



**M-PLUS**



**COMPRESSOR AIR FILTER**

**M SERIES**



Member of CISQ Federation  
**RINA**  
ISO 9001:2000  
Certified Quality System



Member of CISQ Federation  
**RINA**  
ISO 14001  
Certified Environmental System

**M-PLUS FILTRATION**

# Construction

## Construction

A dynamic approach to design, material selection and construction means that M-Plus Filtration is at the forefront of filtration technology. Our internal Research and Development team constantly identify, evaluate and implement enhancements to improve the ease of use and performance of our market leading range. Typically, most alternative filter elements are manufactured to M-Plus Filtration's standard construction illustrated below.

## Filter Element Design and Materials

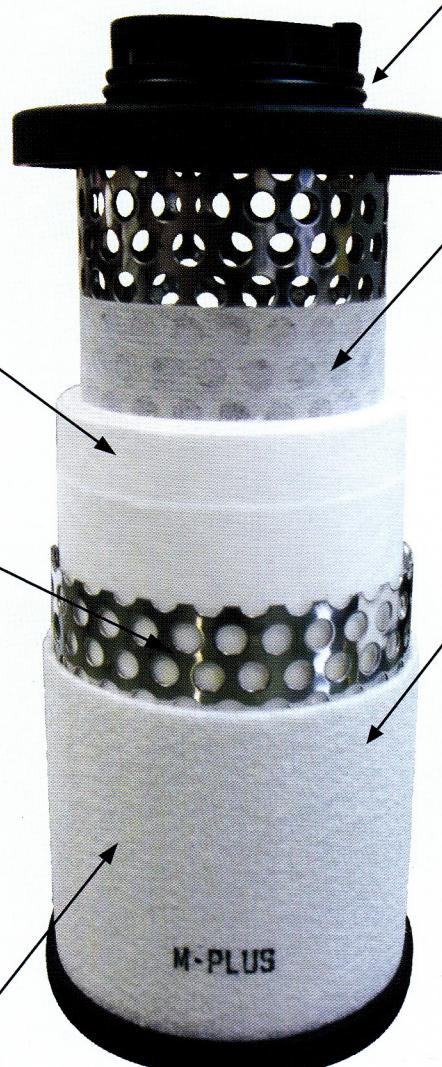
**Borosilicate Microfibre Glass Material** high quality filter material is used to manufacture the media pack. This material, with a bonded structure, withstands high temperatures, is completely inert and is immune to degradation. With sub micron fibre diameters and an extremely high voids volume (as seen in this stereo micro-scan above) it is available in different grades for varying efficiency.



**Stainless Steel** perforated support cylinders, twice as strong as galvanized steel, can withstand 7 bar (100 psig) in either direction.

**Deep Bed Multi Wrap technology** is used to form the media pack. This offers low differential pressure, extremely high oil removal efficiencies and proven continuous performance with long service life.

**Extra Stainless Steel inner support** on larger reverse flow elements is provided by the addition of a coil spring spot welded to the inner cylinder. This feature ensures these elements meet the demands of "outside to in" flow and do not rupture causing downstream contamination.



**High Nitrile 'O' Rings** ensure perfect sealing within the filter housing whilst withstanding high temperatures of over 120°C (250°F).

**Particulate Pre-filtration** on both sides of the media pack offers protection with air flow in either direction. This non-woven fabric also enhances the strength of the filter pack and increases filter life.

**Polyester Fibre Drainage Sleeve**, Has now become industry standard. This polyester material collects coalesced oil from the media pack and allows it to gravitate down to the quiet zone of the filter bowl thus preventing any oil carryover. Unlike reticulated foams which can seriously degrade causing downstream contamination, this material has a high tensile strength and withstands all the demands of compressed air filtration.



Example of a typical reticulated foam sleeve exhibiting considerable degradation, a much less robust solution than the M-Plus polyester drainage sleeve.

- M-Plus's filter element performance guarantee is extended for a further 6 month. ●

# Alternative Filter Element “M-PLUS” brands

HIROSS Model	M-PLUS Model	Connections BSP	Air Flow scfm
# 004	MH004#	3/4"~3/8"	14
# 007	MH007#	3/4"~3/8"	25
# 015	MH015#	3/4"~1/2"	53
# 024	MH024#	1"~1 1/2"	85
# 035	MH035#	1 1/2"	124
# 060	MH060#	1 1/2"	212
# 090	MH090#	2"	318
# 120	MH120#	2"	424
# 150	MH150#	2"	530
# 240	MH240#	DN65	848



HIROSS Grade	M-PLUS Grade	Detail	Particle removal $\mu\text{m}$	Oil removal $\text{mg/m}^3$
Q	P	General purpose filter	3	
P	S	High efficiency oil removal filter	1	1
S	X	Ultra high efficiency oil removal filter	0.01	0.1
C	Z	Oil vapor removal filter		0.003



