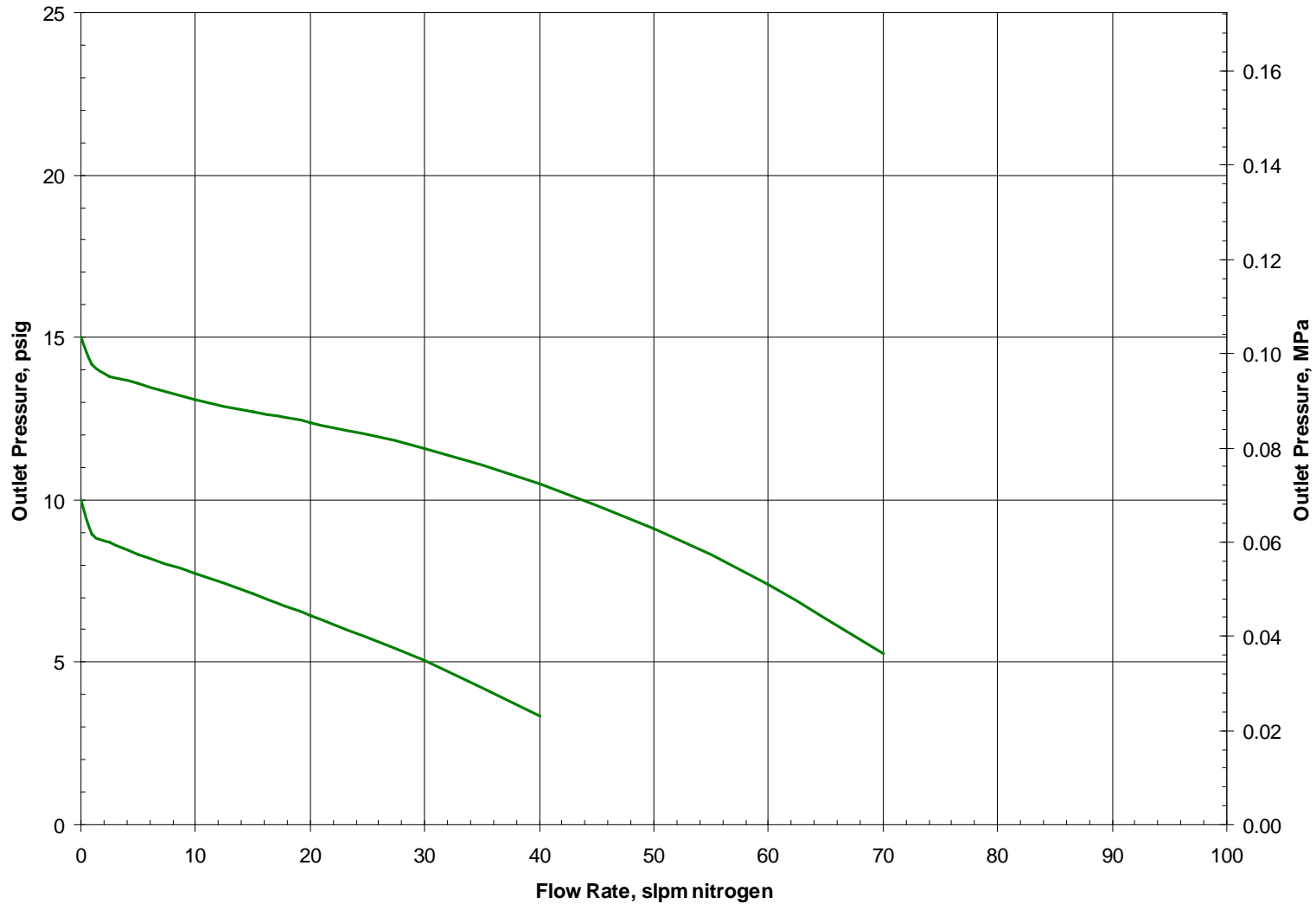
Flow Curve at 50 psig (.34 MPa) Inlet Pressure



Flow Curve Number SL5200HF-003

SL5202 HF (1/4 inch connections)

