

MAGNA3
More than a pump

A full range of intelligent, high-efficiency circulators for heating, cooling, ground source heat pump systems and domestic hot water applications.

be
think
innovate

GRUNDFOS


GRUNDFOS
GRUNDFOS

More than a pump

MAGNA3 is a range of medium and large circulator pumps complete with electronically controlled motors based on permanent magnet (PM) and compact stator technology.

The MAGNA3 range is designed for circulating liquids in:

- Heating systems
- Air conditioning and cooling systems
- Domestic water systems
- Ground-source heat pump systems
- Solar heating systems.

With the MAGNA3 choosing the best setting is simple – simply install the pump and leave it on the factory AUTO*ADAPT* setting. The pump will then analyse the heating system demands and find the optimum setting. It will then continuously adjust its operation to deal with changing system demands.

The new pump also encompasses some new and unique features:

FLOW*LIMIT*: the MAGNA3 features a facility to limit maximum flow. There is no need therefore to use a balancing valve on the main flow and return pipe.

FLOW*ADAPT*: this combines the benefits of both the FLOW*LIMIT* and AUTO*ADAPT* functions together.

Heat energy meter: the MAGNA3 features a built-in heat energy meter. By fitting a separate temperature sensor in the return pipe the energy consumption in the system can be monitored and logged in the MAGNA3. This allows users to monitor their energy consumption in order to avoid excessive energy bills caused by poor system balance and potential problems with system controls.

In addition the MAGNA3 is the most efficient circulator available to the market today. With an Energy Efficiency Index (EEI) that already complies with the EuP 2015 requirements and can achieve savings of up to 75% compared to a typical installed circulator.

Full range – perfect fit

With a wide range of different single and twin head options covering even more duties, specifying for HVAC applications has never been easier. The extended range offers a maximum head of 18m and maximum flow of 70m3/h (140 m3/h for twin head models), and a 6 to 16 bar system pressure.

These pumps are designed to handle liquids down to -10°C which makes them suitable for both tough industrial tasks and ground source heat systems. As the liquid temperature (-10°C to +110°C) is now independent of the ambient temperature (0°C to +40°C) ensuring the MAGNA3 will be a perfect fit regardless if your project requires heating or cooling.

Features:

- AUTO*ADAPT*
- FLOW*ADAPT* and FLOW*LIMIT*
- Proportional pressure control
- Constant pressure control
- Constant temperature control
- Constant curve duty
- Max. or min. curve duty
- Automatic Night Setback
- No external motor protection
- Insulating heads supplied with single head pumps for heating systems
- Motor clamp

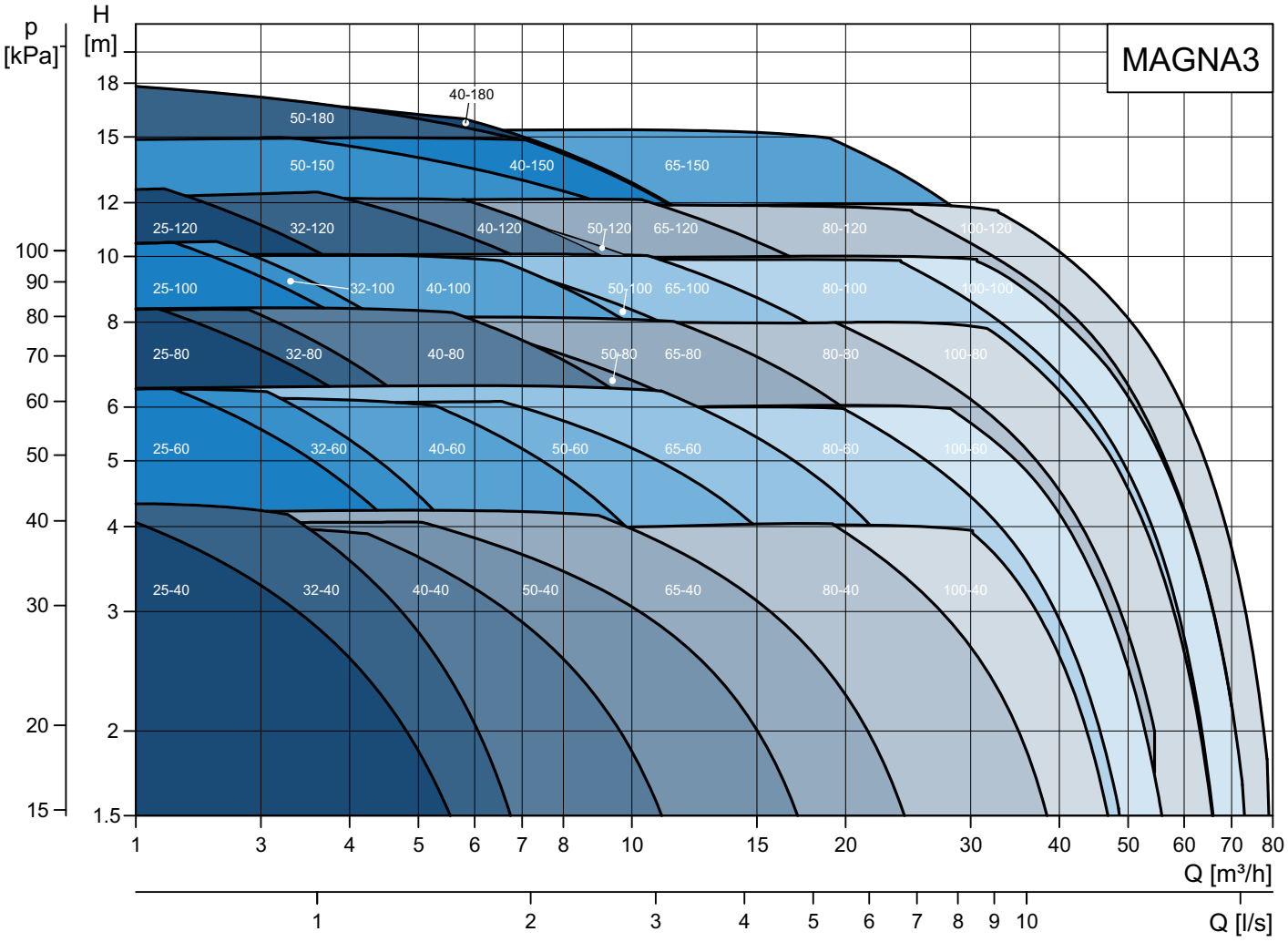
Benefits:

- Low energy consumption
- Built-in differential pressure and temperature sensor
- Simple installation
- Minimal maintenance and long life
- User interface and TFT display
- Self-explanatory, push-button control panel
- Work log history
- Easy system optimisation
- Heat energy meter function
- Multi pump function
- External control and monitoring enabled via add-on modules
- Range is available for system pressures of 6, 10 and 16 bar

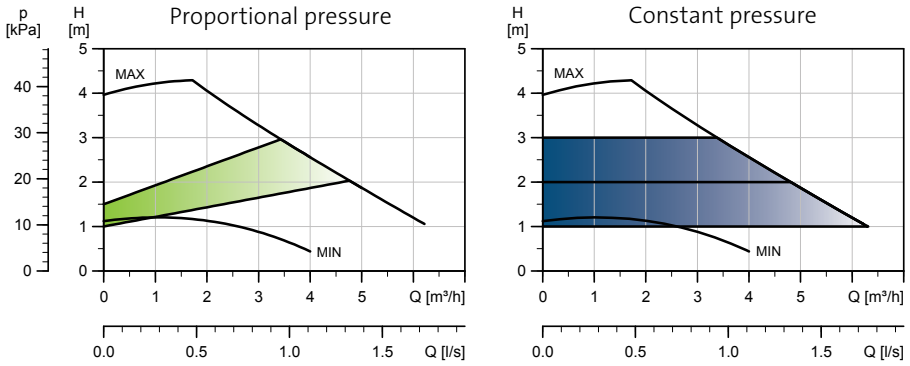
Type Key

Code	Example	MAGNA3	(D)	80	-120	(F)	(N)	280
	Type range MAGNA3							
D	Single-head pump Twin-head pump							
	Nominal diameter (DN) of suction and discharge ports [mm]							
	Maximum head [dm]							
F	**Pipe connection** Flange							
N	**Pump housing material** Cast iron Stainless steel							
	Port-to-port length [mm]							

