

Mini Regulator Flow Curves

Report # 30013700 Rev 0

September 13, 2005

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

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General Recommendations and Notes

Regulator Series	Maximum Inlet Pressure, psig (~MPa)	Maximum Outlet Pressure, psig (~MPa)	Flow Coefficient, Cv	Recommended Maximum Flow, slpm nitrogen
AP500	150 psig (1 MPa)	100 psig (.7 MPa)	0.06	15 slpm
AP500 HF	150 psig (1 MPa)	100 psig (.7 MPa)	0.10	50 slpm
SL5200	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
SL5200 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

Notes:

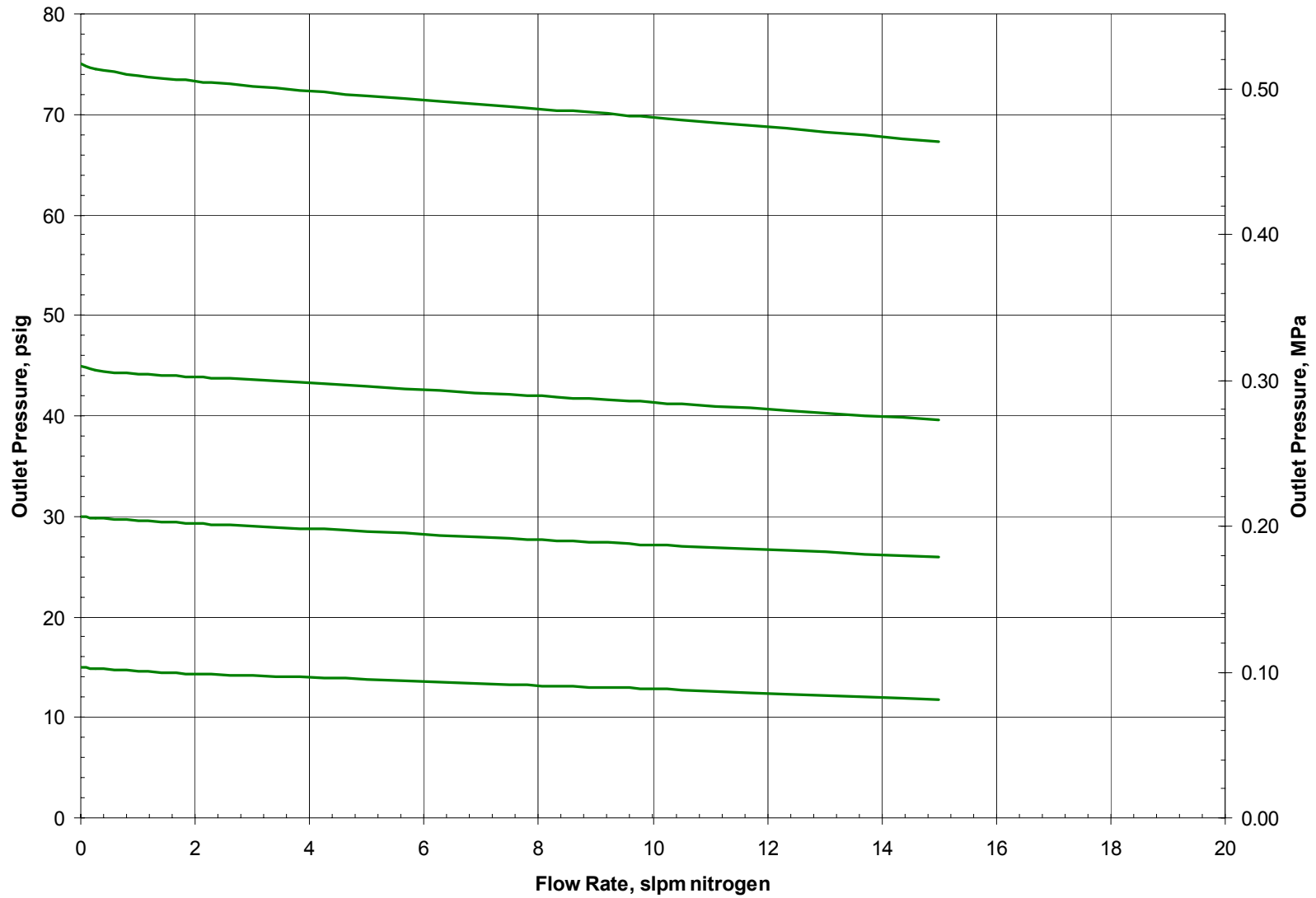
1. The recommended maximum flow might not be achievable depending on the inlet pressure. Please refer to specific flow curve conditions.
2. It is possible to exceed the maximum recommended flow at the maximum inlet pressure. In some applications this will have no adverse affect on the pressure regulator but testing at usage conditions is recommended.
3. Most regulator series are available with outlet pressure ranges other than those specified. A different outlet range selection may have a slight affect on the flow curve. Refer to the data sheet for the specific regulator or consult the factory to determine availability and specifications.
4. In general, it is recommended that the regulator that has the flow capacity at the inlet pressure and outlet pressure conditions and has the smallest flow coefficient be selected. Typically, this regulator will have better performance for characteristics other than flow and will be more cost effective. Please contact the factory for specific recommendations.

AP500 Flow Curve Index

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

Flow Curve Number AP500-001

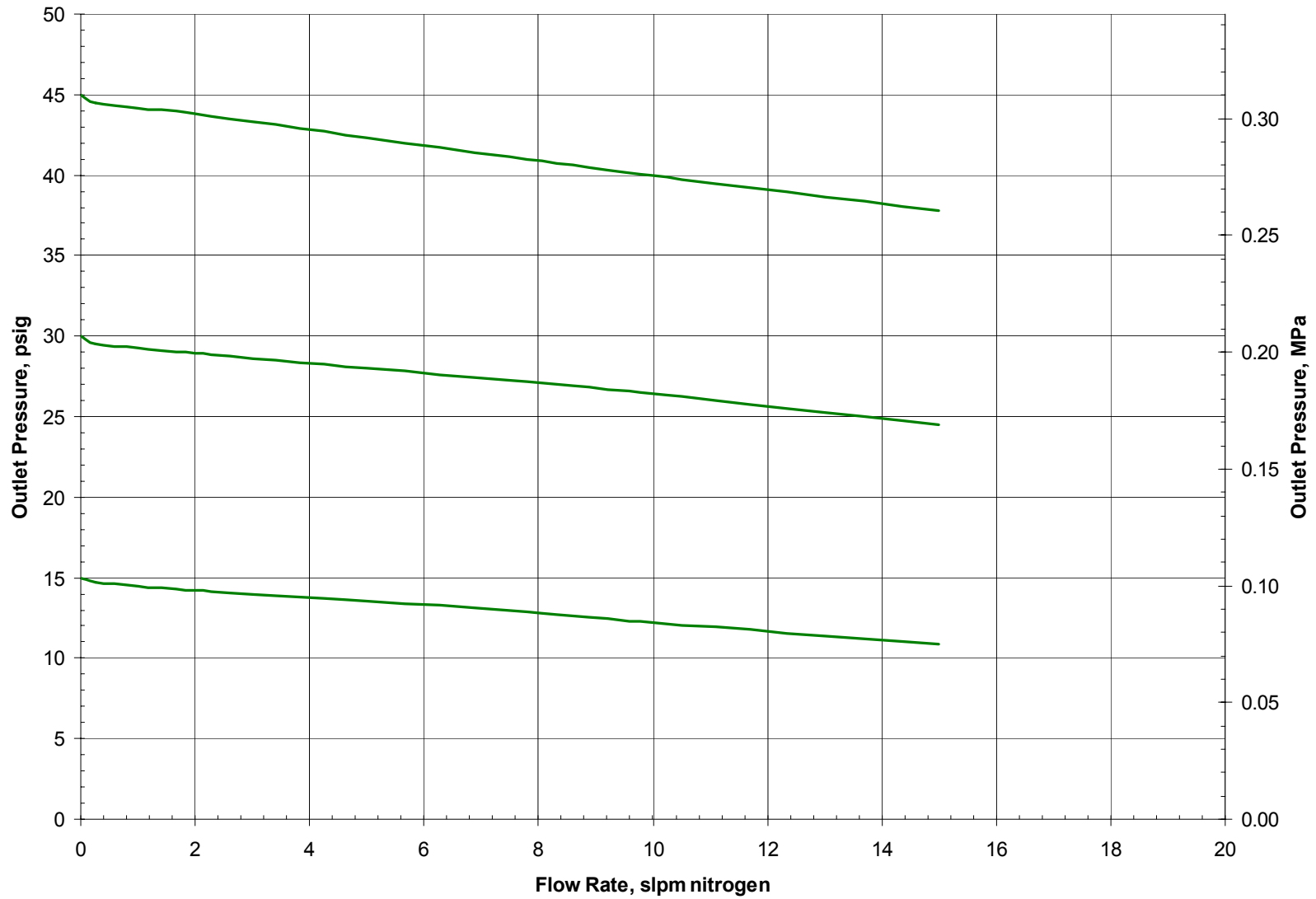
AP510S (1/4 inch connections)
Flow Curve at 100 psig (.69 MPa) Inlet Pressure



