Parker Filtration ARLON

Hydraulic filtration replacement elements

Wilfit
Insert Elements

Global Filtration Technology

Member of Parker Hannifin Corporation

LLOYD'S REGISTER QUALITY ASSURANCE ISO 14001

LLOYD'S REGISTER QUALITY ASSURANCE ISO9001 UKAS QUALITY MANAGEMENT

MBC019 rev 5-03-02

Description and Technical Information

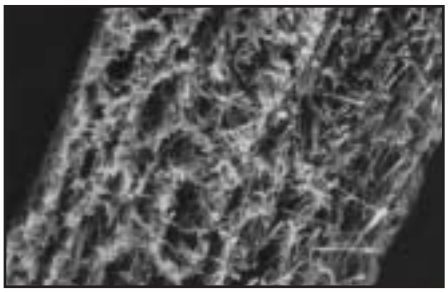
Wilfit

Parker Arlon pioneered the design of high and low pressure, industrial filters. Over 40 year of experience has been applied to design and manufacture high performance filter elements.

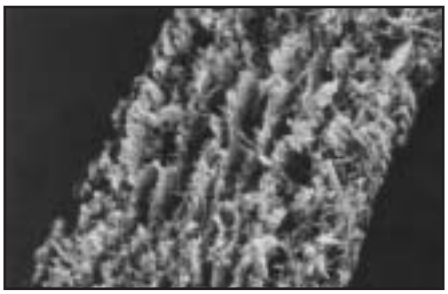
High performance with long life
After many years of continuous research, Parker Arlon now offers the latest state of the art filter media, being superior to others in terms of efficiency and dirt holding capacity.

Pleat pack excellence
The Parker Arlon range of inorganic microfibre media is reinforced on both upstream surfaces to provide excellent fatigue resistance and performance under high differential pressure and pulsing flow.

Increased material thickness
The photomicrographs above show cross section views of Parker Arlon's 03 and a competitors 3 micron media. The fibre diameters and density are similar, however it is the increased thickness of the material that



Parker Arlon 03 media, 110X.



Competitors 3 micron media 110X.

gives its superior dirt holding capacity without sacrificing element efficiency.

Cost saving
Parker Arlon replacement elements need to be changed less frequently than equivalent competitor elements because of their superior construction and characteristics. This means that for every minute Parker Arlon elements are in service, real cost savings are being made.

These elements are designed to give you a better cleanliness in your hydraulic system with a longer lifetime.
The actual result of using Wilfit elements will be cost reduction in combination with quality increase in all your hydraulic systems.

Dirt holding capacity
However, due to the increased dirt holding capacity (DHC) a longer lifetime is guaranteed before the by-pass crack pressure is reached.

This means despite slightly higher initial clean pressure drop the element will protect the hydraulic system for a longer period against contamination than equivalent elements.

Multipass Data Element

Wilfit

Wilfit Insert Elements

CODE NUMBER	ABS. MICRON RATING B_X>200	MULTI PASS TEST RESULTS TO ISO 4572 (Time Weighted Averages)							
		B_3	B_6	B_{10}	B_{12}	B_{15}	B_{20}	B_{25}	B_{40}
03	3	>200 99.50	>1000 99.90	>3000 99.96	>5000 99.98	∞	∞	∞	∞
06	6	>30 96.67	>200 99.50	>3000 99.96	>5000 99.98	∞	∞	∞	∞
12	12	4 75.0	20 95.0	75 99.50	>200 99.50	>1000 99.90	>3000 99.96	∞	∞
15	15	3 66.66	12 91.66	50 98.0	75 98.67	>200 99.50	>2000 99.95	>5000 99.98	∞
25	25	N/A	N/A	10 90.0	20 95.0	50 98.0	75 98.67	>200 99.50	>3000 99.96

Wilfit Spin-on Elements

CODE NUMBER	NOM. MICRON RATING	B_X>75	MULTI PASS TEST RESULTS TO ISO 4572 (Time Weighted Averages)						
			B_3	B_6	B_{10}	B_{12}	B_{20}	B_{25}	B_{40}
03	1	3	≥75 98.6	1000 99.9	>5000 99.98	∞	∞	∞	∞
06	3	6	40 97.5	≥75 98.6	1000 99.9	>5000 98.98	∞	∞	∞
12	6	12	2 50.0	6 83.0	40 97.5	≥75 98.6	1000 99.9	>2000 99.95	∞
25	12	25	2 50.0	5 80.0	12 91.7	24 95.8	≥75 98.6	200 99.5	>1000 99.90

Beta rating
Beta ratings are the recognized industry standard for measuring filter efficiency. These Beta ratings are obtained from a standardized Multi Pass test according to ISO 4572.

This method offers the user the possibility to compare filter elements. The higher the Beta ratio for a specific micron size the greater the element capacity to retain particles larger than the stated dimension. The appropriate equation is:

$$B_X = \frac{\text{No. of particles > x-micron upstream}}{\text{No. of particles > x-micron downstream}}$$

According to ISO standards Bx ≥ 75 is the accepted value for absolute filtration. The efficiency factor belonging to this figure is: 98.6 %. However, the market also requires other efficiencies, the mostly used alternative is Bx ≥ 200 (99.5%).

- Black numbers = Element Beta ratio B_X
- Blue numbers = Element efficiency in percent

Clean element pressure drop

Element ΔP using fluid of 30 cSt viscosity. Element ΔP is directly proportional to viscosity.

