

Hydraulic & Offshore SUPPLIES

HPM High Pressure Filters

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LA SERIE DI FILTRI HPM 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

HPM 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

Elementi filtranti Filter elements	Descrizione Description	Materiale Material	Grado di filtrazione (µm) Filtration (µm)	Rapporto β / β Ratio	
				ISO 4572 β _x ≥200	ISO 16889 β _{x(c)} ≥200
F03	Fibra inorganica / Inorganic fibre	Fibra di vetro / Glass fibre	3	3	5
F06	Fibra inorganica / Inorganic fibre	Fibra di vetro / Glass fibre	6	6	6
F10	Fibra inorganica / Inorganic fibre	Fibra di vetro / Glass fibre	10	10	9
F25	Fibra inorganica / Inorganic fibre	Fibra di vetro / Glass fibre	25	25	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	-	-

FILTRATION MATERIALS

SUPERFICI UTILI (cm²) ELEMENTI FILTRANTI SERIE X - ΔP 2.000.000 Pa (20 bar)

Elementi filtranti/Filter elements	CHP281	CHP282	CHP283	CHP421	CHP422	CHP621	CHP622	CHP623	CHP624
F03 - F06 - F10 - F25	325	450	870	900	1780	1500	3070	4920	6770
T10 - T25	325	450	870	900	1780	1500	3070	4920	6770
C10 - C25	325	450	870	900	1780	1500	3070	4920	6770

FILTRATION AREA (cm²) FILTER ELEMENTS SERIES X - ΔP 2.000.000 Pa (20 bar)

SUPERFICI UTILI (cm²) ELEMENTI FILTRANTI SERIE Y - ΔP 21.000.000 Pa (210 bar)

Elementi filtranti/Filter elements	CHP281	CHP282	CHP283	CHP421	CHP422	CHP621	CHP622	CHP623	CHP624
F03 - F06 - F10 - F25	290	410	810	810	1635	960	2015	3245	4480
T10 - T25	290	410	810	810	1635	960	2015	3245	4480

FILTRATION AREA (cm²) FILTER ELEMENTS SERIES Y - ΔP 21.000.000 Pa (210 bar)

MATERIALI (corpo)

Testina	Ghisa
Contenitore	Acciaio o ghisa
Guarnizioni	N: Nitrilica (Buna-N) V: Fluoroelastomero(viton)
Valvola di by-pass	Ottone
Valvola di flusso inverso	Acciaio
Indicatore	Ottone

MATERIALS (housing)

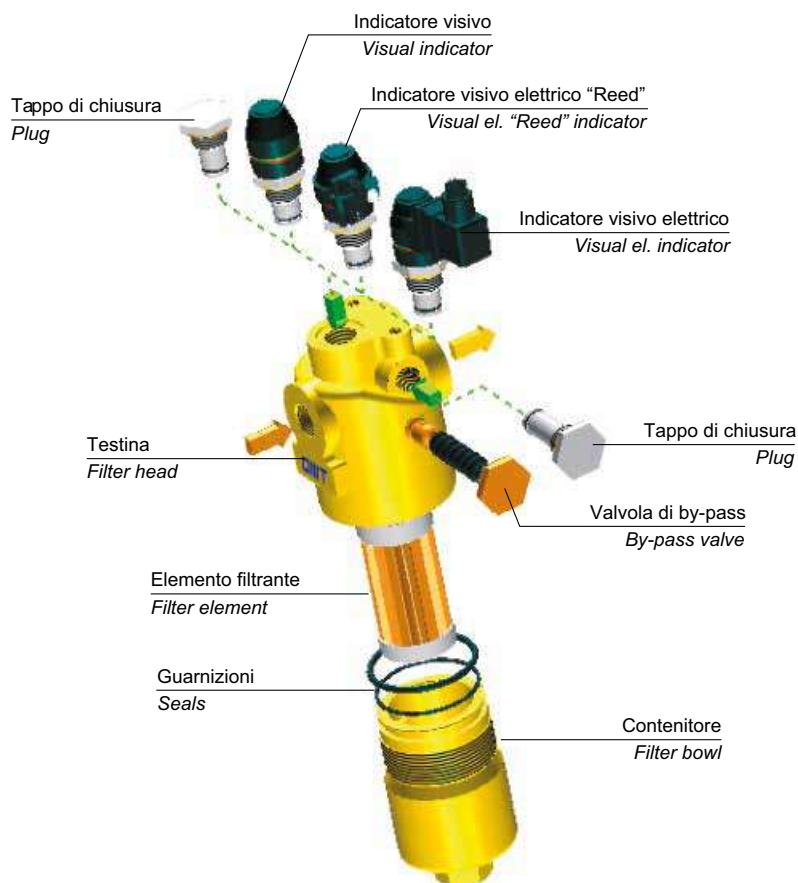
Head	Cast iron
Bowl	Steel or cast iron
Seals	N: Buna-N V: Viton
By-pass valve	Brass
Reverse flow valve	Steel
Indicator	Brass

CONDIZIONI DI ESERCIZIO

Pressioni corpo filtro	Pressione massima d'esercizio: 42.000.000 Pa (420 bar) Pressione di collaudo: 63.000.000 Pa (630 bar) Pressione di scoppio: 126.000.000 Pa (1260 bar)
Temperatura d'esercizio	Da -20 a +95° c
Pressioni di collasso	Serie X : 2.000.000 Pa (20 bar) Serie Y : 21.000.000 (210 bar)
Pressione taratura valvola di by-pass	6 bar ±10% (inizio apertura)
Compatibilità con i liquidi - ISO 2943	Compatibili con oli minerali tipo (HH, HM, HR, HV, HG secondo ISO 6743/4)

