

# HIGH FLOW VACUUM/ BLOWER GENERATORS

NCDF Series air amplifiers generate high vacuum flow, overcoming leaks inherent in handling porous and irregular shaped objects. The NCDF Series generates high output flow using a small volume of compressed air. This efficient use of air makes NCDF air amplifiers a cost effective alternative to electric blowers or raw compressed air.



# 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.

## ● High Flow Vacuum/Blower Generators

### **NCDF Series**

Vacuum level up to 9"Hg,  
flow 12.00-330.00 SCFM,  
air amplifier blower



Page 132

# NCDF

- Excellent for picking porous and irregular shaped materials
- Air amplification capability - amplify air by 40:1 ratio
- Field adjustable for individual applications
- Energy efficient, unlike regenerative blowers that must run continuously
- Ideal for adverse operating conditions

## Technical Data

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

**Operating Pressure**  
Above 50 PSI (3.4bar)

**Operating Temperature**  
-100° to 400° F (-73° to 204°C)

**Materials**  
Generator Body: Anodized Aluminum  
Silencer Body : Varies by Size



	NCDF20, 37	NCDF50, 75, 100, 150, 200
<b>Supply Line</b>	1/4" (4mm)	3/8" (10mm)
<b>Vacuum Line</b>	Minimum orifice 0.125"	Minimum orifice 0.250"

## Option selector

NCDF★-★★★-★-★M★★

Series	Substitute
NCDF (Imperial Thread)	
NCDFM (Metric Thread)	M
Size	Substitute
NCDF-20	20
NCDF-20H	20H
NCDF-37H	37H
NCDF-50H	50H
NCDF-75H	75H
NCDF-100H	100H
NCDF-150H	150H
NCDF-200H	200H
NPT Exhaust Port Threads	Substitute
Without Exhaust Port Threads	(blank)
With Exhaust Port Threads (Required for silencer)	E*

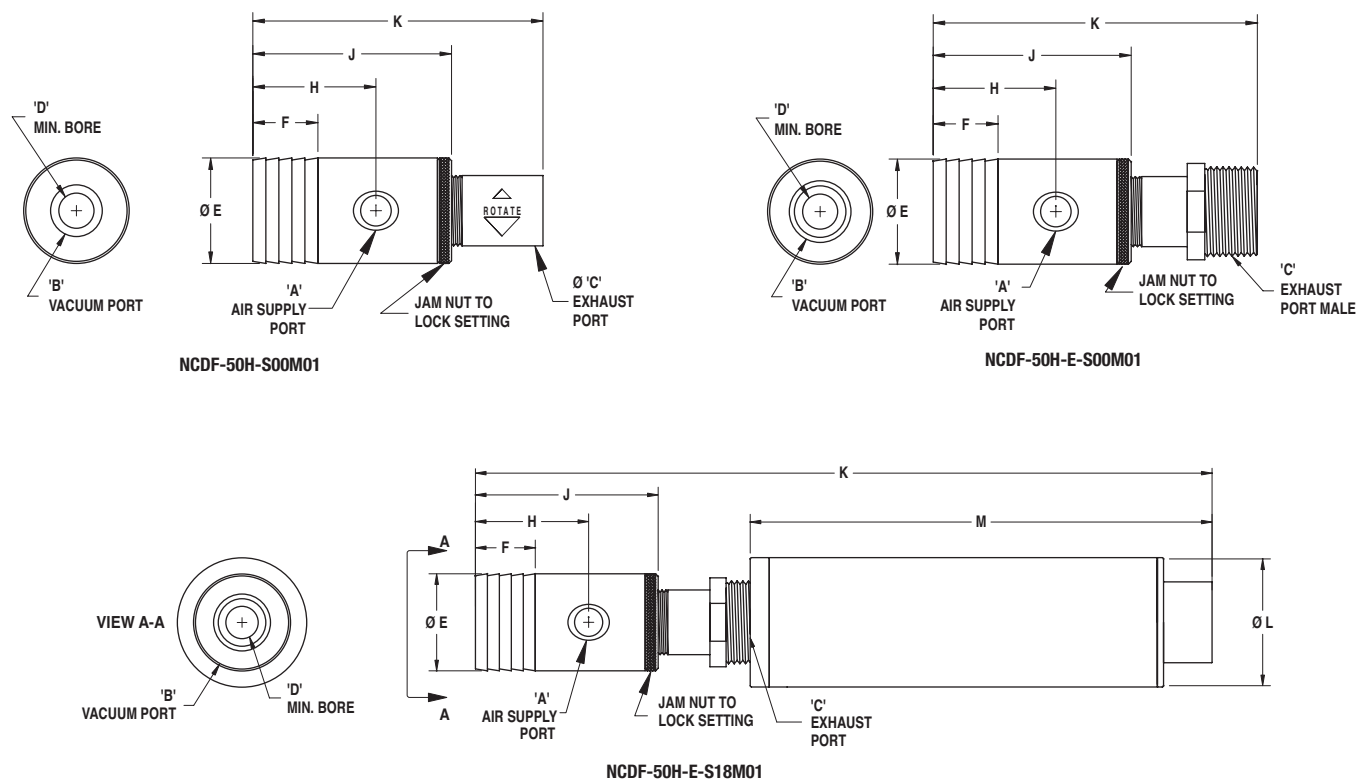
\*External port threads required for attachment of silencers