Flow Curve Number AP500-002

AP510S (1/4 inch connections)

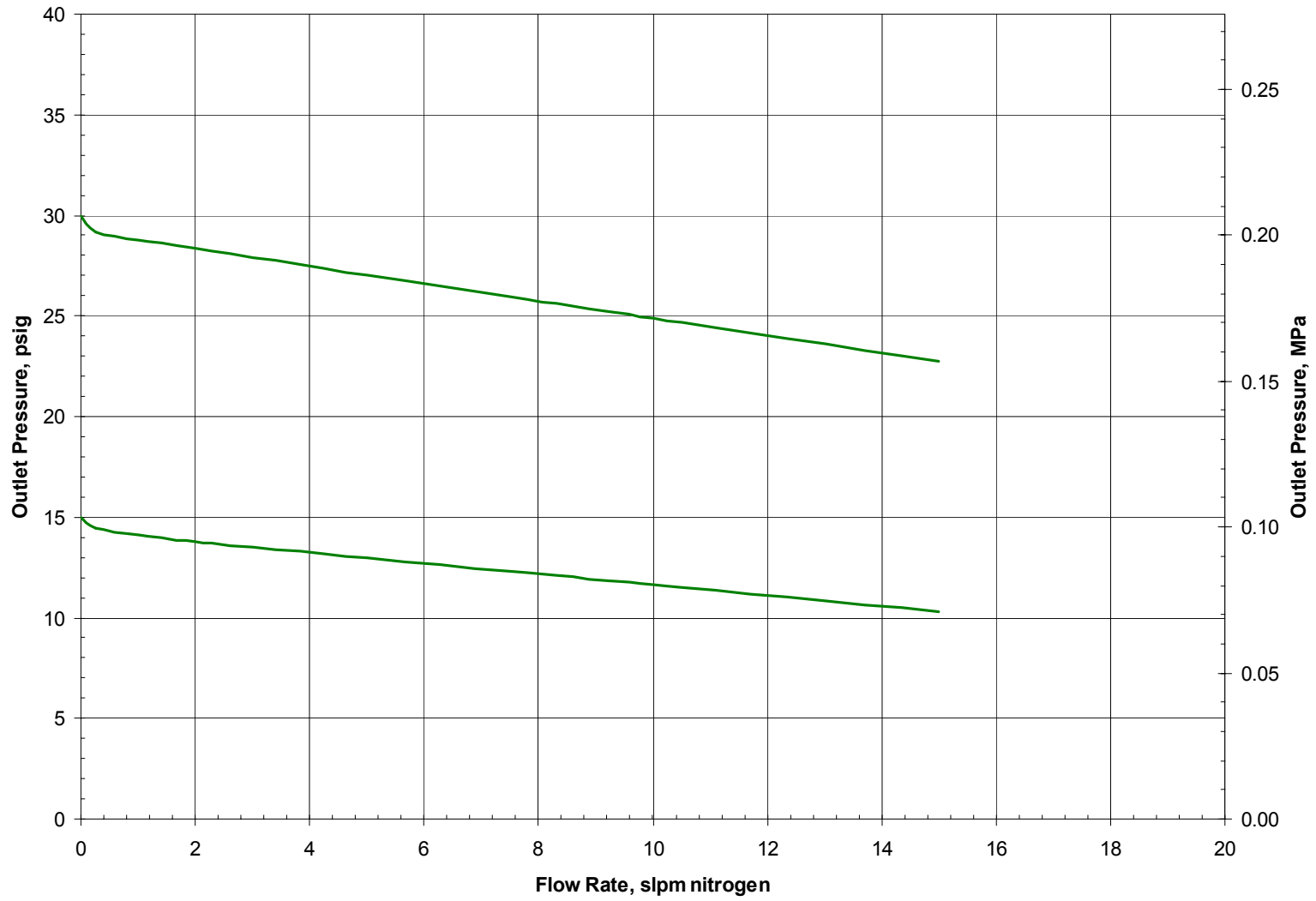
Flow Curve at 75 psig (.52 MPa) Inlet Pressure



Flow Curve Number AP500-003

AP502S (1/4 inch connections)

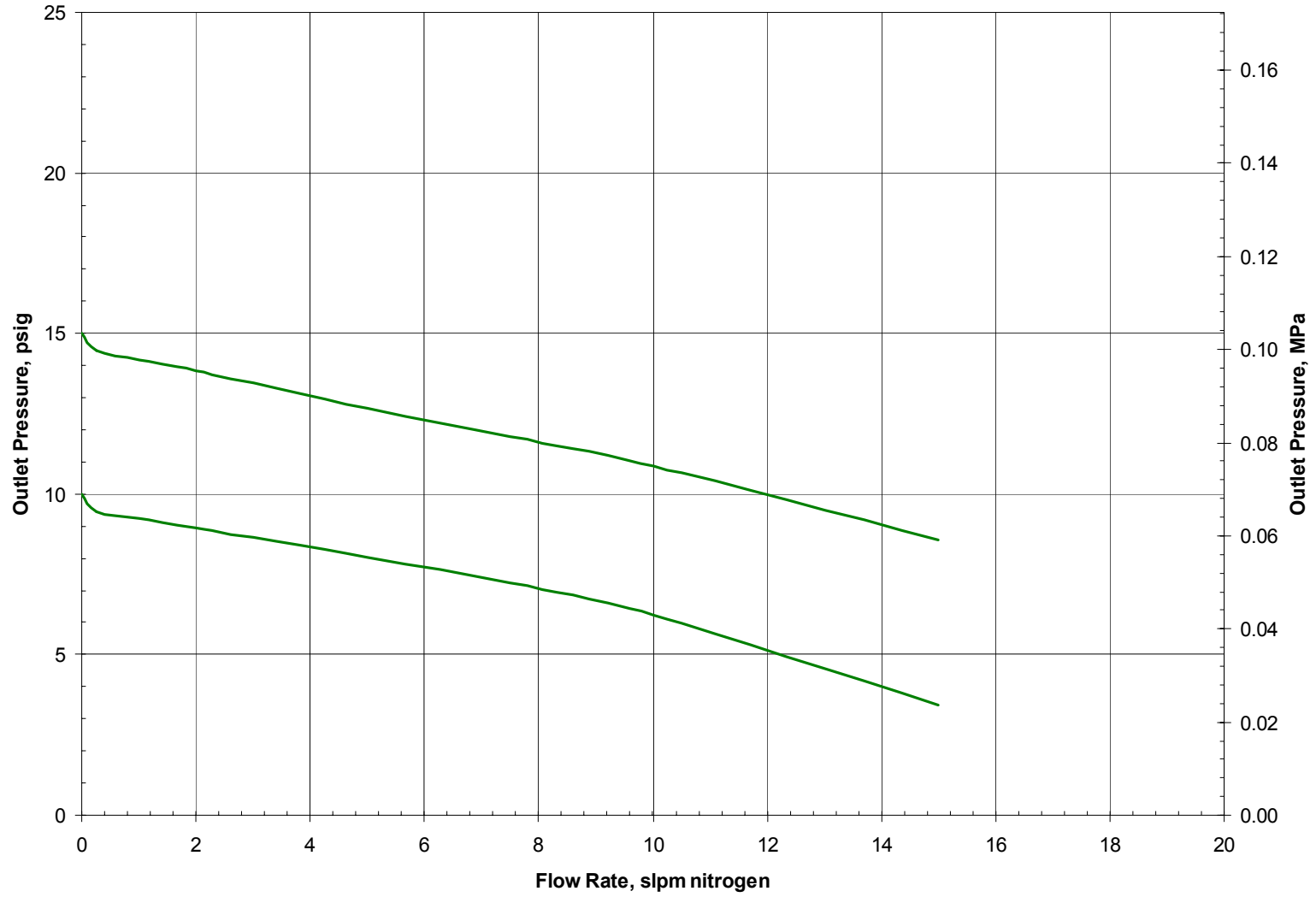
Flow Curve at 45 psig (.31 MPa) Inlet Pressure