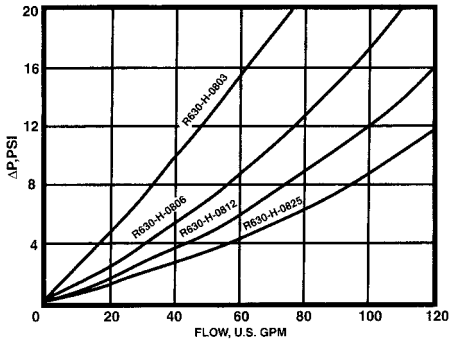
CALCULATION FOR METRIC VALUES

X U.S. GPM = X l/min x 2,642.10 $^{-1}$

Z bar = Z PSI x 6,897.10 $^{-2}$

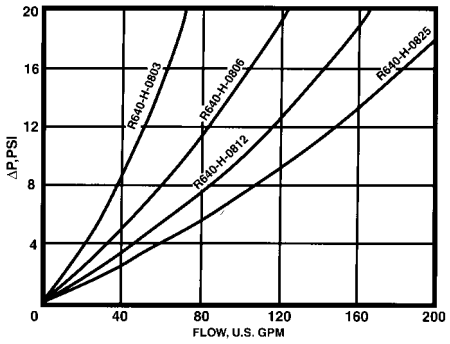
ELEMENT SERIES: R630

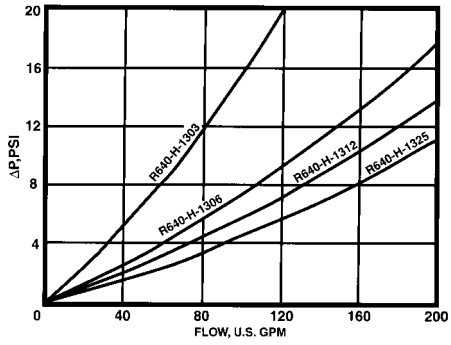
PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R630-H-0803A	HC6300FKP8H
R630-H-0806A	HC6300FKN8H
R630-H-0812A	HC6300FKS8H
R630-H-0825A	HC6300FKT8H

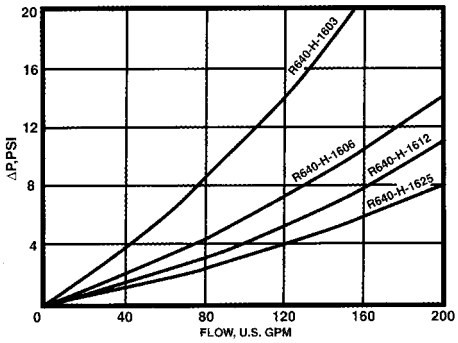


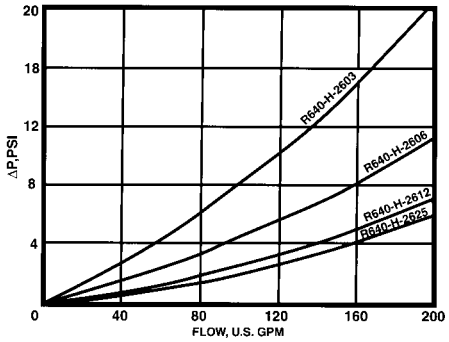
ELEMENT SERIES: R640

PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R640-H-0803A	HC6300FKP8H
R640-H-1303A	HC6400FKP13H
R640-H-1603A	HC6400FKP16H
R640-H-2603A	HC6400FKP26H
R640-H-0806A	HC6400FKN8H
R640-H-1306A	HC6400FKN13H
R640-H-1606A	HC6400FKN16H
R640-H-2606A	HV6400FKN26H
R640-H-0812A	HC6400FKS8H
R640-H-1312A	HC6400FKS13H
R640-H-1612A	HC6400FKS16H
R640-H-2612A	HC6400FKS26H
R640-H-0825A	HC6400FKP8H
R640-H-1325A	HC6400FKP13H
R640-H-1625A	HC6400FKP16H
R640-H-2625A	HC6400FKP26H



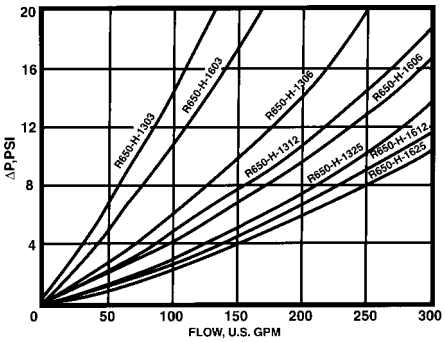


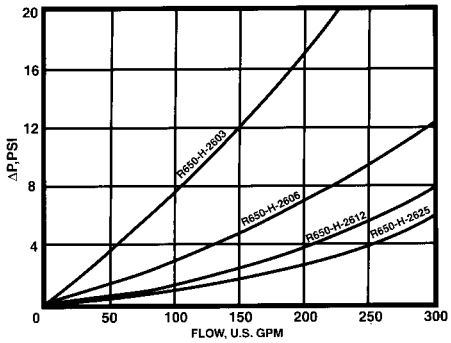




ELEMENT SERIES: R650

PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R650-H-1303A	HC6500FKP13H
R650-H-1603A	HC6500FKP16H
R650-H-2603A	HC6500FKP26H
R650-H-1306A	HC6500FKN13H
R650-H-1606A	HC6500FKN16H
R650-H-2606A	HC6500FKN26H
R650-H-1312A	HC6500FKS13H
R650-H-1612A	HC6500FKS16H
R650-H-2612A	HC6500FKS26H
R650-H-1325A	HC6500FKT13H
R650-H-1625A	HC6500FKT16H
R650-H-2625A	HC6500FKT26H





