

A reflection of our ongoing commitment to innovation, the iMagCat launched in 2008 following years of research and development. The iMagCat is a two stage **commercial and industrial water** conditioning system **suitable for treating potable, processed, recycled or waste water**. It combines Fluid Dynamics' **magnetic and catalytic treatment** systems into a single housing, providing the most complete reaction available for calcium carbonate treatment.



## 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

- ✓ Minimum service of 15 years
- ✓ 10 year pro-rata warranty
- ✓ Water stays treated for over 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
- ✓ No metals leaching into the water

### Materials of construction

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

- ✓ 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

## 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

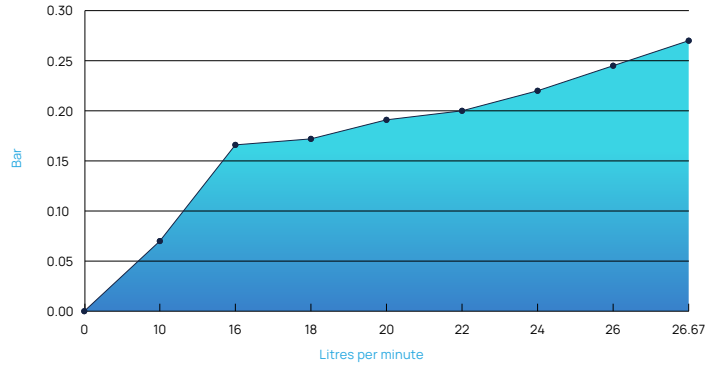
##### USA

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

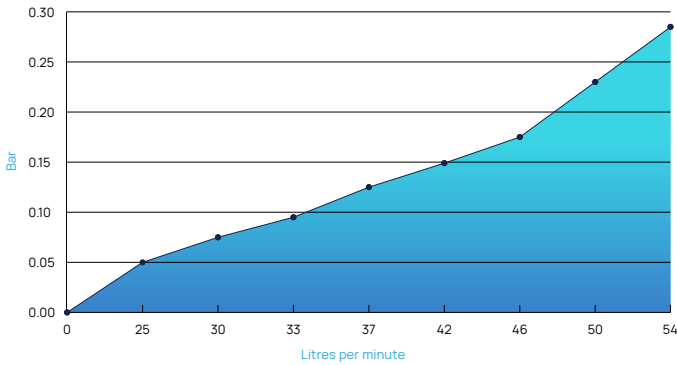
## PRESSURE LOSSES

- 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%

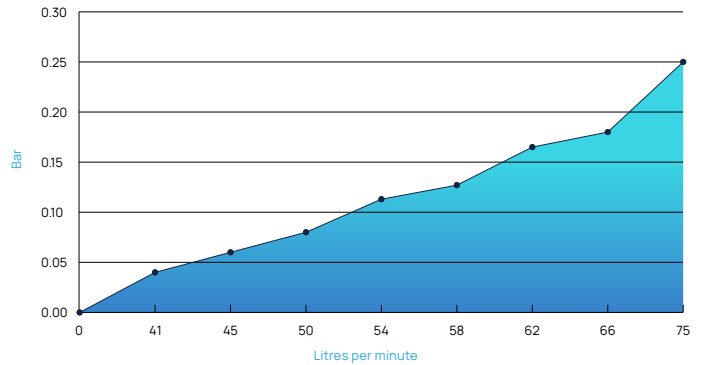
DN15 (½") PRESSURE DROP GRAPH



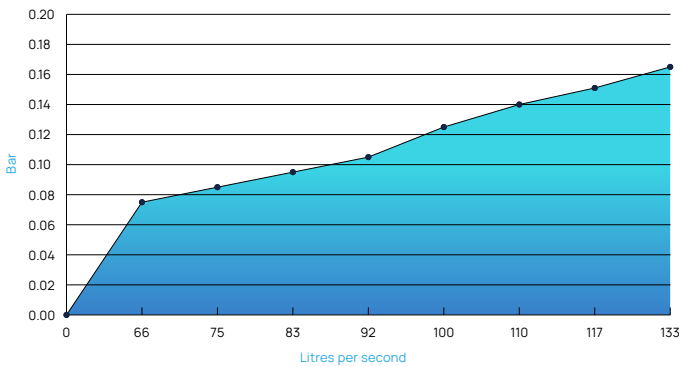
DN20 (¾") PRESSURE DROP GRAPH



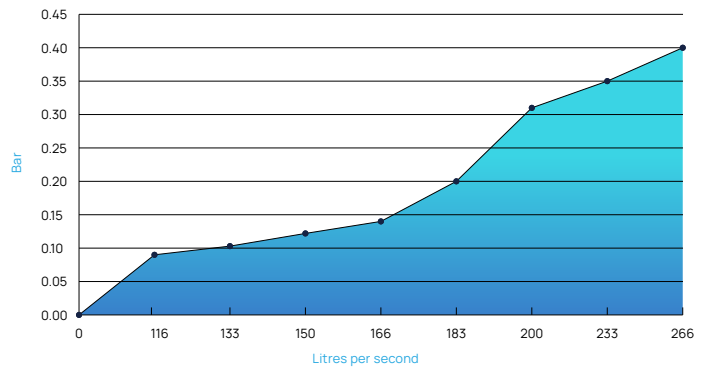
DN25 (1") PRESSURE DROP GRAPH



