

Launched in 2008 following years of research and development, the Magcat is our most powerful and versatile conditioner. Magcat is a two stage **residential and commercial water conditioning system**, combining Fluid Dynamics' **magnetic and catalytic treatment** systems into a single compact stainless steel housing. We believe it to be the most effective in-line conditioner on the market, globally. **It also enables compliance with Part L Building Regulations in the UK.**



## OUR DUAL TREATMENT SYSTEM

Catalytic treatment is suitable for around 90% of the world's potable water, however it is not suitable for water where the alloy can become fouled with iron or where water is already supersaturated with high levels of minerals. This led us to the development of **dual technology** - combining magnetic and catalytic technology to create our most **innovative, versatile and powerful** conditioning products to date.

### Benefits

- ✓ Up to 20 years service
- ✓ 10 year pro-rata warranty
- ✓ Water stays treated for up to 3 months
- ✓ Prolongs the life of water using applications and heating systems
- ✓ Reduces limescale build-up in pipes, valves, pumps and heating elements
- ✓ Reduces energy consumption generating cost savings
- ✓ Reduces carbon emissions - green technology for the future
- ✓ Easy to install - horizontally or vertically
- ✓ Cost effective, proven and sustainable
- ✓ Strong and corrosion resistant: stainless steel
- ✓ Enables compliance with Part L Building Regulations in the UK

### Materials of construction

- ✓ Stainless steel housing - WRAS approved
- ✓ Non-sacrificial catalytic semi precious alloy (lead free) - WRAS approved
- ✓ Magnets - stainless steel coated magnets - WRAS approved

### Life expectancy

- ✓ Dependant on use, a minimum of 10 years service can be expected, however it is not uncommon for our conditioners to last between 15-25 years +

### Applications

- ✓ Whole house protection
- ✓ Apartment blocks
- ✓ Commercial offices
- ✓ Schools
- ✓ Universities & colleges
- ✓ Leisure centres
- ✓ Cruise ships
- ✓ Maritime transport
- ✓ Cinemas
- ✓ Retail parks / shopping centres
- ✓ Restaurants
- ✓ Farming / irrigation
- ✓ Marine applications
- [Much more!](#)

### Regulatory

- ✓ WRAS Approval No: 1812306

## CLIENTS



### Green technology

- No power
- No electrical connections
- No chemicals
- No consumables
- No waste water



### Peace of mind

- No maintenance
- No servicing
- No earthing or bonding required
- No control box to mount
- Up to 20 years service

## INSTALLATION GUIDE

### Sizing

- ✓ Size matters - selecting the right conditioner is critical
- ✓ Selecting the wrong size conditioner - including using a larger diameter than needed - can compromise water delivery and affect treatment quality
- ✓ Conditioner size should be selected based on **flow rate**
- ✓ In general applications where the flow rate is known to be low or there is relatively heavy scale build-up inside the pipe already. In this instance, a conditioner 1 size smaller than the pipe diameter is recommended.

### Fitting options

Fluid Dynamics has a wide range of connection options available - please ask.

#### COMMON THREADS

##### UK: BSPT CONNECTIONS (DN15 TO DN50)

1/2" to 2" BSPT (British Standard Pipe Tapered) threads  
These conform to BSP (British Standard Tapered)

##### USA: NPT CONNECTIONS (DN15 TO DN50)

1/2" to 2" NPT (National Pipe Taper) Male & Female Threads  
These conform to ANSI / ASME Standard B1.20.1

#### FLANGES - DN65 UPWARDS (2.5" +)

A wide range of flanges can be specified as the fitting option required

##### UK

Standard fitting in the UK is the BS4504 PN16 stainless steel flanges  
Higher pressure ratings are available upon request  
Maximum operating temperature = 120 degree celsius

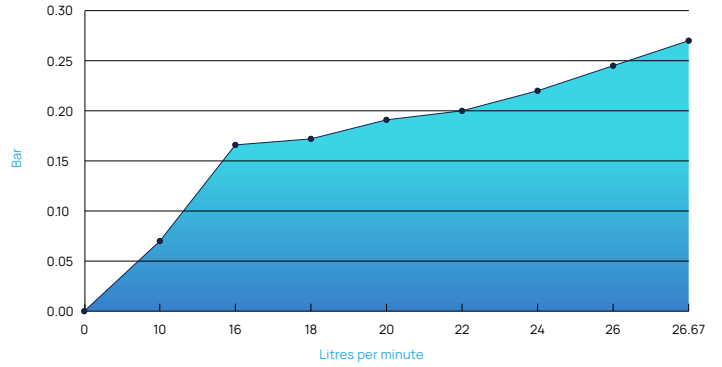
##### USA

The standard flange fitting in the USA is ASA 150 stainless steel flanges  
Higher pressure ratings are available upon request  
Maximum operating temperature = 120 degree celsius