Clean element pressure drop

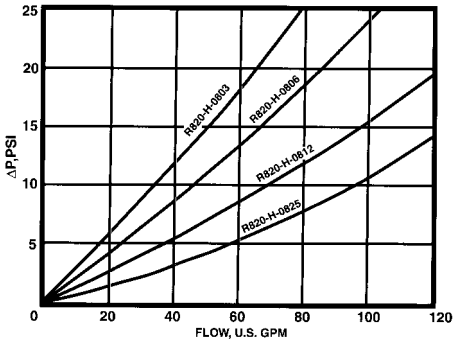
Element ΔP using fluid of 30 cSt viscosity. Element ΔP is directly proportional to viscosity.

CALCULATION FOR METRIC VALUES

X U.S. GPM = X l/min x 2,642.10 $^{-1}$
Z bar = Z PSI x 6,897.10 $^{-2}$

ELEMENT SERIES: R820

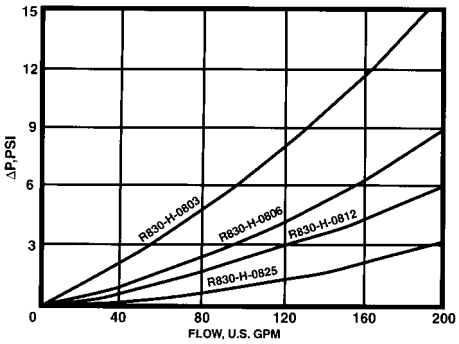
PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R820-H-0803A	HC8200FKP8H
R820-H-0806A	HC8200FKN8H
R820-H-0812A	HC8200FKS8H
R820-H-0825A	HC8200FKT8H

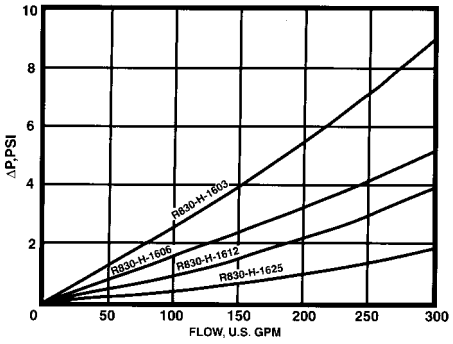


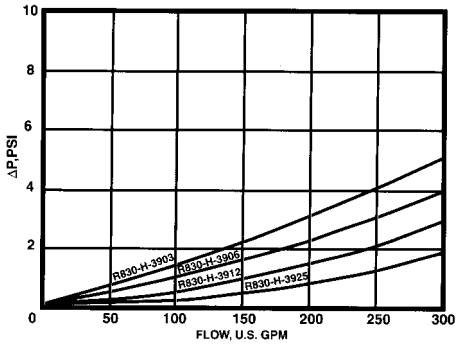
ELEMENT SERIES: R830 - R831

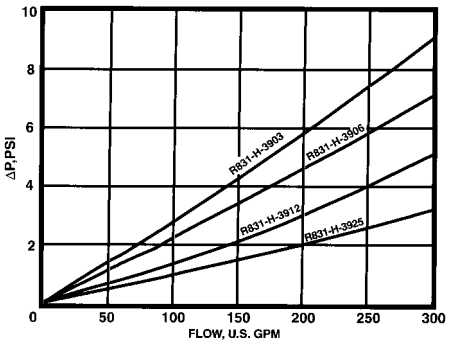
PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R830-H-0803A	HC8300FKP8H
R830-H-1603A	HC8300FKP16H
R830-H-3903A	HC8300FKP39H
R830-H-0806A	HC8300FKN8H
R830-H-1606A	HC8300FKN16H
R830-H-3906A	HC8300FKN39H
R830-H-0812A	HC8300FKS8H
R830-H-1612A	HC8300FKS16H
R830-H-3912A	HC8300FKS39H
R830-H-0825A	HC8300FKT8H
R830-H-1625A	HC8300FKT16H
R830-H-3925A	HC8300FKT39H

R831-H-3903A	HC8310FKP39H
R831-H-3906A	HC8310FKN39H
R831-H-3912A	HC8310FKS39H
R831-H-3925A	HC8310FKT39H



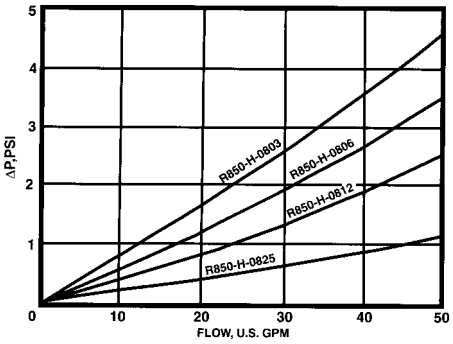


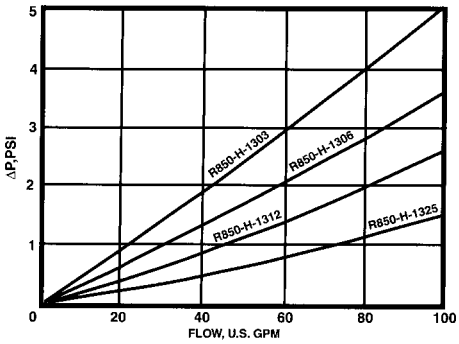




ELEMENT SERIES: R850

PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R850-H-0803A	HC8500FKP8H
R850-H-1303A	HC8500FKP13H
R850-H-0806A	HC8500FKN8H
R850-H-1306A	HC8500FKN13H
R850-H-0812A	HC8500FKS8H
R850-H-1312A	HC8500FKS13H
R850-H-0825A	HC8500FKT8H
R850-H-1325A	HC8500FKT13H





Clean element pressure drop

Element ΔP using fluid of 30 cSt viscosity. Element ΔP is directly proportional to viscosity.