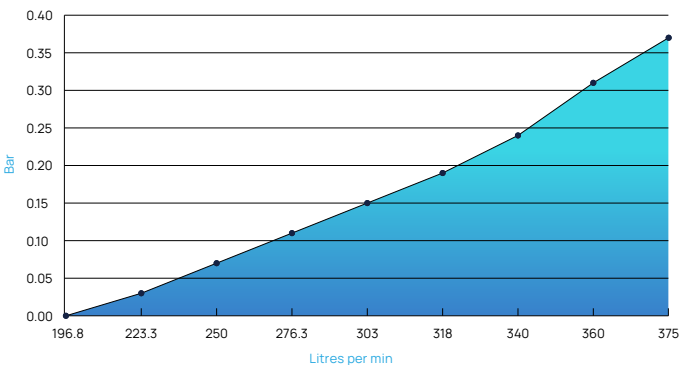
DN32 (1¼") PRESSURE DROP GRAPH



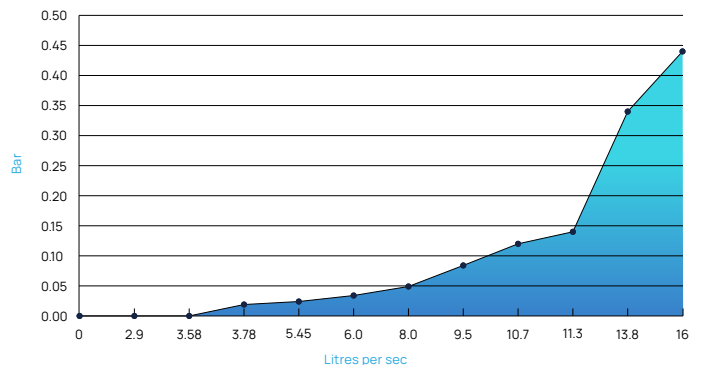
DN40 (1½") PRESSURE DROP GRAPH



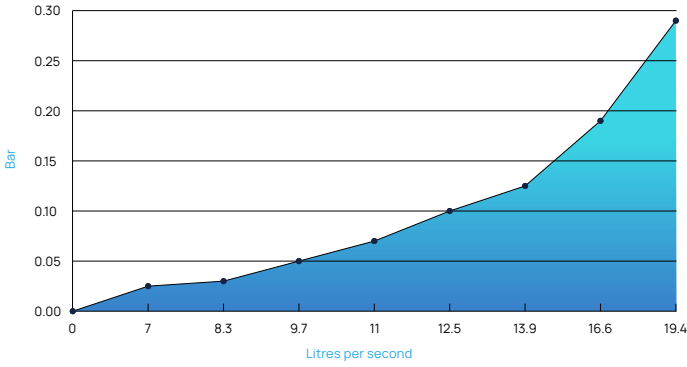
DN50 PRESSURE DROP GRAPH



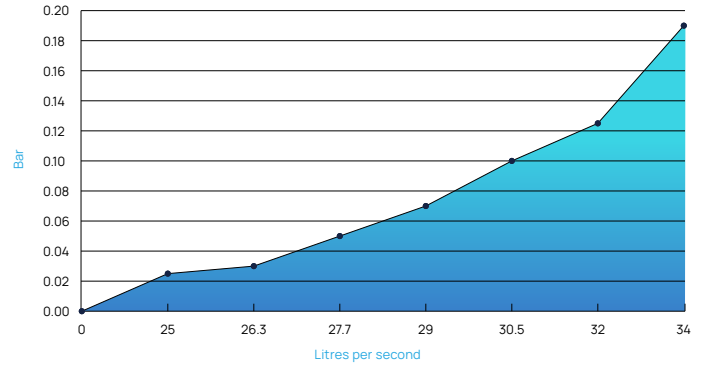
DN65 PRESSURE DROP GRAPH



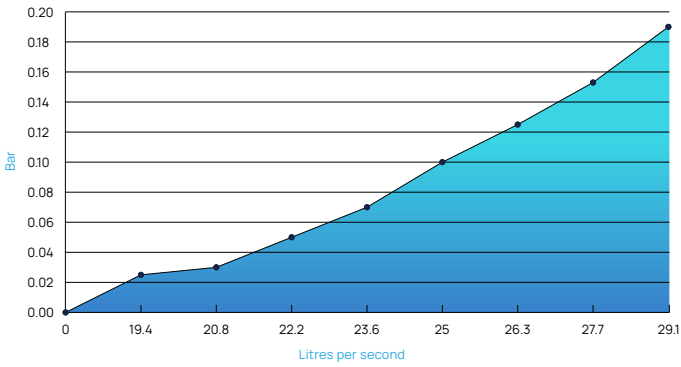
DN80 (3") PRESSURE DROP GRAPH



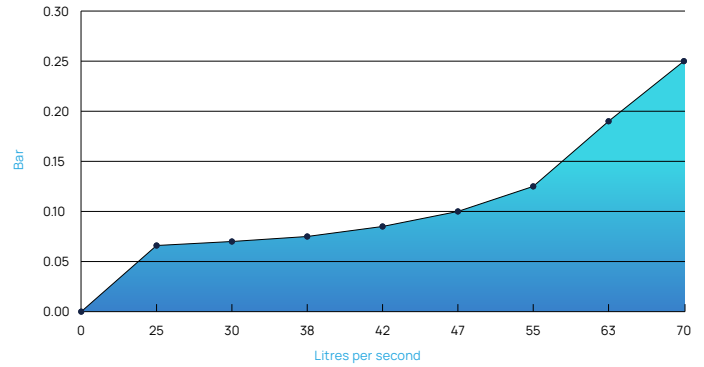
DN100 (4") PRESSURE DROP GRAPH



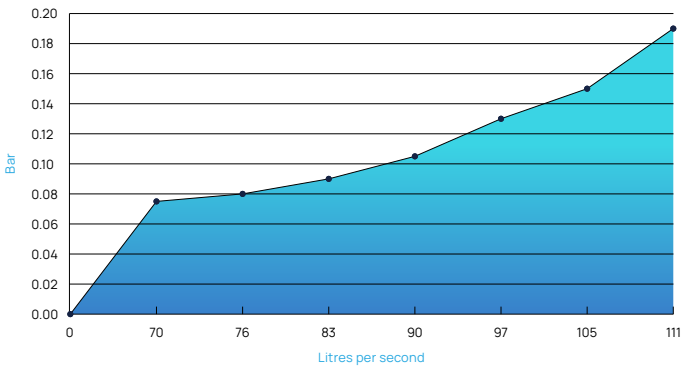
DN125 (5") PRESSURE DROP GRAPH



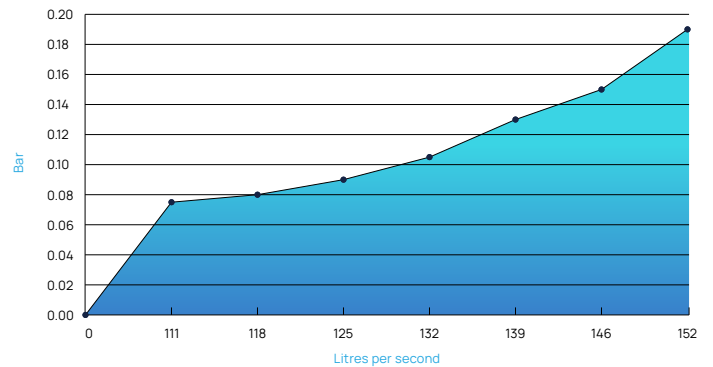
DN150 (6") PRESSURE DROP GRAPH



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
iMAT15BS	Industrial MagCAT 15	½" BSPT	½"(DN15) ¾"(DN20)	-10 to 100	16	3-25	450	2.5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT20BS	Industrial MagCAT 20	¾" BSPT	¾"(DN20) 1"(DN25)	-10 to 100	16	24-54	550	4.9	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT25BS	Industrial MagCAT 25	1" BSPT	1"(DN25) 1¼"(DN32)	-10 to 100	16	45-90	550	5.5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT32BS	Industrial MagCAT 32	1¼" BSPT	1¼"(DN32) 1½"(DN40)	-10 to 100	16	85-120	800	6.5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT40BS	Industrial MagCAT 40	1½" BSPT	1½"(DN40) 2"(DN50)	-10 to 100	16	110-210	800	8.0	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT50BS	Industrial MagCAT 50	2" BSPT	2"(DN50) 2½"(DN65)	-10 to 