M.K. Plastics
CORPORATION

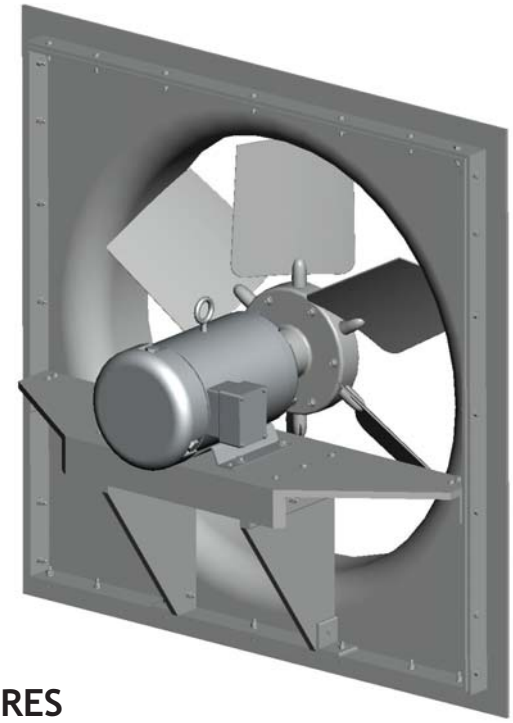
SERVING THE NEEDS OF MODERN INDUSTRY

AXPR

We are pleased to provide you with this brochure for the AXPR FRP Fans. The information contained within is also available on the M.K. Plastics Electronic Catalog (CD ROM). This CD includes information on all of the M.K Plastics fans, exhaust systems and their components, and is available from your technical sales representative or M.K. Plastics directly. We look forward to assisting you with your important application.

For over 40 years, MK Plastics has been engineering, designing, and fabricating thermoplastic and FRP ventilation components and systems for institutional and industrial applications. Founded in 1963, today MK Plastics has facilities and offices in Montreal, Quebec, Canada; Spiez, Switzerland; Troy, OH and Mooers, NY, USA. In major cities throughout the United States, M.K. Plastics is represented by technical sales representatives.

Other Quality Corrosion Resistant Fans
Available from M.K Plastics Corp.
Your Local M.K. Plastics Representative
Will Be Pleased To Provide You With
Technical Information Upon Your Request.



Axijet® High Plume Dilution Blower
Plastifer® Venturi Exhaust System
CNW Medium Pressure/Volume Centrifugal Fan
DHK Medium Pressure Centrifugal Blower
DHK NW High Pressure Centrifugal Blower
PRVS High Pressure/Low Volume Centrifugal Blower
AXB Axial Inline and Up Blast Fan
AXCL Centrifugal Inline and Up Blast Blower
RKW Medium Pressure Mushroom Fan
PVC Duct and Fittings

CONSTRUCTION FEATURES
AXPR fiberglass propeller fans are typically wall mounted for ventilation.

SIZES from 12" to 60" diameter, airflow from 1170 CFM to 60000 CFM at free air.

DIRECT DRIVEN TEFC motors are standard.