Material	Substitute
Anodized aluminum (standard)	M01
303 stainless steel	M05
304 stainless steel	M06
316 stainless steel	M07
PVC	M09
Black Acetal (Delrin®)	M10
White Acetal (Delrin®)	M11
Silencer	Substitute
None	S00
Silencer (for NCDF-20)	Substitute
NST4AX	S14
Silencer (for NCDF-37)	Substitute
NST6BX	S16
Silencer (for NCDF-50, 75)	Substitute
NST16FC	S18
Silencer (for NCDF-100)	Substitute
NST24FC	S19
Silencer (for NCDF-150)	Substitute
NST2020	S22

● Accessories

Standard Models	Inline Fitting	Swivel Elbow Fitting
NCDF-20-E-S00M01	124250418	124470418
NCDF-20H-E-S00M01	124250418	124470418
NCDF-37H-S00M01	124250418	124470418
NCDF-50H-S00M01	124250428	124470628
NCDF-75H-S00M01	124250628	124470628
NCDF-100H-S00M01	124250628	124470628
NCDF-150H-S00M01	124250638	124470638

● Dimensions inches (mm)



● Dimensions inches (mm)

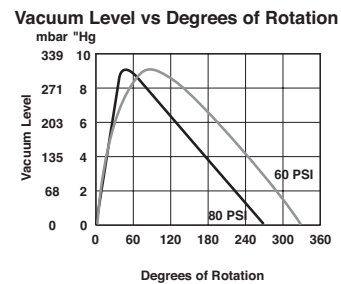
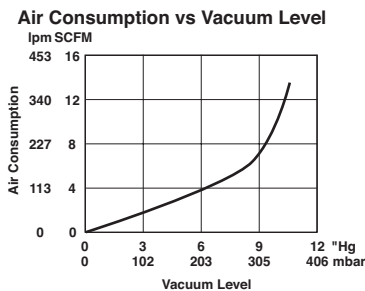
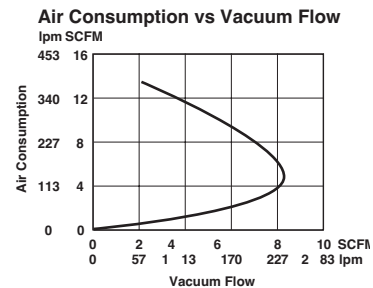
Model	A	B	C	D	E	F	H	J	K	L	M	Weight oz (g)
NCDF-20-E-S00M** (NCDFM-20-E-S00M**)	1/8 NPTF (G 1/8)	— (—)	1/4 NPTF (G 1/4)	0.25 (6.40)	1.25 (31.80)	— (—)	0.44 (11.20)	1.13 (28.70)	2.10 (53.30)	— (—)	— (—)	2.1 oz (60 grams)
NCDF-20H-E-S14M** (NCDFM-20-E-S14M**)	1/8 NPTF (G 1/8)	— (—)	1/4 NPTF (G 1/4)	0.25 (6.40)	1.25 (31.80)	— (—)	0.44 (11.20)	1.13 (28.70)	2.10 (53.30)	1.00 (25.4)	3.57 (90.70)	3.7 oz (105 grams)
NCDF-20H-E-S00M** (NCDFM-20H-E-S00M**)	1/8 NPTF (G 1/8)	3/8 NPTF (G 3/8)	1/4 NPTF (G 1/4)	0.25 (6.4)	1.25 (31.80)	0.76 (19.30)	1.21 (30.70)	1.87 (47.50)	2.85 (72.40)	— (—)	— (—)	3.1 oz (88 grams)
NCDF-20H-E-S14M** (NCDFM-20H-E-S14M**)	1/8 NPTF (G 1/8)	3/8 NPTF (G 3/8)	1/4 NPTF (G 1/4)	0.25 (6.40)	1.25 (31.80)	0.76 (19.30)	1.21 (30.70)	1.87 (47.50)	6.15 (156.20)	1.00 (25.4)	3.57 (90.70)	5.2 oz (147 grams)
NCDF-37H-S00M** (NCDFM-37H-S00M**)	1/8 NPTF (G 1/8)	3/8 NPTF (G 3/8)	0.69 (17.5)	0.38 (9.50)	1.25 (31.80)	0.76 (19.30)	1.21 (30.70)	1.87 (47.50)	2.85 (72.40)	— (—)	— (—)	3.1 oz (88 grams)
NCDF-37H-E-S00M** (NCDFM-37H-E-S00M**)	1/8 NPTF (G 1/8)	3/8 NPTF (G 3/8)	3/8 NPTF (G 3/8)	0.38 (9.50)	1.25 (31.80)	0.76 (19.30)	1.21 (30.70)	1.87 (47.50)	2.85 (72.40)	— (—)	— (—)	3.1 oz (88 grams)
NCDF-37H-E-S16M** (NCDFM-37H-E-S16M**)	1/8 NPTF (G 1/8)	3/8 NPTF (G 3/8)	3/8 NPTF (G 3/8)	0.38 (9.5)	1.25 (31.80)	0.76 (19.30)	1.21 (30.70)	1.87 (47.50)	7.43 (188.70)	1.25 (31.80)	4.80 (121.90)	6.3 oz (179 grams)
NCDF-50H-S00M** (NCDFM-50H-S00M**)	1/4 NPTF (G 1/4)	1/2 NPTF (G 1/2)	0.99 (25.1)	0.5 (12.7)	1.49 (37.80)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	4.13 (104.90)	— (—)	— (—)	6.3 oz (179 grams)
