HMM è la serie di filtri per linee in pressione fino a 22.000.000 Pa (220 bar-3200 Psi) HMM28, 32.000.000 Pa (320 bar-4641 Psi) HMM42; la gamma è composta da due differenti grandezze con portate nominali fino a 170 l/min. con attacchi filettati o flangiati. Gli elementi filtranti sono costruiti con i più evoluti materiali a garanzia di una elevata efficienza di filtrazione e della massima durata nel tempo.
La concezione di costruzione modulare, propria della serie HMM, permette al cliente OMT Group di poter sceglierne la configurazione più adatta alle proprie necessità.

HMM is the medium pressure filter up to 22.000.000 Pa (220 bar-3200 Psi) HMM28, 32.000.000 Pa (320 bar-4641 Psi) HMM42; the range is composed of two different sizes with nominal flow rates up to 170 l/min. with threaded or flanged connections.
Filter elements are made of the most advanced materials, as a guarantee for a high filtration efficiency and a long-lasting life.
HMM series modular construction allows the customer to choose the most suitable type following his needs.

Trust it

HMM

FILTRI MEDIA PRESSIONE
MEDIUM PRESSURE FILTERS



LA SERIE DI FILTRI HMM È CONFORME ALLE SEGUENTI NORME ISO:

-ISO 2941 - Oleoidraulica - Elementi filtranti - Verifica della resistenza allo schiacciamento o allo scoppio

-ISO 2942 - Oleoidraulica - Elementi filtranti - Verifica dell'integrità di fabbricazione e determinazione del punto di prima bolla

-ISO 2943 - Oleoidraulica - Elementi filtranti - Verifica della compatibilità dei materiali con i fluidi

-ISO 3723 - Oleoidraulica - Elementi filtranti - Verifica della resistenza alla deformazione assiale

-ISO 3724 - Oleoidraulica - Elementi filtranti - Verifica delle caratteristiche mediante prova di resistenza a fatica in funzione della portata

-ISO 3968 - Oleoidraulica - Filtri - Determinazione della perdita di carico in funzione della portata

-ISO 16889 - Oleoidraulica - Filtri - Metodo Multi-pass: valutazione delle caratteristiche di filtrazione di un elemento filtrante

HMM FILTER SERIES IS SUITABLE TO THE FOLLOWING ISO STANDARDS:

-ISO 2941 - Hydraulic fluid power - Filter elements Verification of collapse / burst resistance

-ISO 2942 - Hydraulic fluid power - Filter elements Verification of fabrication integrity and determination of the first bubble point

-ISO 2943 - Hydraulic fluid power - Filter elements Verification of material compatibility with fluids

-ISO 3723 - Hydraulic fluid power - Filter elements Method for end load test

-ISO 3724 - Hydraulic fluid power - Filter elements Verification of flow fatigue characteristics

-ISO 3968 - Hydraulic fluid power - Filters - Evaluation of pressure drop versus flow characteristics

-ISO 16889 - Hydraulic fluid power filters - Multi-pass method for evaluating filtration performance of a filter element

MATERIALI (elementi filtranti)

Fondelli	Acciaio zincato
Tubo di sostegno	Acciaio zincato
Reti di supporto	Acciaio galvanizzato con rivestimento epossidico

MATERIALS (filter elements)

Plates	Galvanized steel
Support tube	Galvanized steel
Support mesh	Galvanized steel with epox coating

SETTI FILTRANTI — FILTRATION MATERIALS

Elementi filtranti Filter elements	Descrizione Description	Materiale Material	Grado di filtrazione (µm) Filtration (µm)	Rapporto ß / ß Ratio	
				ISO 16889 ßx(c)≥200	ISO 16889 ßx(c)≥1000
F03	Fibra inorganica / Inorganic fibre	Fibra di vetro / Glass fibre	3	5	6
F06	Fibra inorganica / Inorganic fibre	Fibra di vetro / Glass fibre	6	6	7
F10	Fibra inorganica / Inorganic fibre	Fibra di vetro / Glass fibre	10	10	13
F25	Fibra inorganica / Inorganic fibre	Fibra di vetro / Glass fibre	25	17	20
T10	Tela / Wire mesh	Inox (aisi 304) / Inox (aisi 304)	10	-	-
T25	Tela / Wire mesh	Inox (aisi 304) / Inox (aisi 304)	25	-	-
C10	Carta trattata / Treaded paper	Fibre di cellulosa / Cellulose fibre	10	-	-
C25	Carta trattata / Treaded paper	Fibre di cellulosa / Cellulose fibre	25	-	-

SUPERFICI UTILI (cm^2) ELEMENTI FILTRANTI SERIE X - ΔP 2.000.000 Pa (20 bar) — FILTRATION AREA (cm^2) FILTER ELEMENTS SERIES X - ΔP 2.000.000 Pa (20 bar)

Elementi filtranti/Filter elements	CHP281	CHP282	CHP283	CHP421	CHP422
F03 - F06 - F10 - F25	325	450	870	900	1780
T10 - T25	325	450	870	900	1780
C10 - C25	325	450	870	900	1780

SUPERFICI UTILI (cm^2) ELEMENTI FILTRANTI SERIE Y - ΔP 21.000.000 Pa (210 bar) — FILTRATION AREA (cm^2) FILTER ELEMENTS SERIES Y - ΔP 21.000.000 Pa (210 bar)