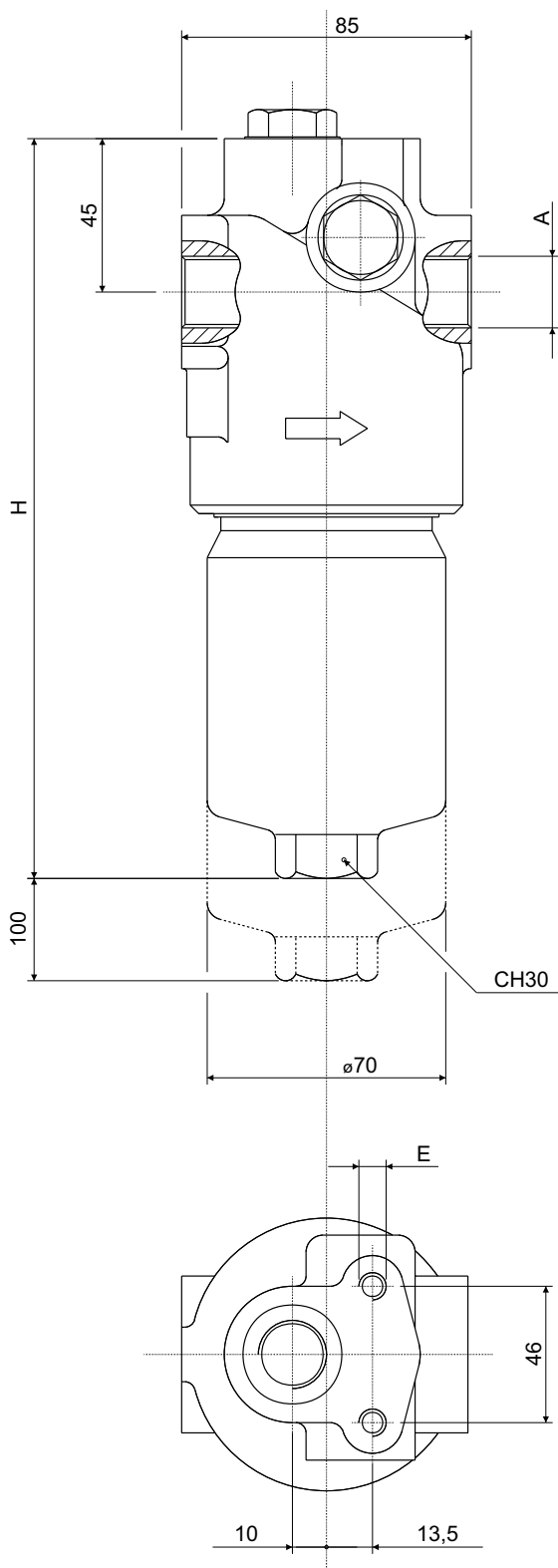
WORKING CONDITIONS

Filter pressure	Working pressure: 42.000.000 Pa (420 bar) Testing pressure: 63.000.000 Pa (630 bar) Collapse pressure: 126.000.000 Pa (1260 bar)
Operating pressure	-20 a +95° c
Collapse pressure	X series : 2.000.000 Pa (20 bar) Y series : 21.000.000 (210 bar)
By-pass valve setting pressure	6 bar ±10% (from opening)
Compatibly with hydraulic fluids ISO 2943	Compatible with mineral oils such as HH, HM, HR, HV, HG according to ISO 6743/4)



Le portate sono state calcolate per ottenere una perdita di carico $\Delta p \leq 120.000$ Pa (1.2 bar) con olio minerale avente viscosità cinematica 30 cst e densità 860 kg/m³. (vedi note a pag. 128)

Flows have been calculated just in order to obtain a pressure drop $\Delta p \leq 120.000$ Pa (1.2 bar) With mineral oil kinematic viscosity 30 cst and 860 kg/m³ density. (see remarks on page 128)



ATTACCHI FILETTATI THREADED CONNECTIONS

Tipo / Type	A	E (prof. 15mm) E (depth 15mm)
1	1/2" BSP	M 8
2	3/4" BSP	M 8
3	1/2" NPT	5/16" UNC
4	3/4" NPT	5/16" UNC
5	SAE8 - 3/4"-16UNF	5/16" UNC
6	SAE12 - 1 1/16"- 12UN	5/16" UNC
7	1/2" BSPT	M 8
8	3/4" BSPT	M 8

LUNGHEZZE LENGTHS

Tipo / Type	H (mm)	Lungh. OMT Group Length OMT Group
1	189	HPM281..
2	214	HPM282..
3	310	HPM283..

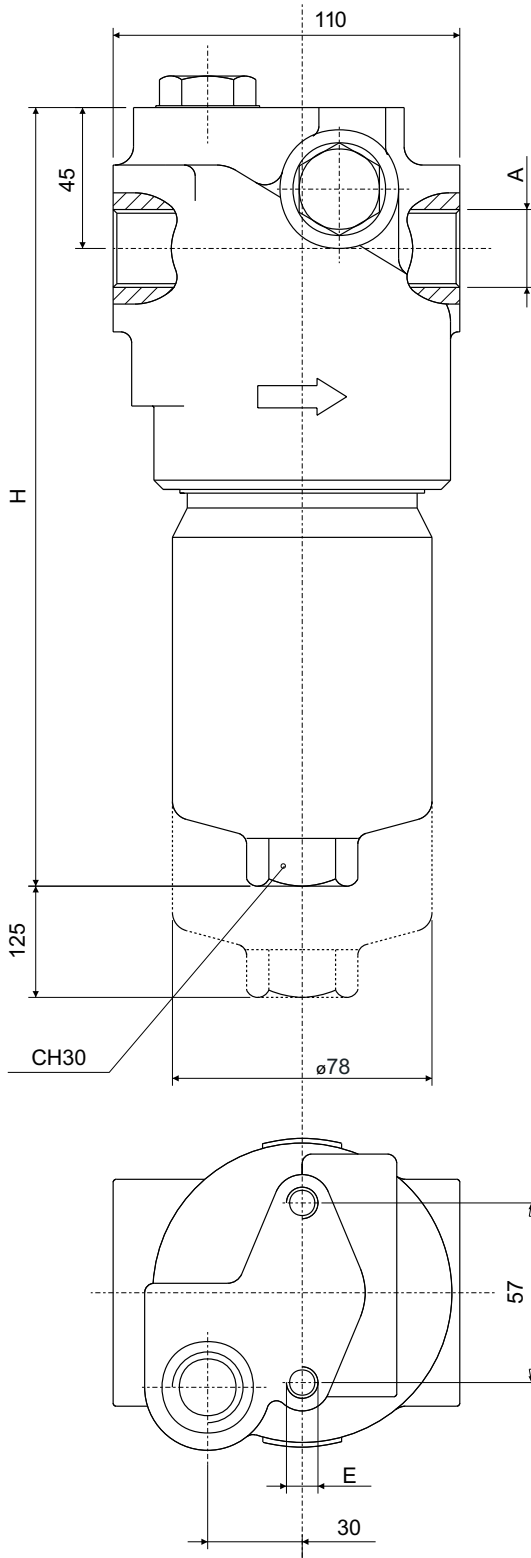
PORTATE CONSIGLIATE RECOMMENDED FLOWS

(Elementi in microfibra)
(Glass fibre elements)