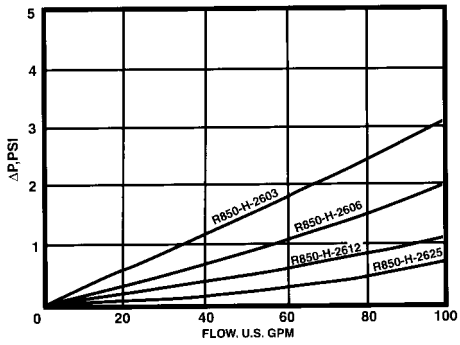
CALCULATION FOR METRIC VALUES

X U.S. GPM = X l/min x 2,642.10 $^{-1}$

Z bar = Z PSI x 6,897.10 $^{-2}$

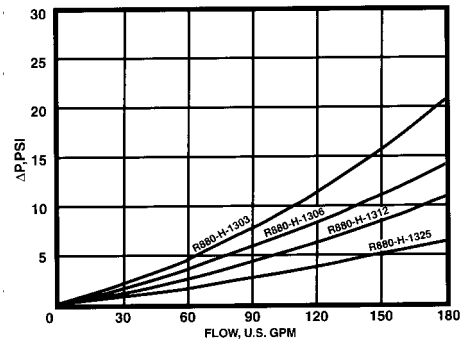
ELEMENT SERIES: R850

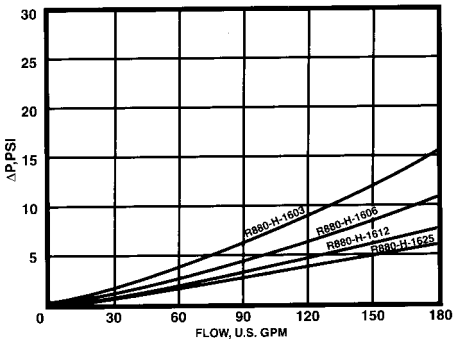
PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R850-H-2603A	HC8500FKP26H
R850-H-2606A	HC8500FKN26H
R850-H-2612A	HC8500FKS26H
R850-H-2625A	HC8500FKT26H



ELEMENT SERIES: R880

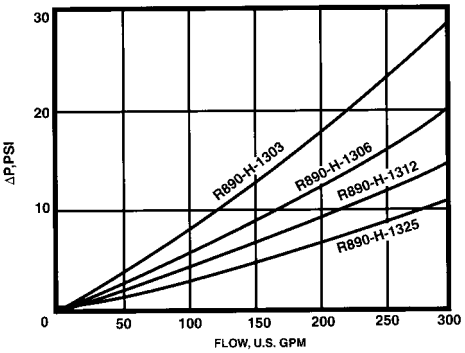
PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R880-H-1303A	HC8800FKP13H
R880-H-1603A	HC8800FKP16H
R880-H-1306A	HC8800FKN13H
R880-H-1606A	HC8800FKN16H
R880-H-1312A	HC8800FKS13H
R880-H-1612A	HC8800FKS16H
R880-H-1325A	HC8800FKS13H
R880-H-1625A	HC8800FKS16H