Elementi filtranti/Filter elements	CHP281	CHP282	CHP283	CHP421	CHP422
F03 - F06 - F10 - F25	290	410	810	810	1635
T10 - T25	290	410	810	810	1635

MATERIALI (corpo)

Testina	HMM28 Alluminio HMM42 Ghisa
Contenitore	Acciaio
Guarnizioni	N: Nitrilica (Buna-N) V: Fluoroelastomero (Viton)
Valvola di by-pass	Ottone
Valvola di flusso inverso	Acciaio
Indicatore	Ottone

MATERIALS (housing)

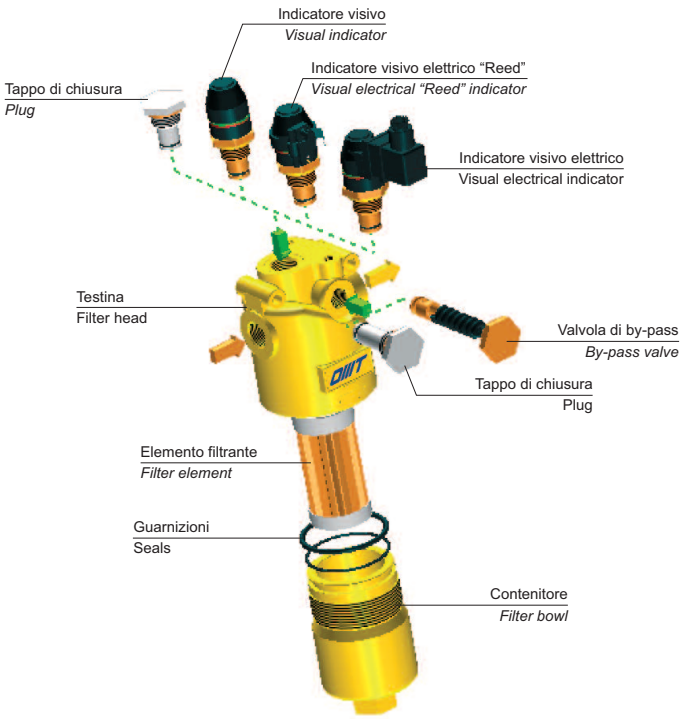
Head	HMM28 Aluminium HMM42 Cast Iron
Bowl	Steel
Seals	N: Nitrilic (Buna-N) V: Fluoroelastomer (Viton)
By-pass valve	Brass
Reverse flow valve	Steel
Indicator	Brass

CONDIZIONI DI ESERCIZIO

Pressioni corpo filtro	Pressione massima d'esercizio: HMM28 - 22.000.000 Pa (220 Bar) HMM42 - 32.000.000 Pa (320 Bar) Pressione di collaudo: HMM28 - 44.000.000 Pa (440 Bar) HMM42 - 64.000.000 Pa (640 Bar) Pressione di scoppio: HMM28 - 66.000.000 Pa (660 Bar) HMM42 - 96.000.000 Pa (960 Bar)
Temperatura d'esercizio	Da -20 a +95° c
Pressioni di collasso (Elemento Filtrante)	Serie X : 2.000.000 Pa (20 bar) Serie Y : 21.000.000 (210 bar)
Pressione taratura valvola di by-pass	600.000 Pa ±10% (6 bar) (inizio apertura)
Compatibilità con i liquidi - ISO 2943	Compatibili con oli minerali tipo (HH,HM,HR,HV,HG secondo ISO 6743/4)

WORKING CONDITIONS

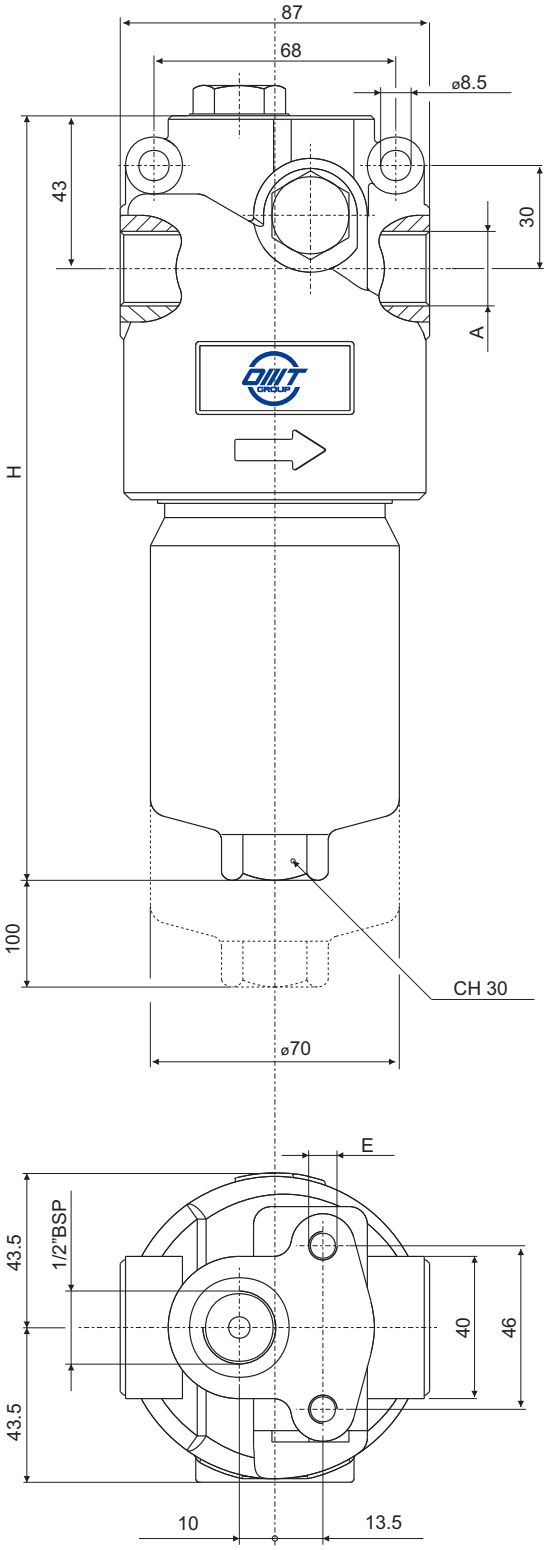
Filter pressure	Max working pressure: HMM28 - 22.000.000 Pa (220 Bar) HMM42 - 32.000.000 Pa (320 Bar Testing pressure: HMM28 - 44.000.000 Pa (440 Bar) HMM42 - 64.000.000 Pa (640 Ba Burst pressure: HMM28 - 66.000.000 Pa (660 Bar) HMM42 - 96.000.000 Pa (960 Bar)
Operating pressure	-20 a +95° c
Collapse pressure (Filter Element)	X series : 2.000.000 Pa (20 bar) Y series : 21.000.000 (210 bar)
By-pass valve setting pressure	600.000 Pa ±10% (6 bar) (from opening)
Compatibily with hydraulic fluids ISO 2943	Compatible with mineral oils such as HH,HM,HR,HV,HG according to ISO 6743/4)