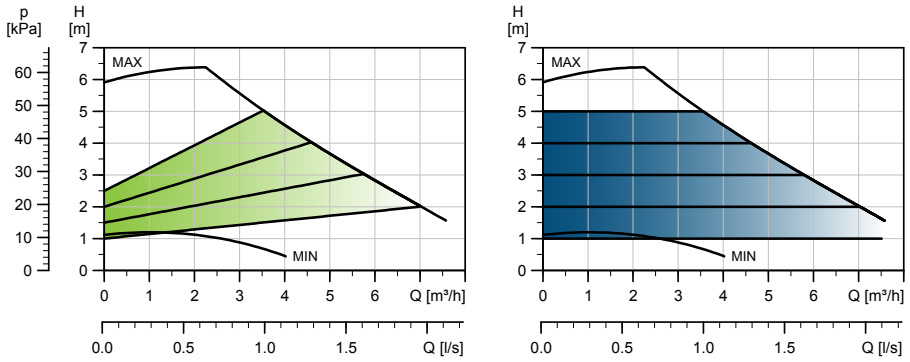
Performance range MAGNA3



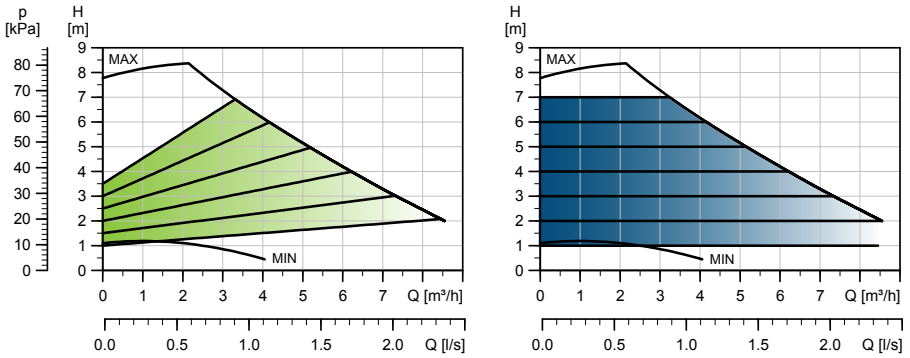
MAGNA3 25-40 (N)