100	16	170-330	800	10	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT65PN	Industrial MagCAT 65	2½" PN16 Flange	2½"(DN65) 3"(DN80)	-10 to 100	16	310-675	1000	18	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT80PN	Industrial MagCAT 80	3" PN16 Flange	3"(DN80) 4"(DN100)	-10 to 100	16	600-1175	1000	30	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT100PN	Industrial MagCAT 100	4" PN16 Flange	4"(DN100) 5"(DN125)	-10 to 100	16	950-1750	1000	46	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT125PN	Industrial 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
iMAT150PN	Industrial 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
iMAT200PN	Industrial 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
iMAT250PN	Industrial 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
iMAT300PN	Industrial 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
iMAT350PN	Industrial 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
iMAT15US	Industrial MagCAT 15	½" NPT	½" (DN15) ¾" (DN20)	-10 to 100	16	3-25	400	2.5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT20US	Industrial MagCAT 20	¾" NPT	¾" (DN20) 1" (DN25)	-10 to 100	16	24-54	400	4.9	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT25US	Industrial MagCAT 25	1" NPT	1" (DN25) 1 ¼" (DN32)	-10 to 100	16	45-90	400	2.5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT32US	Industrial MagCAT 32	1 ¼" NPT	1 ¼" (DN32) 1 ½" (DN40)	-10 to 100	16	85-120	800	5	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT40US	Industrial MagCAT 40	1 ½" NPT	1 ½" (DN40) 2" (DN50)	-10 to 100	16	110-210	800	6	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT50US	Industrial MagCAT 50	2" NPT	2" (DN50) 2 ½" (DN65)	-10 to 100	16	170-330	800	9	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT65US	Industrial MagCAT 65	2 ½" ASA 150 Flange	2 ½" (DN65) 3" (DN80)	-10 to 100	16	310-675	1000	11	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT80US	Industrial MagCAT 80	3" ASA 150 Flange	3" (DN80) 4" (DN100)	-10 to 100	16	600-1175	1000	30	<b>External:</b> stainless steel housing & connections. <b>Internal:</b> FD catalytic galvanic alloy
iMAT100US	Industrial MagCAT 100	4" ASA 150 Flange	4" (DN100) 5" (DN125)	-10 to 100	16	950-1750	1000	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
iMAT125US	Industrial 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
iMAT150US	Industrial 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
iMAT200US	Industrial 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
iMAT250US	Industrial 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
iMAT300US	Industrial 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
iMAT350US	Industrial 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