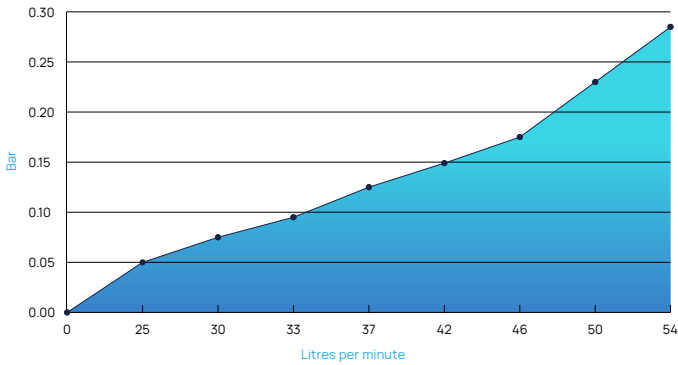
## PRESSURE LOSSES

- Both our catalytic and combination (dual) systems have internal components designed specifically to minimise resistance as water passes through
- Correctly installed conditioners will have a negligible impact on pressure drop - to a maximum of 2%

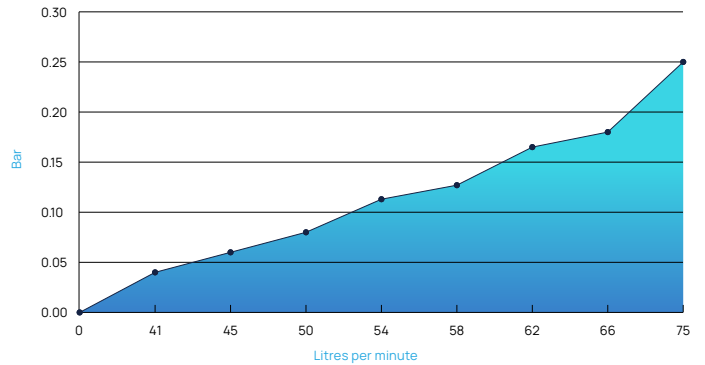
DN15 (1/2") PRESSURE DROP GRAPH



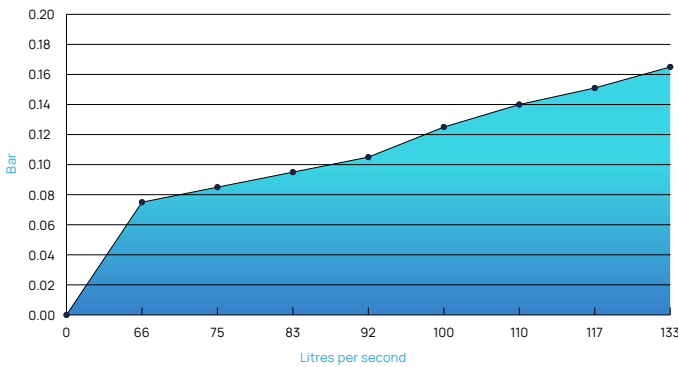
DN20 (3/4") PRESSURE DROP GRAPH



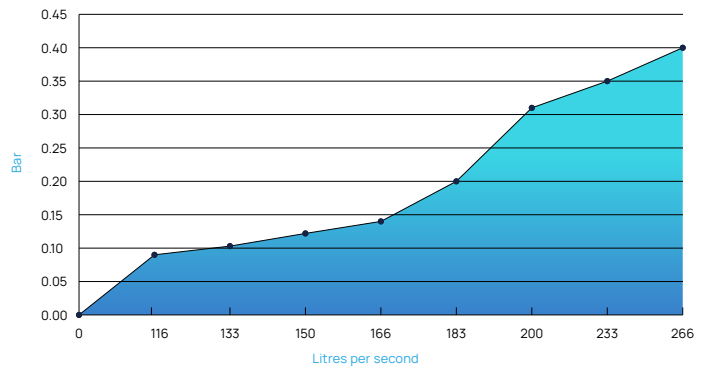
DN25 (1") PRESSURE DROP GRAPH



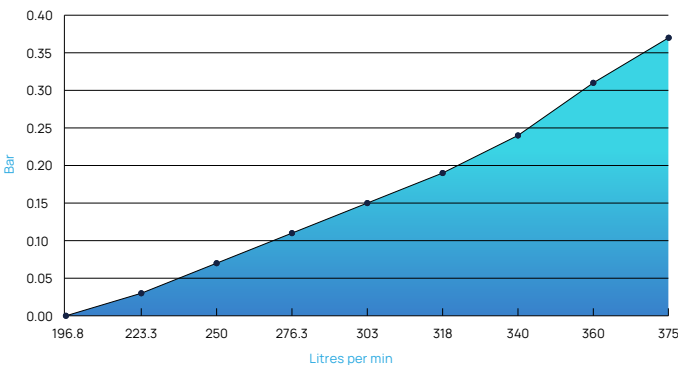
DN32 (1 1/4") PRESSURE DROP GRAPH



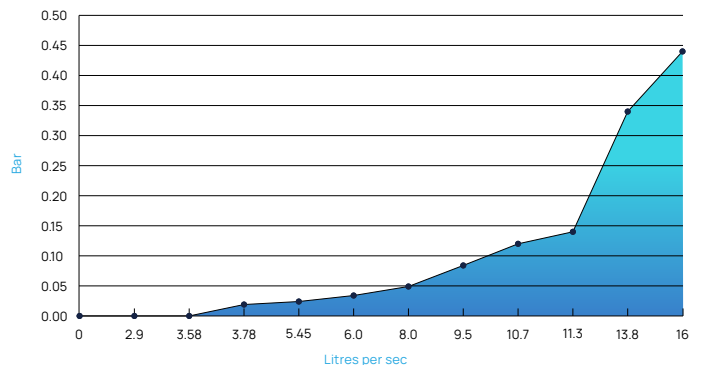
DN40 (1 1/2") PRESSURE DROP GRAPH



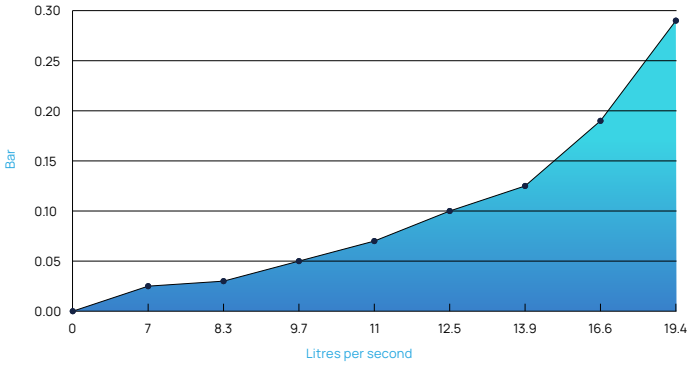
DN50 PRESSURE DROP GRAPH



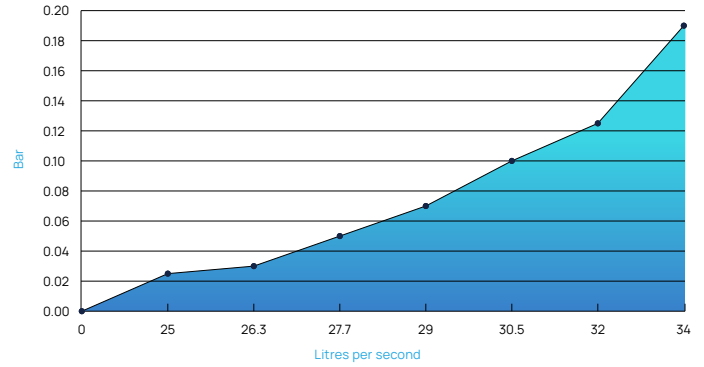
DN65 PRESSURE DROP GRAPH



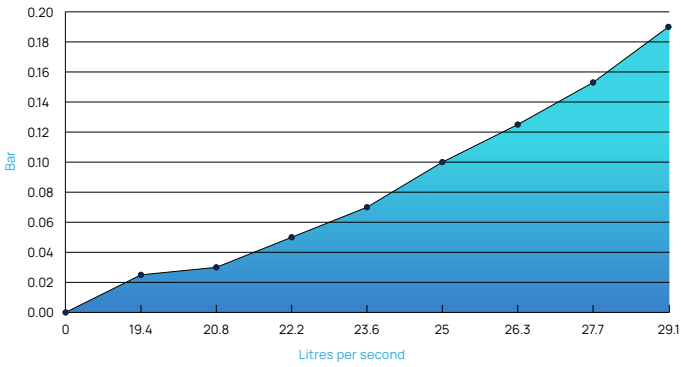
DN80 (3") PRESSURE DROP GRAPH



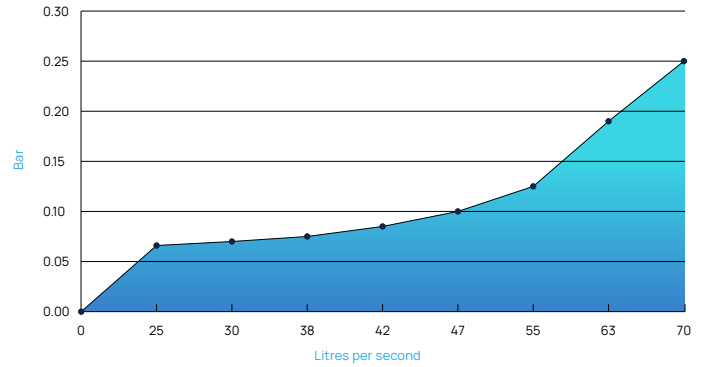
DN100 (4") PRESSURE DROP GRAPH



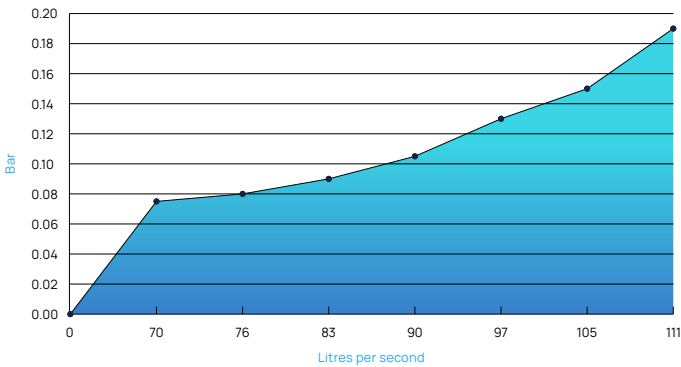
DN125 (5") PRESSURE DROP GRAPH



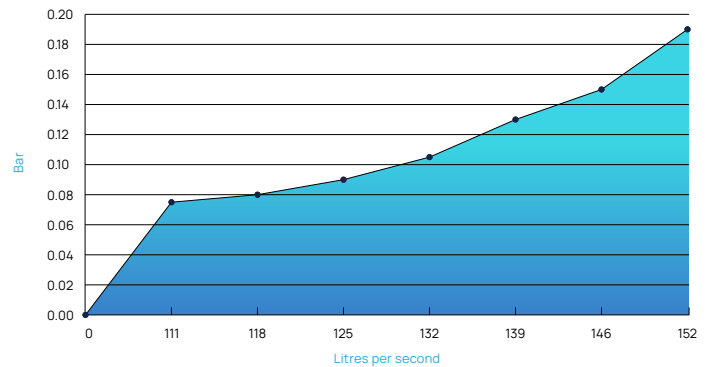
DN150 (6") PRESSURE DROP GRAPH



DN200 (8") PRESSURE DROP GRAPH



DN250 (10") PRESSURE DROP GRAPH



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## DATA TABLE

Product code	Description	Connection type	Suitable for pipe diameter	Max temp (°C)	Max pressure* (bar)	Optimal flow range (lpm)	Length (mm)	Weight (kg)	Housing materials