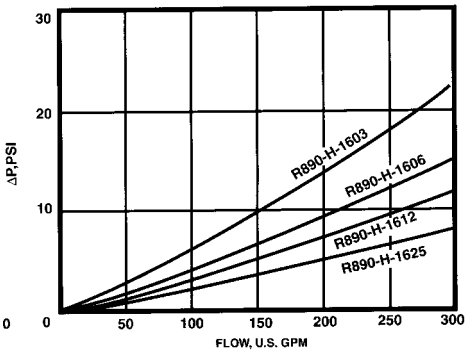


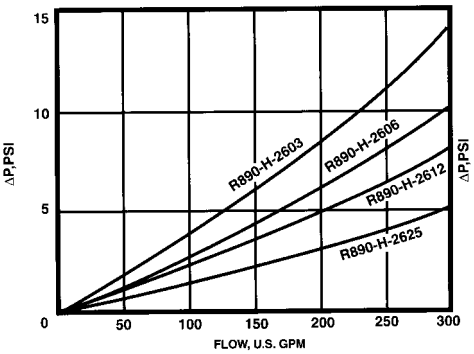


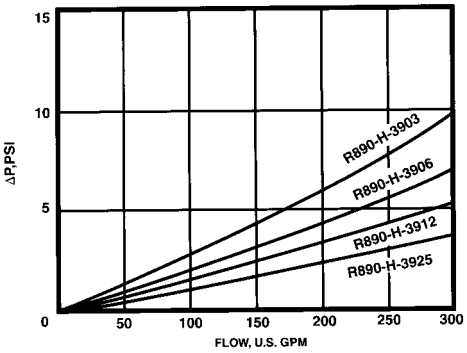
ELEMENT SERIES: R890

PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R890-H-1303A	HC8900FKP13H
R890-H-1603A	HC8900FKP16H
R890-H-2603A	HC8900FKP26H
R890-H-3903A	HC8900FKP39H
R890-H-1306A	HC8900FKN13H
R890-H-1606A	HC8900FKN16H
R890-H-2606A	HC8900FKN26H
R890-H-3906A	HC8900FKN39H
R890-H-1312A	HC8900FKS13H
R890-H-1612A	HC8900FKS16H
R890-H-2612A	HC8900FKS26H
R890-H-3912A	HC8900FKS39H
R890-H-1325A	HC8900FKT13H
R890-H-1625A	HC8900FKT16H
R890-H-2625A	HC8900FKT26H
R890-H-3925A	HC8900FKT39H









Clean element pressure drop

Element ΔP using fluid of 30 cSt viscosity. Element ΔP is directly proportional to viscosity.

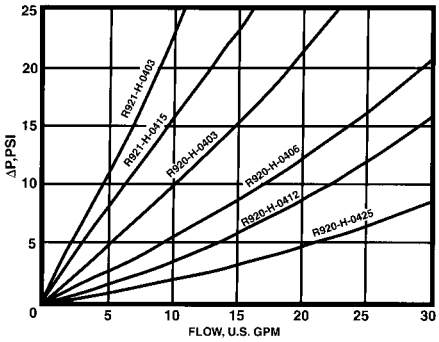
CALCULATION FOR METRIC VALUES

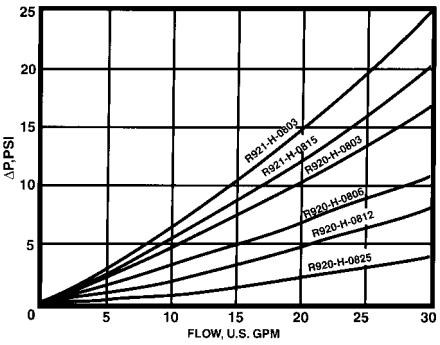
X U.S. GPM = X l/min x 2,642.10 $^{-1}$
Z bar = Z PSI x 6,897.10 $^{-2}$

ELEMENT SERIES: R920 - R921

PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R920-H-0403A	HC9020FKP4H
R920-H-0803A	HC9020FKP8H
R920-H-0406A	HC9020FKN4H
R920-H-0806A	HC9020FKN8H
R920-H-0412A	HC9020FKS4H
R920-H-0812A	HC9020FKS8H
R920-H-0425A	HC9020FKT4H
R920-H-0825A	HC9020FKT8H

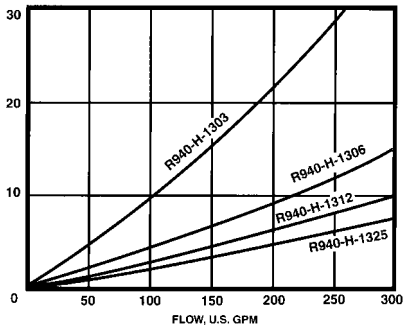
R921-H-0403A	HC9021FKP4H
R921-H-0803A	HC9021FKP8H
R921-H-0415A	HC9021FKT4H
R921-H-0815A	HC9021FKT8H

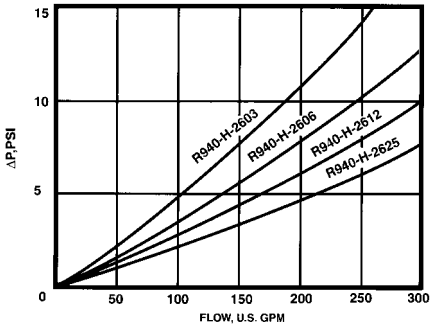


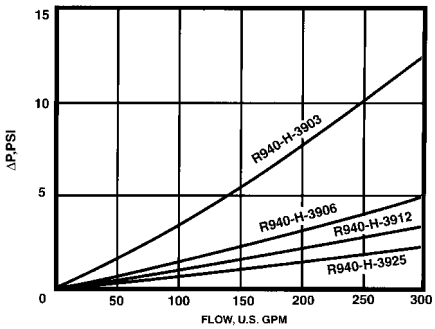


ELEMENT SERIES: R940

PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R940-H-1303A	HC9400FKP13H
R940-H-2603A	HC9400FKP26H
R940-H-3903A	HC9400FKP39H
R940-H-1306A	HC9400FKN13H
R940-H-2606A	HC9400FKN26H
R940-H-3906A	HC9400FKN39H
R940-H-1312A	HC9400FKS13H
R940-H-2612A	HC9400FKS26H
R940-H-3912A	HC9400FKS39H
R940-H-1325A	HC9400FKT13H
R940-H-2625A	HC9400FKT26H
R940-H-3925A	HC9400FKT39H







Clean element pressure drop

Element ΔP using fluid of 30 cSt viscosity. Element ΔP is directly proportional to viscosity.

