NFK

Bag Filter

Dantherm Filtration

Formerly Disa Systems

NFK

Features

Central System

Suitable for collection of many different types of dust including wood, paper and plastic

5,000 - 100,000 CFM

- Modular
- Expandable
- Customizable range
- Fully automatic operation
- Low profile (16’)
- Zoned system design
- No compressed air requirement
- Multiple waste collection options

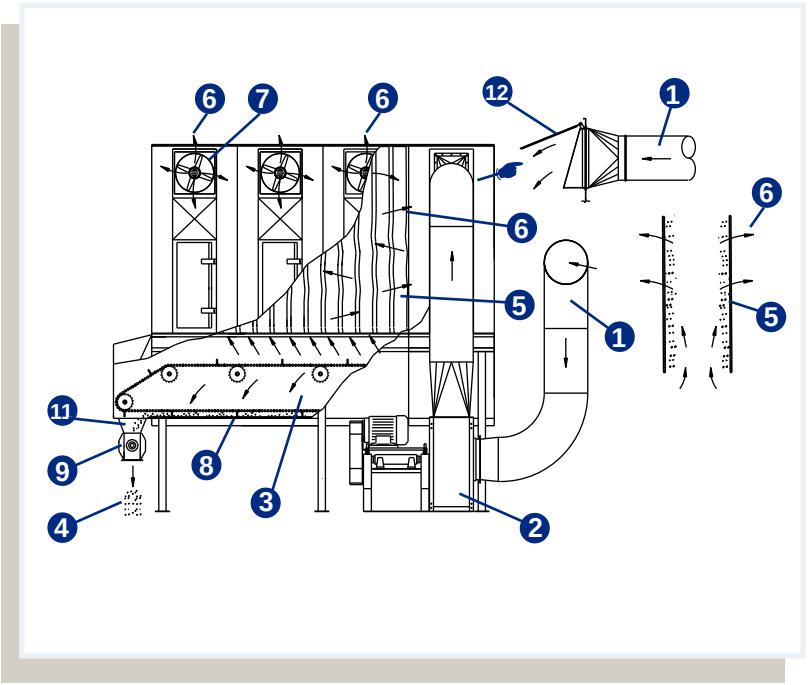
Moulding Operations • Centralized Systems • Sanding Grinding • After-Filters

NFK

How It Works

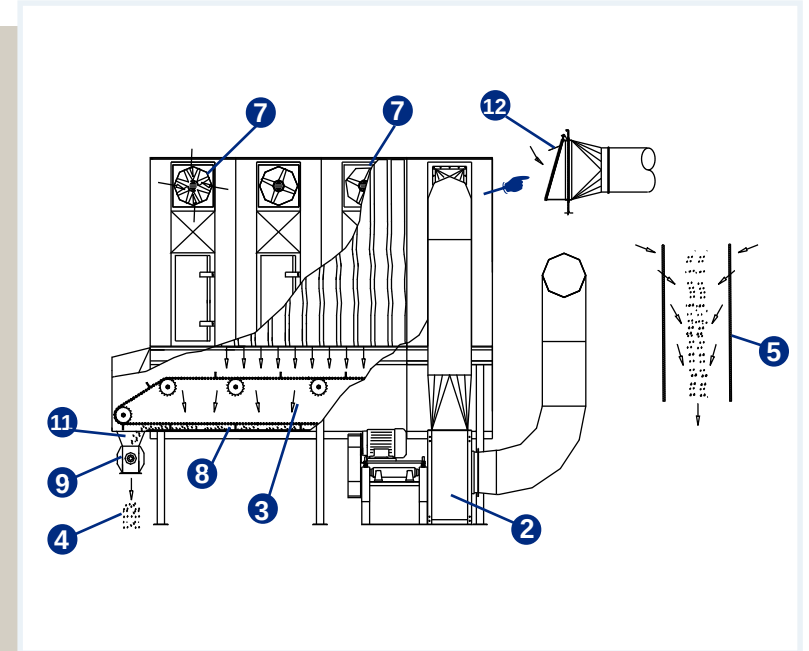
...during normal operation

1. During normal operation, the dust laden air from the plant travels down the supply duct (1)
2. The dirty air then enters the COMBIFAB material handling fan and into the filter (2)
3. As the dust-laden air enters the inlet section of the filter, the air decelerates and heavier dust and shavings settle on the hopper floor (3)
4. The heavier dust and shavings collected on the hopper floor are conveyed to the discharge end (11) of the filter by the scrapers on the chain conveyor (8)
5. At the discharge end of the filter, the dust is pushed into the rotary airlock (9) and out of the filter
6. The remaining dust then travels up into the inside of the filter bags (5)
7. The air, which originated from the plant, is now clean (6) and passes through the filter bag (5) and out the exhaust port (7)