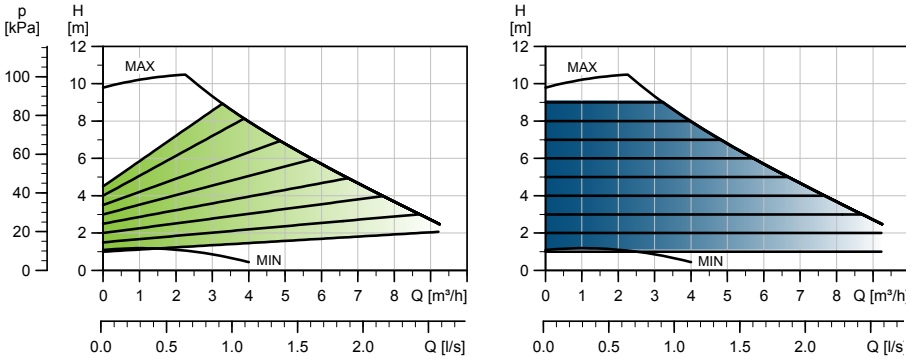
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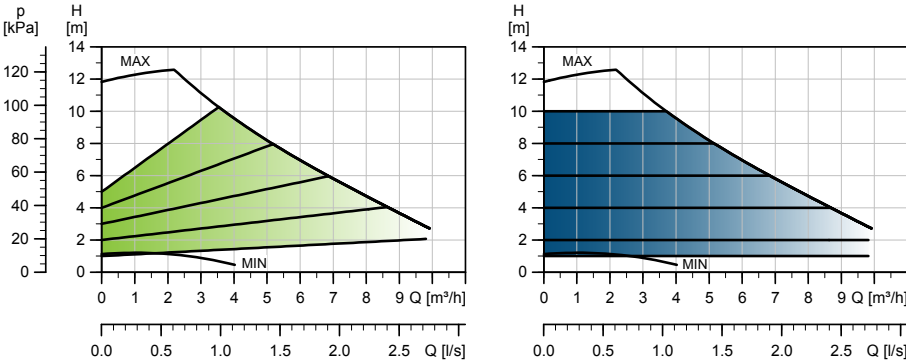
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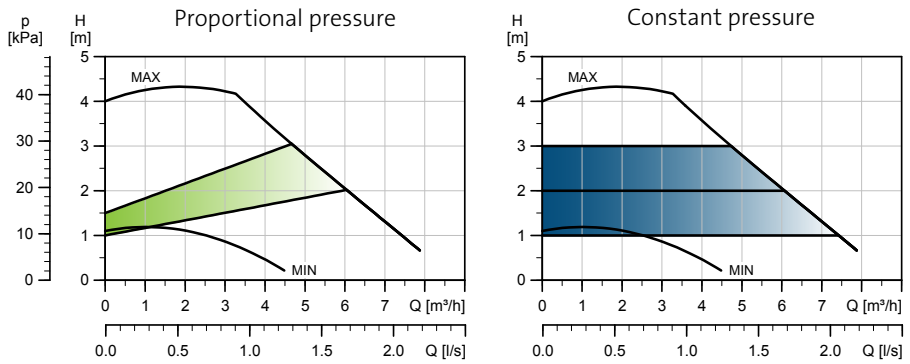
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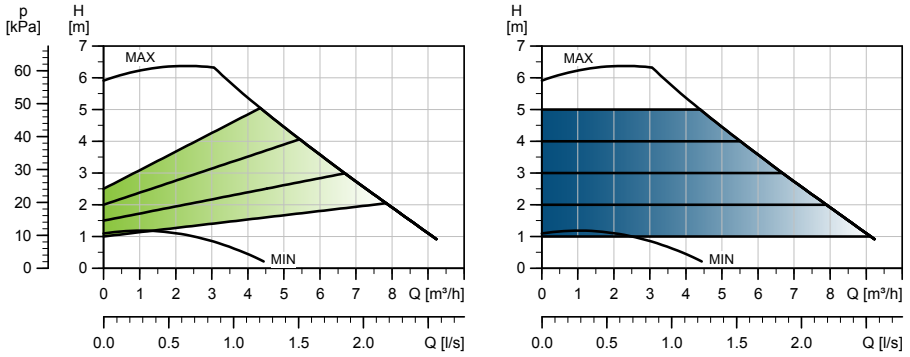
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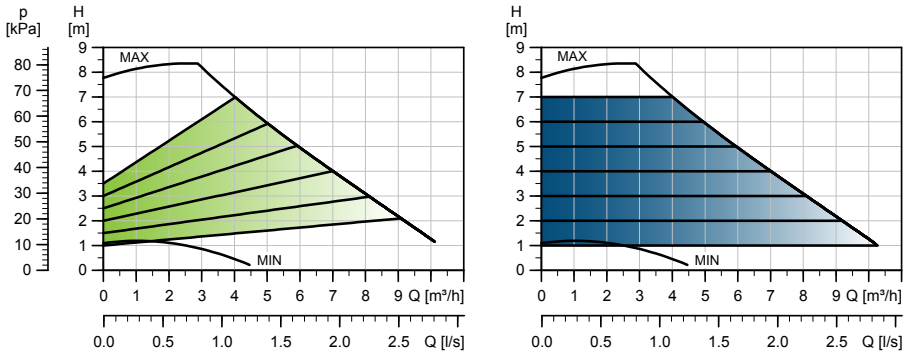
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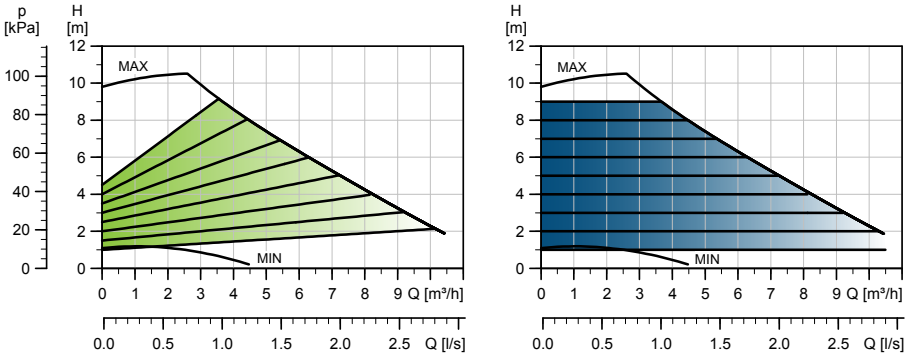
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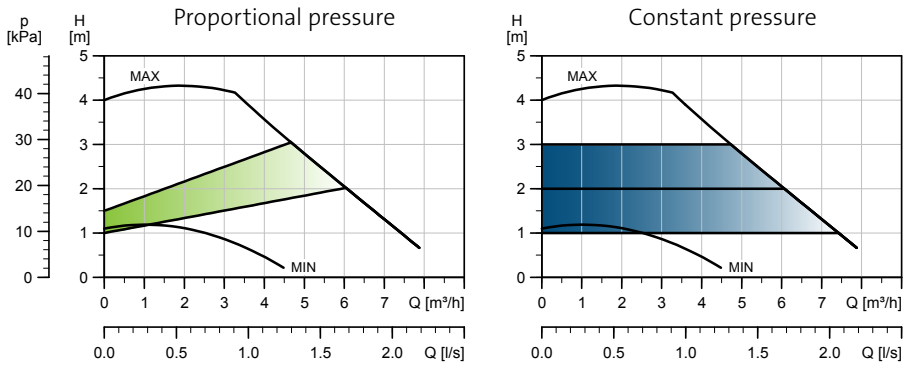
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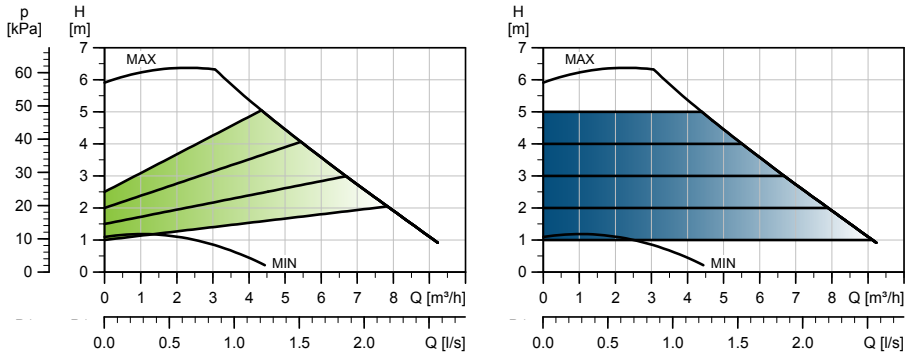
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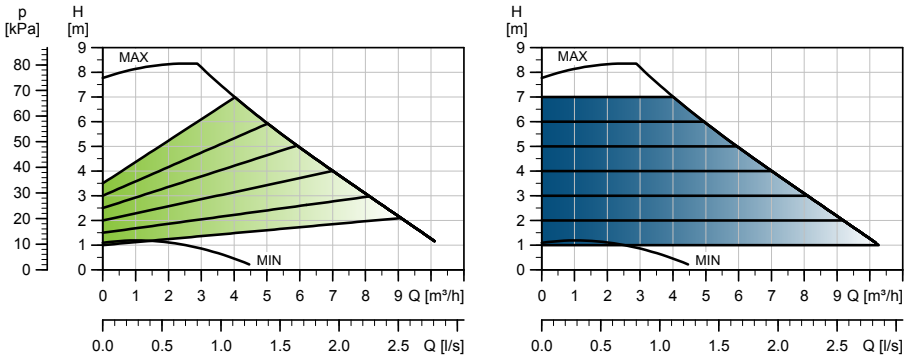
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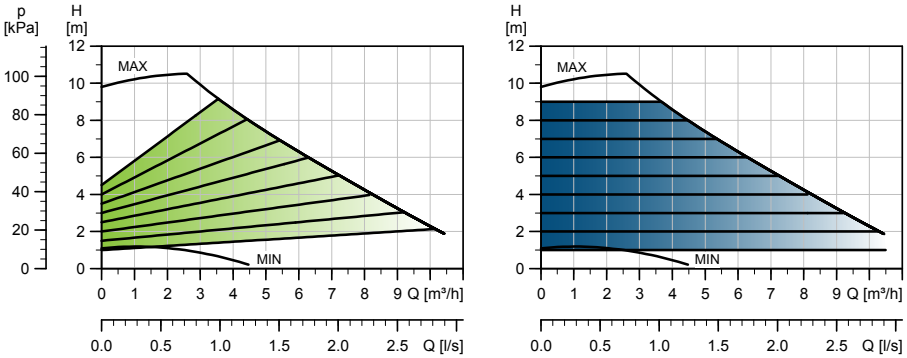
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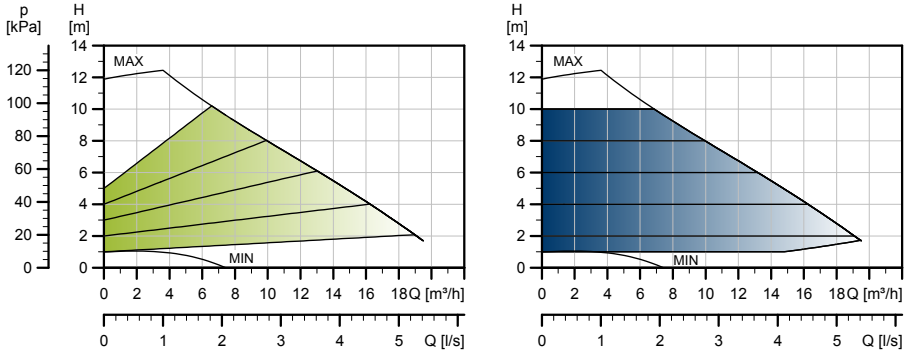
