

MATERIAL TRANSFER VACUUM GENERATORS

The NDF Series of high flow material conveying vacuum generators provide a simple, reliable, and cost effective method of in-line transfer of bulk materials, complex shapes, individual objects, selsedge. The NDF generator's unique capability to create instantaneous vacuum flow and high air velocity, combined with its straight-through, smooth bore design allows material to pass directly through the generator at high speeds without interference or clogging.



*Straight
through
design*

*Materials
pass directly
through the
generator*

Fast Find Guide

Please note: These products represent only part of the IMI Precision Engineering vacuum range. If you can't see the option you require please contact us.

● Material Transfer Vacuum Generators

NDF Series

Vacuum level up to 11"Hg,
flow 4.00-600.00 SCFM, for
bulk material conveyance



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NDF

- Easily transfer a wide variety of materials
- Efficient – instant on and off, for low operating costs
- Fast response – installs close to vacuum point
- Easy to install – connect tubing to the vacuum and exhaust ports, and supply compressed air
- Safe operation – no electricity needed at the generator
- Ideal for adverse operating conditions

Technical Data

Fluid

Filtered (50 Micron) unlubricated, non-corrosive dry gases

Operating Pressure

Input pressure of 40 PSI or less is sufficient to move most bulk materials and individual objects

Supply Pressure

Regulate the supply pressure to develop the necessary transfer speed of the application

Operating Temperature

-100° to 400° F (-73° to 204°C)

Materials

Generator Body: Anodized Aluminum



Standard Models

Part Number	Inline Fitting	Swivel Elbow Fitting	Recommended Air Supply Line	Recommended Transfer Hose
				
NDF13-VSES-M01	124250418	124470418	1/4"	1/2" ID
NDF23-VSES-M01	124250418	124470418	1/4"	3/4" ID
NDF36-VSES-M01	124250618	124470618	3/8"	3/4" ID
NDF56-VSES-M01	124250628	124470628	3/8"	1" ID
NDF76-VSES-M01	124250738	124470738	1/2"	1 1/4" ID
NDF106-VSES-M01	124250738	124470738	1/2"	1 1/2" ID
NDF126-VSES-M01	124250738	124470738	1/2"	1 3/4" ID
NDF156-VSES-M01	124250738	124470738	1/2"	2" ID
NDF206-VSES-M01	124250738	124470738	1/2"	2 1/2" ID