HMM 28 CARATTERISTICHE DIMENSIONALI
SIZE FEATURES

Le portate sono state calcolate per avere una perdita di carico Δp ≤ 120.000 Pa (1.2 bar) con olio minerale avente viscosità cinematica 30 cSt e densità 860 kg/m³. (vedi note a pag. 106/107)

Flows have been calculated just in order to obtain a pressure drop Δp ≤ 120.000 Pa (1.2 bar) with mineral oil kinematic viscosity 30 cSt and 860 kg/m³ density. (See remarks on page 106/107)



ATTACCHI FILETTATI
THREADED CONNECTIONS

Tipo / Type	A	E (prof. 15mm) E (depth 15mm)
	1/2" BSP	M 8
1	3/4" BSP	M 8
2	1/2" NPT	5/16" UNC
3	3/4" NPT	5/16" UNC
4	SAE8 - 3/4"-16UNF	5/16" UNC
5	SAE12 - 1 1/16"- 12UN	5/16" UNC

LUNGHEZZE
LENGTHS

Tipo / Type	H (mm)	Lungh. OMT Group/Pall Length OMT Group/Pall
1	187	HMM281..
2	214	HMM282..
3	310	HMM283..

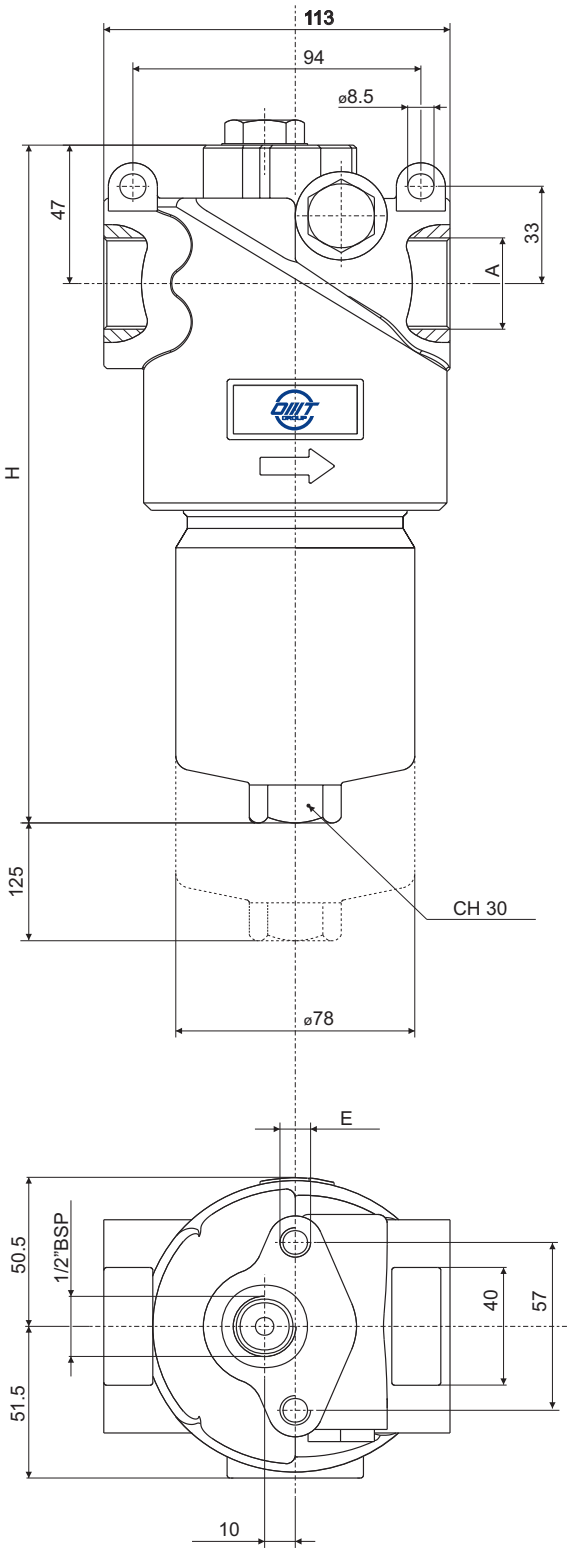
PORTATE CONSIGLIATE
RECOMMENDED FLOWS

(Elementi in microfibra)
(Glass fibre elements)