CALCULATION FOR METRIC VALUES

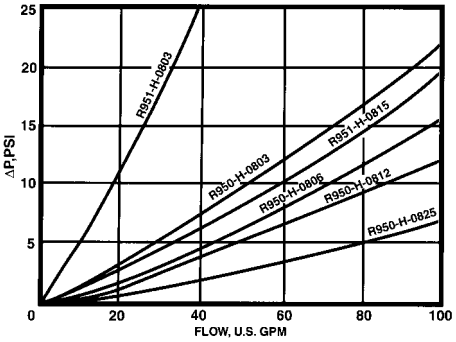
X U.S. GPM = X l/min x 2,642.10 $^{-1}$

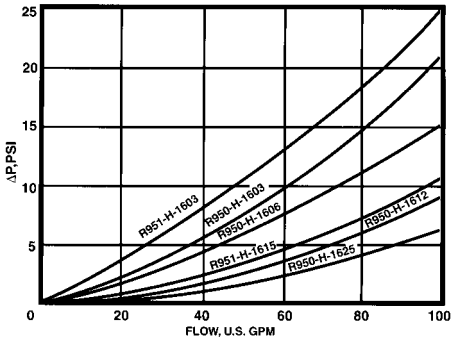
Z bar = Z PSI x 6,897.10 $^{-2}$

ELEMENT SERIES: R950 - R951

PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R950-H-0803A	HC9650FKP8H
R950-H-1603A	HC9650FKP16H
R950-H-0806A	HC9650FKN8H
R950-H-1606A	HC9650FKN16H
R950-H-0812A	HC9650FKS8H
R950-H-1612A	HC9650FKS16H
R950-H-0825A	HC9650FKT8H
R950-H-1625A	HC9650FKT16H

R951-H-0803A	HC9651FKP8H
R951-H-0815A	HC9651FKT8H
R951-H-1603A	HC9651FKP16H
R951-H-1615A	HC9651FKT16H

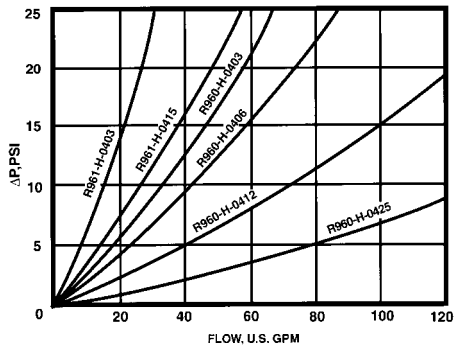


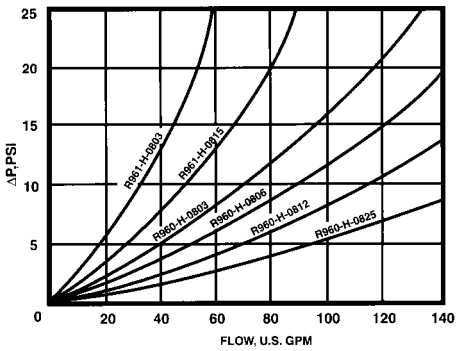


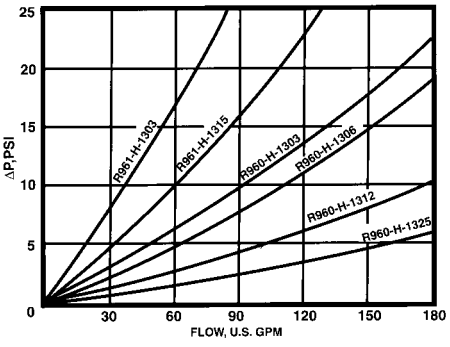
ELEMENT SERIES: R960 - R961

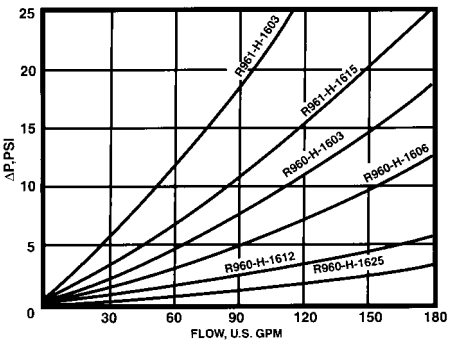
PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R960-H-0403A	HC9600FKP4H
R960-H-0803A	HC9600FKP8H
R960-H-1303A	HC9600FKP13H
R960-H-1603A	HC9600FKP16H
R960-H-0406A	HC9600FKN4H
R960-H-0806A	HC9600FKN8H
R960-H-1306A	HC9600FKN13H
R960-H-1606A	HC9600FKN16H
R960-H-0412A	HC9600FKS4H
R960-H-0812A	HC9600FKS8H
R960-H-1312A	HC9600FKS13H
R960-H-1612A	HC9600FKS16H
R960-H-0425A	HC9600FKT4H
R960-H-0825A	HC9600FKT8H
R960-H-1325A	HC9600FKT13H
R960-H-1625A	HC9600FKT16H

R961-H-0403A	HC9601FDP4H
R961-H-0803A	HC9601FDP8H
R961-H-1303A	HC9601FDP13H
R961-H-1603A	HC9601FDP16H
R961-H-0415A	HC9601FDT4H
R961-H-0815A	HC9601FDT8H
R961-H-1315A	HC9601FDT13H
R961-H-1615A	HC9601FDT16H









Clean element pressure drop

Element ΔP using fluid of 30 cSt viscosity. Element ΔP is directly proportional to viscosity.