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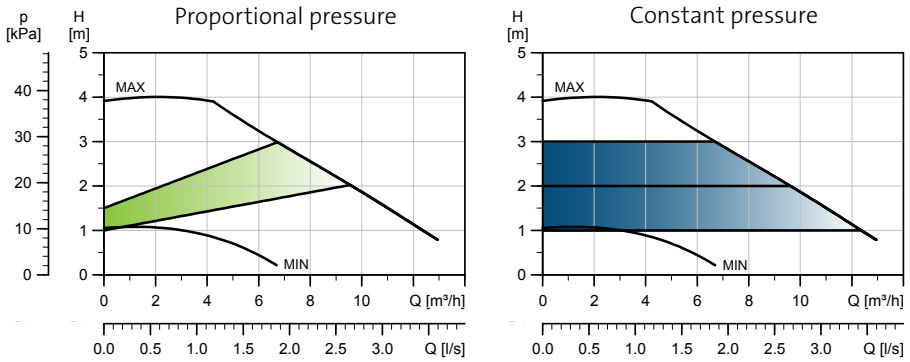
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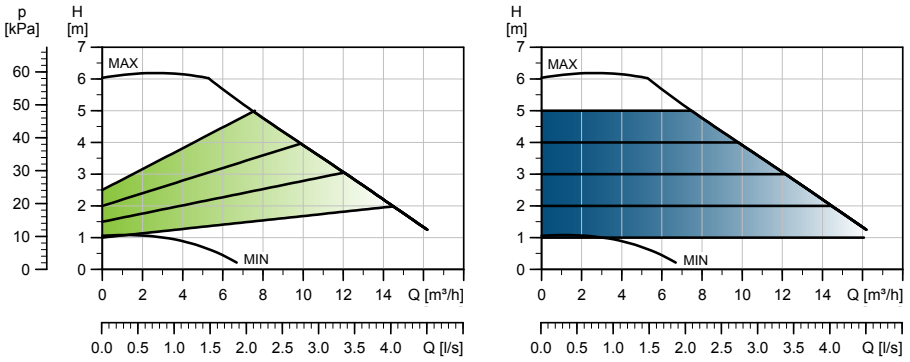
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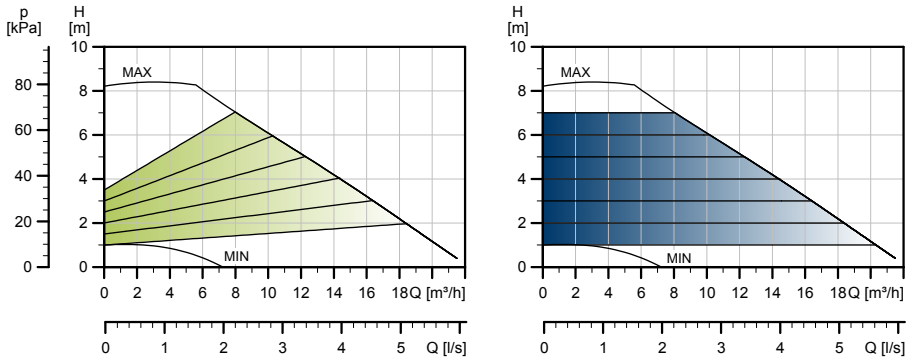
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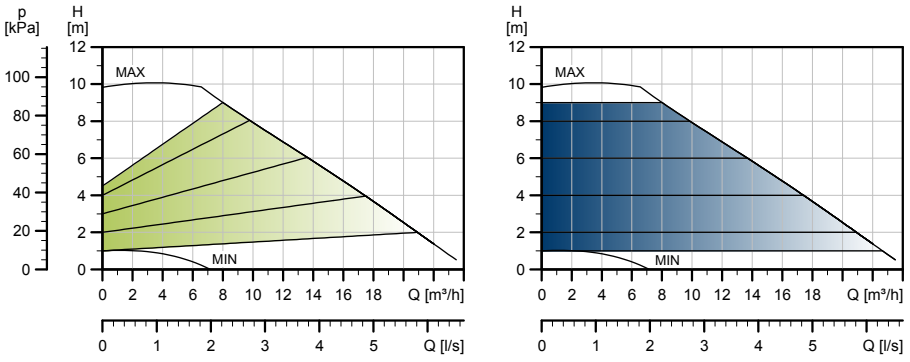
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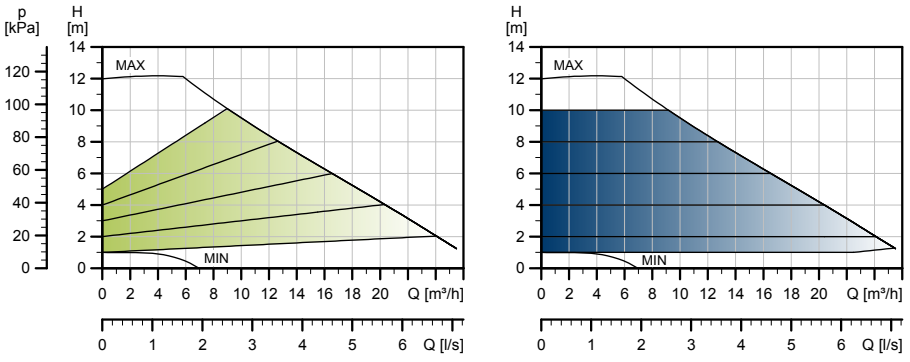
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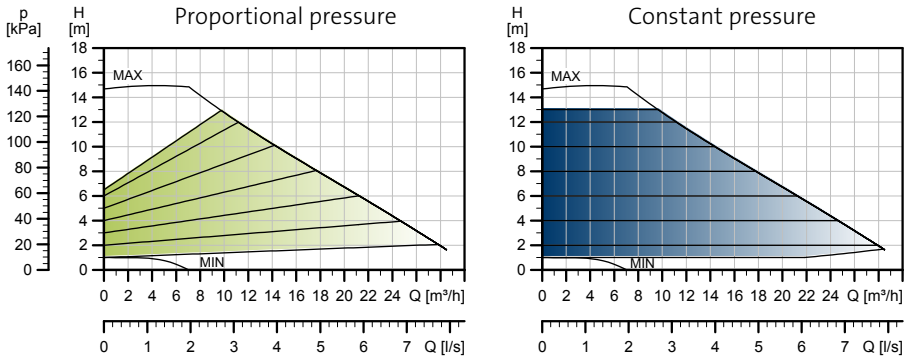
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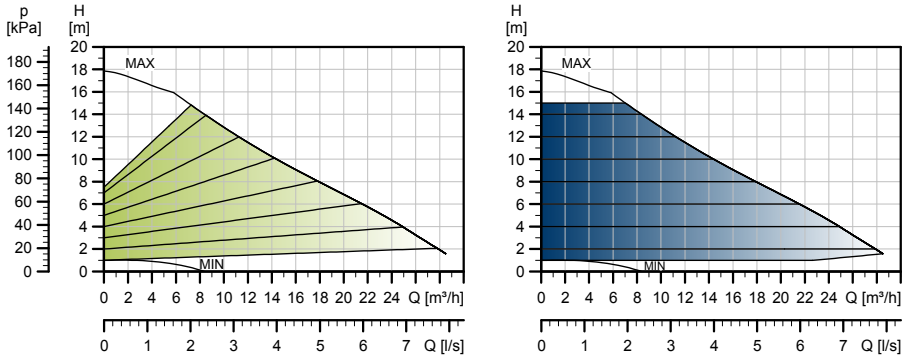
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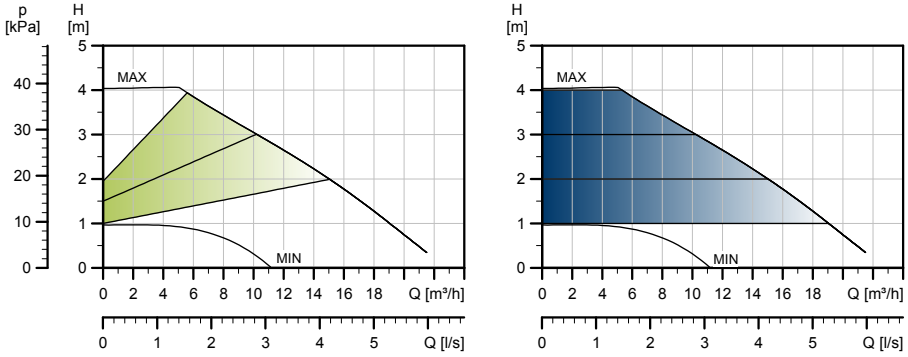
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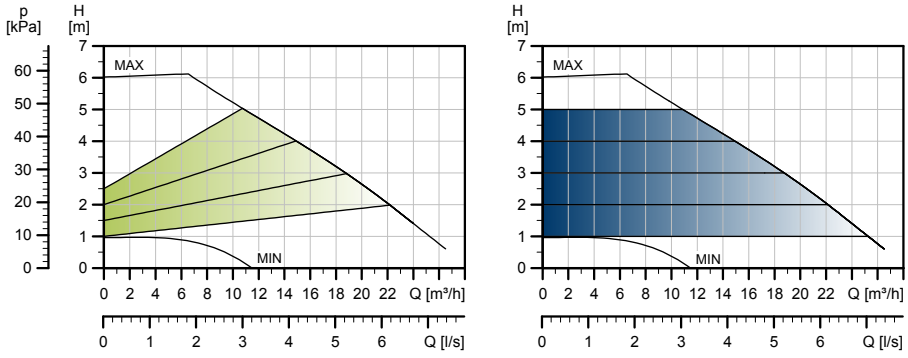
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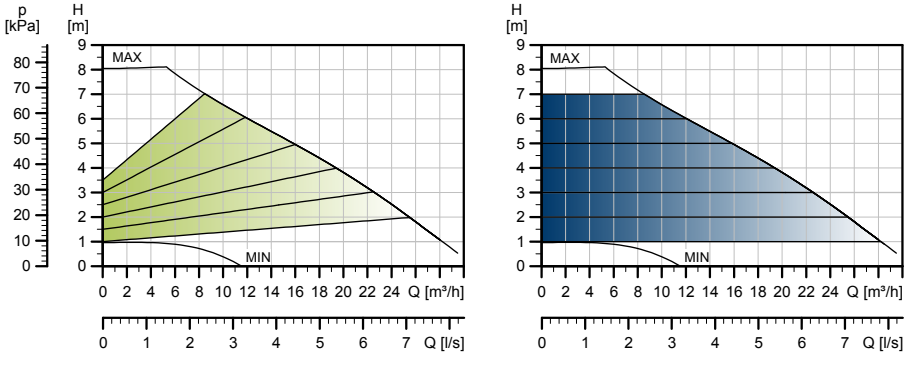
MAGNA3 50-40 F (N)