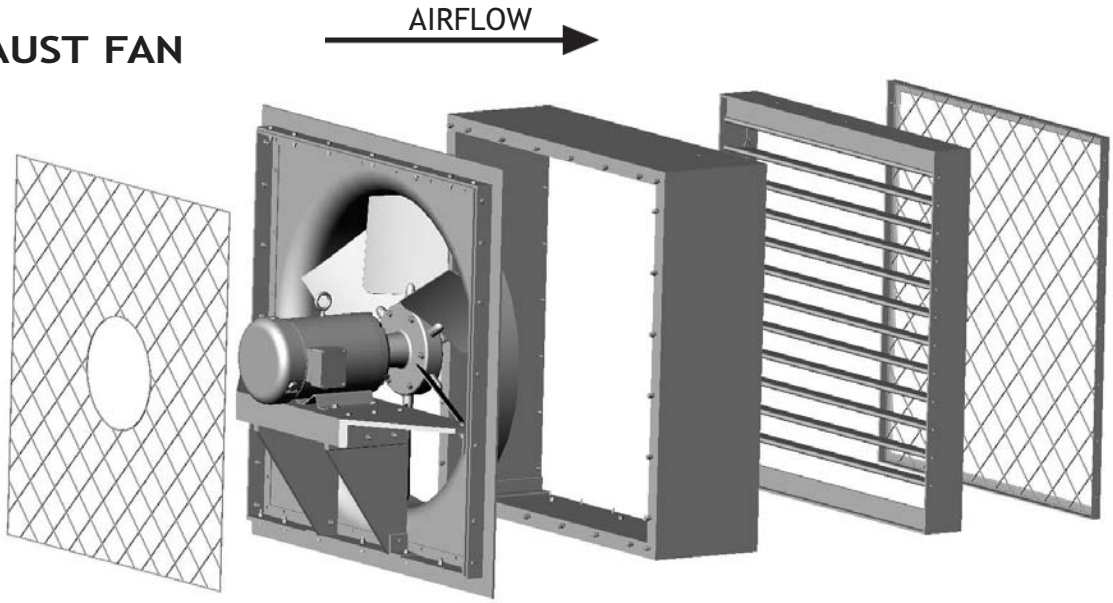
CORROSION RESISTANT All parts are corrosion resistant to most chemicals. The fan components are FRP, stainless steel hardware is standard. There will be no metal parts on the PVC shutter assembly.

TEMPERATURE Fiberglass reinforced plastics (FRP) material can withstand 180°F (82°C); PVC material can withstand 131°F (55°C); motors are suitable for 140°F (40°C) - higher insulation class motors are available.

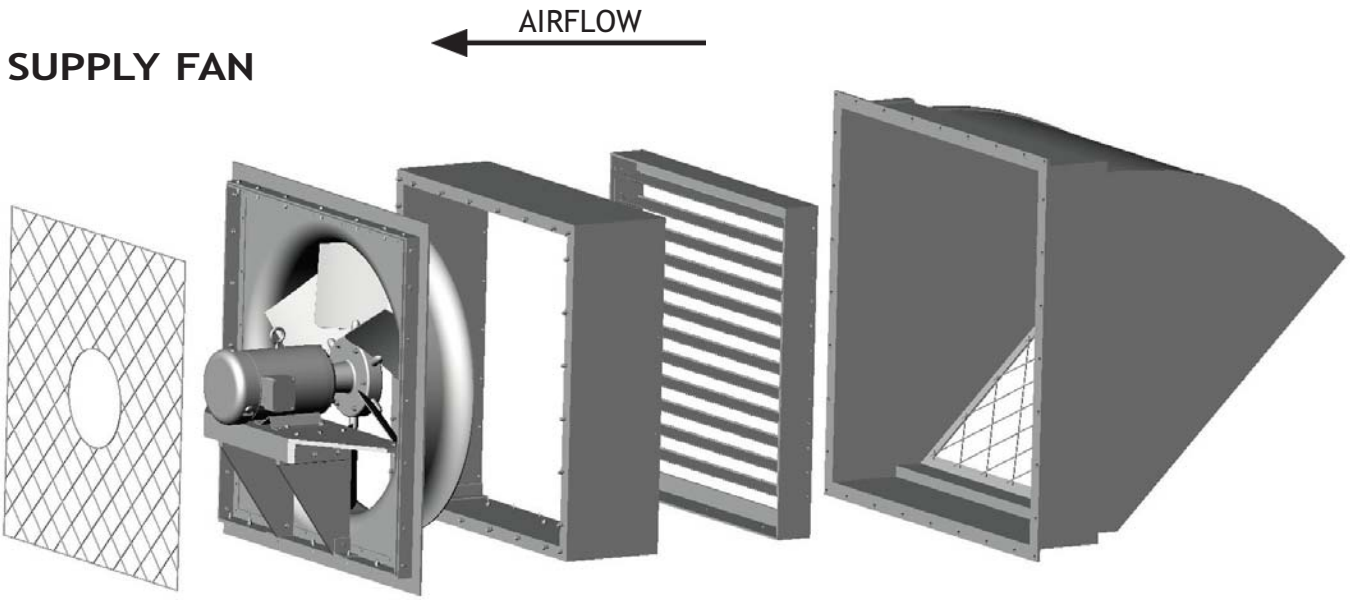
PROPELLERS are airfoil fiberglass reinforced plastic blades. Balanced for smooth and quite operation.