HPM	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	3,8
281	F06	20	18	3,8
281	F10	35	33	3,8
281	F25	50	47	3,8
282	F03	26	22	4,2
282	F06	40	29	4,2
282	F10	55	50	4,2
282	F25	80	70	4,2
283	F03	38	32	6
283	F06	50	40	6
283	F10	70	60	6
283	F25	95	85	6

Le portate sono state calcolate per ottenere una perdita di carico $\Delta p \leq 120.000 \text{ Pa}$ (1.2 bar) con olio minerale avente viscosità cinematica 30 cst e densità 860 kg/m^3 . (vedi note a pag. 129)

Flows have been calculated just in order to obtain a pressure drop $\Delta p \leq 120.000 \text{ Pa}$ (1.2 bar) With mineral oil kinematic viscosity 30 cst and 860 kg/m^3 density. (see remarks on page 129)

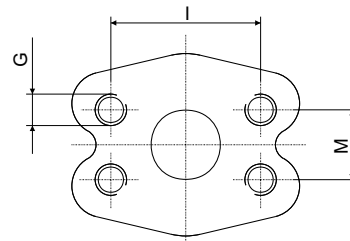


ATTACCHI FILETTATI THREADED CONNECTIONS

Tipo / Type	A	E (prof. 15mm) E (depth 15mm)
1	3/4" BSP 1" BSP	M 10 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
12	1 1/4" BSP	M 8
13	3/4" BSPT	M 8
14	1" BSPT	M 8
15	1 1/4" BSPT	M 8
16	1 1/4" NPT	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
10	3/4"SAE -6000 PSI/M	50.8	23.8	M 10	M 10
11	3/4"SAE -6000 PSI/UNC	50.8	23.8	3/8" UNC	3/8" UNC



LUNGHEZZE - LENGTHS

Tipo Type	H (mm)	Lungh. OMT Group Length OMT Group	Lunghezza Pall Length Pall
1	230	HPM421..	HPM423..
2	341	HPM422..	HPM424..

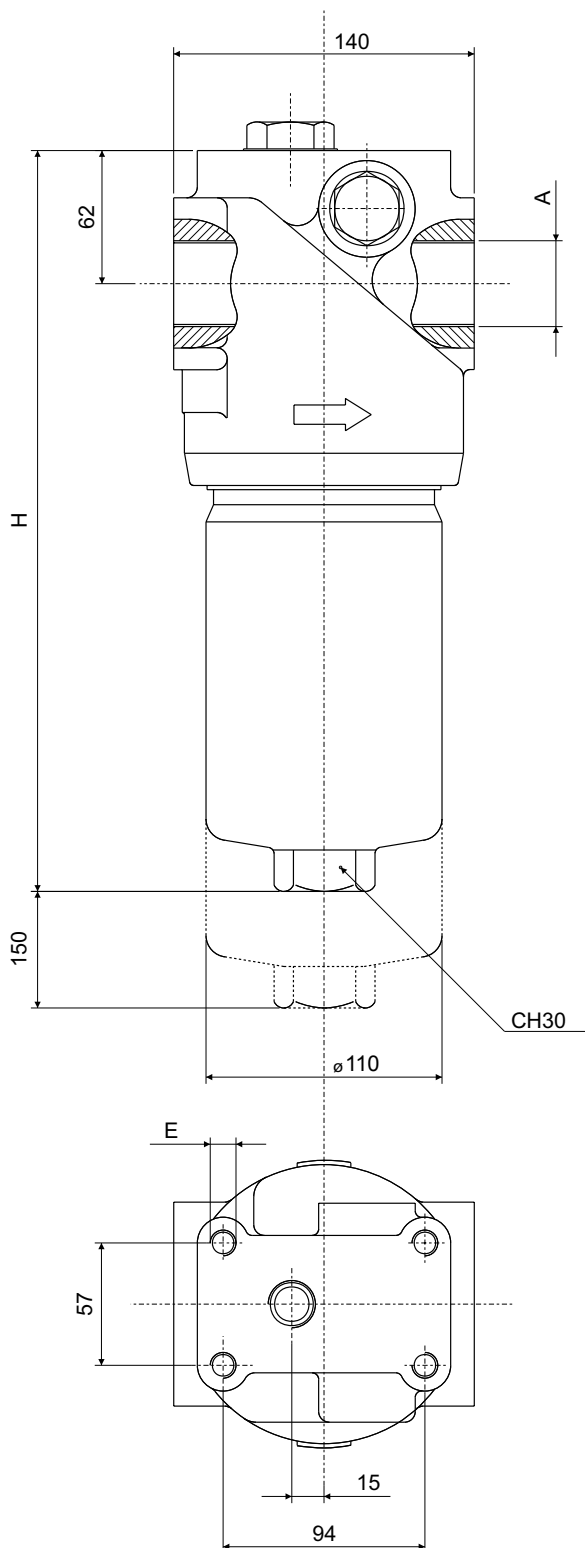
PORTATE CONSIGLIATE RECOMMENDED FLOWS

(Elementi in microfibra - Glass fibre elements)

HPM	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	6,8
421	F06	65	55	6,8
421	F10	80	60	6,8
421	F25	104	75	6,8
422	F03	100	80	8,9
422	F06	113	90	8,9
422	F10	135	115	8,9
422	F25	170	145	8,9

le portate sono state calcolate per ottenere una perdita di carico $\Delta p \leq 120.000 \text{ Pa}$ (1.2 bar) con olio minerale avente viscosità cinematica 30 cst e densità 860 kg/m^3 . (vedi note a pag. 130)

Flows have been calculated just in order to obtain a pressure drop $\Delta p \leq 120.000 \text{ Pa}$ (1.2 bar) With mineral oil kinematic viscosity 30 cst and 860 kg/m^3 density. (see remarks on page 130)

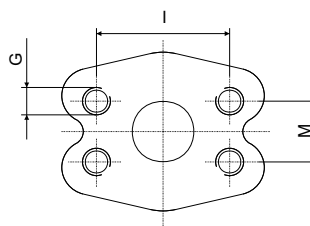


ATTACCHI FILETTATI THREADED CONNECTIONS

Tipo / Type	A	E (prof. 15mm) E (depth 15mm)
1	1" BSP	M 12
1	1 1/4" BSP	M 12
2	1 1/2" BSP	M 12
3	1" NPT	1/2" UNC
4	1 1/4" NPT	1/2" UNC
5	1 1/2" NPT	1/2" UNC
6	SAE20 - 1 5/8" - 12UN	1/2" UNC
7	SAE24 - 1 7/8" - 12UN	1/2" UNC
14	1" BSPT	M 12
15	1 1/4" BSPT	M 12
16	1 1/2" BSPT	M 12