NCDF-50H-E-S00M** (NCDFM-50H-E-S00M**)	1/4 NPTF (G 1/4)	1/2 NPTF (G 1/2)	1 NPT (G 1)	0.5 (12.07)	1.49 (37.80)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	4.63 (117.60)	— (—)	— (—)	7.3 oz (207 grams)
NCDF-50H-E-S18M** (NCDFM-50H-E-S18M**)	1/4 NPTF (G 1/4)	1/2 NPTF (G 1/2)	1 NPT (G 1)	0.50 (12.70)	1.49 (37.80)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	11.39 (289.30)	2.00 (50.80)	7.12 (180.80)	14.9 oz (422 grams)
NCDF-75H-S00M** (NCDFM-75H-S00M**)	1/4 NPTF (G 1/4)	1 NPTF (G 1)	1.23 (31.2)	0.75 (19.10)	1.97 (50)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	4.13 (104.90)	— (—)	— (—)	10.1 oz (286 grams)
NCDF-75H-E-S00M** (NCDFM-75H-E-S00M**)	1/4 NPTF (G 1/4)	1 NPTF (G 1)	1 NPTF (G 1)	0.75 (19.1)	1.97 (50)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	5.02 (127.50)	— (—)	— (—)	10.9 oz (309 grams)
NCDF-75H-E-S18M** (NCDFM-75H-E-S18M**)	1/4 NPTF (G 1/4)	1 NPTF (G 1)	1 NPTF (G 1)	0.75 (19.10)	1.97 (50)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	11.7 (297.20)	2.00 (50.80)	7.12 (180.80)	1lb 2oz (519 grams)
NCDF-100H-S00M** (NCDFM-100H-S00M**)	1/4 NPTF (G 1/4)	1 1/4 NPTF (G 1 1/4)	1.48 (37.6)	1.00 (25.40)	2.22 (56.40)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	4.13 (104.90)	— (—)	— (—)	11.5 oz (326 grams)
NCDF-100H-E-S00M** (NCDFM-100H-E-S00M**)	1/4 NPTF (G 1/4)	1 1/4 NPTF (G 1 1/4)	1 1/2 NPTF (G 1 1/2)	1.00 (25.40)	2.22 (56.40)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	4.64 (117.90)	— (—)	— (—)	13.2 oz (374 grams)
NCDF-100H-E-S19M** (NCDFM-100H-E-S19M**)	1/4 NPTF (G 1/4)	1 1/4 NPTF (G 1 1/4)	1 1/2 NPTF (G 1 1/2)	1.00 (25.40)	2.22 (56.40)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	12.00 (304.80)	2.00 (50.80)	7.85 (199.40)	1lb 5oz (595 grams)
NCDF-150H-S00M** (NCDFM-150H-S00M**)	3/8 NPTF (G 3/8)	2 NPTF (G 2)	1.99 (50.5)	1.50 (38.10)	2.72 (69.10)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	4.13 (104.90)	— (—)	— (—)	13.3 oz (377 grams)
NCDF-150H-E-S00M** (NCDFM-150H-E-S00M**)	3/8 NPTF (G 3/8)	2 NPTF (G 2)	2 NPTF (G 2)	1.5 (38.1)	2.72 (69.10)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	4.76 (120.90)	— (—)	0 (0)	1 lb (454 grams)
NCDF-150H-S22M** (NCDFM-150H-S22M**)	3/8 NPTF (G 3/8)	2 NPTF (G 2)	Slip fit (Slip Fit)	1.5 (38.10)	2.72 (69.10)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	17 (431.80)	3.46 (87.90)	13.62 (345.90)	1lb 8oz (692 grams)
NCDF-200H-S00M** (NCDFM-200H-S00M**)	3/8 NPTF (G 3/8)	2 1/2 NPTF (N/A)	2.49 (63.20)	2.00 (50.80)	3.22 (81.80)	0.93 (23.60)	1.75 (44.50)	2.83 (71.90)	4.13 (104.90)	— (—)	— (—)	1lb 0.5oz (468 grams)