CALCULATION FOR METRIC VALUES

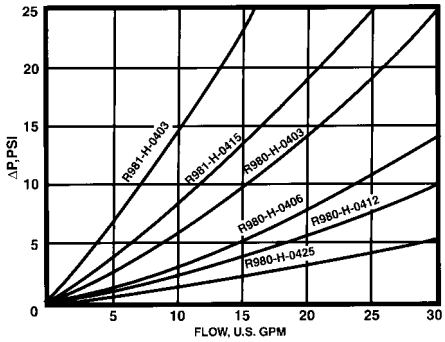
X U.S. GPM = X l/min x 2,642.10 $^{-1}$

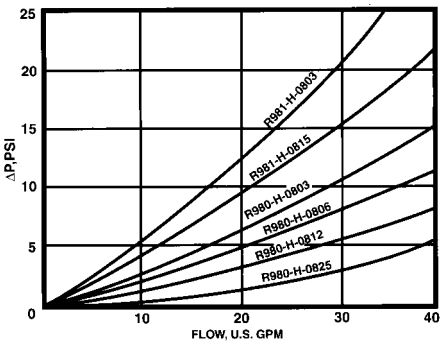
Z bar = Z PSI x 6,897.10 $^{-2}$

ELEMENT SERIES: R980 - R981

PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R980-H-0403A	HC9800FKP4H
R980-H-0803A	HC9800FKP8H
R980-H-0406A	HC9800FKN4H
R980-H-0806A	HC9800FKN8H
R980-H-0412A	HC9800FKS4H
R980-H-0812A	HC9800FKS8H
R980-H-0425A	HC9800FKT4H
R980-H-0825A	HC9800FKT8H

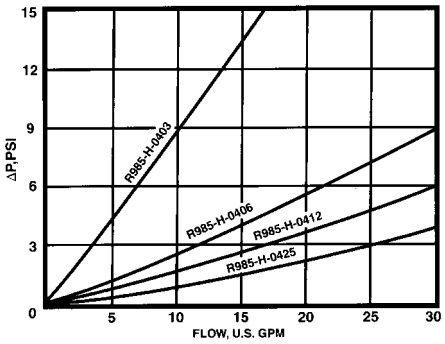
R981-H-0403A	HC9801FDP4H
R981-H-0803A	HC9801FDP8H
R981-H-0415A	HC9801FDT4H
R981-H-0815A	HC9801FDT8H

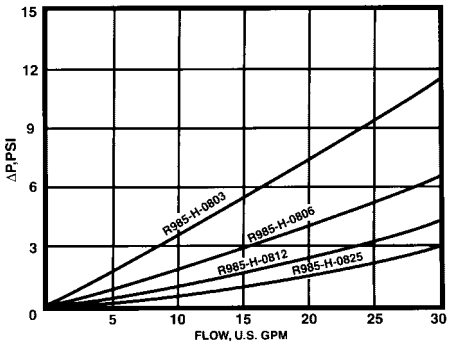




ELEMENT SERIES: R985

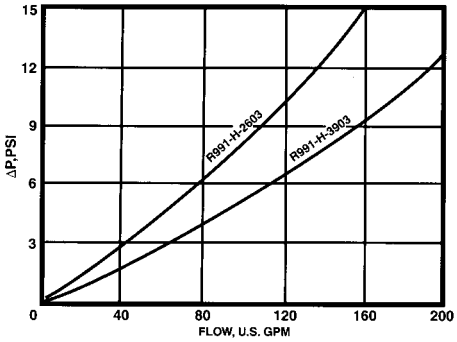
PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R985-H-0403A	HC8700FKP4H
R985-H-0803A	HC8700FKP8H
R985-H-0406A	HC8700FKN4H
R985-H-0806A	HC8700FKN8H
R985-H-0412A	HC8700FKS4H
R985-H-0812A	HC8700FKS8H
R985-H-0425A	HC8700FKT4H
R985-H-0825A	HC8700FKT8H



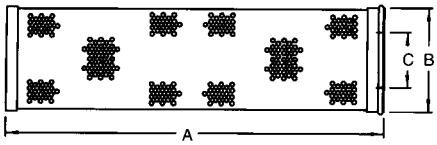


ELEMENT SERIES: R991

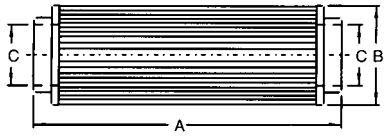
PARKER ARLON PART NUMBER	COMPETITOR PART NUMBER
R991-H-2603A	HC9901FDP26H
R991-H-3903A	HC9901FDP39H