ATTACCHI FLANGIATI FLANGED CONNECTIONS

Tipo Type	Attacco-Connection	I	M	G	E (prof. 15mm) E (depth 15mm)
8	1 1/4" SAE - 3000PSI/M	58.7	30.2	M 10	M 12
9	1 1/2" SAE - 3000 PSI/M	70	35.7	M 10	M 12
10	1 1/4" SAE - 3000 PSI/UNC	58.7	30.2	7/16" UNC	1/2" UNC
11	1 1/2" SAE - 3000 PSI/UNC	70	35.7	1/2" UNC	1/2" UNC
12	1 1/4" SAE - 6000 PSI/M	66.7	31.6	M 14	M 12
13	1 1/4" SAE - 3000 PSI/UNC	66.7	31.6	1/2" UNC	1/2" UNC



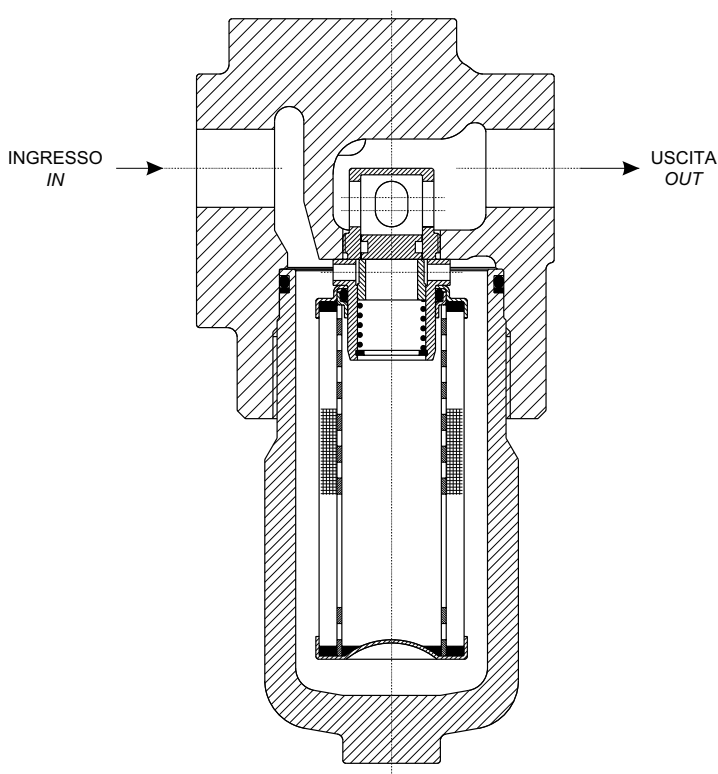
LUNGHEZZE - LENGTHS

Tipo Type	H (mm)	Lungh. OMT Group Length OMT Group	Lunghezza Pall Length Pall
1	273	HPM621..	HPM625..
2	393	HPM622..	HPM626..
3	533	HPM623..	HPM627..
4	673	HPM624..	HPM628..

PORTATE CONSIGLIATE RECOMMENDED FLOWS

(Elementi in microfibra - Glass fibre elements)

HPM	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)
621	F03	110	70	13
621	F06	125	80	13
621	F10	145	105	13
621	F25	190	155	13
622	F03	206	145	16,7
622	F06	250	180	16,7
622	F10	300	220	16,7
622	F25	345	245	16,7
623	F03	250	225	20,5
623	F06	290	260	20,5
623	F10	330	290	20,5
623	F25	375	365	20,5
624	F03	285	240	24
624	F06	330	265	24
624	F10	360	310	24
624	F25	410	345	24



Disponibile per i modelli HPM:
421 - 422 - 621 - 622 - 623 - 624

Available for HPM models:
421 - 422 - 621 - 622 - 623 - 624

**ELEMENTI FILTRANTI INTERCAMBIABILI "PALL"
FILTER ELEMENTS INTERCHANGEABLE TO "PALL"**

Gli elementi filtranti OMT Group serie CHP sono perfettamente intercambiabili con gli elementi filtranti "Pall", come indicato nella tabella:

OMT Group replace elements CHP Series are perfectly interchangeable with "Pall" replace elements, as indicated in the following table:

Codice "Pall" Pall part-number	Codice OMT Group OMT Group part-number	Codice "Pall" Pall part-number	Codice OMT Group OMT Group part-number	Codice "Pall" Pall part-number	Codice OMT Group OMT Group part-number
HC9020 FKP4H	CHP282 F03XN	HC9800 FKP8H	CHP424 F03XN	HC9600 FKP13H	CHP627 F03XN
FKN4H	F06XN	FKN8H	F06XN	FKN13H	F06XN
FKS4H	F10XN	FKS8H	F10XN	FKS13H	F10XN
FKT4H	F25XN	FKT8H	F25XN	FKT13H	F25XN
HC9020 FKP8H	CHP283 F03XN	HC9801 FDP4H	CHP423 F03YN	HC9600 FKP16H	CHP628 F03XN
FKN8H	F06XN	FDT4H	F10YN	FKN16H	F06XN
FKS8H	F10XN	HC9801 FDP8H	CHP424 F03YN	FKS16H	F10XN
FKT8H	F25XN	FDT8H	F10YN	FKT16H	F25XN
HC9021 FDP4H	CHP282 F03YN	HC9600 FKP4H	CHP625 F03XN	HC9601 FDP4H	CHP625 F03YN
FDT4H	F10YN	FKN4H	F06XN	FDT4H	F10YN
HC9021 FDP8H	CHP283 F03YN	FKS4H	F10XN	HC9601 FDP8H	CHP626 F03YN
FDT8H	F10YN	FKT4H	F25XN	FDT8H	F10YN
HC9800 FKP4H	CHP423 F03XN	HC9600 FKP8H	CHP626 F03XN	HC9601 FDP13H	CHP627 F03YN
FKN4H	F06XN	FKN8H	F06XN	FDT13H	F10YN
FKS4H	F10XN	FKS8H	F10XN	HC9601 FDP16H	CHP628 F03YN
FKT4H	F25XN	FKT8H	F25XN	FDT16H	F10YN

FILTRO COMPLETO - COMPLETE FILTER

Indicando la grandezza dell'elemento filtrante OMT Group nel codice di ordinazione, i filtri completi serie HPM saranno forniti con l'elemento filtrante e codolo speciale intercambiabile "Pall".