HMM	Elemento filtrante Replace element	Portata (L/min) serie X Flow (L/min) X series	Portata (L/min) serie Y Flow (L/min) Y series	Peso (Kg) Weight (Kg)
281	F03	17	15	2,65
281	F06	20	18	2,65
281	F10	35	33	2,65
281	F25	50	47	2,65
282	F03	26	22	3,2
282	F06	40	29	3,2
282	F10	55	50	3,2
282	F25	80	70	3,2
283	F03	38	32	4,7
283	F06	50	40	4,7
283	F10	70	60	4,7
283	F25	95	85	4,7

Le portate sono state calcolate per avere una perdita di carico Δp ≤ 120.000 Pa (1.2 bar) con olio minerale avente viscosità cinematica 30 cSt e densità 860 kg/m³. (vedi note a pag. 107)

Flows have been calculated just in order to obtain a pressure drop Δp ≤ 120.000 Pa (1.2 bar) with mineral oil kinematic viscosity 30 cSt and 860 kg/m³ density. (See remarks on page 107)

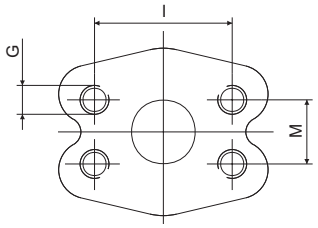


ATTACCHI FILETTATI
THREADED CONNECTIONS

Tipo / Type	A	E (prof. 15mm) E (depth 15mm)
	3/4" BSP	M 10
1	1" BSP	M 10
2	3/4" NPT	3/8" UNC
3	1" NPT	3/8" UNC
4	SAE12 - 1 1/16"-12UN	3/8" UNC
5	SAE16 - 1 5/16"-12UN	3/8" UNC

ATTACCHI FLANGIATI
FLANGED CONNECTIONS

Tipo Type	Attacco-Connection	I	M	G	E (prof. 15mm) E (depth 15mm)
6	3/4"SAE - 3000 PSI/M	47.6	22.5	M 10	M 10
7	1"SAE - 3000 PSI/M	52.4	26.2	M 10	M 10
8	3/4"SAE - 3000 PSI/UNC	47.6	22.5	3/8" UNC	3/8" UNC
9	1"SAE - 3000 PSI/UNC	52.4	26.2	3/8" UNC	3/8" UNC



LUNGHEZZE - LENGTHS

Tipo Type	H (mm)	Lunghezza Length
1	230	HMM421..
2	341	HMM422..

PORTATE CONSIGLIATE
RECOMMENDED FLOWS

(Elementi in microfibra - Glass fibre elements)

HMM	Elemento filtrante Replace element	Portata (L/min) serie X Flow (L/min) X series	Portata (L/min) serie Y Flow (L/min) Y series	Peso (Kg) Weight (Kg)
421	F03	55	38	3,9
421	F06	65	55	3,9
421	F10	80	60	3,9
421	F25	104	75	3,9
422	F03	100	80	5,6
422	F06	113	90	5,6
422	F10	135	115	5,6
422	F25	170	145	5,6

HMM CADUTE DI PRESSIONE - CONFORMI A ISO 3968
PRESSURE DROPS - ACCORDING TO ISO 3968

La caduta di pressione completa si ottiene sommando la caduta di pressione del corpo filtro e quella dell'elemento filtrante.

Cadute di pressione nel corpo filtro

Le curve sono valide con olio minerale avente massa volumica di 860 Kg/m^3.
La caduta di pressione è proporzionale alla massa volumica.

Cadute di pressione negli elementi filtranti

Le curve sono valide con olio minerale avente viscosità cinematica di 30 cSt.
La variazione di caduta di pressione è proporzionale alla viscosità cinematica.

The pressure drop of the complete filter is calculated by adding the pressure drop of the housing to that of the filter element.

Pressure drops in the housings

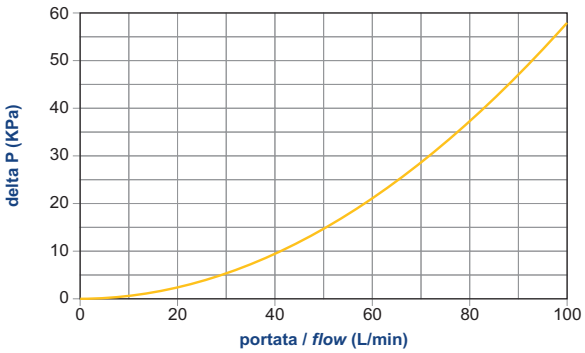
The graphics refer to use of mineral oil with a mass density of 860 Kg/m^3.
The pressure drop is proportional to the variations of mass density.