● Performance Data

Model	Air Consumption	Imperial	Metric
NCDF-20	Vacuum Level "Hg [mbar]	9	305
	Vacuum Flow SCFM [lpm]	12	340
	Maximum Exhaust Output SCFM [lpm]	16	453
NCDF-20H	Vacuum Level "Hg [mbar]	9	305
	Vacuum Flow SCFM [lpm]	12	340
	Maximum Exhaust Output SCFM [lpm]	16	453
NCDF-37H	Vacuum Level "Hg [mbar]	8	271
	Vacuum Flow SCFM [lpm]	28	793
	Maximum Exhaust Output SCFM [lpm]	36	1019
NCDF-50H	Vacuum Level "Hg [mbar]	7	237
	Vacuum Flow SCFM [lpm]	55	1557
	Maximum Exhaust Output SCFM [lpm]	70	1982
NCDF-75H	Vacuum Level "Hg [mbar]	5	169
	Vacuum Flow SCFM [lpm]	110	3115
	Maximum Exhaust Output SCFM [lpm]	140	3964
NCDF-100H	Vacuum Level "Hg [mbar]	3	102
	Vacuum Flow SCFM [lpm]	130	3681
	Maximum Exhaust Output SCFM [lpm]	180	5097
NCDF-150H	Vacuum Level "Hg [mbar]	3	102
	Vacuum Flow SCFM [lpm]	250	7079
	Maximum Exhaust Output SCFM [lpm]	300	8495
NCDF-200H	Vacuum Level "Hg [mbar]	1	34
	Vacuum Flow SCFM [lpm]	330	9345
	Maximum Exhaust Output SCFM [lpm]	390	11044