DOMNICK Model	M-PLUS Model	Connections BSP	Air Flow scfm
K009 #	MD009#	1/4"	19
K017 #	MD017#	3/8"	36
K030 #	MD030#	1/2"	64
K058 #	MD058#	3/4"	127
K145 #	MD145#	1"~1 1/2"	170~307
K220 #	MD220#	1 1/2"~2"	424~466
K330 #	MD330#	2"	699
K430 #	MD430#	2 1/2"~3"	848~911
K620 #	MD620#	3"	1314

DOMNICK Grade	M-PLUS Grade	Detail	Particle removal $\mu\text{m}$	Oil removal $\text{mg/m}^3$
PF	Q	Coarse Pre-Filtration	25	
AO	S	High efficiency general purpose protection	1	0.6
AA	X	High efficiency oil removal filtration	0.01	0.01
AX	V	Ultra high efficiency filtration	0.01	0.001
ACS	Z	Oil vapour & Odour removal		0.003
AR	P	General purpose dust filtration	1	
AAR	A	High efficiency dust filtration	0.01	

# Alternative Filter Element “M-PLUS” brands

Hankison Model	M-PLUS Model	Connections BSP	Air Flow scfm
E#-12	MHK#-12	3/8"~1/2"	20
E#-16	MHK#-16	3/8"~1/2"	35
E#-20	MHK#-20	3/8"~1/2"	60
E#-24	MHK#-24	3/4"~1"	100
E#-28	MHK#-28	3/4"~1"	170
E#-32	MHK#-32	1"~1 1/2"	250
E#-36	MHK#-36	1"~1 1/2"	375
E#-40	MHK#-40	2"~2 1/2"	485
E#-44	MHK#-44	2 1/2"	625
E#-48	MHK#-48	2 1/2"	780



Hankison Grade	M-PLUS Grade	Detail	Particle removal $\mu\text{m}$	Oil removal $\text{mg/m}^3$
E9	P	Separator/Filter	3	5
E7	S	General purpose air line filter	1	1
E5	X	High efficiency oil removal filter	0.01	0.01
E3	V	Ultra high efficiency oil removal filter	0.01	0.001
E1	Z	Oil vapor removal filter		0.003



ATLAS Model	M-PLUS Model	Connections BSP	Air Flow scfm
# 009	MAC009#	3/8"	23
# 017	MAC017#	1/2"	45
# 032	MAC032#	1/2"	85
# 044	MAC044#	3/4"~1"	117
# 060	MAC060#	1"	159
# 120	MAC120#	1 1/2"	318
# 150	MAC150#	1 1/2"	399
# 175	MAC175#	1 1/2"	464
# 260	MAC260#	2"~2 1/2"	742
# 390	MAC390#	3"	1035
# 520	MAC520#	3"	1378
# 780	MAC780#	DN100	2067

ATLAS Grade	M-PLUS Grade	Detail	Particle removal $\mu\text{m}$	Oil removal $\text{mg/m}^3$
DD	S	Coalescing filter for general purpose protection	1	0.1
DDp	A	Particle filter for dust protection	1	
PD	X	High efficiency coalescing filter	0.01	0.01
PDp	V	High efficiency particle filter for dust protection	0.01	
QD	Z	Active carbon filter for removal of oil vapours and odours		0.003

# Alternative Filter Element “M-PLUS” brands

ULTRA Model	M-PLUS Model	Connections BSP	Air Flow scfm
# 02/05	MU#02/05	1/4"	12
# 03/05	MU#03/05	3/8"	24
# 03/10	MU#03/10	3/8"	36
# 04/10	MU#04/10	1/2"	54
# 04/20	MU#04/20	1/2"	72
# 05/20	MU#05/20	3/4"	108
# 05/25	MU#05/25	1"	162
# 07/25	MU#07/25	1 1/4"	216
# 07/30	MU#07/30	1 1/2"	288
# 10/30	MU#10/30	2"	432
# 15/30	MU#15/30	2"	648
# 20/30	MU#20/30	2 1/2"	864
# 30/30	MU#30/30	3"	1152
# 30/50	MU#30/50	3"	1728

Ultra Filter



ULTRA Grade	M-PLUS Grade	Detail	Particle removal $\mu\text{m}$	Oil removal $\text{mg/m}^3$
PE	Q	Separator/Filter	25	
SB	P	Coarse Pre-Filtration	5	
FF	S	High efficiency general purpose protection	0.01	0.1
MF	A	High efficiency coalescing filter	0.01	0.03
SMF	X	High efficiency oil removal filter	0.01	0.01
AK	Z	Activated carbon filter	0.003	