SPARK RESISTANT, when handling explosive fumes, graphite liner is applied and grounded to reduce a static charge build-up.

EXHAUST FAN



SUPPLY FAN



WALL BOX an FRP box to contain fan, shutter and outlet screen. To be mounted in the wall opening.
SHUTTER counterbalanced PVC blades. Easily opened with minimal pressure losses.
SCREENS PVC/PP/PE, to protect access to inlet or outlet. Stainless steel screens are also available.
WEATHER COWL for supply fan configuration.

SIZE	CODE	MOTOR		MAX.	CFM @ STATIC PRESSURE(IN. W.G.)								
		RPM	HP	BHP	0"	1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
12	12-43CC	1725	1/4	0.11	1170	1040	870						
	12-43CE	1725	1/4	0.16	1390	1230	1020						
	12-83CF	1725	1/4	0.28	1690	1540	1370						
14	14-43CD	1725	1/4	0.22	1960	1760	1540	1230					
	14-43CF	1725	1/3	0.33	2230	2010	1700						
	14-83CF	1725	1/2	0.51	2550	2390	2190	1960					
16	16-82CD	1140	1/4	0.17	2120	1850	1510						
	16-82CE	1140	1/4	0.21	2380	2110	1740						
	16-82CF	1140	1/4	0.25	2600	2270	1880						
	16-43CD	1725	1/3	0.37	2910	2680	2420	2130	1710				
	16-43CE	1725	1/2	0.48	3240	3000	2710	2370	1990				
	16-83CE	1725	3/4	0.74	3600	3430	3240	3030	2800	2490			
18	18-31AD	850	1/4	0.12	2200	1750							
	18-61AL	850	1/4	0.27	3100	2650							
	18-32AA	1140	1/4	0.23	2620	2300	1900						
	18-32AJ	1140	1/2	0.41	3750	3400	2880						
	18-42AL	1140	1/2	0.51	4020	3700	3150						
	18-33AA	1725	3/4	0.80	4000	3800	3560	3300	3030	2700			
20	20-31AK	850	1/4	0.27	3760	3070							
	20-32AD	1140	1/2	0.37	3900	3500	3000						
	20-32AH	1140	1/2	0.50	4600	4180	3600						
	20-42AL	1140	3/4	0.67	5200	4700	3900						
	20-33AA	1750	1	1.10	5300	5040	4780	4460	4120	3560			
24	24-31AD	850	1/4	0.27	4300	4000							
	24-31AF	850	1/3	0.32	5200	4500							
	24-31AL	850	1/2	0.52	6400	5560							
	24-32AA	1140	1/2	0.53	5550	5100	4600	3900					
	24-32AF	1140	3/4	0.78	6900	6500	5960	5200					
	24-32AH	1140	1	0.93	7420	6960	6280	5600	4200				
	24-32AJ	1140	1	1.08	8000	7500	6800	6000					
	24-33AA	1750	2	1.90	8550	8260	7960	7640	7300	6940	6500	5920	4900
	24-33AC	1750	2	2.27	9400	9130	8830	8530	8180	7830	7350	6830	6160
30	30-31AA	850	1/3	0.35	6800	5600	2900						
	30-31AD	850	1/2	0.5	8000	7000	5300						
	30-31AF	850	3/4	0.6	8600	7600	6400						
	30-31AH	850	3/4	0.77	9700	8700	7200						
	30-31AJ	850	1	0.85	10400	9400	7700						
	30-31AL	850	1	1.00	11200	10000	8400						
	30-32AA	1140	1	0.85	9100	8400	7200						
	30-32AD	1160	1.5	1.26	10900	10200	9400	8470	6780				
	30-32AF	1160	1.5	1.51	12000	11120	10280	9450	8360				
	30-32AJ	1160	2	2.17	14300	13520	12650	11600	10100				
	30-33AB	1750	3	3.44	14700	14300	13800	13300	12500	11600	10700	9600	