Pressure drops in the filter elements

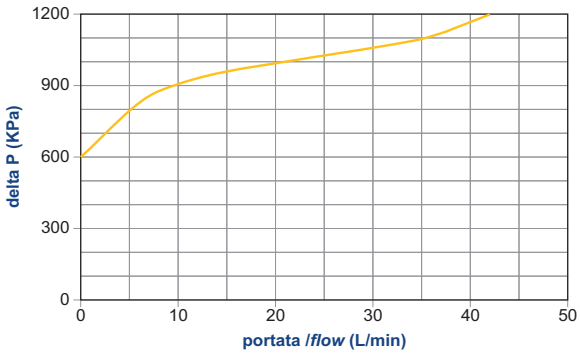
The graphics refer to mineral oil with a kinematic viscosity of 30 cSt. The variation of the pressure drop is proportional to viscosity.

HMM serie/series 28

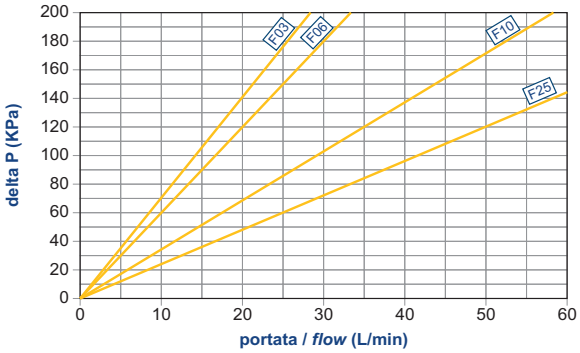
ΔP CORPI / ΔP HOUSINGS



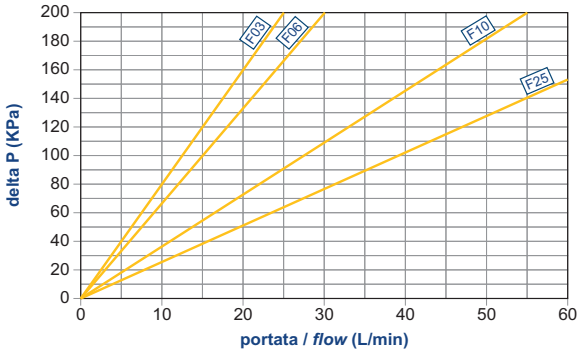
BY-PASS / BY-PASS



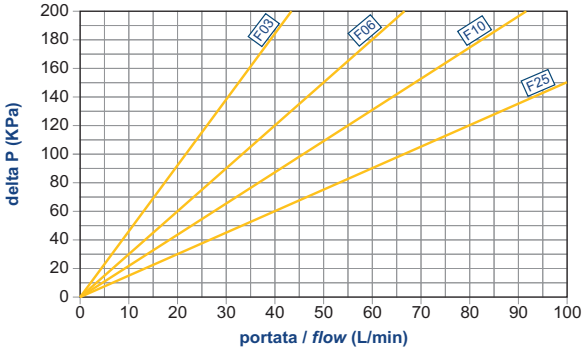
ΔP ELEMENTI X / ΔP X ELEMENTS — tipo 281 series