● Option selector

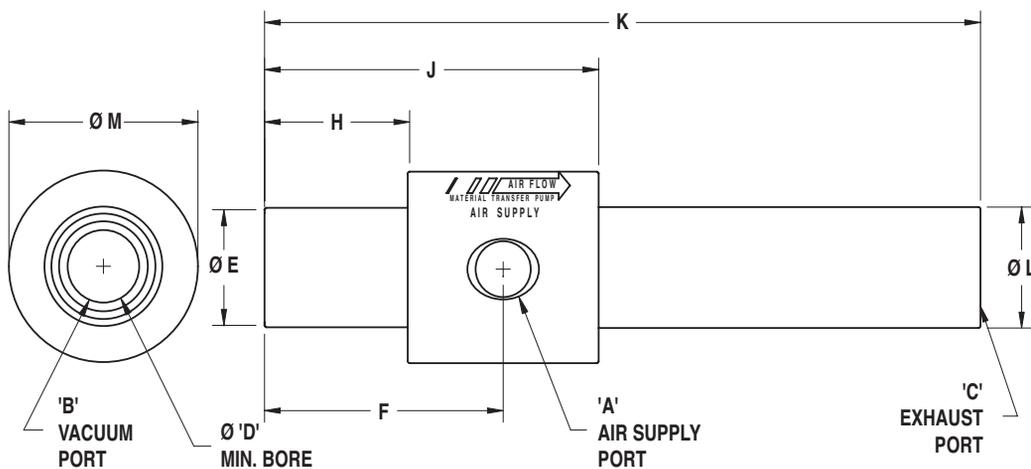
NDF★-★★-★★★-M★★

Series	Substitute
NDF (Imperial Thread)	
NDFM (Metric Thread)	M
Size	Substitute
NDF13	13
NDF23	23
NDF36	36
NDF56	56
NDF76	76
NDF106	106
NDF126	126
NDF156	156
NDF206	206
NDF306	306
NDF4012	4012
Vacuum Port Thread Options	Substitute
No thread (standard)	VS
Female (internal) thread	VF
Male (external) thread	VM
Exhaust Port Thread Options	Substitute
Exhaust port - no thread (standard)	ES
Exhaust port female - internal thread	EF
Exhaust port male (external) thread	EM

Material	Substitute
Anodized aluminum (standard)	M01
*303 stainless steel	M05
304 stainless steel	M06
316 stainless steel	M07
316L stainless steel	M08
PVC	M09
Black Acetal (Delrin®)	M10
White Acetal (Delrin®)	M11
PTFE (Teflon®)	M12
PEEK	M14

*303 stainless steel only available for NDF-13,23, and 36 generators

● Dimensions inches (mm)

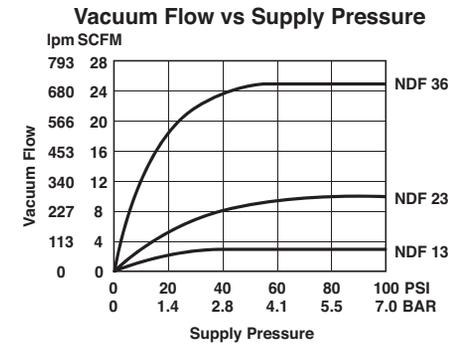
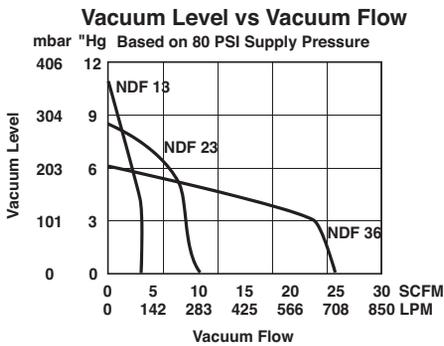
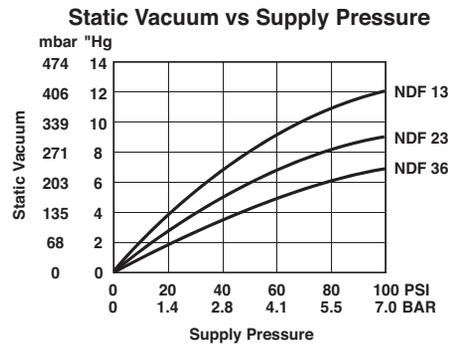
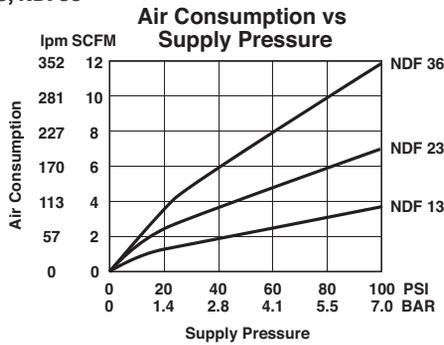