Flow Curve Number AP500-004

AP502S (1/4 inch connections)

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



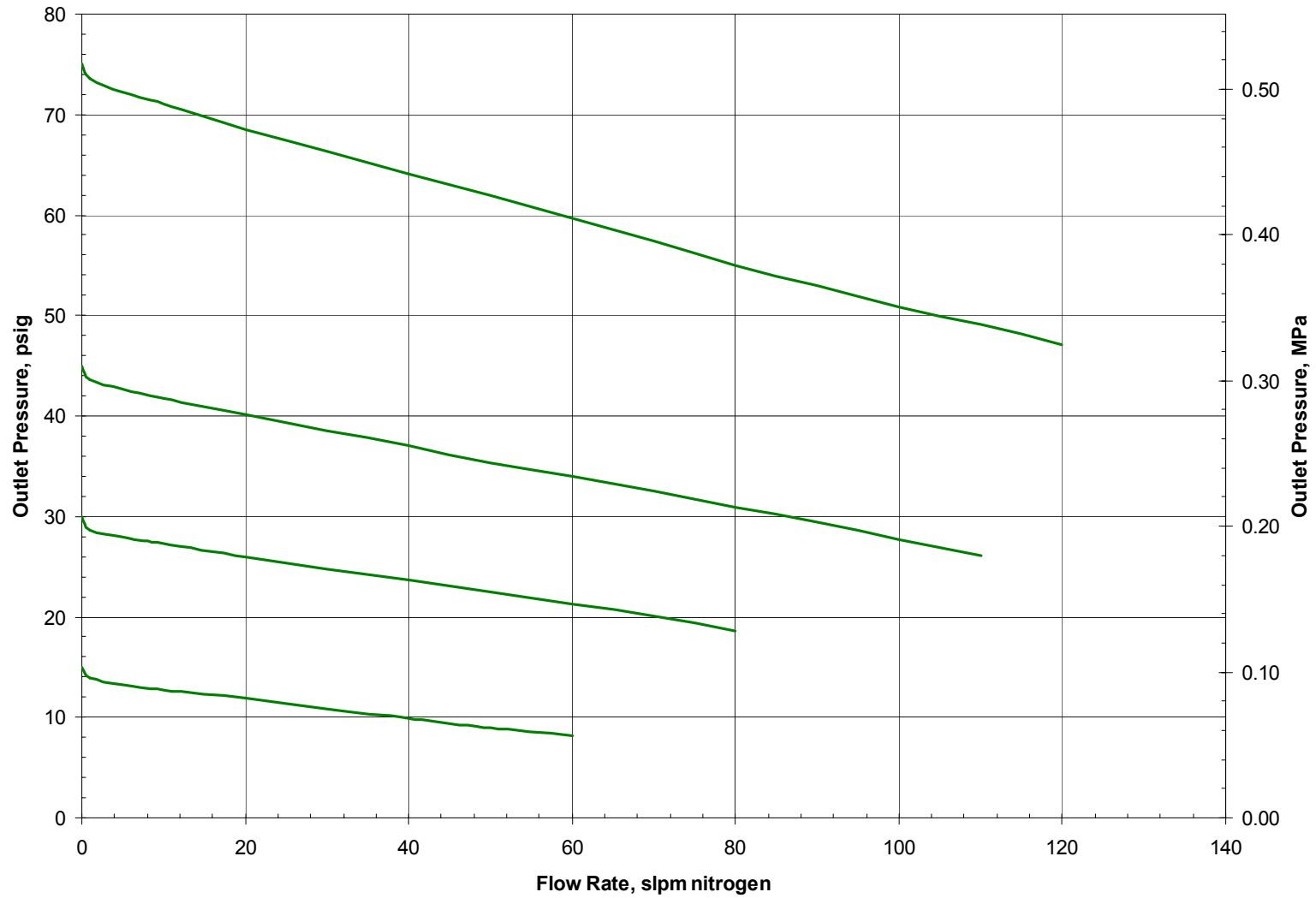
AP500 HF Flow Curve Index

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

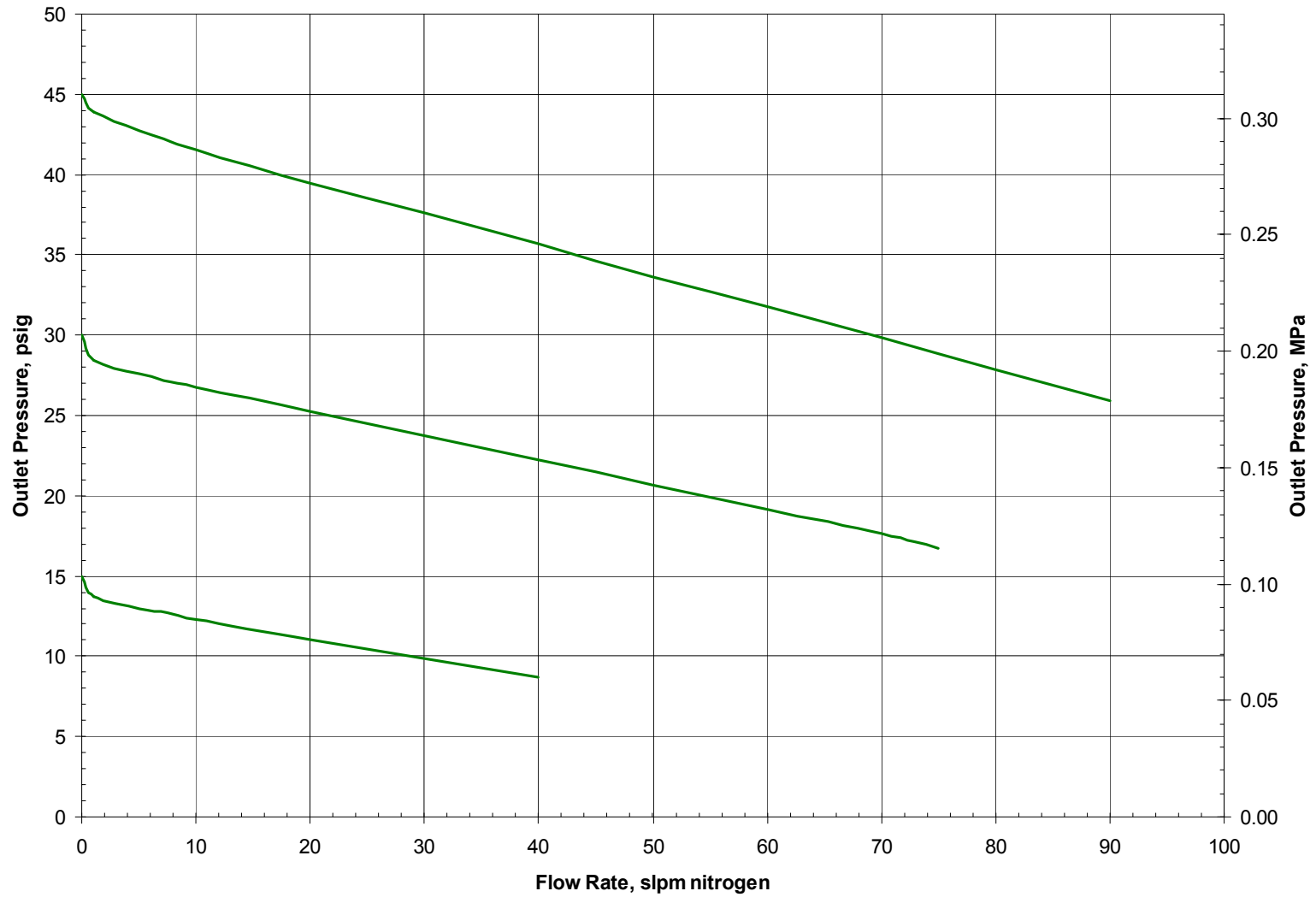
Flow Curve at 100 psig (.69 MPa) Inlet Pressure