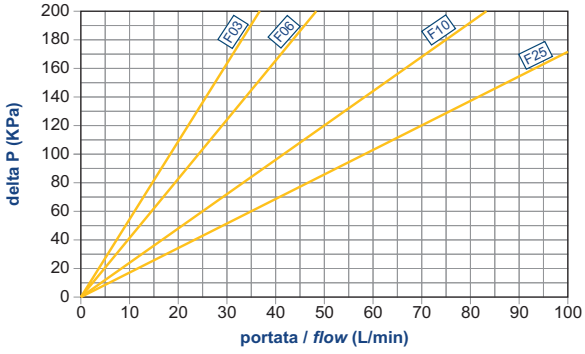
ΔP ELEMENTI Y / ΔP Y ELEMENTS



ΔP ELEMENTI X / ΔP X ELEMENTS — tipo 282 series

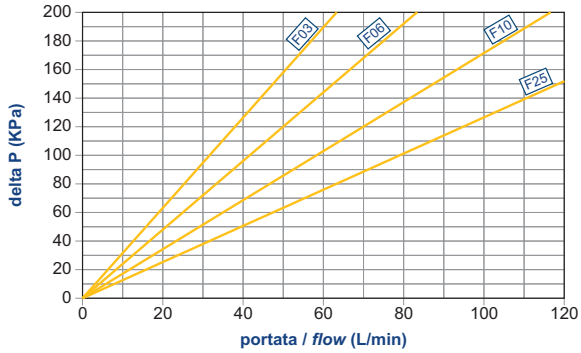


ΔP ELEMENTI Y / ΔP Y ELEMENTS

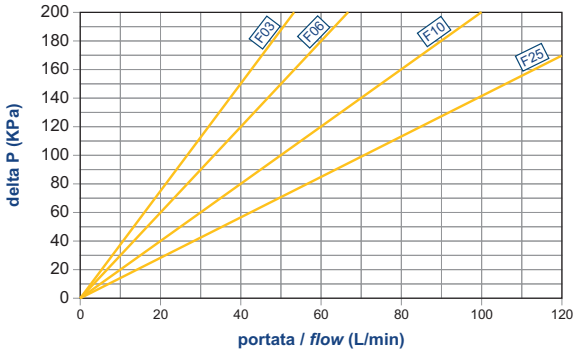


tipo 283 series

ΔP ELEMENTI X / ΔP X ELEMENTS

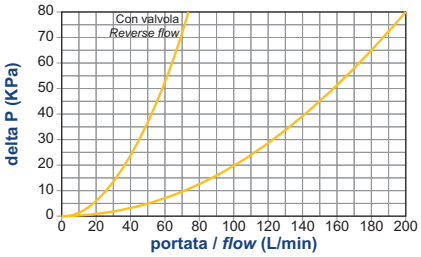


ΔP ELEMENTI Y / ΔP Y ELEMENTS

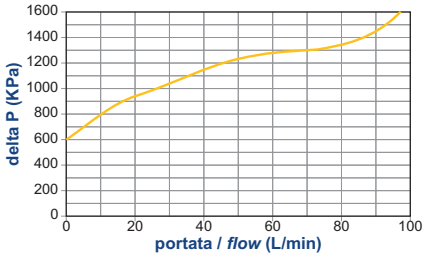


HMM serie/series 42

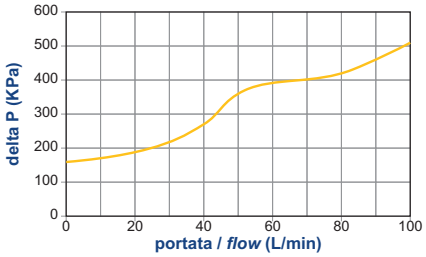
ΔP CORPI / ΔP HOUSINGS



BY-PASS / BY-PASS

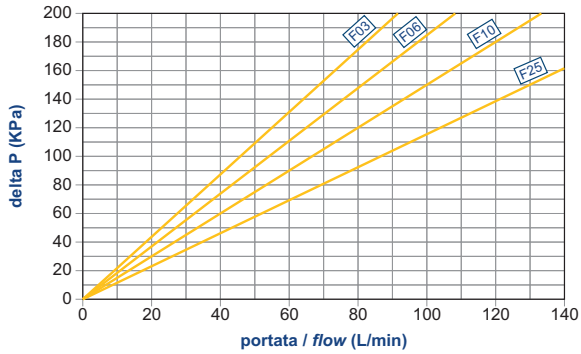


RF FLUSSO INV. / REV. FLOW VALVE

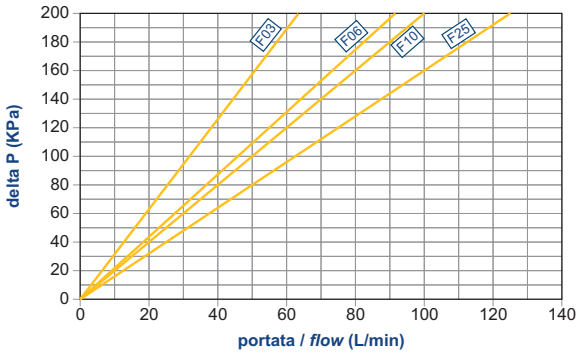


tipo 421 series

ΔP ELEMENTI X / ΔP X ELEMENTS