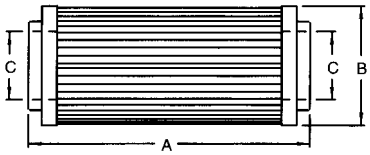
R630, R640, R650



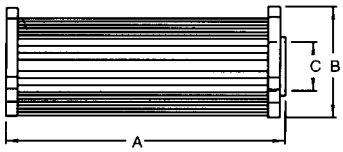
R831



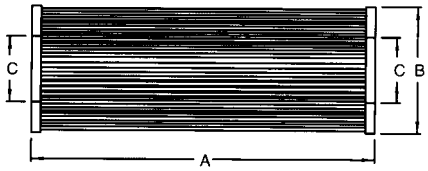
R950, R985



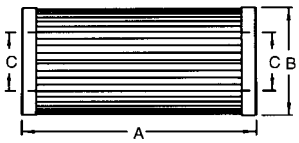
R820



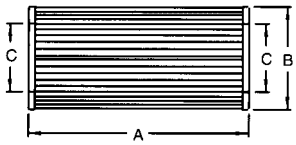
R850



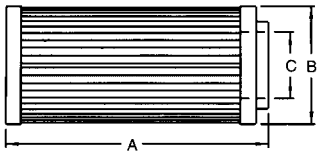
R951, R991



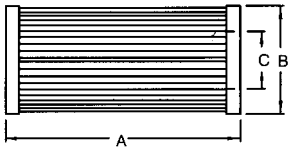
R830



R880, R890, R920, R921, R960, R980, R981



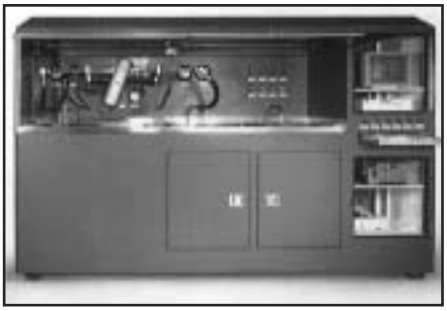
R961



150 psid COLLAPSE		3000 psid COLLAPSE		LENGTH	NOMINAL DIMENSIONS - INCHES (MM)		
PARKER ARLON SERIES	COMPETITOR SERIES	PARKER ARLON SERIES	COMPETITOR SERIES	CODE	A	B	C
*R630	6300	N/A	N/A	08 16	8.22(209) 16.86(428)	3.08(78)	1.60(41)
*R640	6400	N/A	N/A	08 13 16 26	8.22(209) 12.87(327) 16.86(428) 25.73(654)	3.39(86)	1.95(50)
*R650	6500	N/A	N/A	13 16 26	12.87(327) 16.86(428) 25.73(654)	3.78(96)	2.20(56)
R820	8200	N/A	N/A	08	8.16(208)	3.39(86)	1.50(38)
R830	8300	N/A	N/A	08 16 39	8.17(208) 16.85(428) 38.67(982)	6.00(152)	4.17(106)
R831	8310	N/A	N/A	39	37.82(961)	6.07(154)	4.13(105)
R850	8500	N/A	N/A	08 13 26	8.05(204) 12.79(325) 25.57(649)	3.78(96)	1.70(43)
R880	8800	N/A	N/A	13 16	12.96(329) 16.86(428)	3.39(86)	1.95(86)
R890	8900	N/A	N/A	13 16 26 39	12.93(328) 16.85(428) 25.69(653) 38.69(983)	3.70(94)	2.20(56)
R920	9020	R921	9021	04 08	4.48(114) 8.15(207)	1.76(45)	1.00(26)
R950	9650	R951	9651	08 16	8.19(208) 16.95(431)	3.15(80)	1.69(43)
R960	9600	R961	9601	04 08 13 16	4.50(114) 8.15(207) 12.98(330) 16.88(429)	3.15(80)	1.69(43)
R980	9800	R981	9801	04 08	4.55(115) 8.18(207)	1.99(51)	.94(24)
R985	8700	N/A	N/A	04 08	4.58(116) 8.24(209)	2.14(54)	.94(24)
R940	9400	N/A	N/A	13 26 39	13.10(333) 25.86(657) 38.86(987)	3.70(94)	2.20(56)
N/A	N/A	R991	9901	26 39	25.86(657) 38.86(987)	3.70(94)	2.20(56)

* Element Burst Rating: 150 psid

Hardware:	Plated, Carbon Steel End Caps and Core.
Filter Media:	Glass Micro-Fibre, Epoxy End Cap Adhesive.
Fluid Compatibility:	150 psid collapse: Suitable for all conventional hydraulic fluids except phosphate base esters.
	3000 psid collapse, Suitable for all conventional hydraulic fluids.



ISO STANDARDS IN FILTRATION	
ISO 2941 =	Burst pressure elements
ISO 2942 =	Bubble test filter media
ISO 2943 =	Fluid compatibility
ISO 3723 =	Element load test
ISO 3724 =	Element fatigue test
ISO 3968 =	Flow/ P test
ISO 4406 =	Fluid contamination level
ISO 4572 =	Multi Pass test

4.1 Ordering code

Wilfit

TABLE 1/ MODEL REFERENCE

INSERT ELEMENTS	
ELEMENTS	CODE
150 psid COLLAPS RATING	
HC6300	R630
HC6400	R640
HC6500	R650
HC8200	R820
HC8300	R830
HC8310	R831
HC8500	R850
HC8800	R880
HC8900	R890
HC9020	R920
HC9650	R950
HC9600	R960
HC9800	R980
HC8700	R985
HC9400	R940
3000 psid COLLAPSE RATING	
HC9021	R921
HC9651	R951
HC9601	R961
HC9801	R981
HC9901	R991

TABLE 2/ LENGTH CODE

LENGTH	CODE
4(")	04
8(")	08
13(")	13
16(")	16
26(")	26
39(")	39

TABLE 4/ SEAL MATERIAL

MATERIAL	CODE
H-BUNA	A
Z-VITON	H
J-EPR	B

TABLE 3/ MICRON RATING

MATERIAL/RATING	CODE
F*P/3(MICRON)	03
F*N/6(MICRON)	06
F*S/12(MICRON)	12
F*T/25(MICRON)	25
F*T/25(MICRON) collapse pressure 3000 psid only	15

* Parker Arlon elements interchange with material designations K, D, U and X.

ORDERING EXAMPLE: DESCRIPTION: HC 9600 FDT - 4H = R960 - H - 0425 - A

Table 1				Standard	Table 2		Table 3		Table 3
R	9	6	0	H	0	4	2	5	A

Parker Filtration ARLON