Performance shown is for installation Type A: Free inlet, Free outlet.
Performance data is based on standard air conditions (0.075 lb/cu.ft density).
Performance ratings do not include the effects of appurtenances in the airstream.

SIZE	CODE	MOTOR		MAX.	CFM @ STATIC PRESSURE(IN. W.G.)								
		RPM	HP	BHP	0"	1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
36	36-31AA	850	1/2	0.54	9800	8400	6200						
	36-31AE	850	3/4	0.82	12200	10900	9000						
	36-31AG	850	1	1.04	13600	12300	10400						
	36-31AK	870	1.5	1.66	16600	15100	13400						
	36-41AK	870	2	2.11	17400	16000	14500						
	36-32AA	1160	1.5	1.37	13400	12400	11200	9800	8000				
	36-32AE	1160	2	2.05	16600	15800	14700	13400	12300				
	36-32AI	1160	3	3.25	20300	19400	18300	17100	15700				
	36-32AL	1160	5	4.32	23000	21900	20600	19100	17300				
	36-62AJ	1160	5	5.71	24100	23600	22800	22000	21100	20200	19300		
42	42-30BE	690	2	2.09	19800	18300	16400	13900					
	42-31BC	870	3	3.39	23800	22700	21200	19600	17900				
	42-31BD	870	5	3.70	24800	23500	22000	20300	18700	16200			
	42-31BG	870	5	5.20	26600	25300	23900	22200	20600	18500			
	42-32BC	1160	7.5	8.00	31700	30900	29700	28900	27800	26500	25400	24000	22500
48	48-30BE	690	3	3.08	27700	25900	23800	21000					
	48-31BA	870	5	3.51	27000	25400	24000	22000	20000	17700			
	48-31BD	870	5	5.16	32800	31400	29800	28000	26000	23500	20900		
	48-31BG	870	7.5	8.28	39000	37300	35800	34000	32100	29800	27000		
54	54-20BF	690	3	3.36	35000	31700	27700	23000					
	54-40BF	690	5	5.68	41000	39000	36500	34000	31000				
	54-21BA	870	5	3.47	32000	29500	26700	23600	19600	14800			
	54-31BA	870	5	4.71	35100	33100	31000	28700	26400	23500	20000		
	54-21BD	870	5	5.12	40500	37500	34000	30700	27300	23000			
	54-31BE	870	7.5	8.26	46600	44700	42300	40100	38000	34800	31600	27200	
60	60-40BD	690	5	5.56	43200	41000	38100	35200	32000				
	60-21BA	870	5	4.37	39000	35500	32000	28000	25000				
	60-21BD	870	7.5	6.44	48500	44000	41000	37800	33600	29800			
	60-21BE	870	7.5	7.63	51000	48000	44300	40200	36500	32000	26400		
	60-21BG	870	10	10.87	59500	56900	52500	48000	43700	39600	34500		