Model	A	B Optional Male Vacuum Thread	C Optional Male Exhaust Thread	B Optional Female Vacuum Thread	C Optional Female Vacuum Thread	D Minimum Bore	E	F	H	J	K	L	M	Weight lb / oz (kg)
NDF13 (NDFM13)	1/8 NPTF (G1/8)	1/8 NPT (G1/8)	1/8 NPT (G1/8)	1/8 NPT (G1/8)	1/8 NPT (G1/8)	0.15 (3.80)	0.48 (12.20)	1.00 (25.40)	0.50 (12.70)	1.50 (38.10)	3.00 (76.20)	0.49 (12.40)	0.99 (25.10)	1.5oz (42.5g)
NDF23 (NDFM23)	1/8 NPTF (G1/8)	3/8 NPT (G3/8)	3/8 NPT (G3/8)	1/4 NPT (G1/4)	1/4 NPT (G1/4)	0.25 (6.40)	0.73 (18.40)	1.25 (31.80)	0.75 (19.10)	1.75 (44.50)	3.50 (88.90)	0.74 (18.80)	1.24 (31.50)	3.2oz (91g)
NDF36 (NDFM36)	1/8 NPTF (G1/8)	3/8 NPT (G3/8)	3/8 NPT (G3/8)	1/4 NPT (G1/4)	1/4 NPT (G1/4)	0.38 (9.70)	0.73 (18.40)	1.25 (31.80)	0.75 (19.10)	1.75 (44.50)	3.50 (88.90)	0.74 (18.80)	1.24 (31.50)	2.8oz (79g)
NDF56 (NDFM56)	1/4 NPTF (G1/4)	1/2 NPT (G1/2)	1/2 NPT (G1/2)	1/2 NPT (G1/2)	1/2 NPT (G1/2)	0.50 (12.70)	0.99 (25)	1.62 (41.10)	1.00 (25.40)	2.25 (57.20)	5.50 (139.70)	1.00 (25.40)	1.48 (37.60)	6.2oz (176g)
NDF76 (NDFM76)	3/8 NPTF (G3/8)	3/4 NPT (G3/4)	3/4 NPT (G3/4)	3/4 NPT (G3/4)	3/4 NPT (G3/4)	0.75 (19.10)	1.24 (31.40)	2.50 (63.50)	1.50 (38.10)	3.50 (88.90)	7.50 (190.50)	1.25 (31.80)	1.98 (50.30)	13.4oz (380g)
NDF106 (NDFM106)	3/8 NPTF (G3/8)	1 NPT (G1)	1 NPT (G1)	1 NPT (G1)	1 NPT (G1)	1.00 (25.40)	1.46 (37.10)	2.50 (63.50)	1.50 (38.10)	3.50 (88.90)	7.50 (190.50)	1.48 (37.60)	2.23 (56.60)	1lb 5oz (468g)
NDF126 (NDFM126)	3/8 NPTF (G3/8)	*	*	*	*	1.25 (31.80)	1.71 (43.40)	2.50 (63.50)	1.50 (38.10)	3.50 (88.90)	7.50 (190.50)	1.73 (43.90)	2.47 (62.70)	1lb 3oz (541g)
NDF156 (NDFM156)	3/8 NPTF (G3/8)	1 1/2 NPT (G1 1/2)	1 1/2 NPT (G1 1/2)	1 1/4 NPT (G1 1/4)	1 1/4 NPT (G1 1/4)	1.50 (38.10)	1.96 (49.80)	2.50 (63.50)	1.50 (38.10)	3.50 (88.90)	7.50 (190.50)	1.98 (50.30)	2.73 (69.30)	1lb 5oz (607g)
NDF206 (NDFM206)	3/8 NPTF (G3/8)	2 NPT (G2)	2 NPT (G2)	2 NPT (G2)	2 NPT (G2)	2.00 (50.80)	2.46 (62.50)	2.50 (63.50)	1.50 (38.10)	3.50 (88.90)	7.50 (190.50)	2.48 (63)	3.23 (82)	1lb 9oz (777g)
NDF306 (NDFM306)	1/2 NPTF (G1/2)	N/A (N/A)	N/A (N/A)	N/A (N/A)	N/A (N/A)	3.00 (76.20)	3.46 (87.90)	2.50 (63.50)	1.50 (38.10)	3.50 (88.90)	8.50 (215.90)	3.48 (88.40)	4.47 (113.50)	3lbs 6oz (1.4kgs)
NDF4012 (NDFM4012)	3/4 NPTF (G3/4)	N/A (N/A)	N/A (N/A)	N/A (N/A)	N/A (N/A)	4.00 (101.60)	4.89 (124.20)	3.25 (82.60)	2.00 (50.80)	4.50 (114.30)	9.50 (241.30)	4.95 (125.70)	5.95 (151.10)	6lbs 11oz (3kgs)