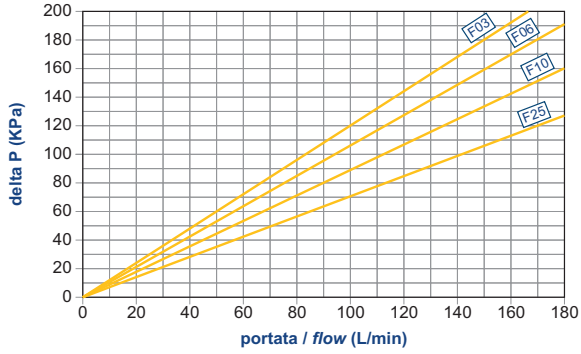


ΔP ELEMENTI Y / ΔP Y ELEMENTS

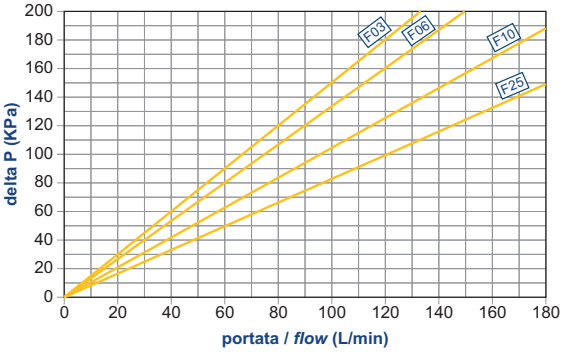


tipo 422 series

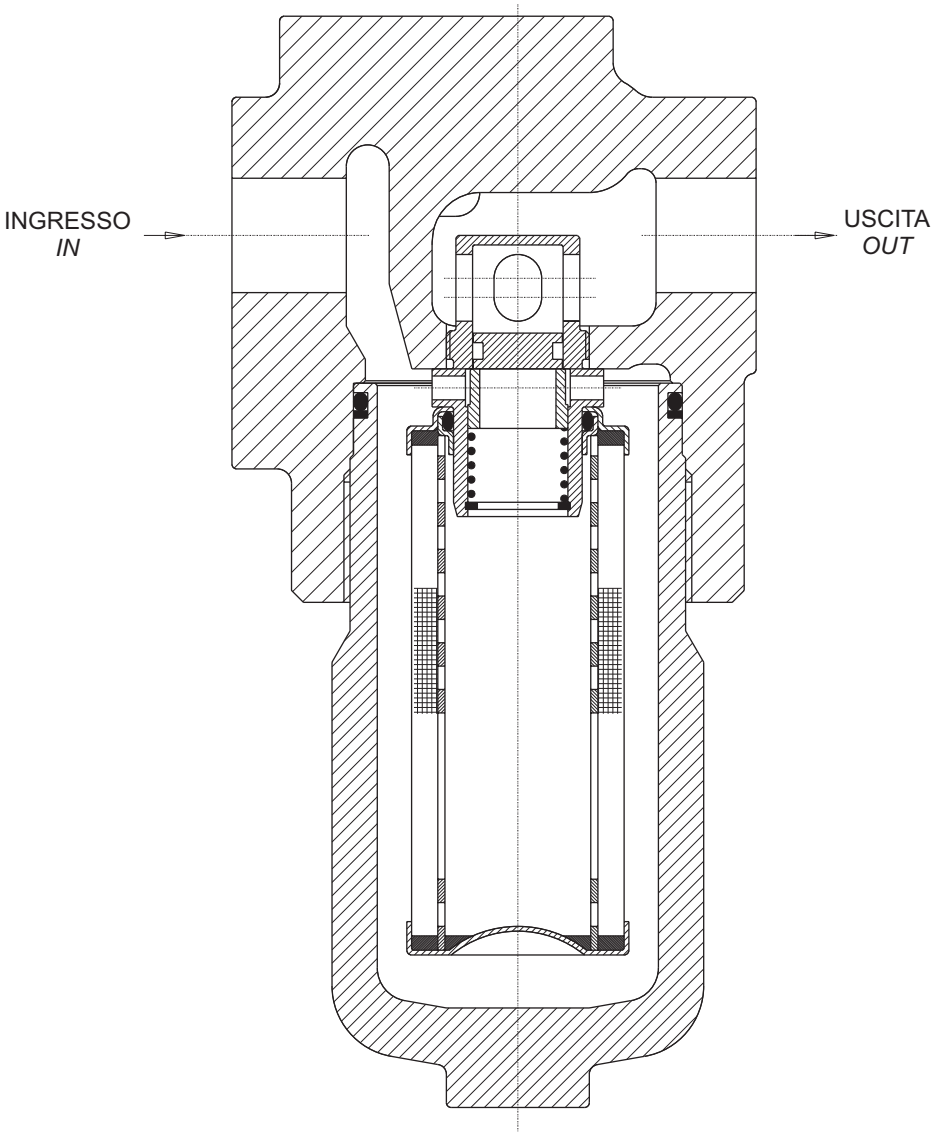
ΔP ELEMENTI X / ΔP X ELEMENTS



ΔP ELEMENTI Y / ΔP Y ELEMENTS



HMM VALVOLA DI FLUSSO INVERSO
REVERSE FLOW VALVE

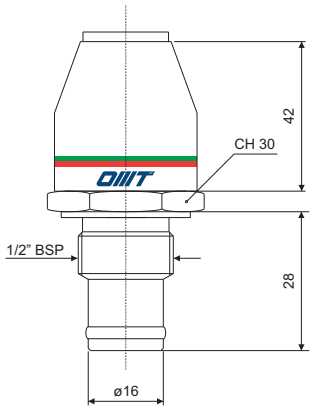


Disponibile per i modelli HMM:
421 - 422

Available for HMM models:
421 - 422

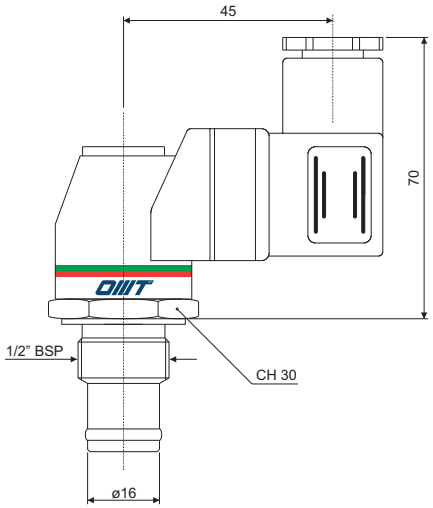
DV500/800

Indicatore visivo
Visual Indicator



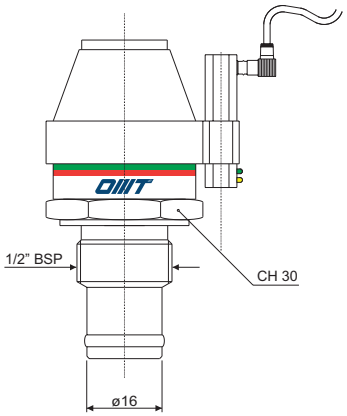
DE500/800*

Indicatore visivo-elettrico
Electrical visual Indicator



DR500/800*

Indicatore visivo-elettrico
con contatti REED
Electrical visual Indicator
with REED contacts



