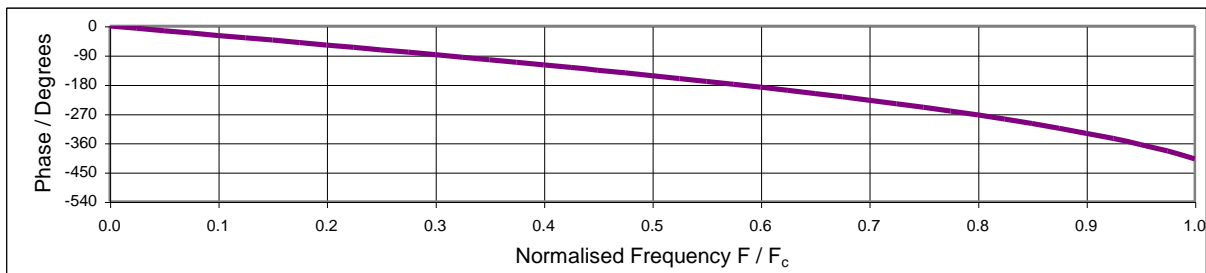**Amplitude Response**

Kemo Filter Response 01 is an 8 pole Elliptic type filter. Designed with a flat passband, and sharp cut-off, making it ideal for anti-aliasing applications, or where sharp cut-off are required. This response is also available in high pass (01 HP)

| Response 01 Data			
Equivalent Slope	135 dB / Octave		
Stopband (theoretical)	> -79 dB		
Overshoot (theoretical)	20.4 % at 1.43 /Fc		
Risetime to 0.996	1.17/Fc		
Mean phase line (theoretical)	-335 f/Fc		
Attenuation / dB	Normalised Frequency F / F_c		Attenuation / dB
0.10	1.00	1.00	0.09
0.25	1.01	1.10	10.5
0.50	1.02	1.25	33.6
1.00	1.03	1.50	79.9
3.00	1.05	1.75	> 79.9
6.00	1.07	2	> 79.9
12.00	1.12	3	> 79.9
24.00	1.20	4	> 79.9
40.00	1.29	5	> 79.9
60.00	1.43	8	> 79.9
80.00	-	10	> 79.9

Passband Phase Response
The curve above shows the passband phase response.
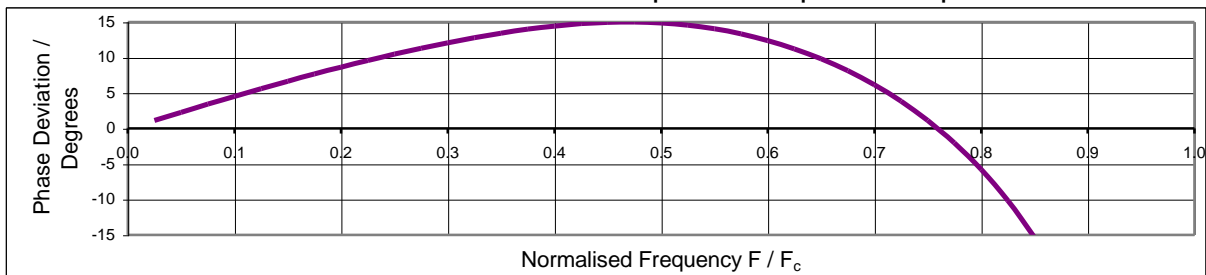
Passband phase deviation
The above curve shows the passband phase variation for the Kemo 01 filter, this is the difference from the mean phase line and the actual variation of the filter.
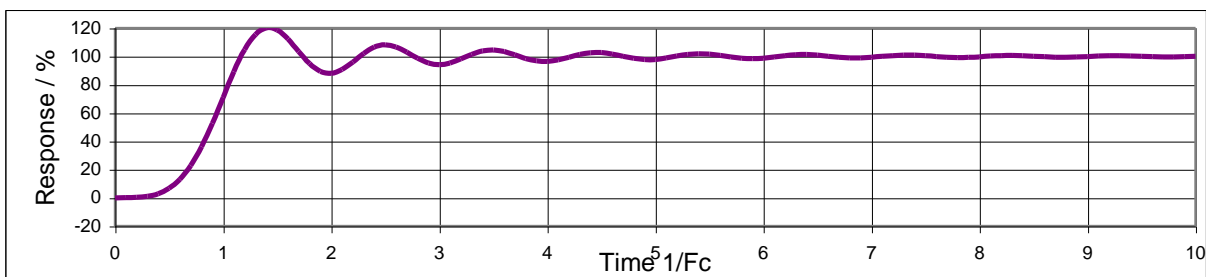
Time Response to Step Input
The curve above shows the step input time response of the Kemo 01 filter.

Other Filter Responses

General Purpose (41) – a filter optimised for low signal distortion. Flat passband and linear phase characteristics, with moderate settling time.

Butterworth (03) (05) – traditional Butterworth filters, often used to match existing systems, type 01 is superior for alias protection, and type 41 is a better general-purpose filter

Bessel (07) (09) – traditional Bessel filters, linear phase, and small-time delay with no overshoot, but significant roll off in the passband.

General Notes about Filter Responses

Selecting a filter is a compromise. We have been manufacturing filters since 1965, and this sheet shows our selection of standard responses built up over a number of years to meet most applications. One of the most important aspects of filter selection is to allow for the total effect on the signal, passband amplitude, phase variation, and step response.

Note - F_c is cut-off frequency