MAT15BS	MagCAT 15	½" BSPT	½" (DN15) ¾" (DN20)	-10 to 100	16	3-25	400	2.1	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT20BS	MagCAT 20	¾" BSPT	¾" (DN20) 1" (DN25)	-10 to 100	16	24-54	400	2.4	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT25BS	MagCAT 25	1" BSPT	1" (DN25) 1 ¼" (DN32)	-10 to 100	16	45-90	550	5.5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT32BS	MagCAT 32	1 ¼" BSPT	1 ¼" (DN32) 1 ½" (DN40)	-10 to 100	16	85-120	550	6.5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT40BS	MagCAT 40	1 ½" BSPT	1 ½" (DN40) 2" (DN50)	-10 to 100	16	110-210	550	8.0	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT50BS	MagCAT 50	2" BSPT	2" (DN50) 2 ½" (DN65)	-10 to 100	16	170-330	550	10	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT65PN	MagCAT 65	2 ½" PN16 Flange	2 ½" (DN65) 3" (DN80)	-10 to 100	16	310-675	800	18	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT80PN	MagCAT 80	3" PN16 Flange	3" (DN80) 4" (DN100)	-10 to 100	16	600-1175	850	30	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT100PN	MagCAT 100	4" PN16 Flange	4" (DN100) 5" (DN125)	-10 to 100	16	950-1750	850	46	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT125PN	MagCAT 125	5" PN16 Flange	5" (DN125) 6" (DN150)	-10 to 100	16	1500-2150	1000	65	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT150PN	MagCAT 150	6" PN16 Flange	6" (DN150) 8" (DN200)	-10 to 100	16	2000-4150	1000	80	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT200PN	MagCAT 200	8" PN16 Flange	8" (DN200) 10" (DN250)	-10 to 100	16	4000-6660	1000	132	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy