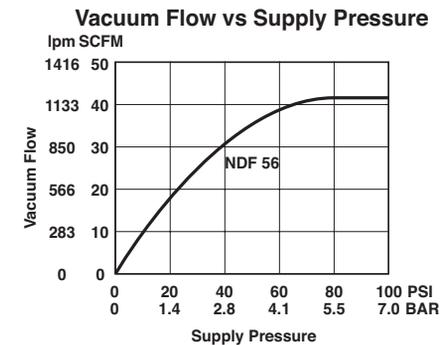
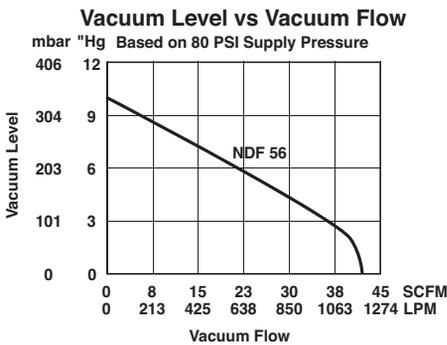
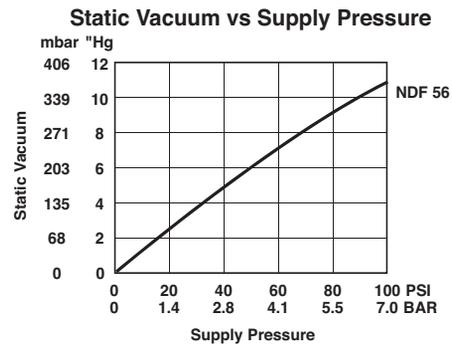
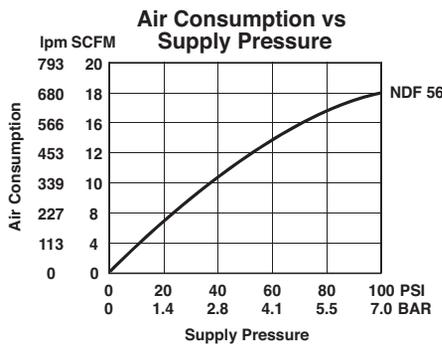
*Note: Consult factory

● Performance Data

NDF13, NDF23, NDF36



NDF56

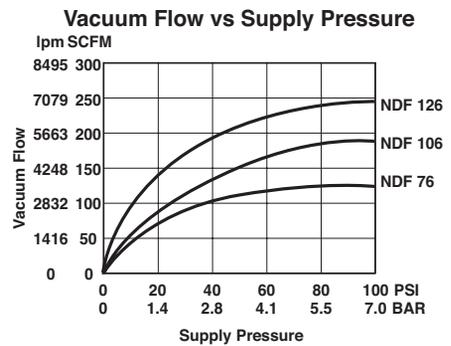
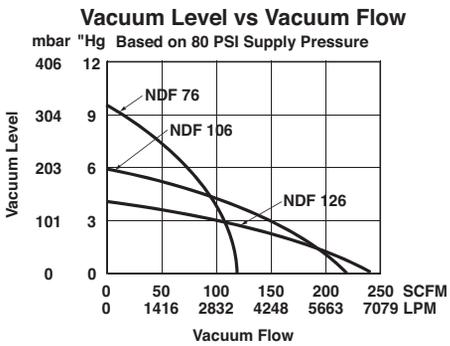
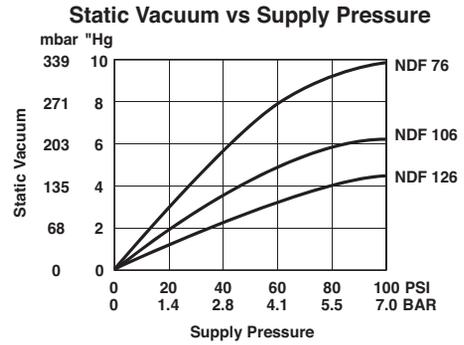
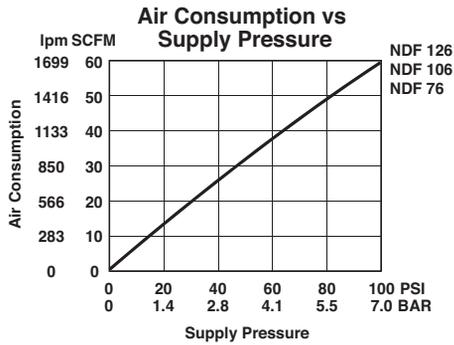