HPM complete filters will be supplied with the replace element and special interchangeable "Pall" tang, if when ordering the OMT Group replace element, you indicate the size of the replace element in the complete part-number.

Esempio: HPM 628 F03XNR

Example: HPM 628 F03XNR

Filtro completo OMT Group serie HPM62 con elemento fil-trante intercambiabile al tipo "Pall HC9600FKP16H"

Complete OMT Group filter series HPM62 with replace element interchangeable to "Pall HC9600FKP16H"

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/m³.

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/m³.

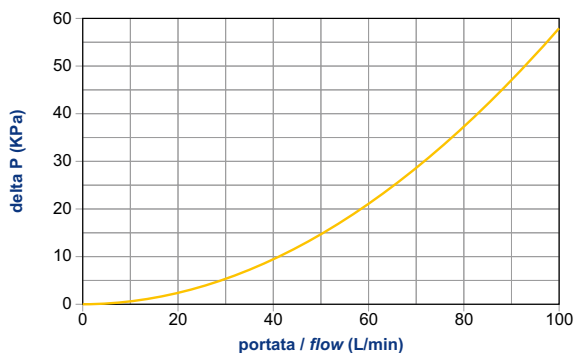
The pressure drop is proportional to the variations of mass density.

Pressure drops in the filter elements

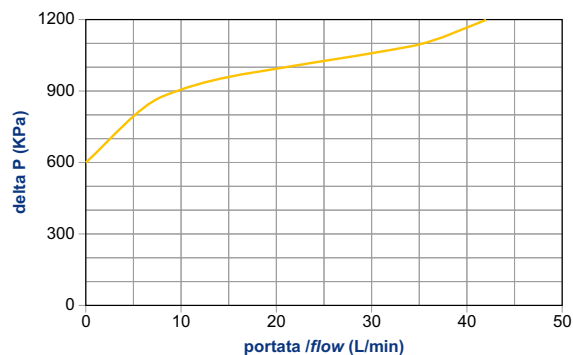
The graphics refer to mineral oil with a kinematic viscosity of 30 cSt. The variation of the pressure drop is proportional to viscosity.