MAGNA3 50-60 F (N)



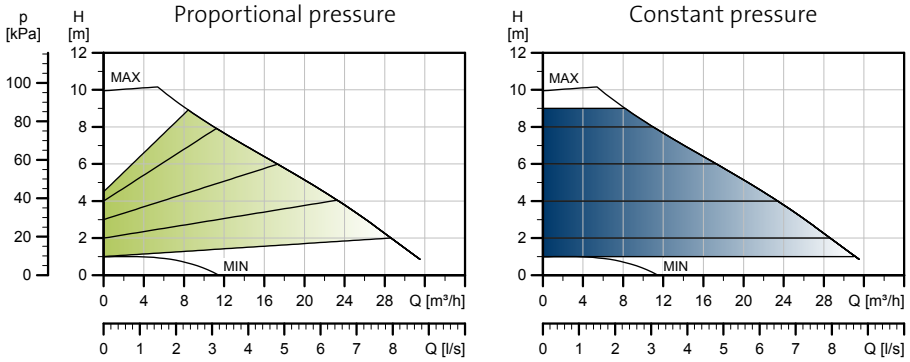
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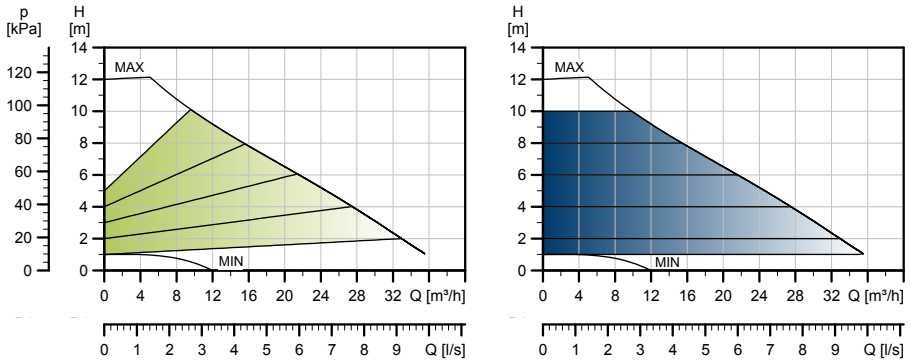
Proportional pressure