...while cleaning

1. The NFK filter cleans the bag during operation (On-line cleaning) and when the unit is shut down (Off-line cleaning). The Off-line cleaning period starts after the COMBIFAB fan (2) has stopped rotating
2. A PLC control in the electrical panel regulates the cycle of the reverse air regeneration fan. (7) The regeneration fan shakes the filter bags (5) causing the dust cake, which hangs on the inside of the filter bag, to fall into the hopper section (3)
3. Any dust that remains on the inside of the filter bag after the initial “shake” is removed by the airflow generated by the regeneration fan.
4. The dust that is removed during the cleaning cycle falls on to the floor of the hopper (3), and then gets transported to the discharge section of the filter (11) by the chain conveyor (8)



NOTE: The back-blast damper (12) is open during normal operation of the filter but closes when the fan is shut down and the filter starts in an Off-line cleaning cycle. During the Off-line cleaning period, the back-blast damper (12) acts as a barrier to prevent the air generated from the regeneration fan to travel back down the supply duct (1)

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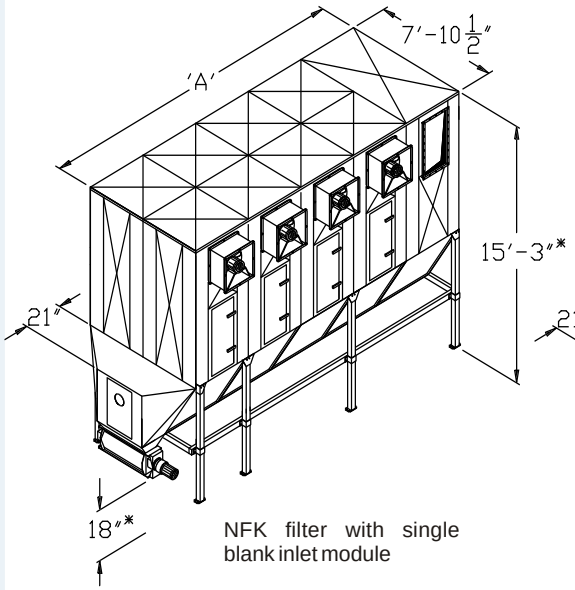
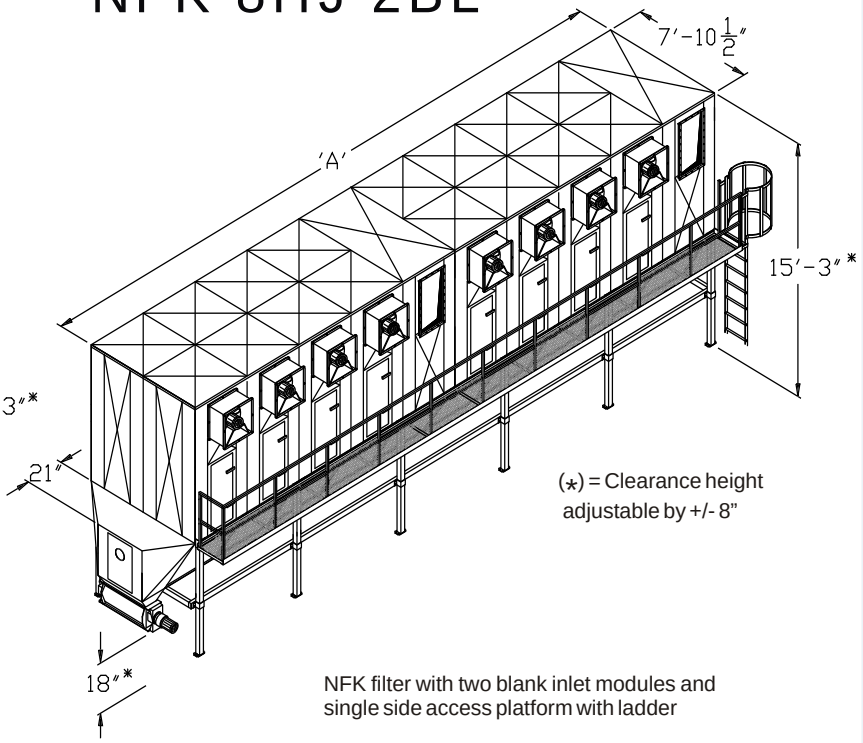
Ground Mounted Units