Product code	Description	Connection type	Suitable for pipe diameter	Max temp (°C)	Max pressure* (bar)	Optimal flow range (lpm)	Length (mm)	Weight (kg)	Housing materials
MAT250PN	MagCAT 250	10" PN16 Flange	10" (DN250) 12" (DN300)	-10 to 100	16	6500-9960	1000	187	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT300PN	MagCAT 300	12" PN16 Flange	12" (DN300) 14" (DN350)	-10 to 100	16	9500-11700	1000	297	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT350PN	MagCAT 350	14" PN16 Flange	14" (DN350) 16" (DN400)	-10 to 100	16	11500-13200	1000	375	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT15US	MagCAT 15	½" NPT	½" (DN15) ¾" (DN20)	-10 to 100	16	3-25	400	2.1	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT20US	MagCAT 20	¾" NPT	¾" (DN20) 1" (DN25)	-10 to 100	16	24-54	400	2.4	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT25US	MagCAT 25	1" NPT	1" (DN25) 1¼" (DN32)	-10 to 100	16	45-90	550	2.5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT32US	MagCAT 32	1¼" NPT	1¼" (DN32) 1½" (DN40)	-10 to 100	16	85-120	550	5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT40US	MagCAT 40	1½" NPT	1½" (DN40) 2" (DN50)	-10 to 100	16	110-210	550	6	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT50US	MagCAT 50	2" NPT	2" (DN50) 2½" (DN65)	-10 to 100	16	170-330	550	9	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT65US	MagCAT 65	2½" ASA 150 Flange	2½" (DN65) 