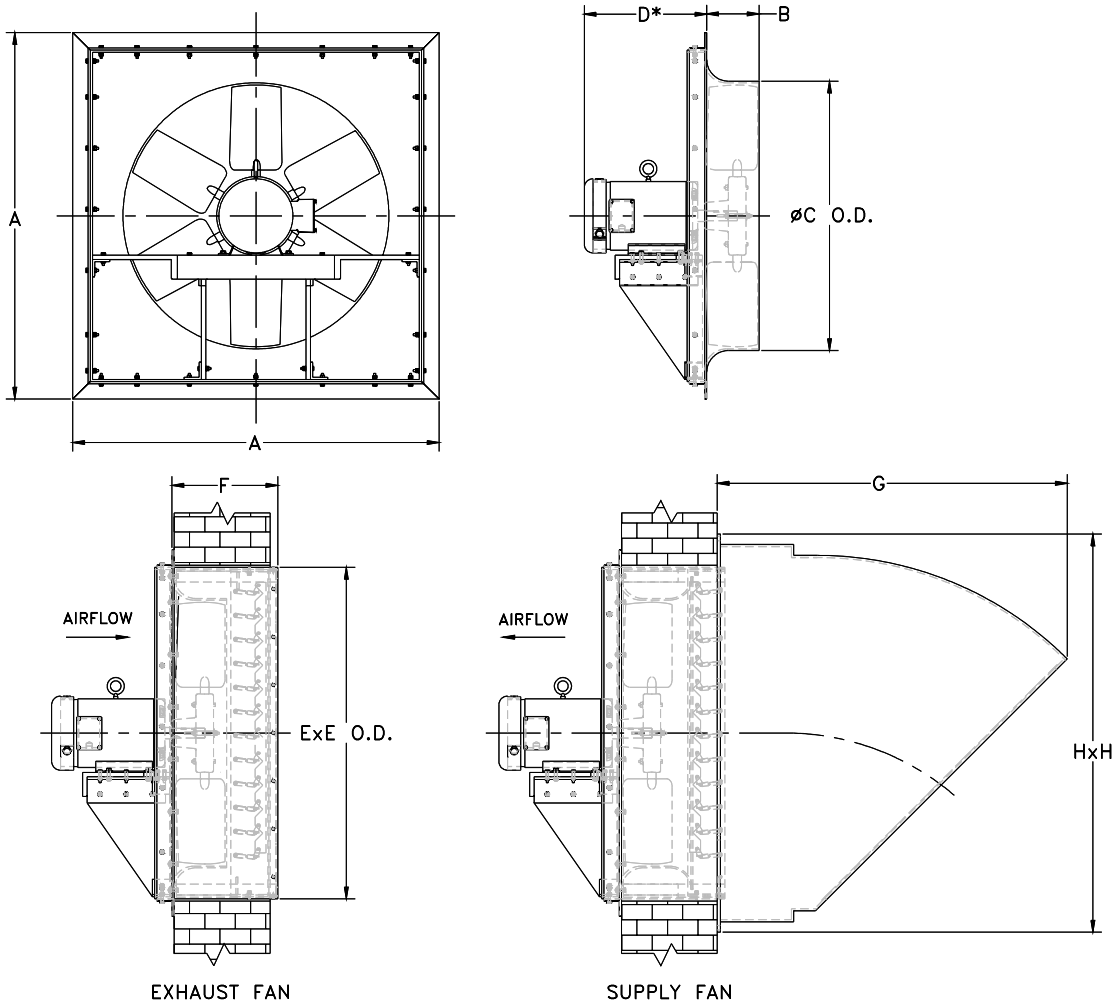
Performance shown is for installation Type A: Free inlet, Free outlet.
Performance data is based on standard air conditions (0.075 lb/cu.ft density).
Performance ratings do not include the effects of appurtenances in the airstream.
Other performances are available, please contact your local representative or the factory for information.
NOTE: AXPR 12" to 16" are also available at higher CFM's, up to 2" SP, with 3450 rpm motors. Consult M.K. Plastics for selections.