Operating Note: Above 40 PSI [2.7 bar], the increased energy consumed through rising air consumption is converted into increased vacuum level while vacuum flow stays constant. It is the vacuum flow that provides the motive force for the materials to be transferred. Higher vacuum levels are useful when lifting high molecular weight bulk materials and heavy individual objects long distances vertically.

Note: Performance Charts represent average performance data. For reference only.

● Performance Data

NDF76, NDF106, NDF126

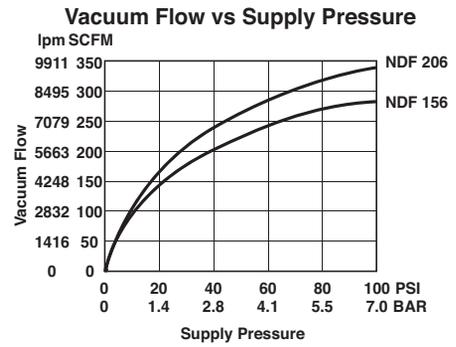
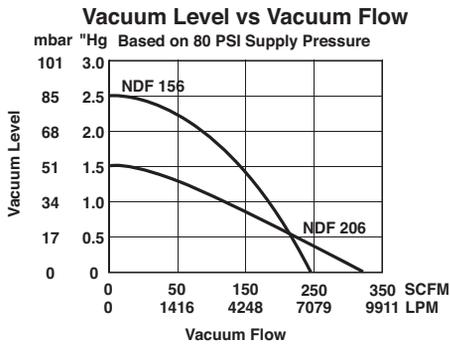
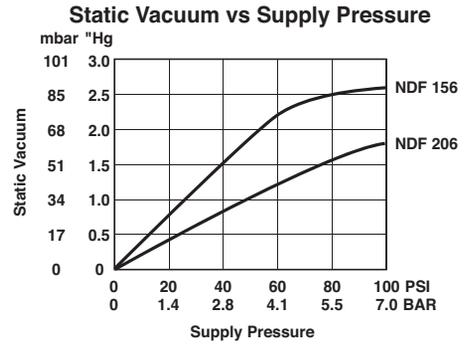
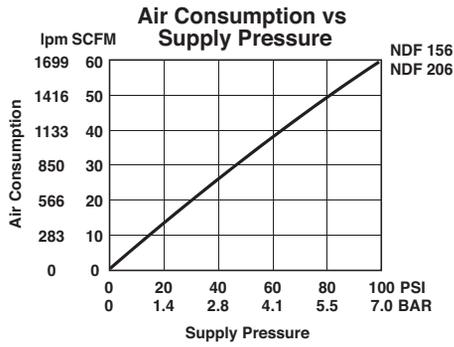