Flow Curve Number AP500HF-002

AP510S HF (1/4 inch connections)

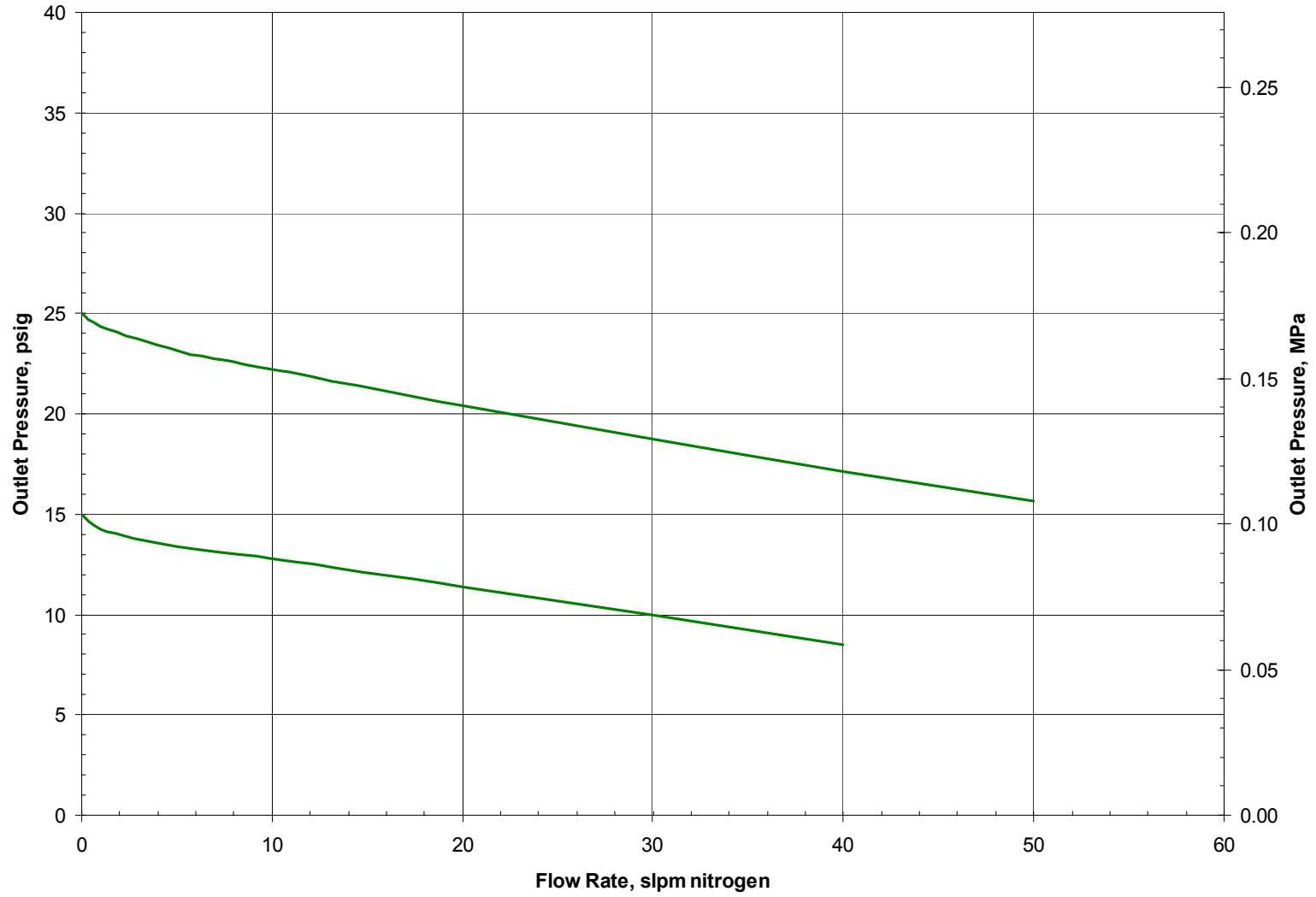
Flow Curve at 75 psig (.52 MPa) Inlet Pressure



Flow Curve Number AP500HF-003

AP502S HF (1/4 inch connections)

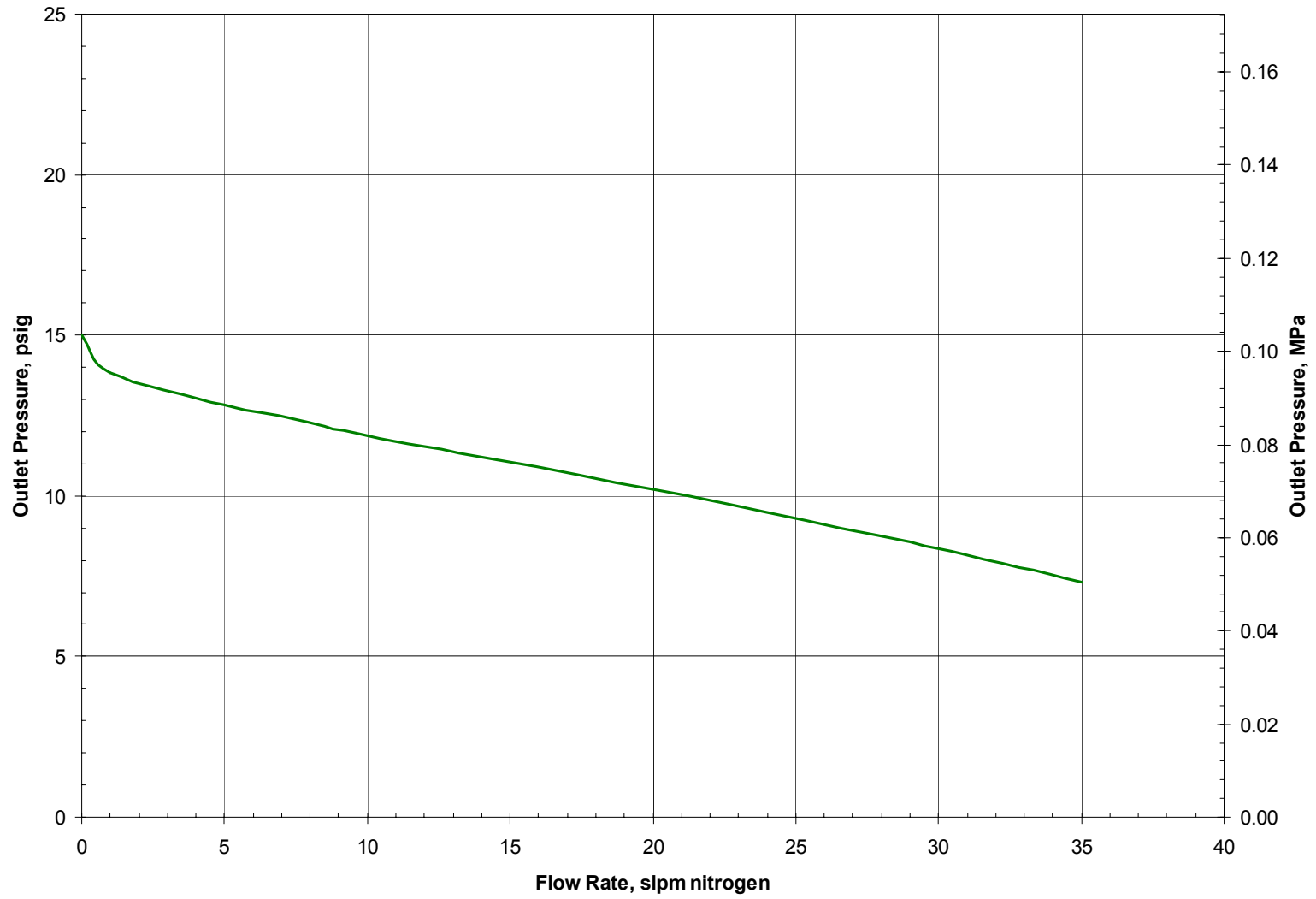
Flow Curve at 45 psig (.31 MPa) Inlet Pressure