NFK 4HJ-1BL



NFK filter with single blank inlet module

NFK 8HJ-2BL



(*) = Clearance height adjustable by +/- 8”

NFK filter with two blank inlet modules and single side access platform with ladder

MODEL NUMBER	NO. OF BAGS	FILTER MEDIA (ft²)	AIR VOLUME (cfm)	' A '	NO. OF CLEANING FANS	NO. OF BLANK INLET MODULES	WEIGHT (lbs) * FILTER UNIT (Unplugged)	WEIGHT (lbs) * FILTER UNIT (Plugged)
NFK 2HJ-1BL	100	1,600	**10,000**	11' - 10"	2	1	4,010	6.600
NFK 3HJ-1BL	150	2,400	**15,000**	15' - 9"	3	1	4,976	8,800
NFK 4HJ-1BL	200	3,200	**20,000**	19' - 8"	4	1	6,007	11,000
NFK 5HJ-1BL	250	4,000	**25,000**	23' - 8"	5	1	7,040	13,200
NFK 6HJ-1BL	300	4,800	**30,000**	27' - 7"	6	1	8,072	15,400
NFK 7HJ-2BL	350	5,600	**35,000**	35' - 6"	7	2	9,904	20,900
NFK 8HJ-2BL	400	6,400	**40,000**	39' - 5"	8	2	10,779	22,000
NFK 9HJ-2BL	450	7,200	**45,000**	43' - 4"	9	2	11,811	24,200
NFK 10HJ-2BL	500	8,000	**50,000**	47' - 3"	10	2	12,843	26,400

* = Weight includes filter, airlock, cleaning fans and access platform. 'Unplugged' weight should be used for transportation purposes only.

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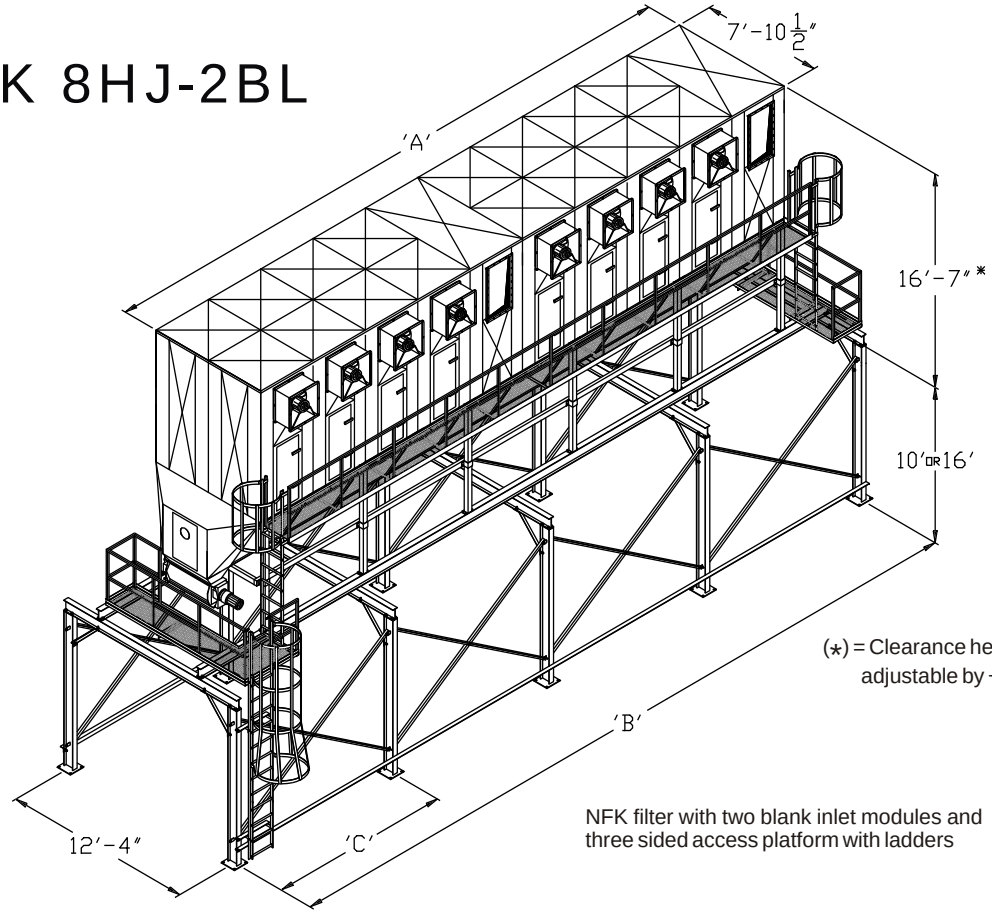
Structure Mounted Units