HPM serie/series 28

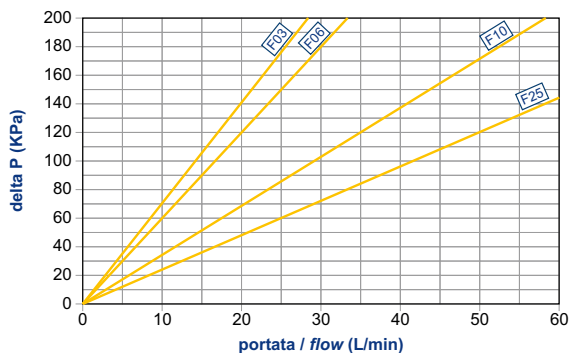
ΔP CORPI / ΔP HOUSINGS



BY-PASS / BY-PASS

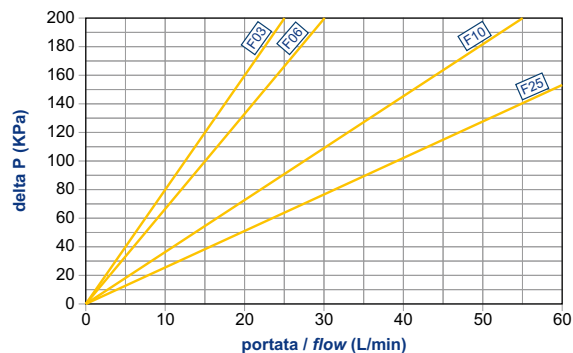


ΔP ELEMENTI X / ΔP X ELEMENTS

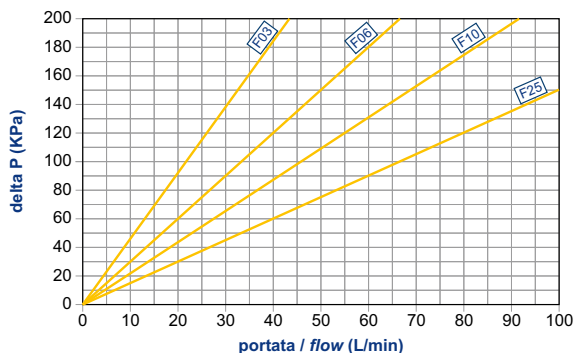


tipo 281 series

ΔP ELEMENTI Y / ΔP Y ELEMENTS

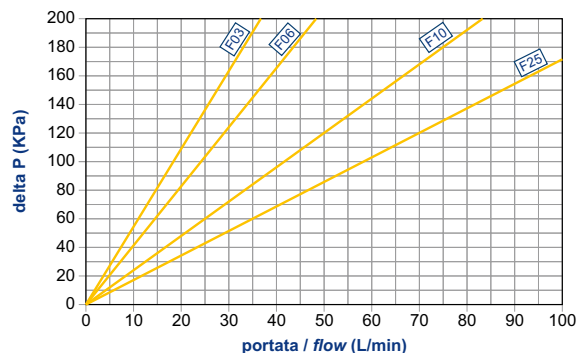


ΔP ELEMENTI X / ΔP X ELEMENTS

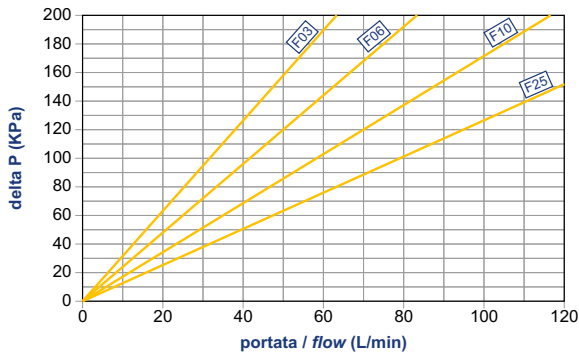


tipo 282 series

ΔP ELEMENTI Y / ΔP Y ELEMENTS

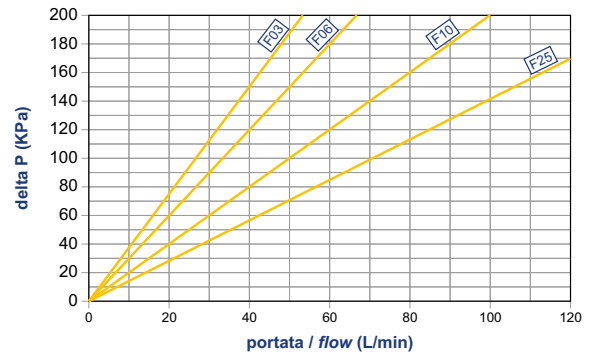


ΔP ELEMENTI X / ΔP X ELEMENTS



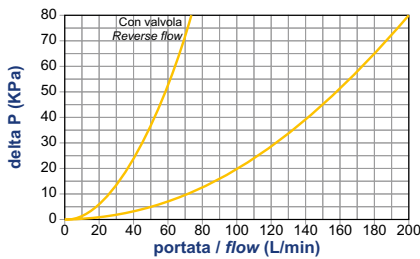
tipo 283 series

ΔP ELEMENTI Y / ΔP Y ELEMENTS

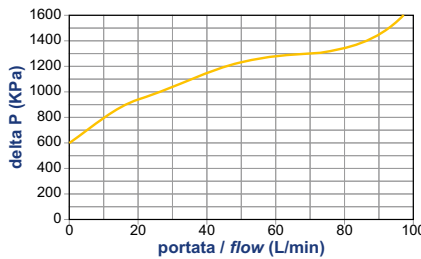


HPM serie/series 42

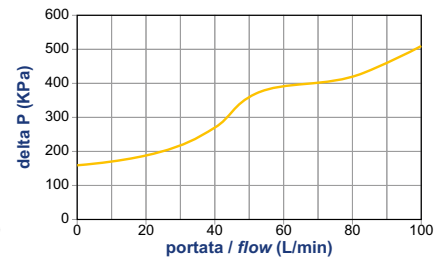
ΔP CORPI / ΔP HOUSINGS



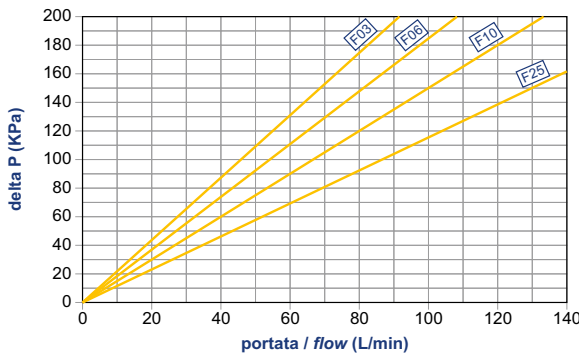
BY-PASS / BY-PASS



RF FLUSSO INV. / REV. FLOW VALVE

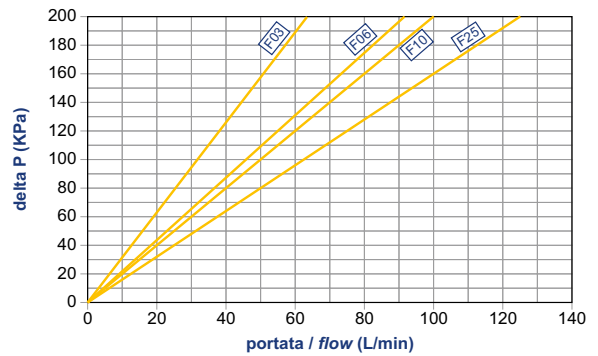


ΔP ELEMENTI X / ΔP X ELEMENTS

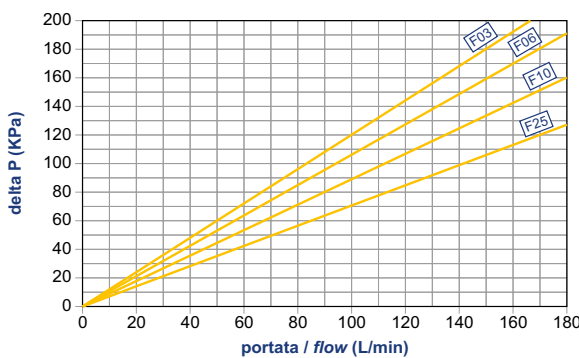


tipo 421 series

ΔP ELEMENTI Y / ΔP Y ELEMENTS

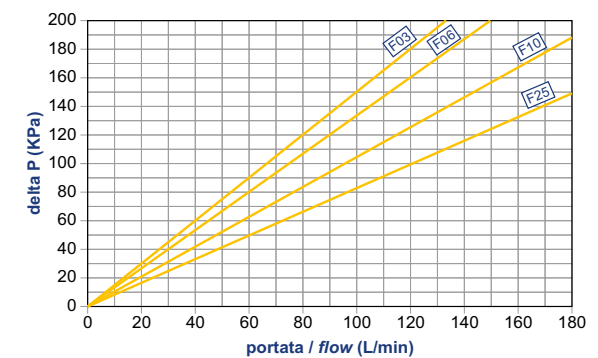


ΔP ELEMENTI X / ΔP X ELEMENTS



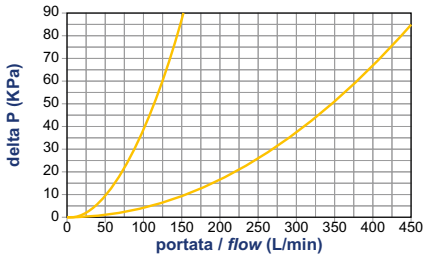
tipo 422 series

ΔP ELEMENTI Y / ΔP Y ELEMENTS

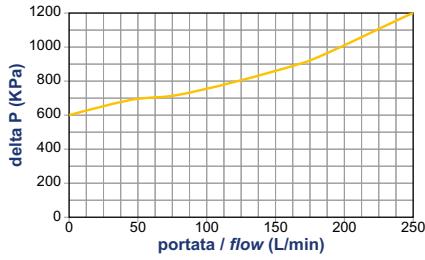


HPM serie/series 62