Flow Curve Number AP500HF-004

AP502S HF (1/4 inch connections)

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

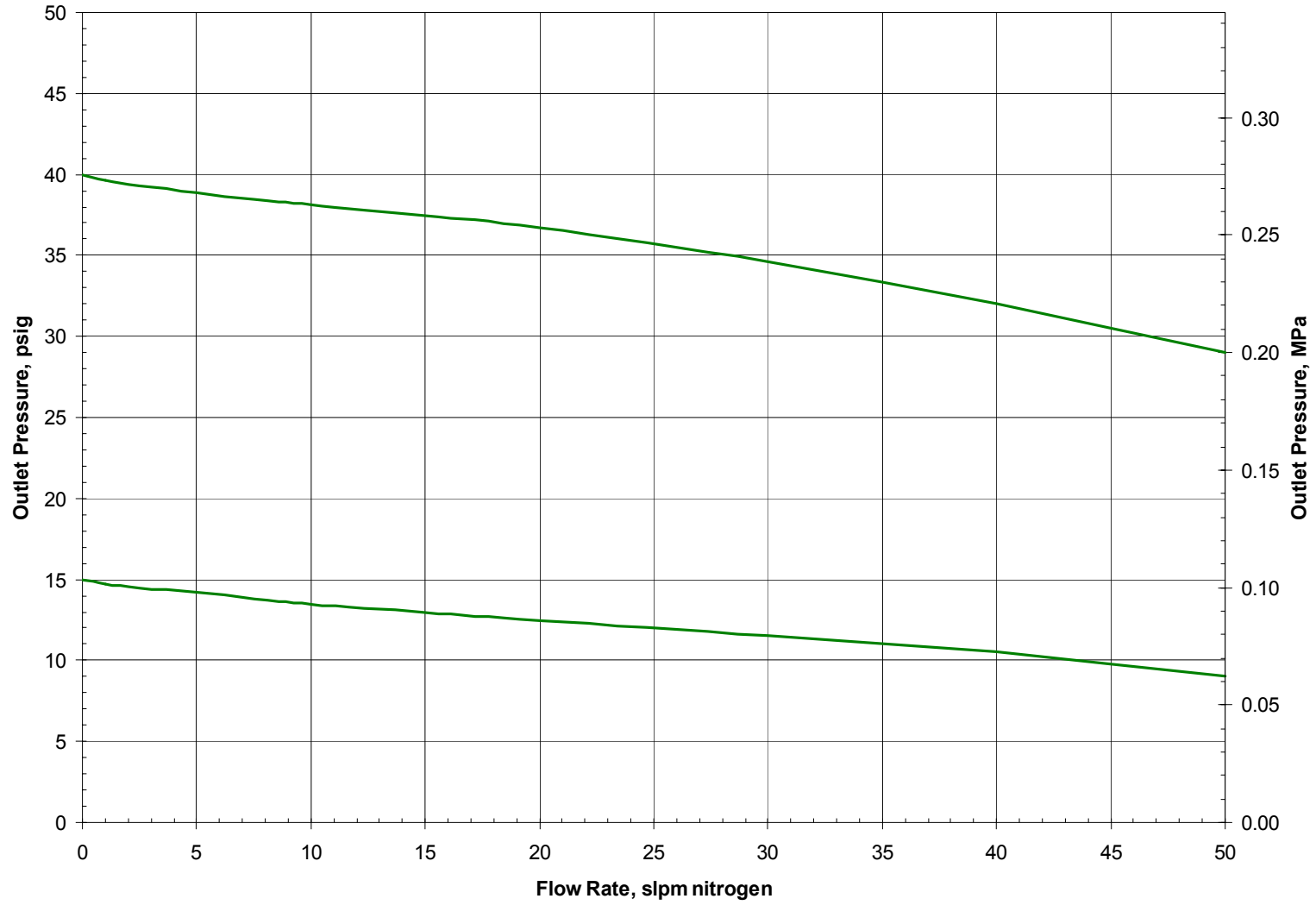


SL5200 Flow Curve Index

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

Flow Curve Number SL5200-001

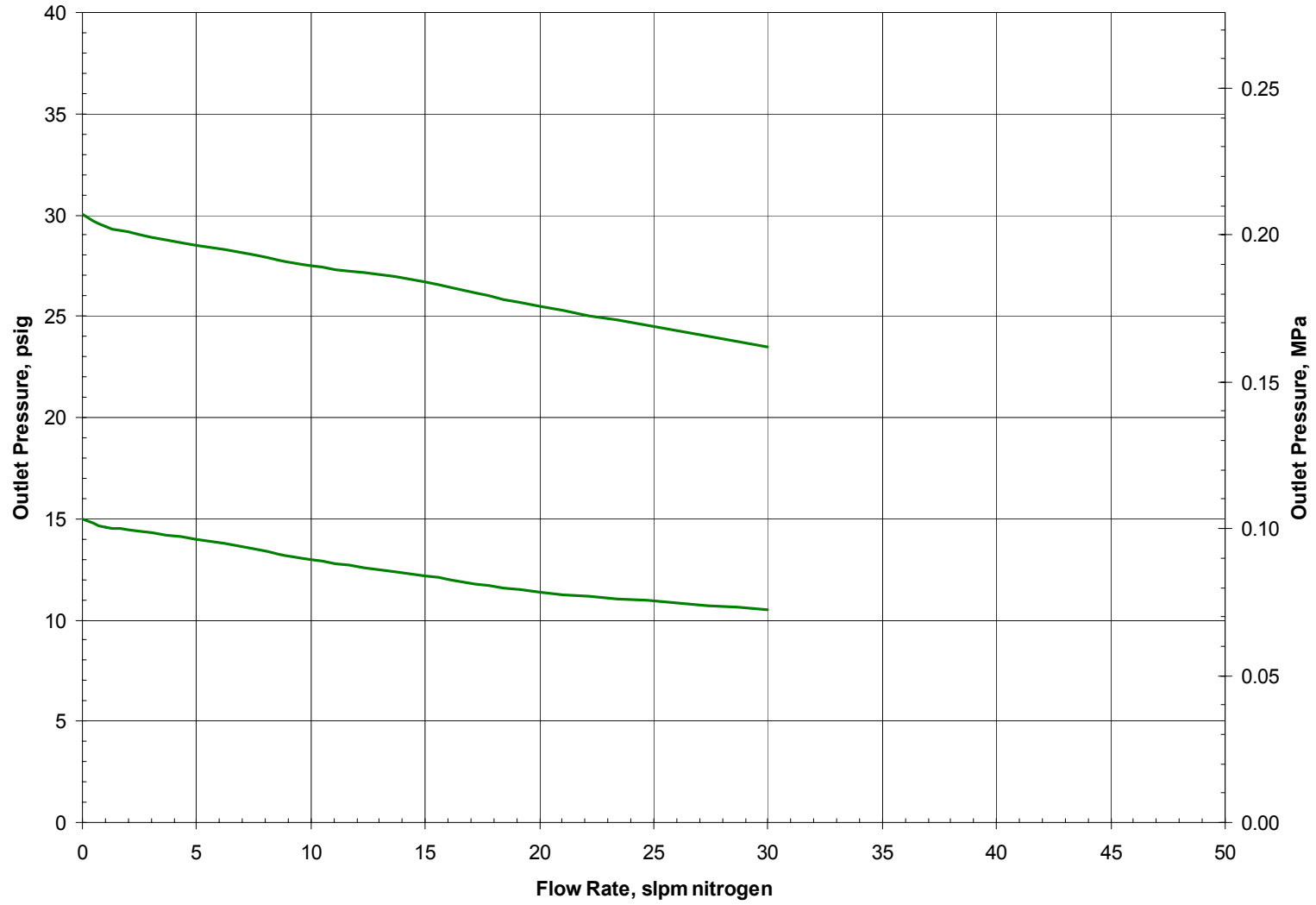
SL5210 (1/4 inch connections)
Flow Curve at 100 psig (.69 MPa) Inlet Pressure