Flow Curve at 30 psig (.21 MPa) Inlet Pressure



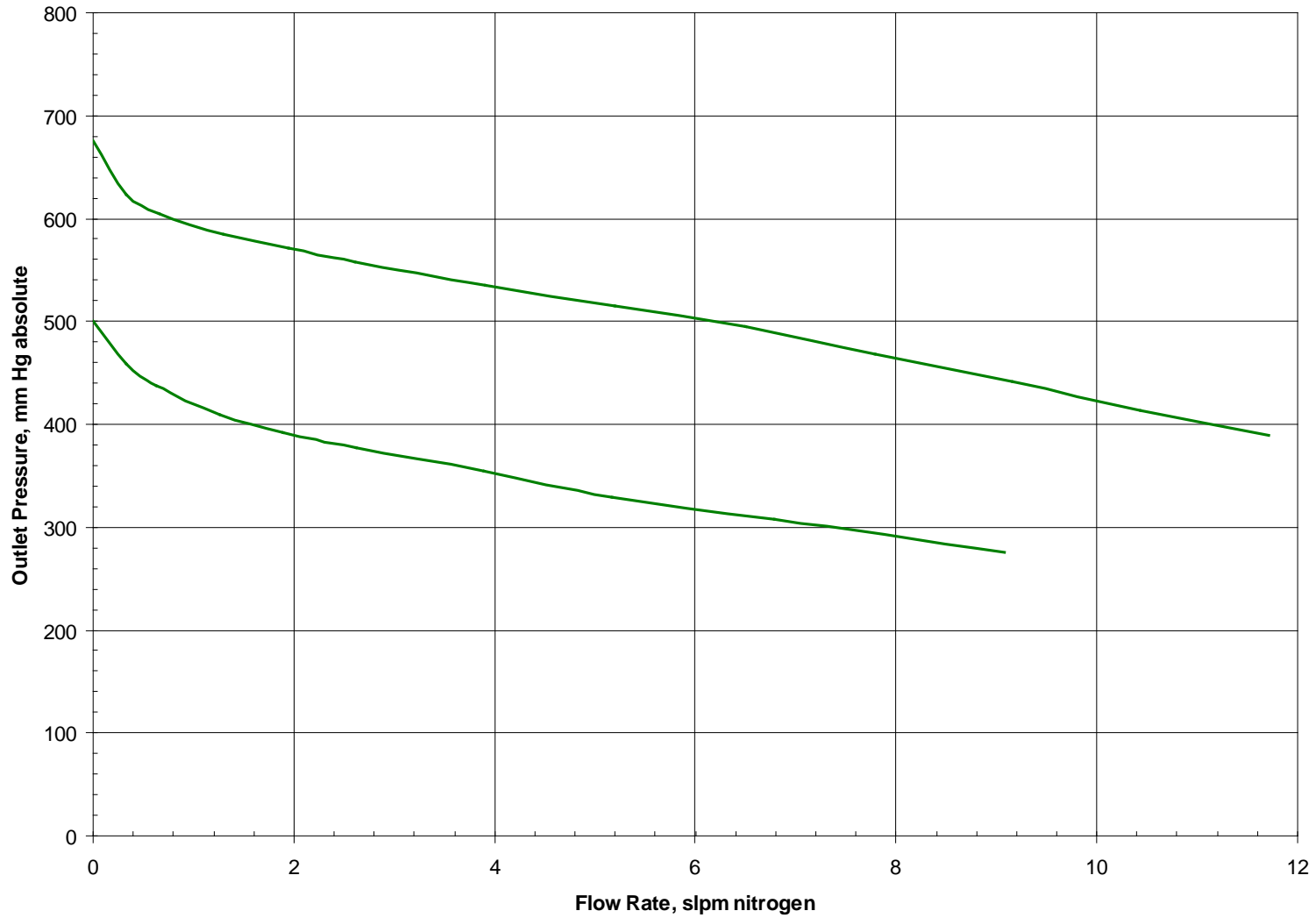
SL5201A HF Flow Curve Index

Series	Inlet Pressure, psig (~MPa)	Outlet Pressures, mm Hg	Connection Size	Flow Curve Number
SL5201A HF	10 psig (.07 MPa)	500, 675 mm Hg	1/4 inch	SL5201AHF-001
	2 psig (.014 MPa)	500 mm Hg	1/4 inch	SL5201AHF-002

Flow Curve Number SL5201AHF-001

SL5201SA HF (1/4 inch connections)

Flow Curve at 10 psig (.07 MPa) Inlet Pressure



Flow Curve Number SL5201AHF-002

SL5201SA HF (1/4 inch connections)

Flow Curve at 2 psig (.014 MPa) Inlet Pressure