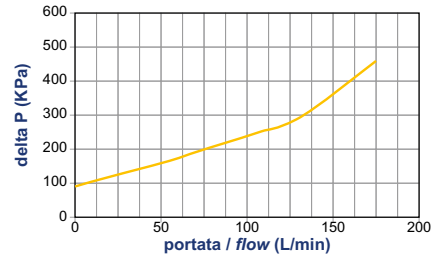
ΔP CORPI / ΔP HOUSINGS



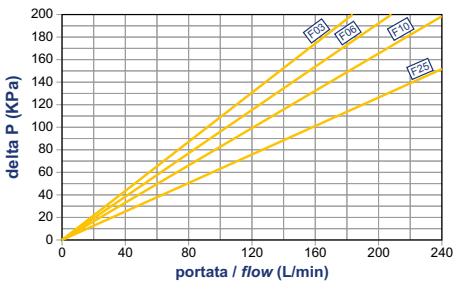
BY-PASS / BY-PASS



RF FLUSSO INV. / REV. FLOW VALVE

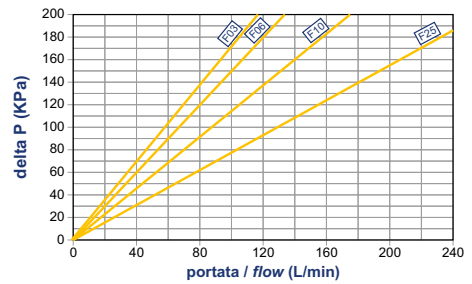


ΔP ELEMENTI X / ΔP X ELEMENTS

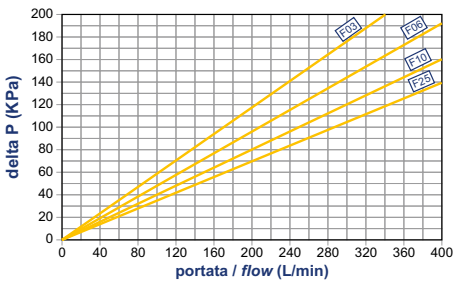


tipo 621 series

ΔP ELEMENTI Y / ΔP Y ELEMENTS

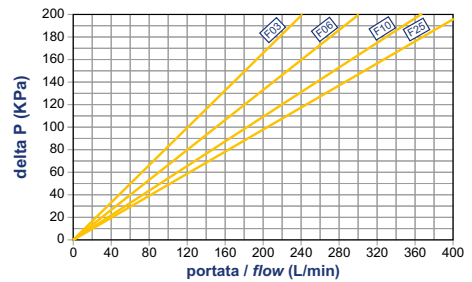


ΔP ELEMENTI X / ΔP X ELEMENTS

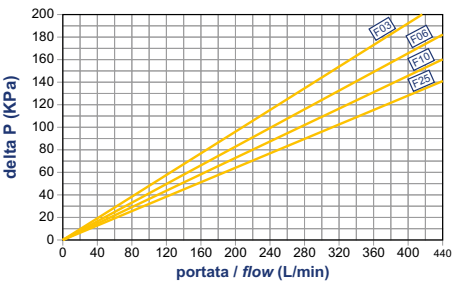


tipo 622 series

ΔP ELEMENTI Y / ΔP Y ELEMENTS

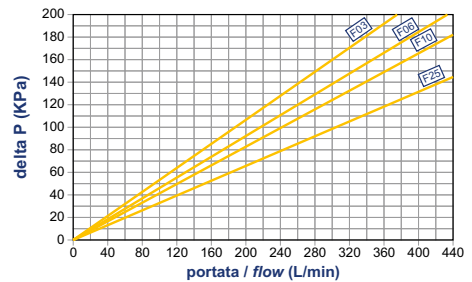


ΔP ELEMENTI X / ΔP X ELEMENTS

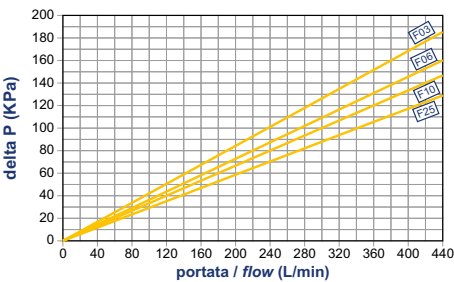


tipo 623 series

ΔP ELEMENTI Y / ΔP Y ELEMENTS

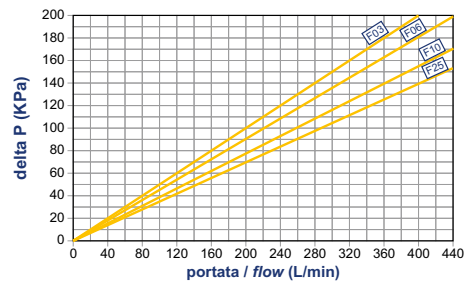


ΔP ELEMENTI X / ΔP X ELEMENTS



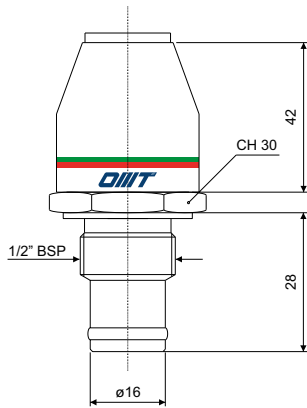
tipo 624 series

ΔP ELEMENTI Y / ΔP Y ELEMENTS



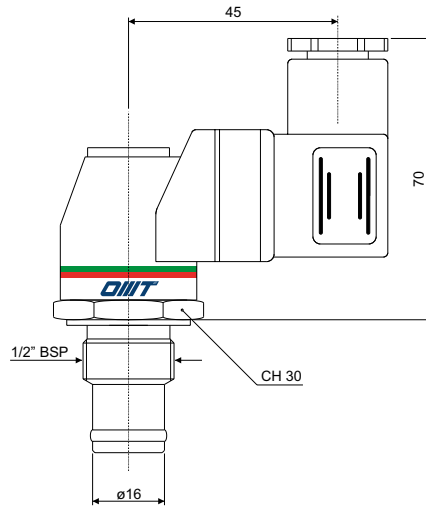
DV500/800

Indicatore visivo
Visual Indicator



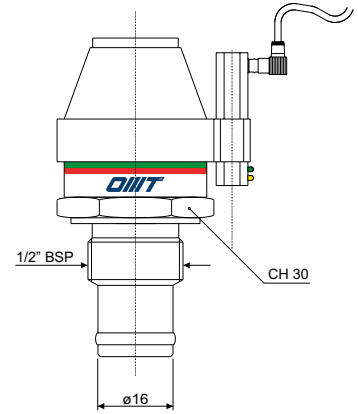
DE500/800*

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"
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"
D E 800	elettrico - electrical		Scambio Switch	
D R 800	visivo- elettrico con contatti "reed" Visual-electrical with "reed" contacts			