Flow Curve Number SL5200-002

SL5210 (1/4 inch connections)

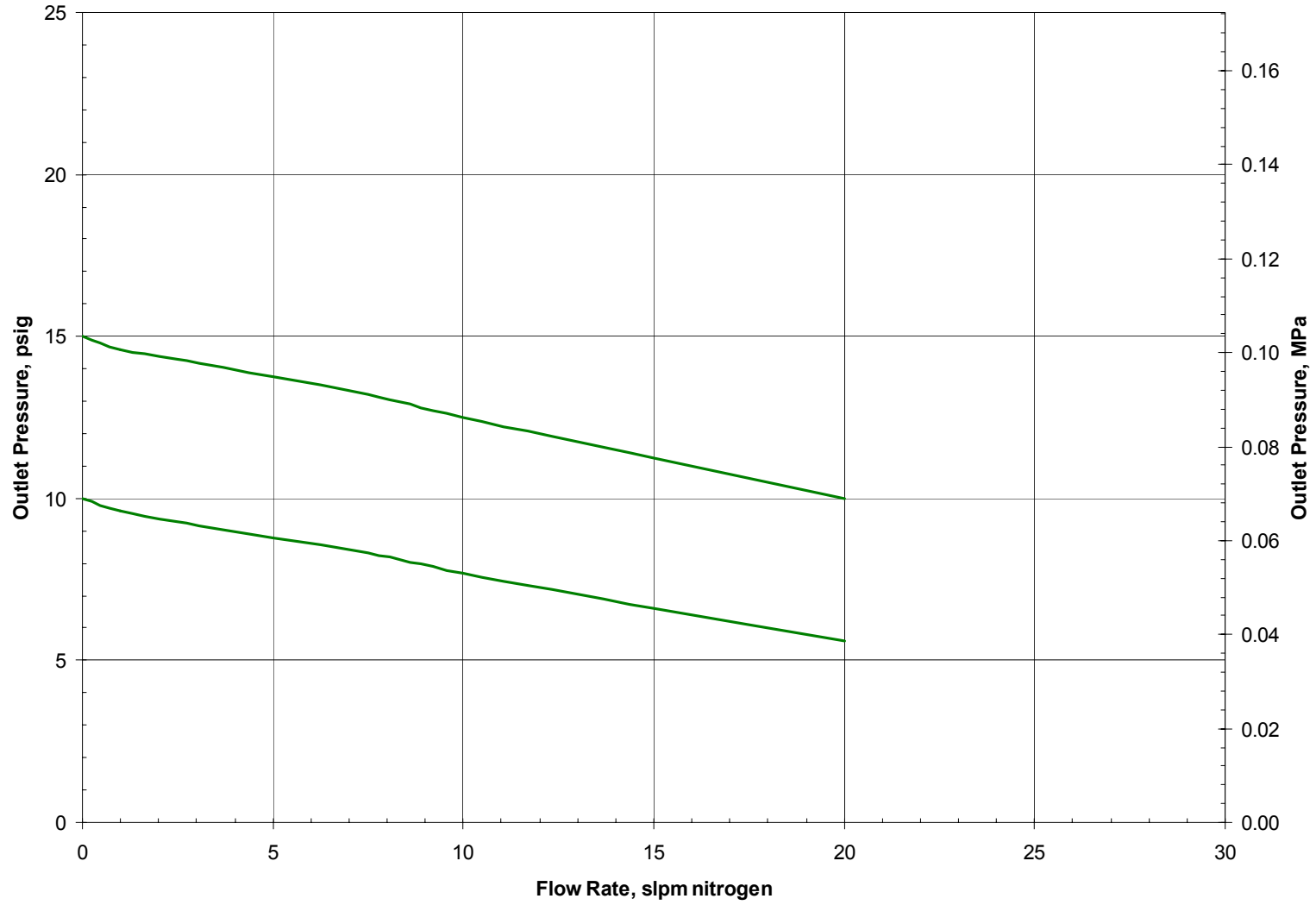
Flow Curve at 60 psig (.41 MPa) Inlet Pressure



Flow Curve Number SL5200-003

SL5202 (1/4 inch connections)