Zander



ZANDER Model	M-PLUS Model	Connections BSP	Air Flow scfm
1030 #	MZ1030#	1/4"	18
1050 #	MZ1050#	1/4"	29
1070 #	MZ1070#	3/8"	41
1140 #	MZ1140#	1/2"	59
2010 #	MZ2010#	3/4"	106
2020 #	MZ2020#	1"	177
2030 #	MZ2030#	1 1/2"	277
2050 #	MZ2050#	1 1/2"	412
3050 #	MZ3050#	2"	553
3075 #	MZ3075#	2"	853
5060 #	MZ5060#	2 1/2"	1142
5075 #	MZ5075#	3"	1413

ZANDER Grade	M-PLUS Grade	Detail	Particle removal $\mu\text{m}$	Oil removal $\text{mg/m}^3$
V	P	Pre-filter element	3	
ZP	S	General purpose filter	1	0.5
XP	A	Oil removal filter	0.01	0.01
XP4	X	Super fine filter	0.01	0.001
A	Z	Activated carbon filter	0.003	

# Alternative Filter Element “M-PLUS” brands

ORION Model	M-PLUS Model	Connections BSP	Air Flow scfm
# 150C	MO#150C	1/2"	35
# 200C	MO#200C	3/4"	58
# 400C	MO#400C	1"	131
# 700C	MO#700C	1 1/2"	230
# 1000C	MO#1000C	1 1/2"	353
# 1500C	MO#1500C	2~2 1/2"	459~862

ORION Grade	M-PLUS Grade	Particle removal $\mu\text{m}$	Oil Removal $\text{mg/m}^3$
EL	S	1	0.1
EM	X	0.01	0.01



ORION NEW Model	M-PLUS Model	Connections BSP	Air Flow scfm
# 400C	MOR#400C	1"	138
# 700C	MOR#700C	1 1/2"	233
# 1000C	MOR#1000C	1 1/2"	374
# 1300C	MOR#1300C	2"	487
# 2000C	MOR#2000C	2"	706

ORION NEW Grade	M-PLUS Grade	Particle removal $\mu\text{m}$	Oil Removal $\text{mg/m}^3$
ELS	S	1	0.1
EMS	X	0.01	0.01
EKS	Z		0.003



SMC Model	SMC Model	M-PLUS Model	Air Flow scfm
#-EL150	AFF-EL2B	MEL#-150	20
#-EL250	AFF-EL4B	MEL#-250	40
#-EL350	AFF-EL8B	MEL#-350	60
#-EL450	AFF-EL11B	MEL#-450	90
#-EL550	AFF-EL22B	MEL#-550	120
#-EL650	AFF-EL37B	MEL#-650	180
#-EL850	AFF-EL75B	MEL#-850	270

SMC Grade	M-PLUS Grade	Detail	Particle removal $\mu\text{m}$	Oil removal $\text{mg/m}^3$
AM	A	Oil mist separation element	0.3	0.01
AMD	S	Fine mist separation element	0.01	0.1
AME	X	Super fine oil separation element	0.01	0.01
AFF	P	Main pipeline filter element	3	
AMF	Z	Filter element for eliminating odour	0.01	0.003

# Alternative Filter Element “M-PLUS” brands

SWAN Model	M-PLUS Model	Connections BSP	Air Flow scfm
ARS-30	MARS30#	1/4"	18
ARS-100	MARS100#	1/2"	60
ARS-180	MARS180#	3/4"	106
ARS-290	MARS290#	1"	169.5
ARS-460	MARS460#	1 1/2"	360
ARS-610	MARS610#	2"	547
ARS-930	MARS930#	2 1/2"	618
ARS-1050	MARS1050#	3"	822.5
ARS-1400	MARS1400#	3"	1235.5



Swan

SMC Grade	M-PLUS Grade	Detail	Particle removal $\mu\text{m}$	Oil removal $\text{mg/m}^3$
RF	P	Main line filter	1	
RB	S	Oil removal filter	0.1	0.1
RA	X	Micro filter	0.01	0.01
CA	Z	Active carbon filter		0.003



FRIULAIR Grade	M-PLUS Grade	Detail	Particle removal $\mu\text{m}$	Oil removal $\text{mg/m}^3$
P	P	General purpose air line filter	3	
S	S	Particle filter for dust protection	1	0.1
X	X	High efficiency coalescing filter	0.01	0.01
Z	Z	Activated carbon filtration		0.003

# Air Filter Element to Customer's requirement



M-PLUS FILTRATION CO., LTD.'S FILTER MEDIA HAS BEEN GRANTED EUROPEAN STANDARD WHICH ARE ISO 14001:2004 AND UNI EN ISO 9001:2000 CERTIFIED BY IQNET AND CISQ, THE INTERNATIONAL CERTIFICATION NETWORK.



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