NFK 8HJ-2BL



NFK filter with two blank inlet modules and three sided access platform with ladders

MODEL NUMBER	NUMBER. OF BAGS	FILTER MEDIA (ft²)	AIR VOLUME (cfm)	' A '	' B '	' C '	WEIGHT (lbs) * 10' STRUCTURE (lbs)	WEIGHT (lbs) * 16' STRUCTURE (lbs)
NFK 2HJ-1BL	100	1,600	**10,000**	11' - 10"	19' - 0"	9' - 6"	1,778	2,528
NFK 3HJ-1BL	150	2,400	**15,000**	15' - 9"	23' - 0"	11' - 6"	1,858	2,630
NFK 4HJ-1BL	200	3,200	**20,000**	19' - 8"	27' - 0"	13' - 6"	1,938	2,742
NFK 5HJ-1BL	250	4,000	**25,000**	23' - 8"	31' - 0"	10' - 4"	2,484	3,516
NFK 6HJ-1BL	300	4,800	**30,000**	27' - 7"	35' - 0"	11' - 8"	2,564	3,628
NFK 7HJ-2BL	350	5,600	**35,000**	35' - 6"	43' - 0"	10" - 9"	3,190	4,514
NFK 8HJ-2BL	400	6,400	**40,000**	39' - 5"	47' - 0"	11' - 9"	3,270	4,626
NFK 9HJ-2BL	450	7,200	**45,000**	43' - 4"	51' - 0"	12' - 9"	3,350	4,738
NFK 10HJ-2BL	500	8,000	**50,000**	47' - 3"	55' - 0"	13' - 9"	3,430	4,850

* = Structure weights DO NOT include filter unit. Please add plugged or un-plugged weight from the 'Ground Mounted Unit Specification' page.

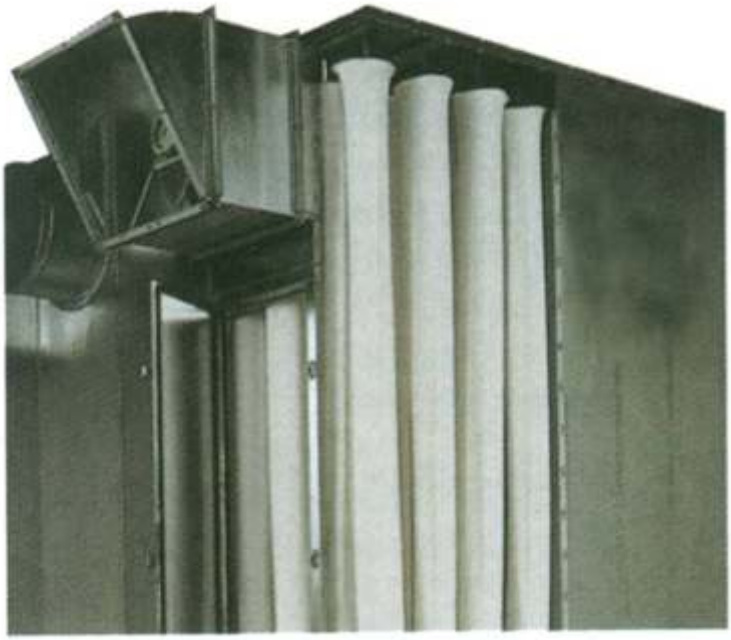
NFK

Superbag

The heart of the system

A filter is only as good as the filter bags it uses. This is the component that provides the filtering while allowing clean air to pass through with the least possible resistance and, therefore, the lowest possible consumption of energy-even after several thousand hours of operation.

SUPERBAG, our patented filter bag, is fitted as the standard in all NFK filters.



Efficiency and low energy consumption

Superbag is polyester filter bag. A patented weaving technique in tubular format give the filter bag a surface which can cope with varying dust loads and with virtually any type of dust. Better filtering efficiency is achieved with this unique filter media which provides low pressure drop, and low energy consumption.

Antistatic

SUPERBAG's interwoven carbon fiber wire provides higher anti-static properties - both on the surface and inside - than traditional filter bags. This reduces the risk of fire and explosion as fine particles are removed.

Strength and durability

The special shape of the SUPERBAG helps to ensure that the high efficiency and effectiveness of the NFK filter system is maintained even after long periods of operation. The durability is the result of the patented construction , strong polyester fiber and seamless body.
These features also help make cleaning of the filter bag very easy.