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



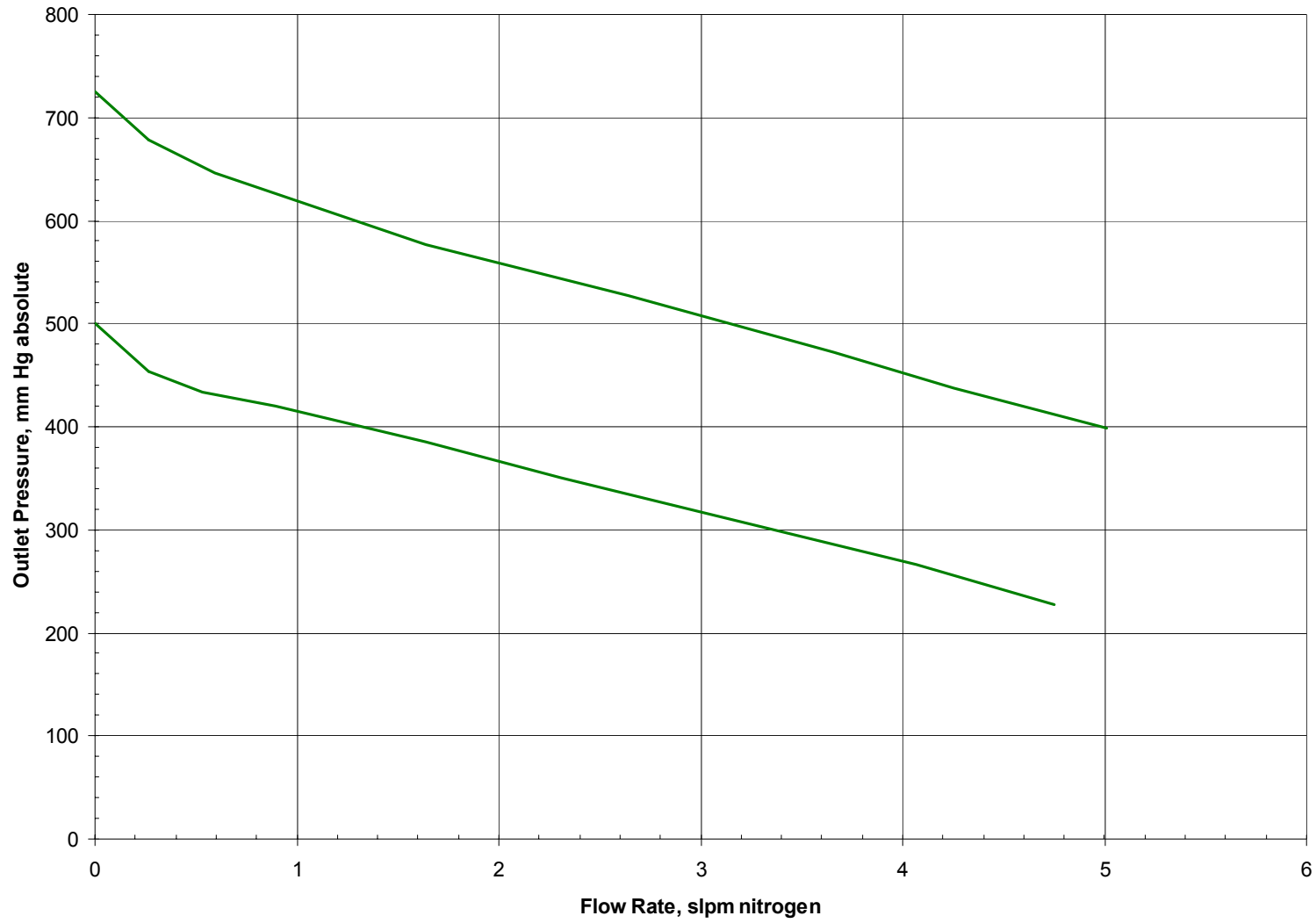
SL5201A Flow Curve Index

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



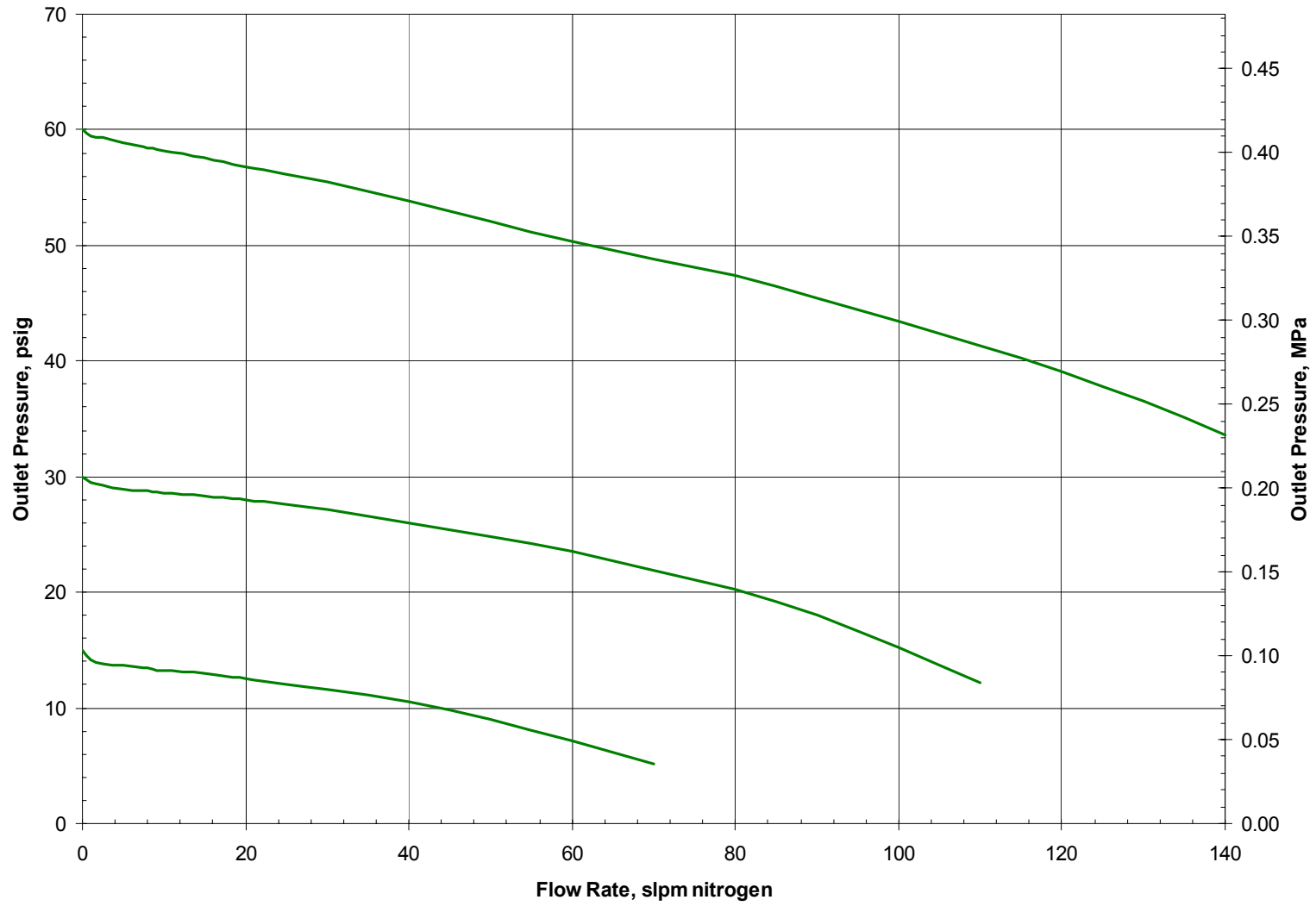
SL5200 HF Flow Curve Index

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

Flow Curve Number SL5200HF-001

SL5210 HF (1/4 inch connections)

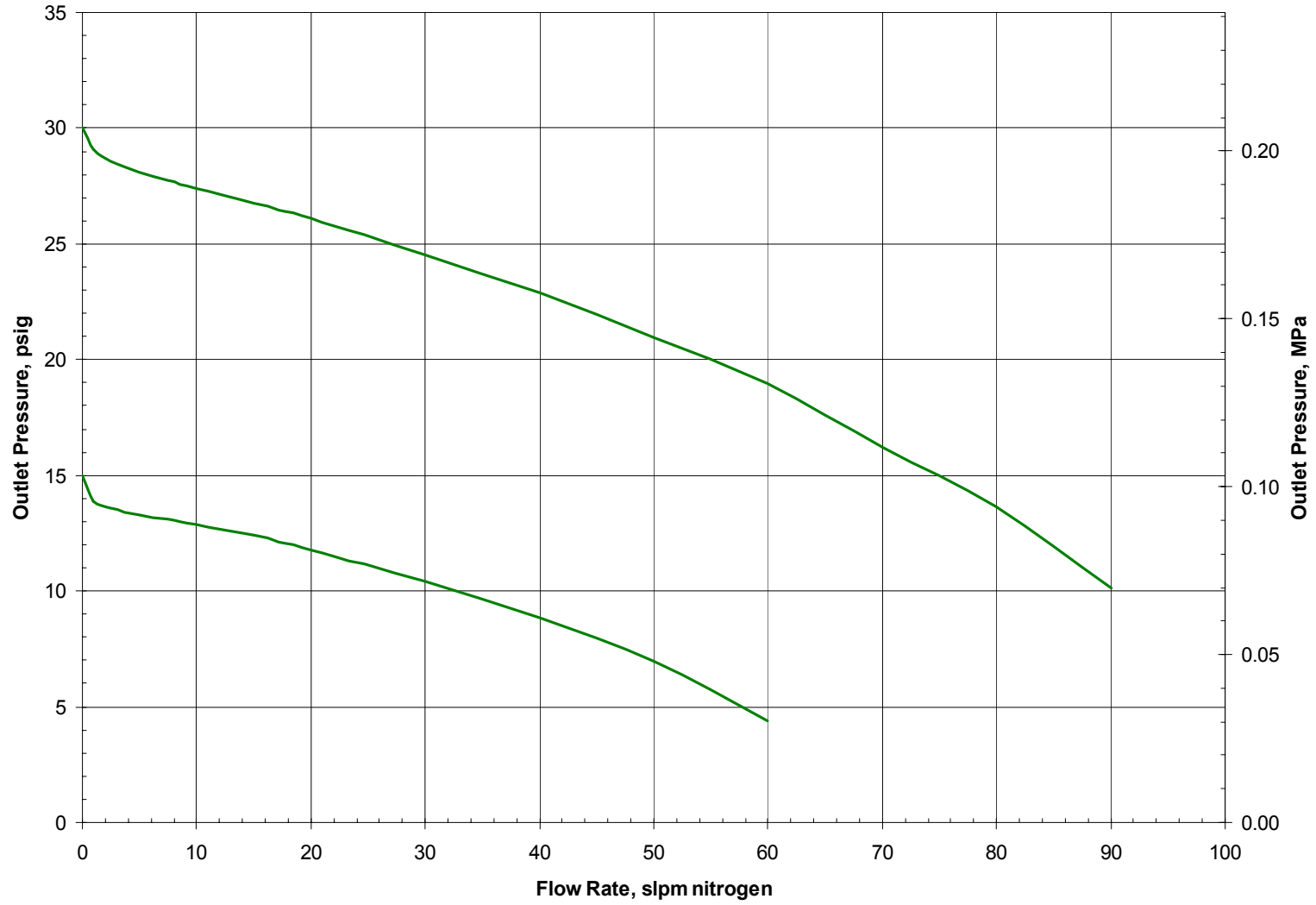
Flow Curve at 100 psig (.69 MPa) Inlet Pressure