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● Performance Data

NDF156, NDF206

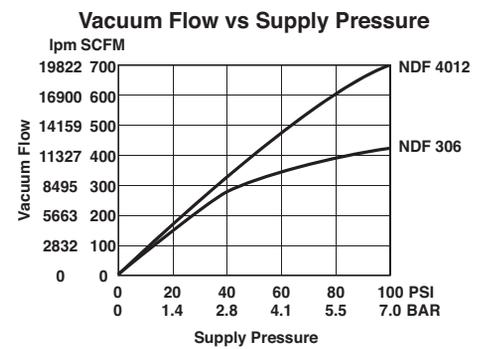
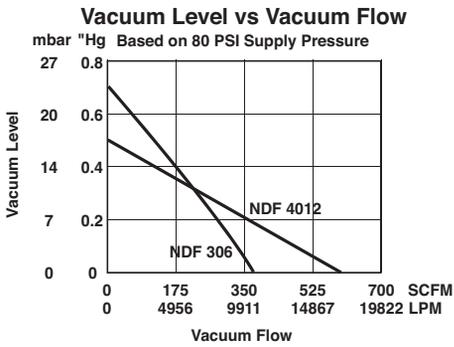
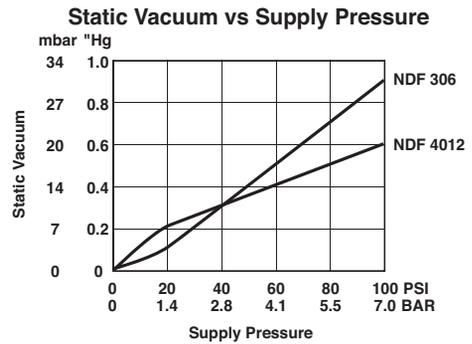
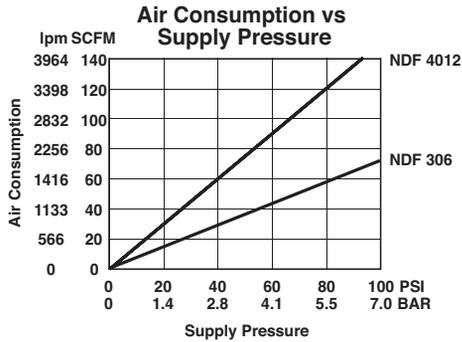


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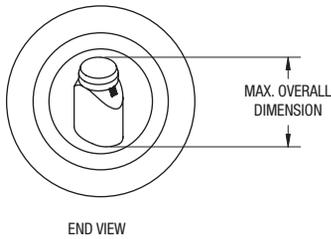
● Performance Data

NDF306, NDF4012

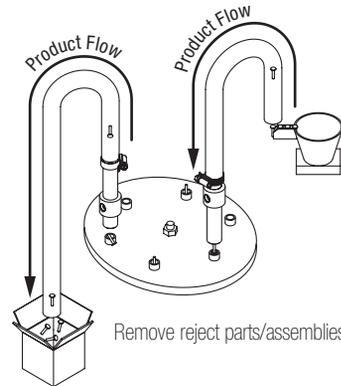


NDF

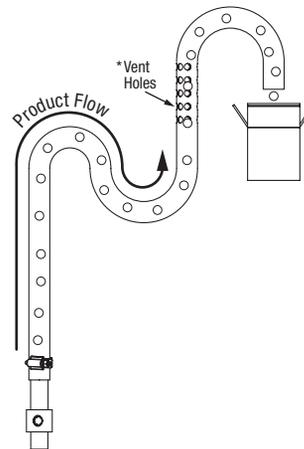
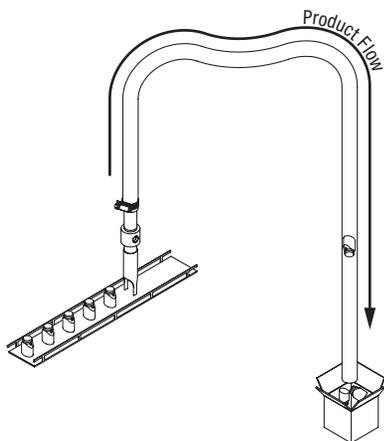
Transferring Bulk Materials:



To size a NDF generator for transferring individual items, choose the generator with an inside diameter just slightly larger than the largest dimension of the object.