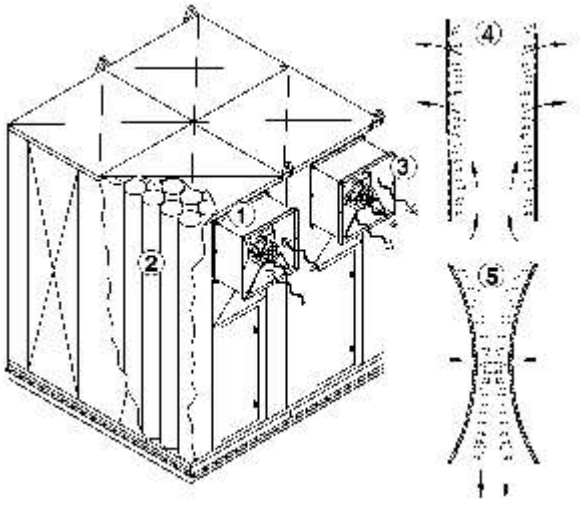
NFK

Superbag

Quality	Circular knitted with two integrated layers filter	
Material	100% polyester	
Weight	16	Ounces/sqft
Max. operating temperature	289	°F
Intermittent peak temperature	320	°F
Melting point	482-500	°F
BIA classification	U	95.5 % filtration of .088 gr/ft^3 Test dust (90 % 0,2-2,0)
Electrostatic behavior	Surface resistance 2.6 x 10^7 Ohm Charging towards PA 0.7 kV	DIN 54 345 TEIL 1 TEFO Method 40-77
Applications	Filtration of: Shavings, saw dust, sanding dust, lacquering dust from woodworking industry as well as other fibrous materials such as mineral wool, paper strips and dust.	

Cleaning System

All filters in the NF series utilize a regeneration fan for filter cleaning. The regeneration fan reverses the flow of air back into the filter section causing the bags to shake. In most cases, cleaning is done while the filter is shut down. The NFK chain filter may be set up with continuous cleaning which allows the filter to clean during normal operation.



1. If continuous cleaning is selected as an option (available on the NFK only), a regeneration fan is placed on every filter module. Otherwise, one is located on every other module.

2. The filter bags shake during the cleaning cycle causing the dust cake on the inside of the bag to break free and fall into the hopper section and out of the filter.

3. Only one regeneration fan operates at any given time, so the clean air may exhaust through the blades of the other fans during normal operation.

4. During normal operation, the materials collects on the inside of the filter bag causing a dust cake. The clean air is blown through the bag from the inside out.

5. During the cleaning cycle the air is reversed back through the filter bag from the outside in. The reverse flow, along with the shaking action generated by the cleaning fan, cause the dust cake to fall off the filter bag and into the hopper section.