3" (DN80)	-10 to 100	16	310-675	800	11	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT80US	MagCAT 80	3" ASA 150 Flange	3" (DN80) 4" (DN100)	-10 to 100	16	600-1175	850	30	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT100US	MagCAT 100	4" ASA 150 Flange	4" (DN100) 5" (DN125)	-10 to 100	16	950-1750	850	46	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy

Product code	Description	Connection type	Suitable for pipe diameter	Max temp (°C)	Max pressure* (bar)	Optimal flow range (lpm)	Length (mm)	Weight (kg)	Housing materials
MAT125US	MagCAT 125	5" ASA 150 Flange	5" (DN125) 6" (DN150)	-10 to 100	16	1500-2150	1000	65	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT150US	MagCAT 150	6" ASA 150 Flange	6" (DN150) 8" (DN200)	-10 to 100	16	2000-4150	1000	80	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT200US	MagCAT 200	8" ASA 150 Flange	8" (DN200) 10" (DN250)	-10 to 100	16	4000-6660	1000	132	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT250US	MagCAT 250	10" ASA 150 Flange	10" (DN250) 12" (DN300)	-10 to 100	16	6500-9960	1000	187	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT300US	MagCAT 300	12" ASA 150 Flange	12" (DN300) 14" (DN350)	-10 to 100	16	9500-11700	1000	297	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
MAT350US	MagCAT 350	14" ASA 150 Flange	14" (DN350) 16" (DN400)	-10 to 100	16	11500-13200	1000	375	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy

\*higher pressure units available upon request