● Performance Data

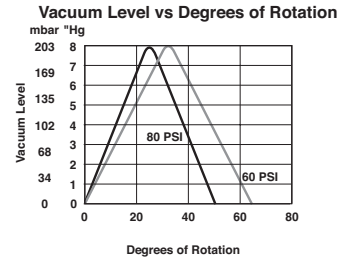
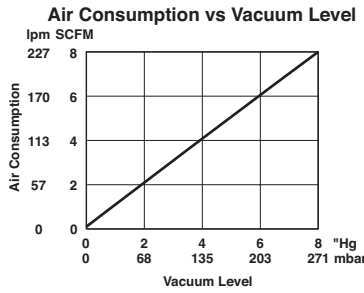
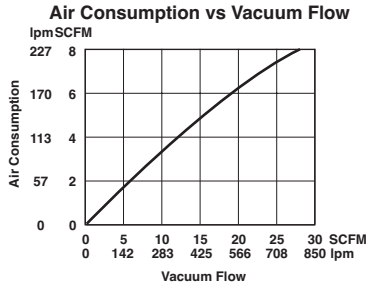
NCDF-20/20H Series



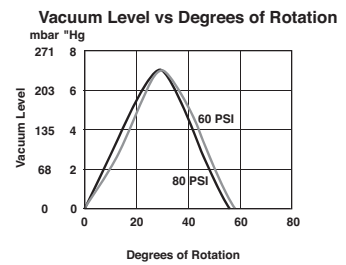
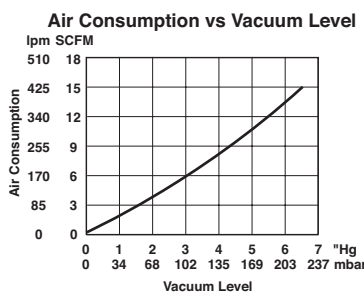
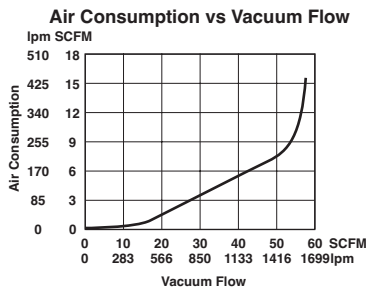
Note: Performance Charts represent average performance data. For reference only.

● Performance Data

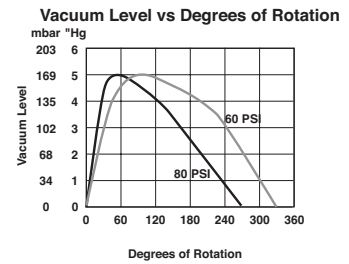
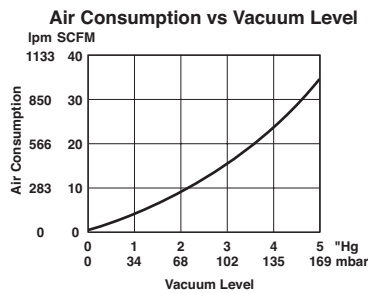
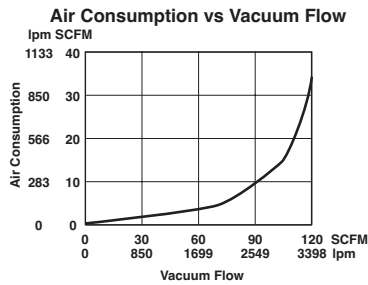
**NCDF-37H Series**