NFK

Component Description

Inside Filter View

Picture Of The Chain

Chain Drive Station

NRS10 Rotary Air-Lock

Chain Security Switch

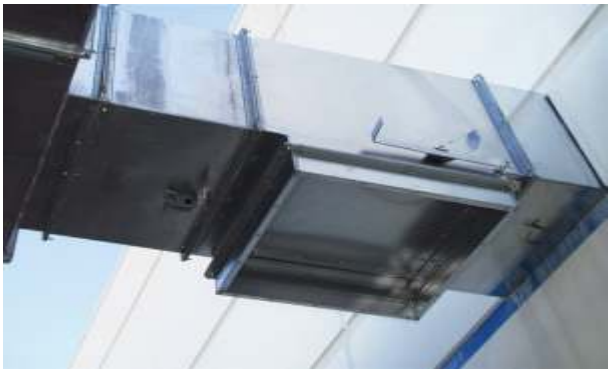
Door Security Switch

NFK

Component Description

Return Air Ductwork

Summer/Winter Gate



Reverse Air Cleaning Fan

Fire Gate

Spark Detection

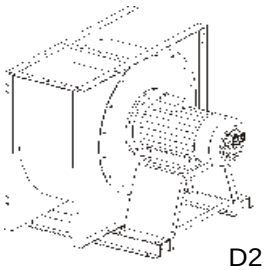
Drive Station End

Extinguisher

NFK

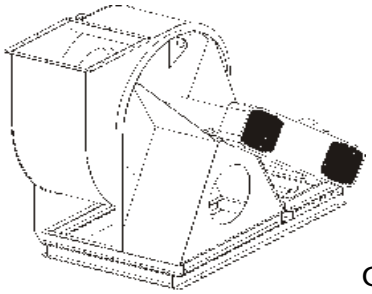
Combifab Fans

Direct Driven 2



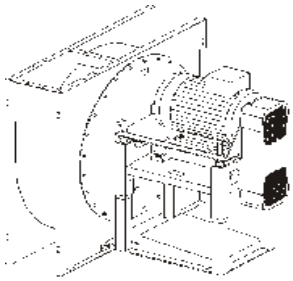
D2

Gear 3



G3

Gear 5

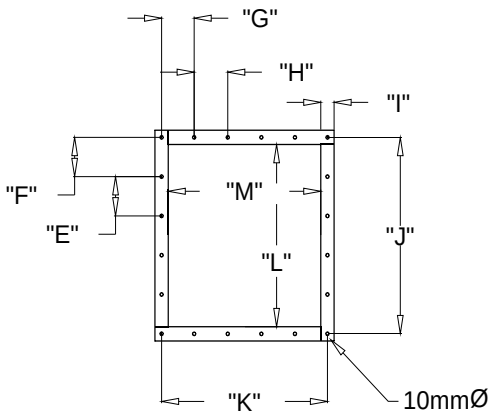


G5

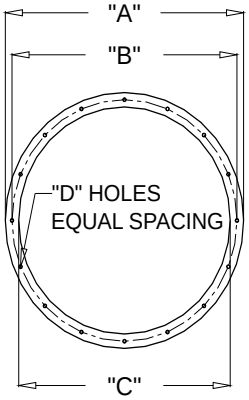
Model	Arrangement	HP	CFM Range	Total S.P. Range	Stock Item
S56-250	D1	10	2,100 - 4,000	13" - 6"	YES
S40-315	D2	15	4,100 - 6,000	12" - 8"	YES
S56-450	D2	20	6,100 - 9,000	11" - 7"	YES
S56-500	D2	40	12,100 - 15,000	11" - 7"	YES
S40-315	G5	15	4,100 - 6,000	12" - 8"	NO
S56-450	G5	20	6,100 - 9,000	11" - 7"	YES
S63-500	G5	25	9,100 - 12,000	10" - 6"	YES
S56-500	G5	40	12,100 - 15,000	12" - 8"	YES
S56-560	G5A	60	15,100 - 18,000	14" - 11"	YES
S56-630	G5A	75	18,100 - 23,000	14" - 11"	YES
S56-630	G3	75	18,100 - 23,000	14" - 11"	YES
S56-710	G3	100	23,100 - 27,000	16" - 12"	YES
S56-900	G3	125	32,100 - 35,000	14" - 12"	NO

NFK

Combifab Fan Flange Configurations



FAN OUTLET
FLANGE PATTERN



FAN INLET
FLANGE PATTERN

	"A"		"B"		"C"		"D"	HOLE DIA	
	mm	inch	mm	inch	mm	inch	QTY	mm	inch
S56-500-D2	576	22.68	538	21.18	500	19.69	12	10	0.39
S56-500-G5A	576	22.68	538	21.18	500	19.69	12	10	0.39
S56-630-G5A	710	27.95	670	26.38	630	24.80	16	10	0.39
S56-710-G3	790	31.10	750	29.53	710	27.95	16	10	0.39
S56-800-G3	896	35.28	848	33.39	800	31.50	16	10	0.39

	"E"		"F"		"G"		"H"		I"	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
S56-500-D2	**109**	4.29	**109**	4.29	**97**	3.82	**100**	3.94	**40**	1.57
S56-500-G5A	**109**	4.29	**109**	4.29	**97**	3.82	**100**	3.94	**40**	1.57
S56-630-G5A	**112.5**	4.43	**112**	4.41	**100**	3.94	**101**	3.98	**40**	1.57
S56-710-G3	**192.5**	7.58	**192.5**	7.58	**172.5**	6.79	**172.5**	6.79	**55**	2.17
S56-800-G3	**172**	6.77	**172**	6.77	**192.5**	7.58	**192.5**	7.58	**55**	2.17

	"J"		"K"		"L"		"M"	
	mm	inch	mm	inch	mm	inch	mm	inch
S56-500-D2	**545**	21.46	**494**	19.45	**505**	19.88	**454**	17.87
S56-500-G5A	**545**	21.46	**494**	19.45	**505**	19.88	**454**	17.87
S56-630-G5A	**674**	26.54	**604**	23.78	**634**	24.96	**564**	22.20
S56-710-G3	**770**	30.31	**690**	27.17	**720**	28.35	**640**	25.20
S56-800-G3	**860**	33.86	**770**	30.31	**810**	31.89	**720**	28.35