Flow Curve Number SL5200HF-002

SL5210 HF (1/4 inch connections)

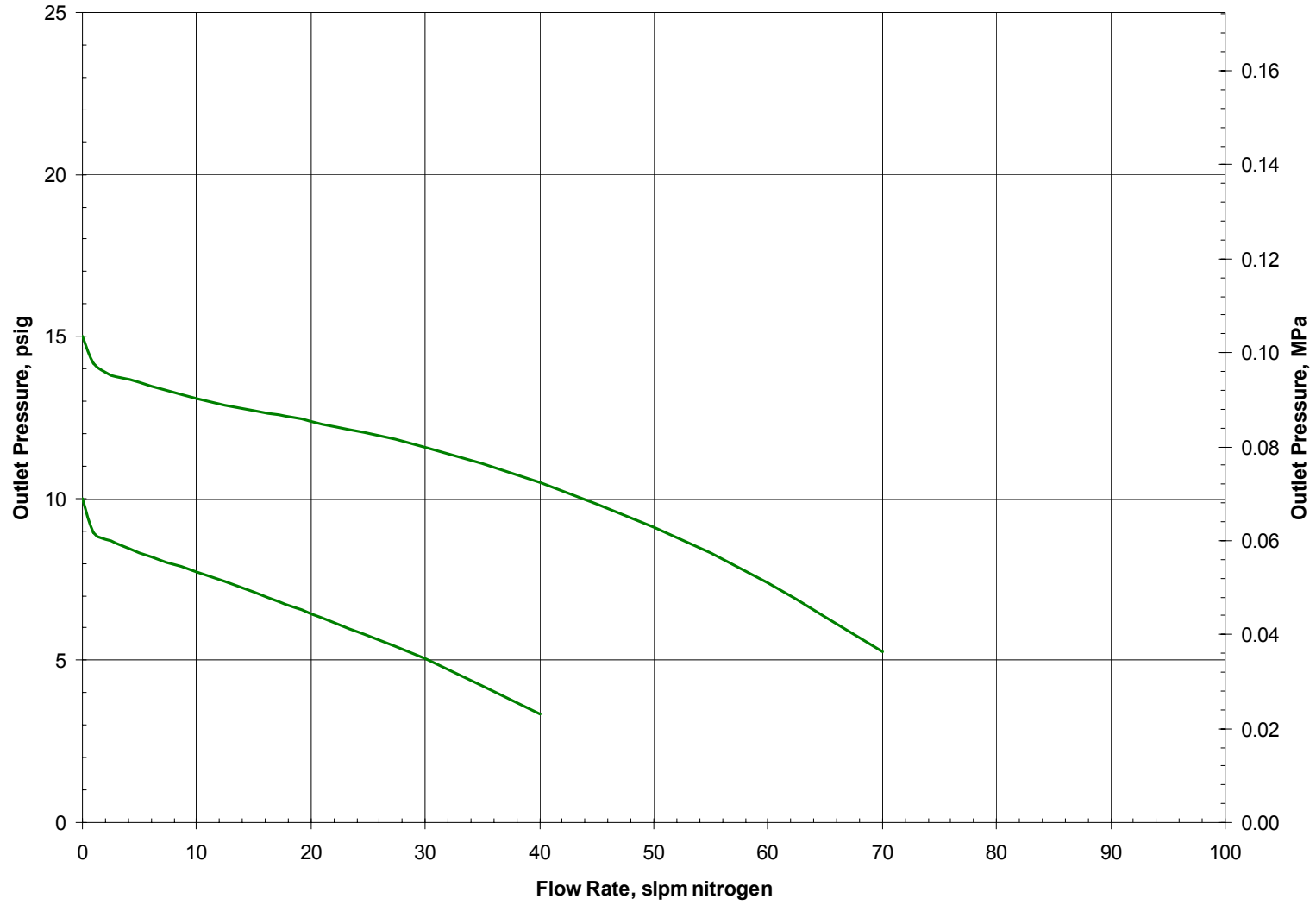
Flow Curve at 50 psig (.34 MPa) Inlet Pressure



Flow Curve Number SL5200HF-003

SL5202 HF (1/4 inch connections)

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



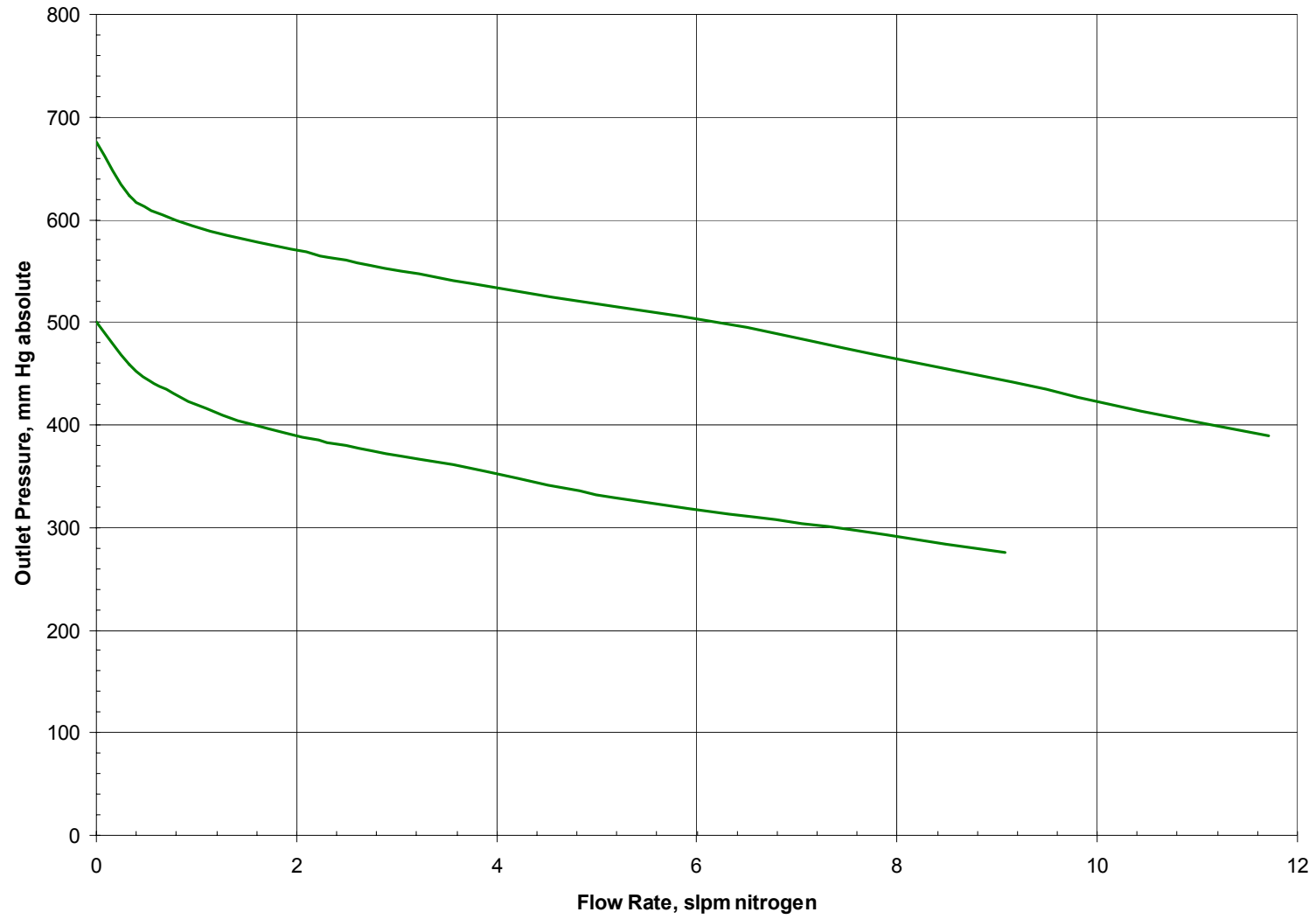
SL5201A HF Flow Curve Index

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