Constant pressure

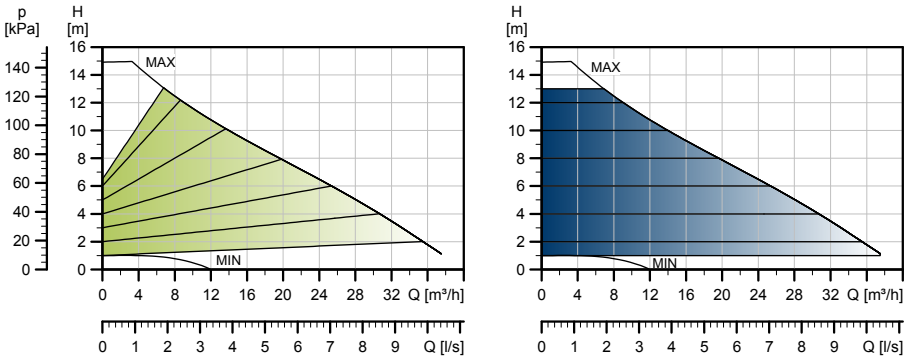
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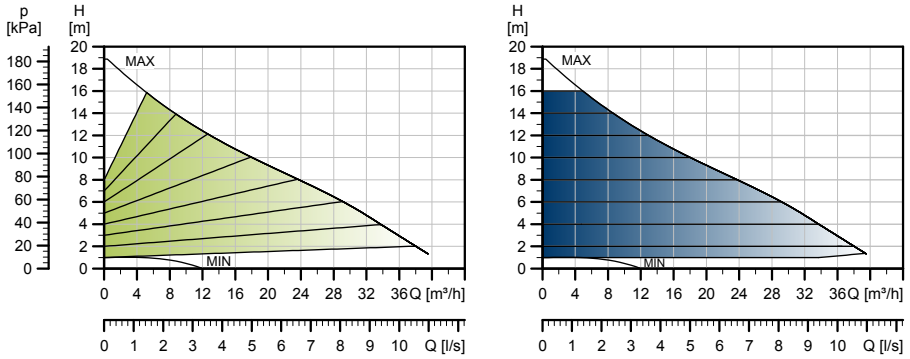
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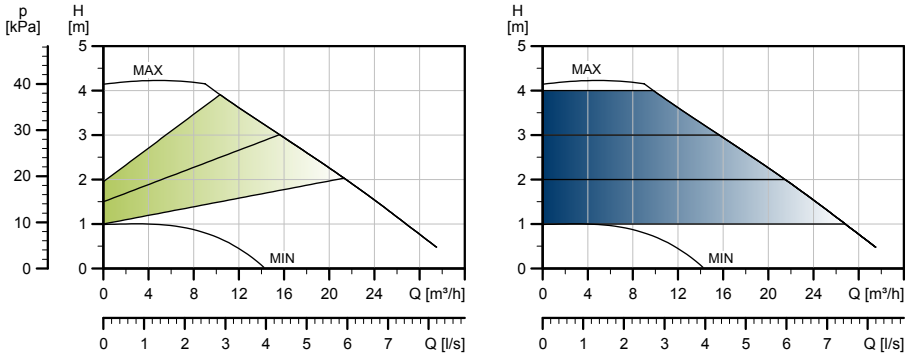
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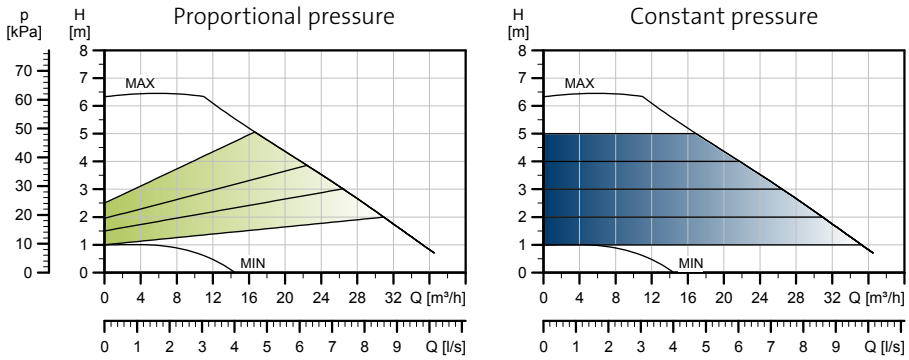
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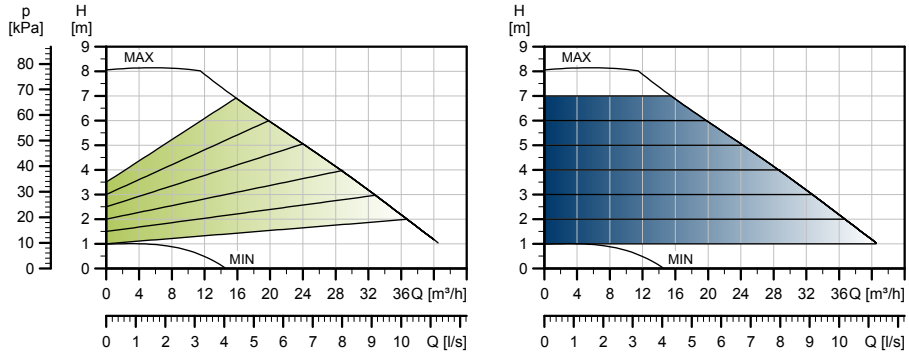
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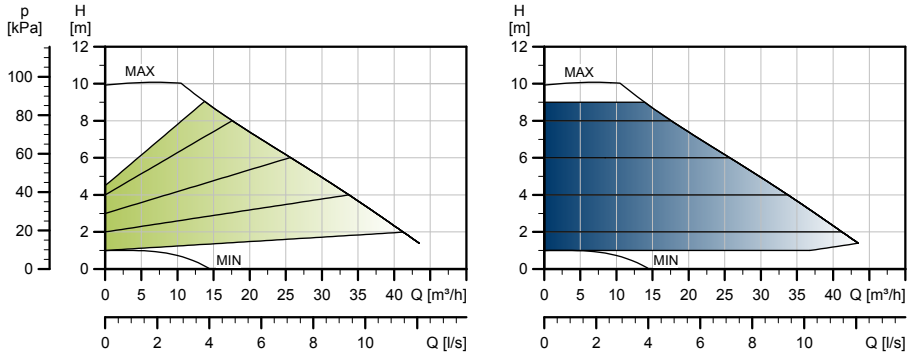
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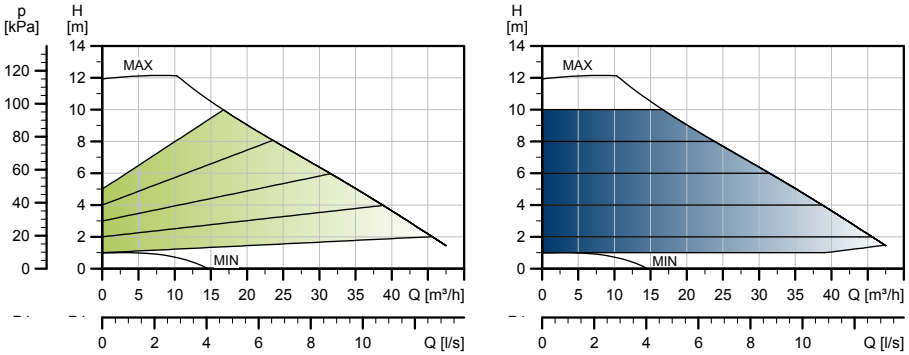
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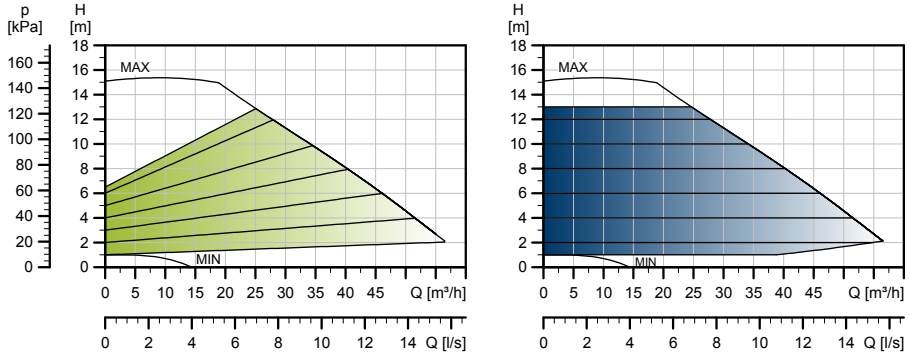
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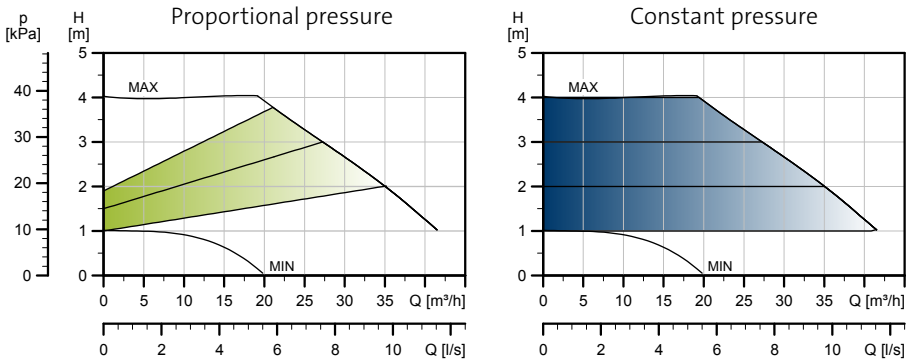
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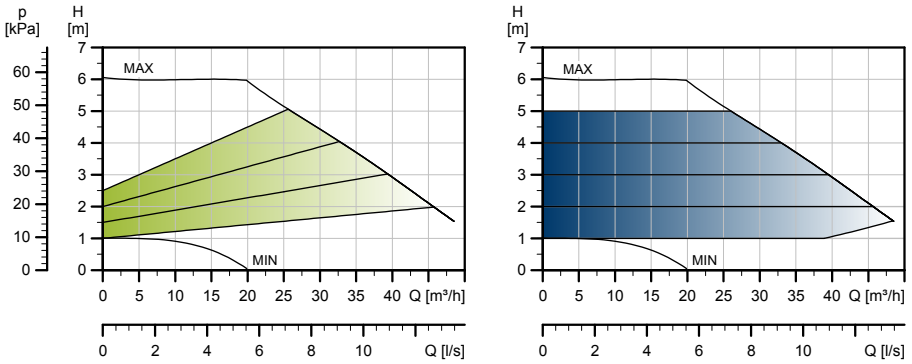
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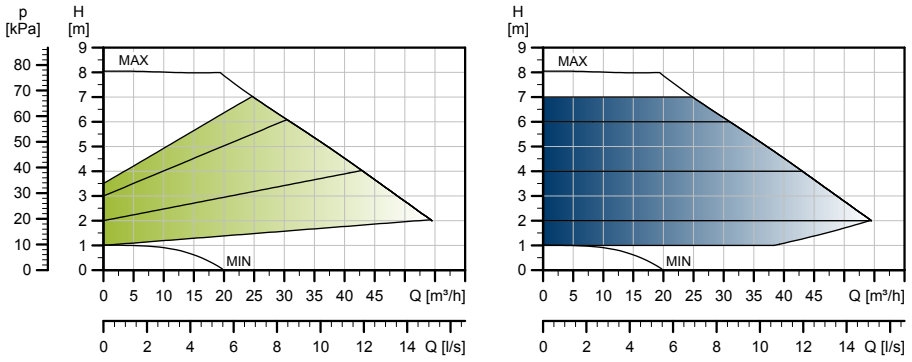
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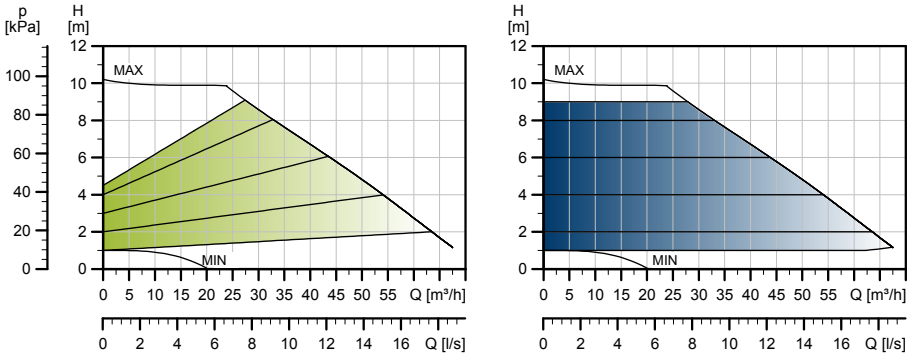
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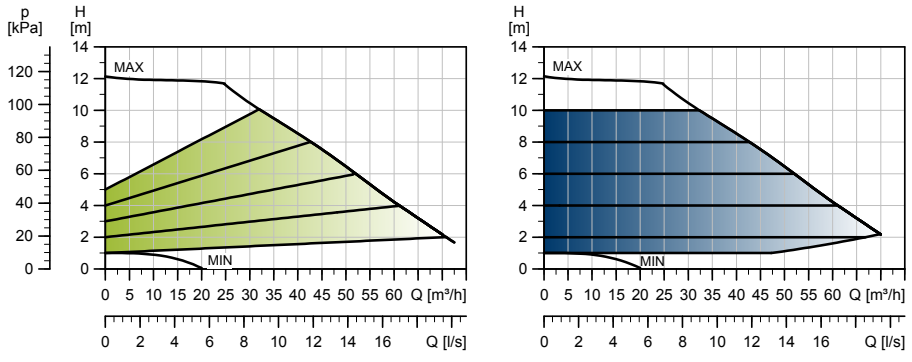
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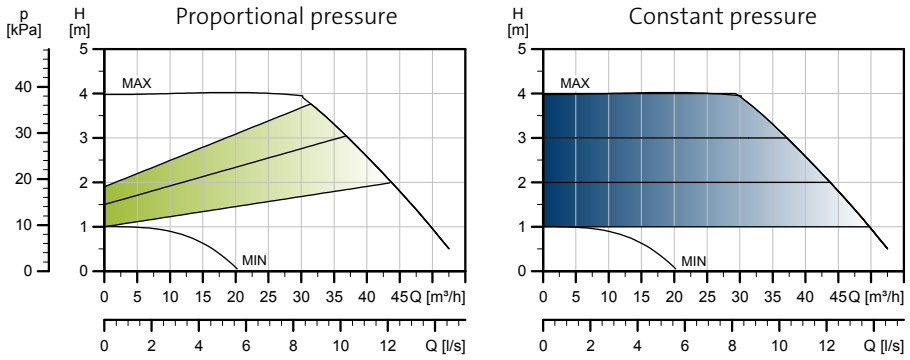
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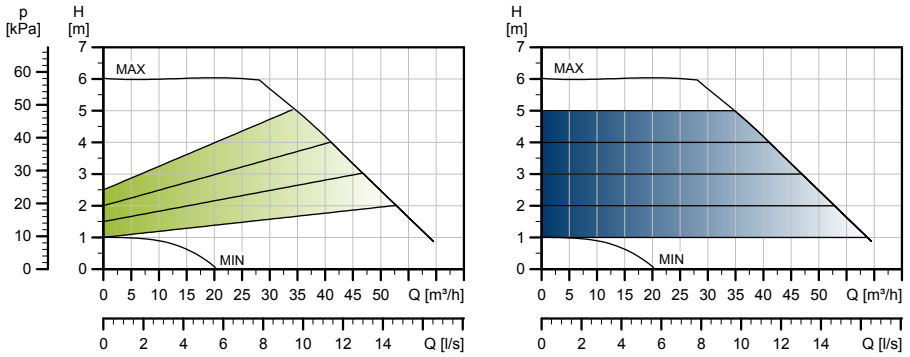
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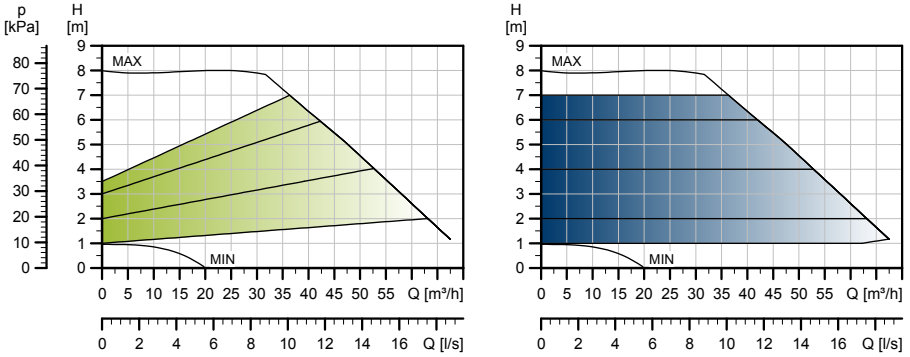
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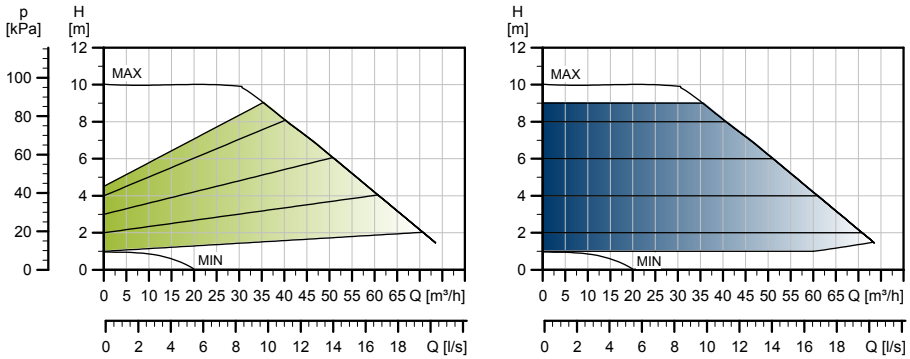
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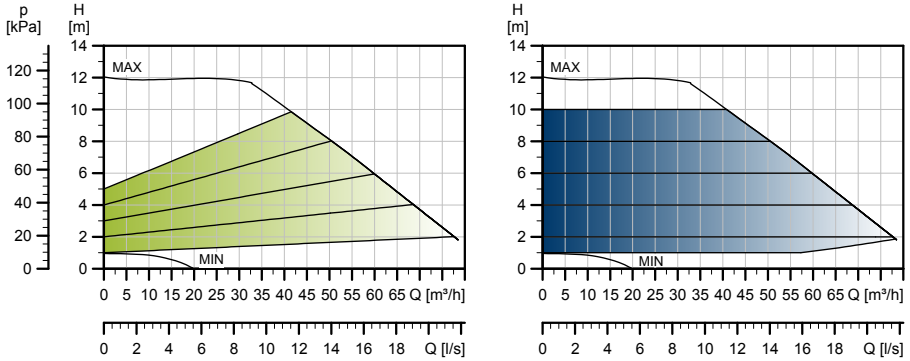
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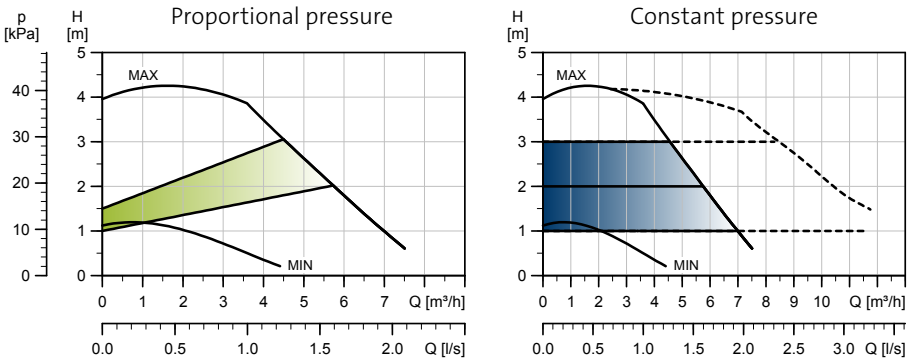
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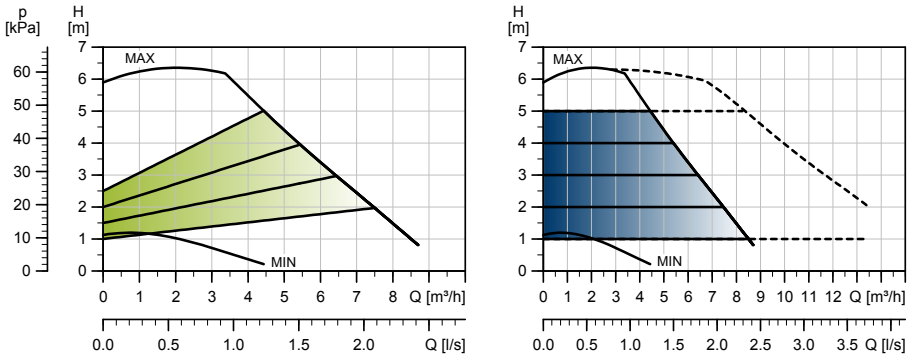
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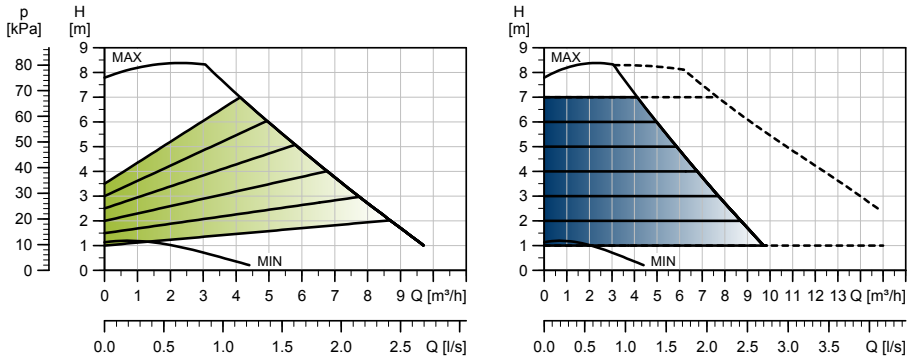
MAGNA3 D 32-40