Equipment	HP	Drive Arrangement	Full Load Amps		CFM	TSP range	Break HP	RPM	Weights	DbA @5'
			230V	460V						
S56-500-D2	40	Direct	100	50	9000-13000	14"-12.6"	30.5-33.4	1800	1500	75
S56-500-G5	50	Belt Drive	122	61	15000	12.3"	49.3	2000	1900	81
S56-630-G5A	75	Belt Drive	178	89	20000	15.5"	74.6	1600	2750	81
S56-710-G3	100	Belt Drive	228	114	25000	16.7"	99.6	1460	4650	82
S56-800-G3	125	Belt Drive	N/A	142	30000	17.6"	124.1	1305	5400	82

NFK

Control Panel

Suitable for collection of many different types of dust including wood, paper and plastic

Can control from 2 to 10 regeneration fans

Can control 1 to 4 COMBIFAB fans

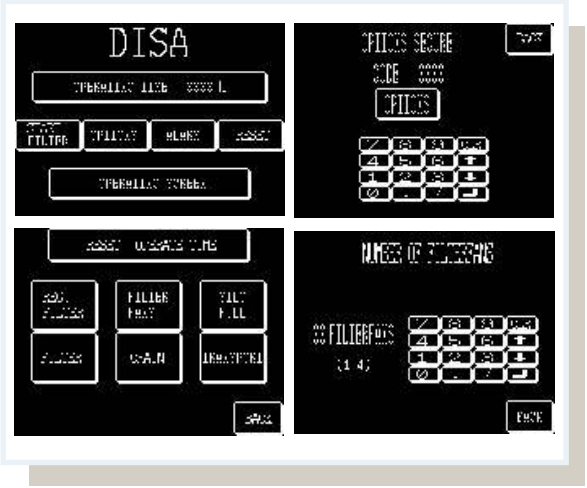
Touch Panel

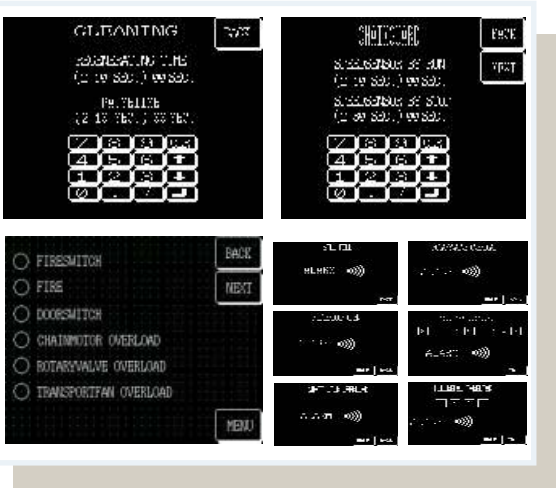
Emergency stop button

Can be equipped with modem for remote access

Description

The electric panel is operated by means of a Touch Panel placed on the front of the electric panel. Start/stop is controlled from the Touch Panel or the external motor starter. The Touch Panel is built up with a number of screen pictures each having a visual function. The design of the electric panel is very flexible which makes it possible to use the electric panel for numerous individual purposes. State of operation, alarms, total running period as well as setting of cleaning periods, counter, number of regeneration fans and filter fans can be changed and shown on the screen pictures of the Touch Panel. The electric control is enclosed functional description, PLC program, key diagram, parts list and layout diagram as well as installation instructions.





Structure

The electric panel is built into a steel plate housing which is powder-lacquered. As standard the electric panel is fitted with PLC control (programme logic controller), terminals for external emergency stop, door switch, fire damper, full-load control, switches for 1 pce. transport auger, 1 pce. rotary valve, 1 pce. chain motor, 2 pcs. regeneration fans, terminals for external transport fan and terminals for 4 pcs. external filter fans.

Variants

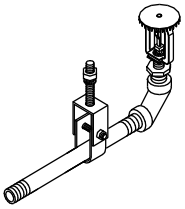
The standard electric panel for NFK 2000 can be supplied for control of 2 to 10 regeneration fans and from 1 to 4 filter fans. Changes and choosing between transport fan and transport auger are carried out on the Touch Panel (see directions for use Touch Panel).

Certificate

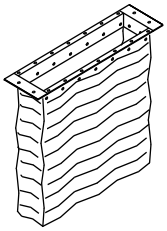
The electric panel complies with the standard Underwriters Laboratories Inc. (cUL).