Load parts for assembly from a vibratory bowl feeder.

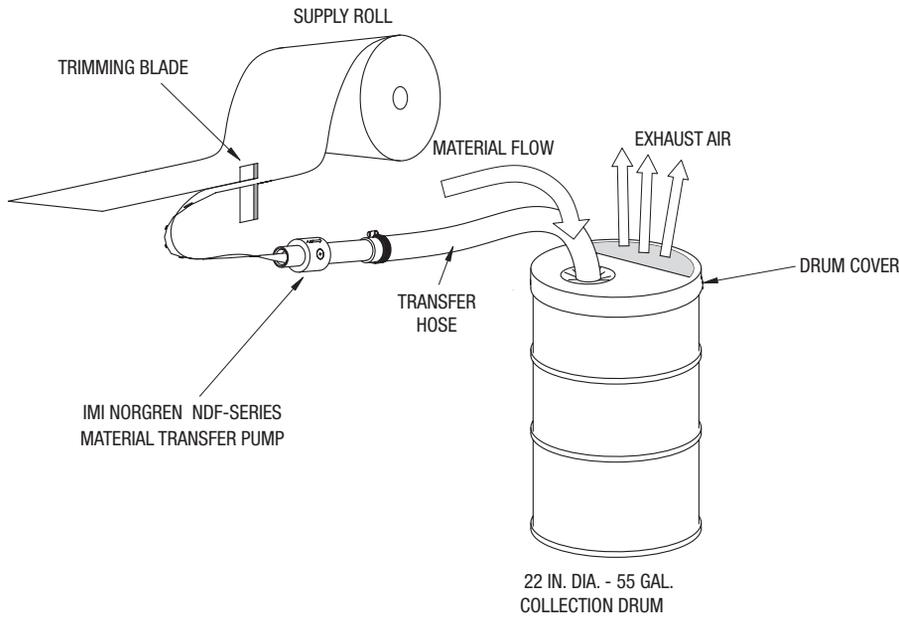


Design Tip: To prevent damage or to match the assembly speed, decrease the transfer speed by introducing a vertical bend into the tube, allowing gravity to work against the direction of travel.

* To reduce transfer speed further, add holes in the tube to allow the air to vent.

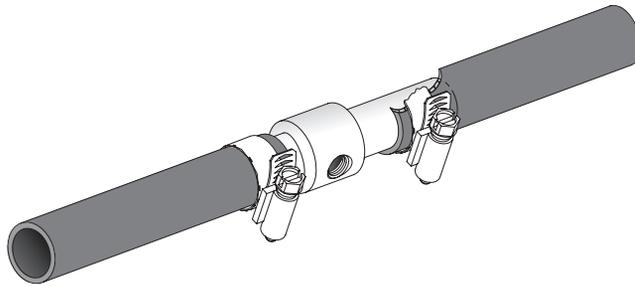
Caution: When conveying materials through plastic transfer lines, you must ground the transfer line to dissipate the static charge that develops from the friction of the air and material flowing over the transfer line surface.

Trim, Selvage and Fiber Collection:



Installation Options

For simple applications, place the NDF generator in the transfer line, slip the transfer hose over the outside diameter of the generator and secure in place with a hose clamp. When this type of installation is not desired or appropriate for the application, IMI Norgren offers the option of adding threads to the O.D. and the I.D.



Warnings

Improper selection, misuse, age or malfunction of components used in systems can cause failure in various modes. The system designer is warned to consider the failure modes of all component parts and to provide adequate safeguards to prevent personal injury or damage to equipment or property in the event of such failure modes. System designers and end users are cautioned to consult instruction sheets and specifications available from the factory. The system designer/end user is responsible for verifying that all requirements for the application are met.

Warranty

The products described herein are warranted subject to seller's Standard Terms and Condition of Sale, available at seller's website.