CATALOG NOMENCLATURE

36-32AE, where: 36: propeller size is 36" diameter
3: three blades
2: motor's nominal speed is 1160 RPM
AE: blade pitch

MOTOR SPEED

RPM	690	850/870	1140/1160	1725/1750
CODE	0	1	2	3



EXHAUST FAN

SUPPLY FAN

SIZE	A	B	C	D*	E	F	G	H
AXPR 12	24	6.25	12.875	12	20	11.875	20	24
AXPR 14	26	6.25	14.875	12	22	11.875	22	26
AXPR 16	28	6.25	16.875	12	24	11.875	24	28
AXPR 18	30	6.25	18.875	18	26	11.875	30.25	32
AXPR 20	32	6.25	20.875	22	28	11.875	30.25	32
AXPR 24	36	6.25	24.875	22	32	11.875	35	38.5
AXPR 30	42	6.25	30.875	22	38	11.875	40	45.625
AXPR 36	52.5	6.25	36.875	22	46.5	11.875	43	49.625
AXPR 42	58.5	8.25	42.875	22	52.5	13.5	49.5	59.25
AXPR 48	66	8.25	48.875	22	60	13.5	50	64
AXPR 54	72	8.25	54.875	22	66	13.5	52	70
AXPR 60	77	8.25	60.875	22	71	13.5	54	75

D*: Approximate value. Actual dimension will vary with each motor.

PART 1 GENERAL

1.01 WORK INCLUDED
AXPR Fiberglass Reinforced Plastics (FRP) Propeller Fan, wall mounted, direct driven, manufactured by M.K. Plastics.
1.02 RELATED WORK
All sections, drawing plans, and contract documents.
1.03 REFERENCES
A. AMCA 99 Standard Handbook
B. AMCA 210 Laboratory Method of Testing Fans for Aerodynamic Performance Rating
C. AMCA 204 Balance Quality and Vibration Levels for Fans.
1.04 QUALITY ASSURANCE
A. Fan performance shall be based on tests conducted in accordance with AMCA Standard 210 for air performance.
B. Classification for Spark Resistant Construction, conform to AMCA 99.
C. Each fan shall be tested before shipping. Motors to be tested for amperage drawn.
D. A certificate to be supplied with each fan as to quality control before shipping and compliance to specifications.
1.05 SUBMITTALS
A. M.K. Plastics to submit product data on each AXPR fan.
B. Provide fans curves for each fan at the specified operating point, with the flow, static pressure and horsepower clearly plotted.

PART 2 EQUIPMENT

2.01 GENERAL
A. Base fan performance at standard air condition (density 0.075 Lb/ cu. ft).
B. Fan selected shall be capable of accommodating static pressure and airflow of scheduled values.
C. Each fan shall be direct driven.
2.02 CONSTRUCTION
A. Fan panel shall be aerodynamically designed with high-efficiency venturi inlet to reduce incoming air turbulence.
B. Fan panel shall be manufactured in specially formulated resins, for maximum corrosion resistance and reinforced with fiberglass for structural strength.
C. A rigid FRP frame made by four FRP angles shall be bolted to fan panel and wall box.
D. Motor support shall be rigid FRP channel and plates, bolted to fan panel.
E. Stainless steel airstream hardware shall be used for corrosion resistance.
F. Airstream parts to be supplied with graphite impregnated resin finish, and grounding straps to remove static electricity, if required.
2.03 PROPELLER
A. Blades shall be molded high efficient airfoil profile.
B. Hub shall be molded to two parts each of them has half socket for receiving blades.
C. Blades and hub shall be assembled on a special jig for precise blades pitch.
D. The propeller assembly shall be statically and dynamically balanced in accordance with AMCA 204 to Fan Application Category BV-3, Balance Quality Grade G6.3.
2.04 MOTOR
A. Motors shall be TEFC foot-mounted with a 1.15 service factor.
B. Unless otherwise specified, motors shall be equipped with permanently lubricated sealed ball bearings for heavy duty performance.
C. Explosion-proof or Chemical Duty motors are available according to the specifications.
2.05 ACCESSORIES
The AXPR fan shall be furnished with the following optional accessories when required:
A. Inlet/Outlet OSHA Screens, PVC/PP/PE, stainless steel available.
B. Weather Cowl, FRP or epoxy steel, for supply fan configuration.
C. Wall Box, FRP.
D. Shutter, PVC counterweighted to assist opening.

3.01 INSTALLATION
A. Install fans and accessories as indicated on the contract drawings.
B. Install fans and accessories in accordance with the manufacturer's instructions.