NFK

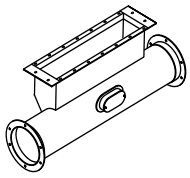
Options



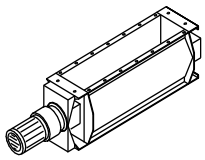
Sprinkler head



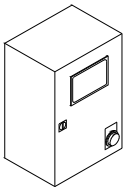
NRS10 vinyl drop chute 4’ & 6’ long



NRS10 drop tube
For relay fan

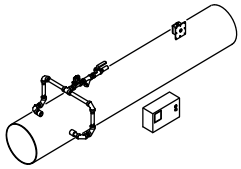


NRS10 rotary valve

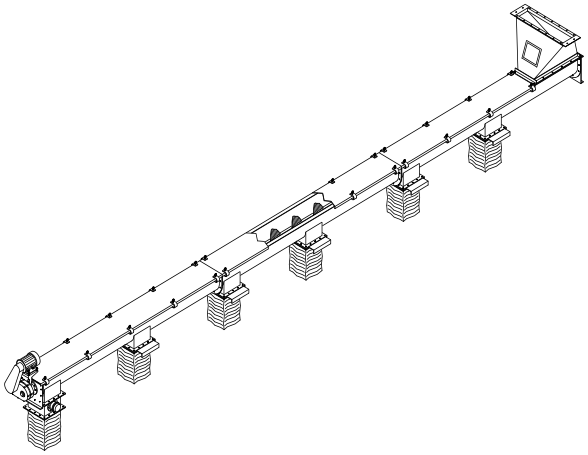


For large hp

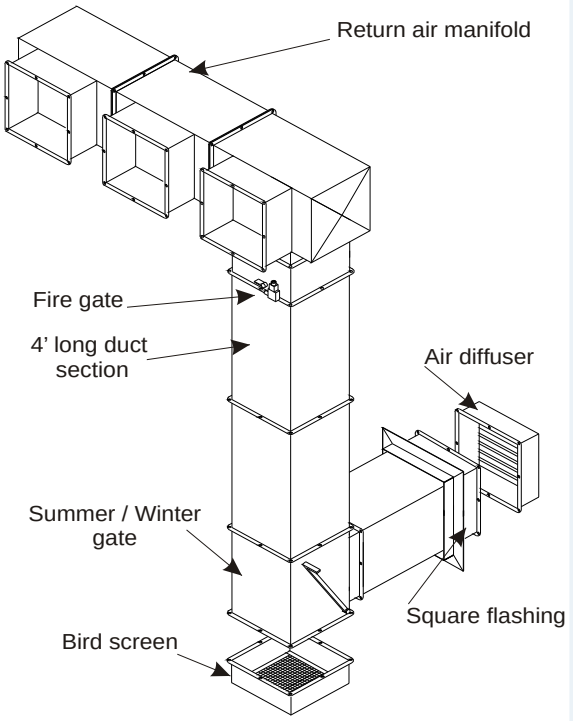
Fan motors
soft-start starter



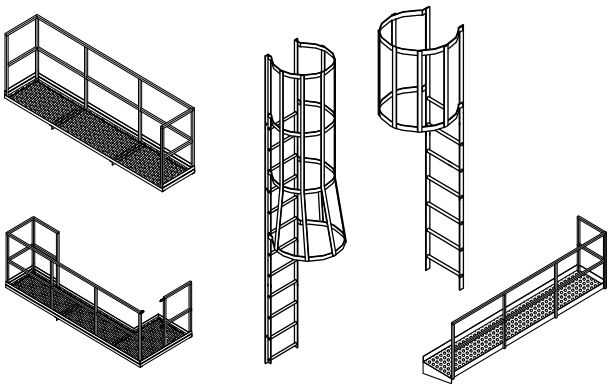
Spark detection system
(detect & extinguish)



Dumpster loading leveling auger available in 12’, 24’,



Return air duct assembly



Triple Platform & Ladders

NFK

Installations

Typical Ground Mounted

Unit On Structure

Filter Located On Roof

Installation In Progress

Expanded Filter

“Zoning” / Multiple Fans

NFK

Installations

Custom Painted

Enclosed Relay System

Mechanical Conveying System

Enclosed Relay System

Conveying System

Dual Enclosed Relay System

World-Class Dust Collection Solutions

World Wide Manufacturing & Assembly Locations:

- United States
- England
- France
- Poland
- Denmark
- Finland
- Germany
- Thailand

United States Manufacturing & Assembly Locations:

East Coast
102 Transit Ave.
Thomasville, NC-27360

West Coast
1990 Rockefeller Road, Suite 200
Ceres, CA-95307

800 533 5286

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