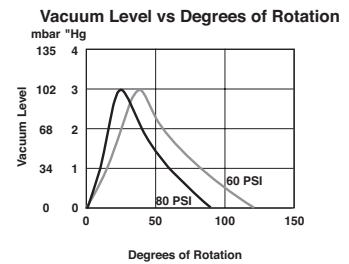
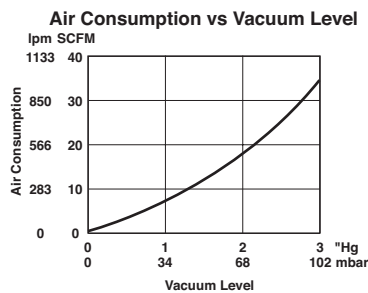
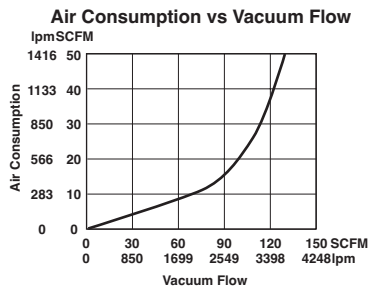
**NCDF-50H Series**



**NCDF-75H Series**



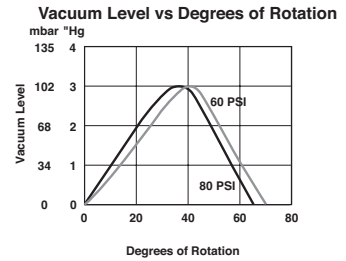
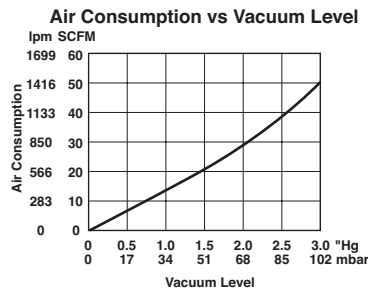
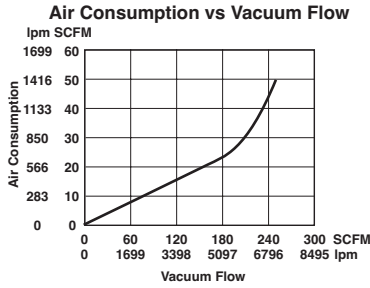
**NCDF-100H Series**



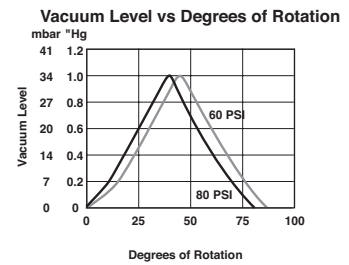
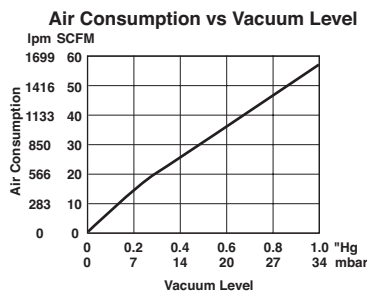
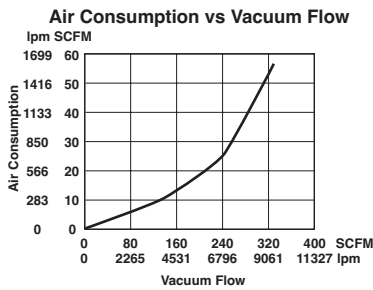
Note: Performance Charts represent average performance data. For reference only.

● Performance Data

**NCDF-150H Series**



**NCDF 200H Series**



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

● Air Consumption

Model	Silencer	With Silencer		Without Silencer	
		Open Flow	Sealed Vacuum	Open Flow	Sealed Vacuum
NCDF-20-E-S14M01	NST4AX	86dB	78dB	98dB	94dB
NCDF-20H-E-S14M01	NST4AX	86dB	78dB	98dB	94dB
NCDF-37H-E-S16M01	NST6BX	78dB	70dB	98dB	90dB
NCDF-50H-E-S18M01	NST16FC	78dB	72dB	100dB	92dB
NCDF-75H-E-S18M01	NST16FC	78dB	70dB	100dB	92dB
NCDF-100H-E-S19M01	NST24FC	82dB	72dB	102dB	92dB
NCDF-150H-E-S22M01	NST2020	88dB	72dB	106dB	96dB
NCDF-200H-S00M01	N/A	N/A	N/A	108dB	98dB

Noise levels at 80PSI

**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.