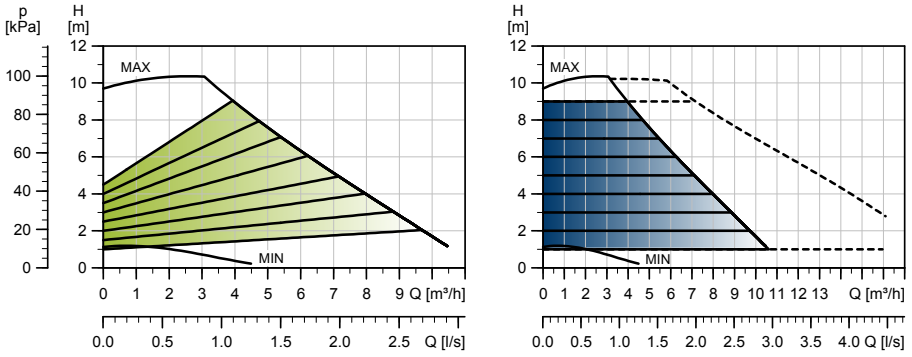
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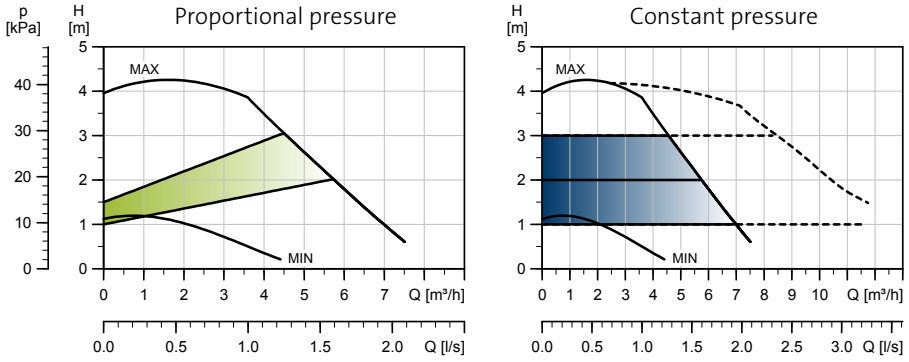
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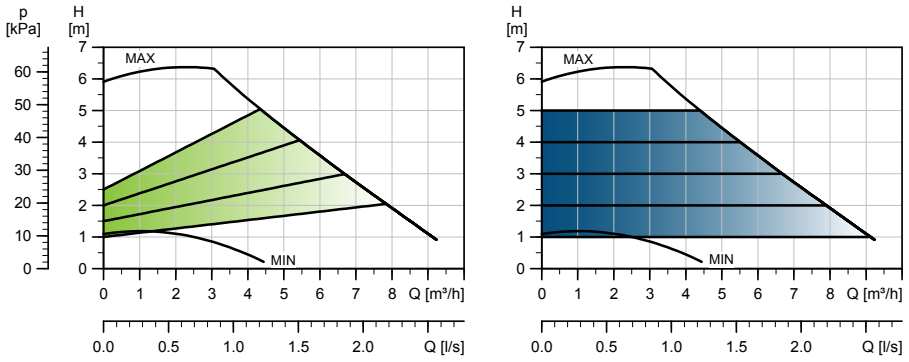
MAGNA3 D 32-100