(*) Protection IP65 connector DIN 43650

CARATTERISTICHE TECNICHE
TECHNICAL DATA

Codice Part number	Descrizione Description	Taratura Setting	Contatti elettrici Electrical Contacts	Applicazione Application
D V 500	visivo - visual	500.000Pa (5 bar)	-	Filtri con By-pass ed elementi filtranti serie "X" Filters with By-pass and elements "X" series
D E 500	elettrico - electrical		Scambio Switch	
D R 500	visivo- elettrico con contatti "reed" Visual-electrical with "reed" contacts			
D V 800	visivo - visual	800.000Pa (8 bar)	-	Filtri con By-pass ed elementi filtranti serie "Y" Filters with By-pass and elements "Y" series
D E 800	elettrico - electrical		Scambio Switch	
D R 800	visivo- elettrico con contatti "reed" Visual-electrical with "reed" contacts			

Tensioni di rottura per "DR 500 e DR 800"
Breakdown voltage for "DR 500 and DR 800"

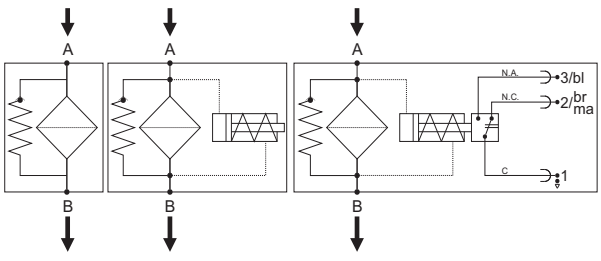
Tensione di alimen. (V) Feeder voltage (V)	Potenza con carico induttivo (VA) Power with inductive load (VA)
A.C. 3-115	20
D.C. 3-115	20

Tensioni di rottura per "DE 500 e DE 800"
Breakdown voltage for "DE 500 and DE 800"

Tensione di alimen. (V) Feeder voltage (V)	Carico resistivo (A) Resistive load (A)	Carico induttivo (A) Inductive load (A)
A.C. 125	5	5
A.C. 250	5	5
D.C. 15	10	10
D.C. 30	5	5
D.C. 50	2	2
D.C. 125	0.5	0.06

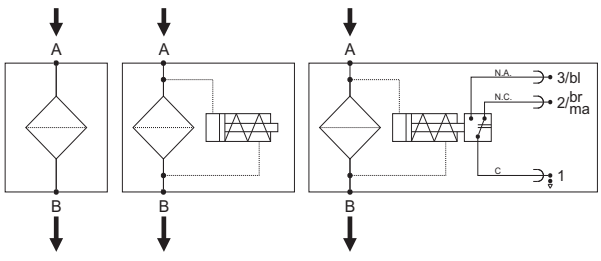
SIMBOLOGIA / SIMBOLOGY

Con By-pass / With By-pass



HMM...R/Q HMM...R/Q + DV500 HMM...R/Q + DE500/DR500

Senza By-pass / Without By-pass



HMM...S/P HMM...S/P + DV800 HMM...S/P + DE800/DR800

HMM CODICE PER L'ORDINAZIONE DEL FILTRO COMPLETO
HOW TO ORDER THE COMPLETE FILTER

HMM 281 T25 Y N S 3

Grandezza nominale / Nominal Size

281
282
283
421
422

Elemento filtrante / Filtration Element

-		Senza elemento filtrante Without filtration elements
C10*	10 µm	Carta trattata con resine ßx(c)>2 Resin treated cellulose ßx(c)>2
C25*	25 µm	Carta trattata con resine ßx(c)>2 Resin treated cellulose ßx(c)>2
F03	3 µm	Fibre inorganiche ßx(c)>200 Inorganic fibre ßx(c)>200
F06	6 µm	Fibre inorganiche ßx(c)>200 Inorganic fibre ßx(c)>200
F10	10 µm	Fibre inorganiche ßx(c)>200 Inorganic fibre ßx(c)>200
F25	25 µm	Fibre inorganiche ßx(c)>200 Inorganic fibre ßx(c)>200
T10	10 µm	Tela metallica (Aisi304) Steel Aisi 304 Wire mesh
T25	25 µm	Tela metallica (Aisi304) Steel Aisi 304 Wire mesh

*Solo versione X
*Only X version

ΔP. Cartuccia / Cartridge

X	2.000.000 (20 Bar)	per filtri con By-pass for filters with By-pass
Y	21.000.000 (210 Bar)	per filtri senza By-pass for filters without By-pass

Guarnizioni / Seals

N	Nitrica / Buna-N
V	Viton

Valvola di By-pass / By-pass valve

S	Senza By-pass Without By-pass
R	By-pass Δp 6 bar
P	Con valvola di flusso inverso With reverse flow valve
Q	Con valvola di flusso inverso + By-Pass With reverse flow valve + By-Pass

*Opzioni P, Q non valide per versioni di tipo HMM28
*P, Q options not valid for HMM28 versions

CHP 421 F03 Y N

Codice per l'ordinazione della cartuccia
How to order the replacement element

ATTACCHI
CONNECTIONS

A	HMM28	HMM42
-	1/2" BSP	3/4" BSP
1	3/4" BSP	1" BSP
2	1/2" NPT	3/4" NPT
3	3/4" NPT	1" NPT
4	SAE8 3/4" - 16UNF	SAE12 1 1/16" - 12UN
5	SAE12 1 1/16" - 12UN	SAE16 1 5/16" - 12UN
6		3/4" SAE-3000PSI/M
7		1" SAE-3000PSI/M
8		3/4" SAE-3000PSI/UNC
9		1" SAE-3000PSI/UNC