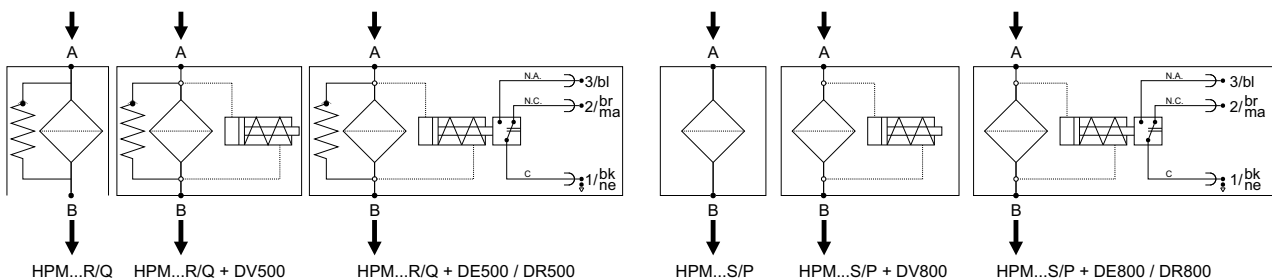
Tensioni di rottura per "DR 500 e DR 800" Breakdown voltage for "DR 500 and DR 800"	
Tensione di alimen. (V) Feeder voltage (V)	Potenza con carico induttivo (VA) Power with inductive load (VA)
A.C. 3-115	20
D.C. 3-115	20

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

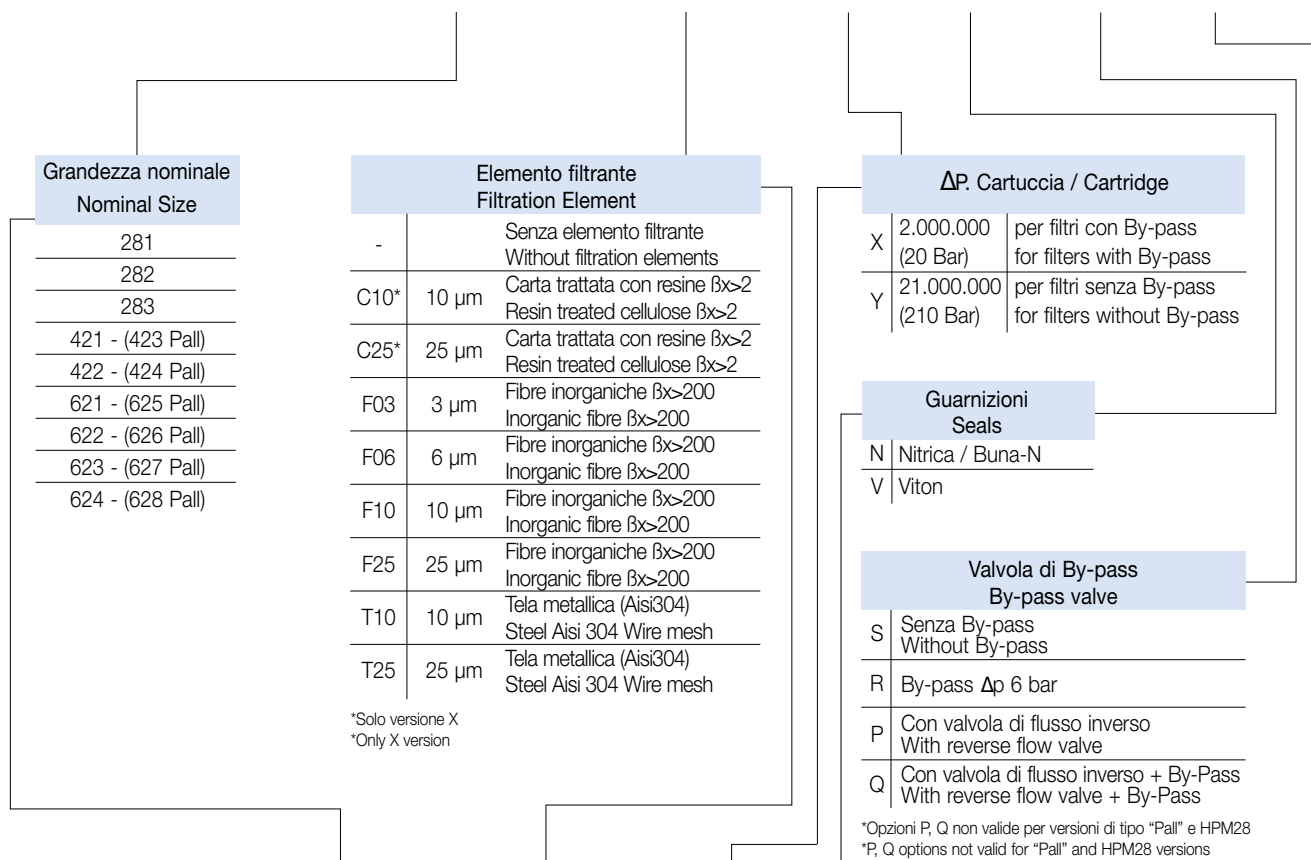
SIMBOLOGIA / SIMBOLOGY

Con By-pass / With By-pass

Senza By-pass / Without By-pass



HPM 283 F10 X N R 2



CHP 421 F03 Y N

Codice per l'ordinazione dell'elemento filtrante di ricambio
 How to order the replacement element

ATTACCHI CONNECTIONS

A	HPM28	HPM42	HPM62
-	1/2" BSP	3/4" BSP	1" BSP
1	3/4" BSP	1" BSP	1 1/4" BSP
2	1/2" NPT	3/4" NPT	1 1/2" BSP
3	3/4" NPT	1" NPT	1" NPT
4	SAE8 3/4" - 16UNF	SAE12 1 1/16" - 12UN	1 1/4" NPT
5	SAE 12	SAE16 1 5/16" - 12UN	1 1/2" NPT
6	1/2" BSPT	3/4" SAE-300PSI/M	SAE20 1 5/8" - 12UN
7	3/4" BSPT	1" SAE-3000PSI/M	SAE24 1 7/8" - 12UN
8		3/4" SAE-300PSI/UNC	1 1/4" SAE-3000PSI/M
9		1" SAE-3000PSI/UNC	1 1/2" SAE-3000PSI/M
10		3/4" SAE-6000PSI/M	1 1/4" SAE-3000PSI/UNC
11		3/4" SAE-6000PSI/UNC	1 1/2" SAE-3000PSI/UNC
12		1 1/4" BSP	1 1/4" SAE-6000PSI/M
13		3/4" BSPT	1 1/4" SAE-6000PSI/UNC
14		1" BSPT	1" BSPT
15		1 1/4" BSPT	1 1/4" BSPT
16		1 1/4" NPT	1 1/2" BSPT

* Per l'ordinazione degli indicatori di intasamento, guardare pag.131

* See page131 for information how to order clogging indicators

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