4.01 ACCEPTABLE MANUFACTURERS
A. M.K. Plastics Corporation, Model AXPR Fiberglass Propeller Fan.

CONDITIONS OF SALE

1. Prices quoted are current, prices prevailing at time of shipping will apply. Material in stock is offered subject to prior sale. All Sales Contracts arising out of this quotation shall be subject to our regular conditions show on this side.

2. All deliveries quoted are based on availability of material and labor at the time of quotation and subject to change. Deliveries are contingent upon strikes, accidents, fires, and other causes and we shall not be liable for any loss or damage caused by delays beyond the control of the company.

3. Goods invoiced up to and including the last day of the calendar month shall be paid for not later than the last business day of the following month. The company reserves the right to charge interest at commercial rates on any overdue account.

4. Any order accepted by us cannot be countermanded, revised or cancelled without our written consent and upon such terms as will indemnify us against any loss. The word "loss" as used herein shall include, but not limited to, cost of materials, special machinery, tools, jigs and fixtures built or purchased for the contract and all parts in process, fabricated in whole or in part by previous costumer authorization.

5. No contract arising from the acceptance of this quotation shall be valid and binding until approved by the company, such contract shall be governed by and interpreted in accordance with the laws of Province of Quebec.

6. All memoranda, drawings and information furnished by the company shall remain its property and shall be considered business or trade secrets received in trust and confidence for the sole purpose of assisting the buyer.

7. Orders to customer's drawings or descriptions are filled with the understanding that the customer assumes the obligation to protect M.K. Plastics Corp. from any action for infringements of patents.

8. No modification of the above conditions of sale shall be effected by our receipt or acknowledgement of a purchase order containing additional or different conditions.

LIMITATION OF WARRANTY AND LIABILITY

We will not be responsible for the damage to equipment or materials through improper installation, storage, improper servicing, or through attempts to operate it in excess of its rated capacity or recommended use, intentional or otherwise. We will not be responsible for consequential damage.

Based on the fact that M.K. Plastics Corp. has no direct control over the actual handling and use of its products in the field, M.K. Plastics Corp. does not assume any liability for any loss of costumer or any personnel or any physical damages that claimed by anyone due to a failure or cause attributed to the use of its products. In no event shall M.K. Plastics Corp. be responsible for consequential damages of any such defective material or workmanship, including but not limited to the buyer's loss of material or profit, increase expense of operation, downtime or reconstruction of the work and in no event shall M.K. Plastics Corp. obligation under this warranty exceed the original contract price of the defective item.

M.K. Plastics Corp. warrants its equipment, products and parts, to be free from defects in workmanship and material under normal use and service for one (1) year after delivery to the first user. Our obligation under this warranty being limited to repairing or replacing, at our option, without cost at our factory any part, or parts which shall , within such warranty period, be returned to us with transportation charged prepaid, and which our examination shall disclose to our satisfaction to have been defective.

M.K. Plastics Corp. will not be responsible for the cost of removal of a defective product or parts or the installation of a replaced product or parts, or for costs due for its removal, crating or shipping.

On account of variables including but not limited to, vibration, system noise characteristics, motor overloading or change in voltage conditions, the specifics of customer application of equipment or other system conditions, M.K. Plastics Corp. does not expressly warrant its equipment for any specific purpose.

The customer and its agents are responsible for the selection and application of M.K. Plastics Corp. products, including their fitness for the purpose and performance intended. Consequently, the customer on behalf of its agents assumes all liability related to the user/misuse, application and selection of the M.K. Plastics Corp.

M.K. Plastics CORPORATION

SERVING THE NEEDS OF MODERN INDUSTRY

4955 De Courtrai Ave., Montreal, Quebec H3W 1A6
Trimex Building, Route 11, Mooers, NY 12958
Spiez, Switzerland
tel: (514) 871-9999 / (888) 278-9988
fax: (514) 871-1753
www.mkplastics.com

78-01-MAY-2005