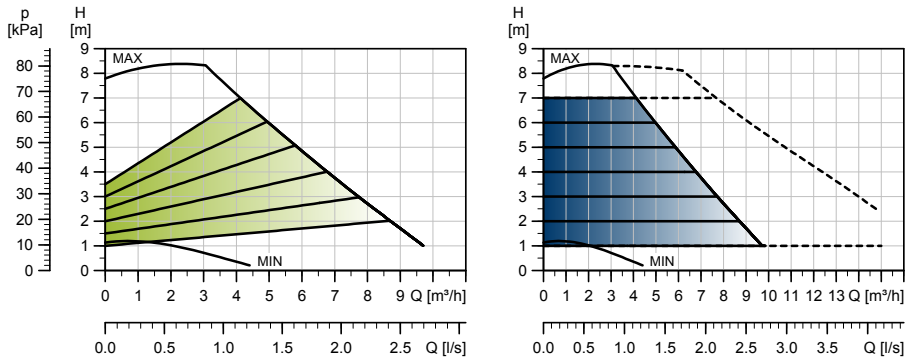
MAGNA3 D 32-40 F



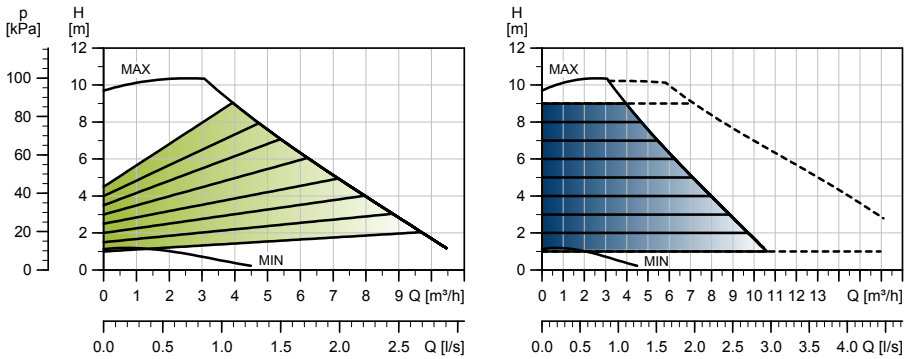
MAGNA3 D 32-60 F



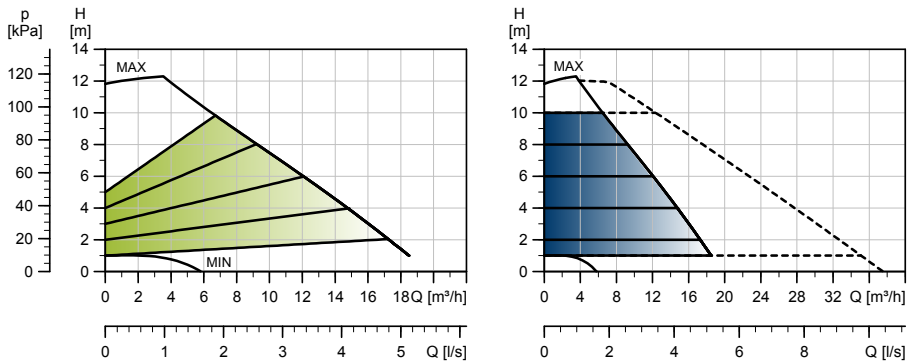
MAGNA3 D 32-80 F



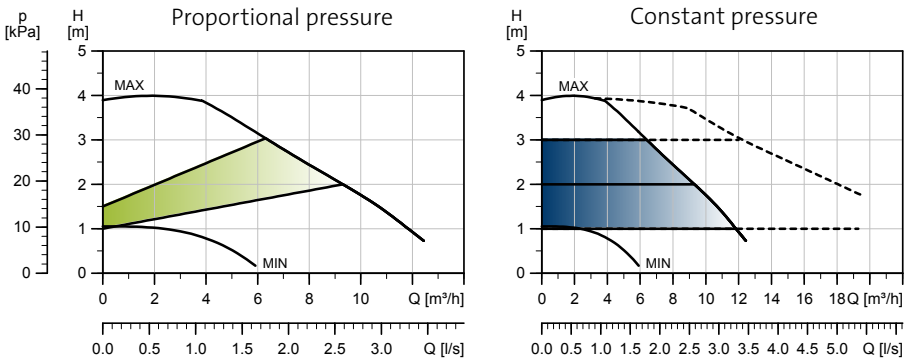
MAGNA3 D 32-100 F



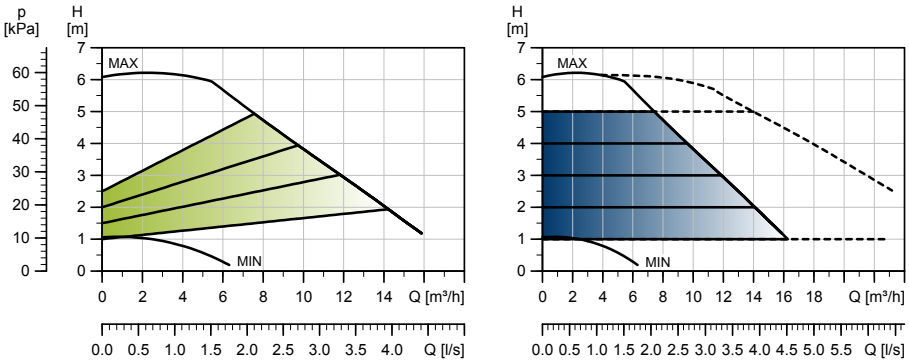
MAGNA3 D 32-120 F



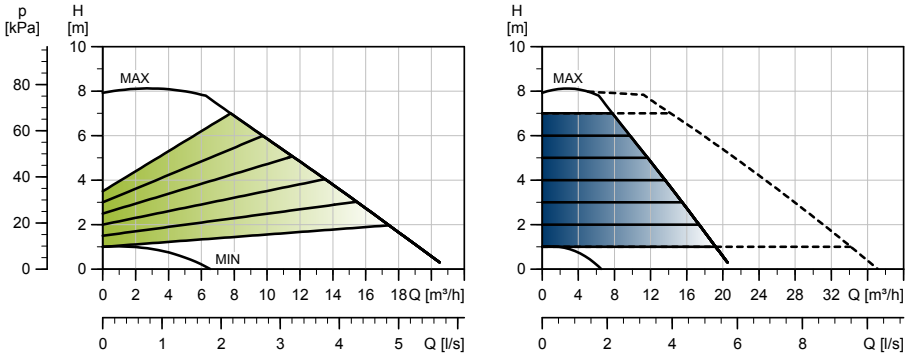
MAGNA3 D 40-40 F



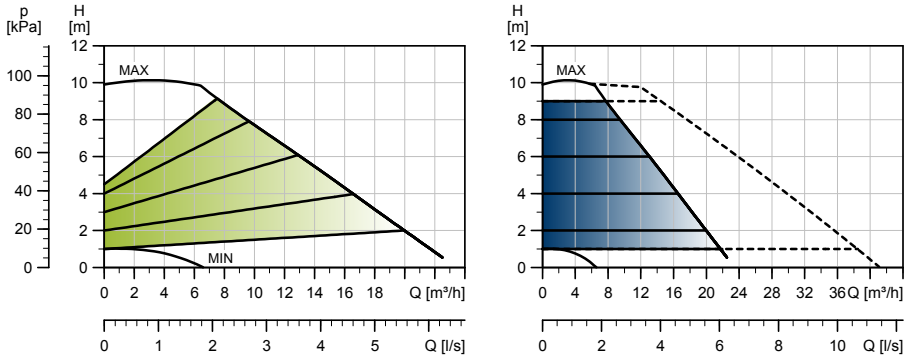
MAGNA3 D 40-60 F



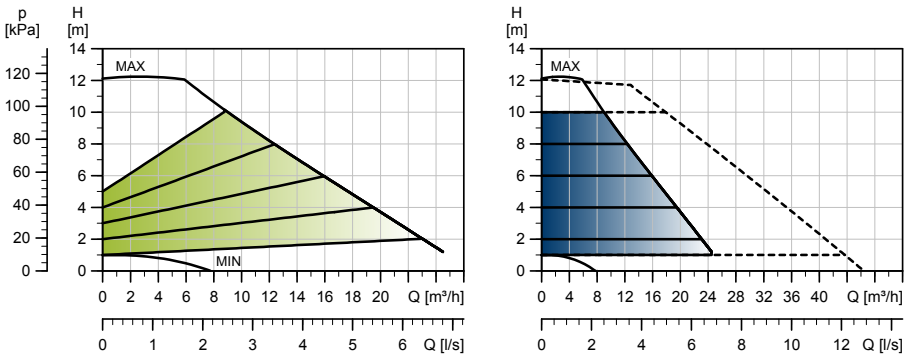
MAGNA3 D 40-80 F



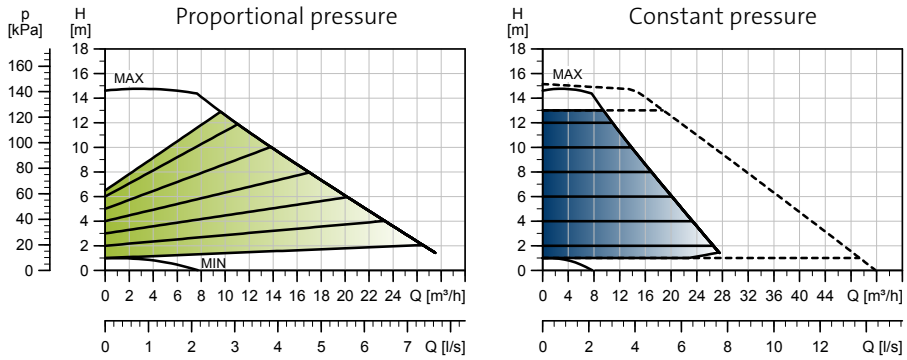
MAGNA3 D 40-100 F



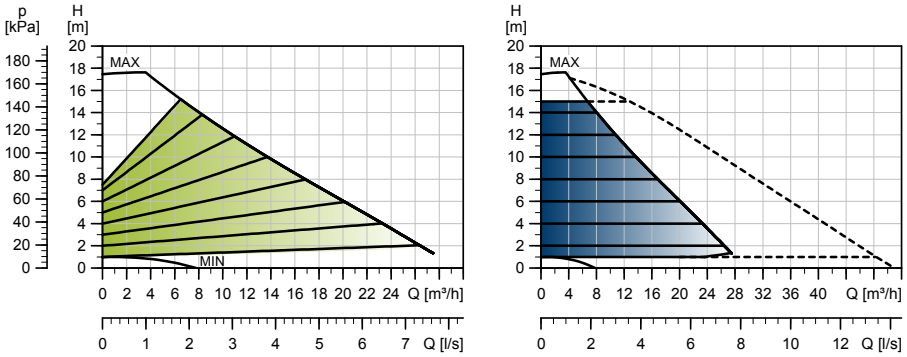
MAGNA3 D 40-120 F



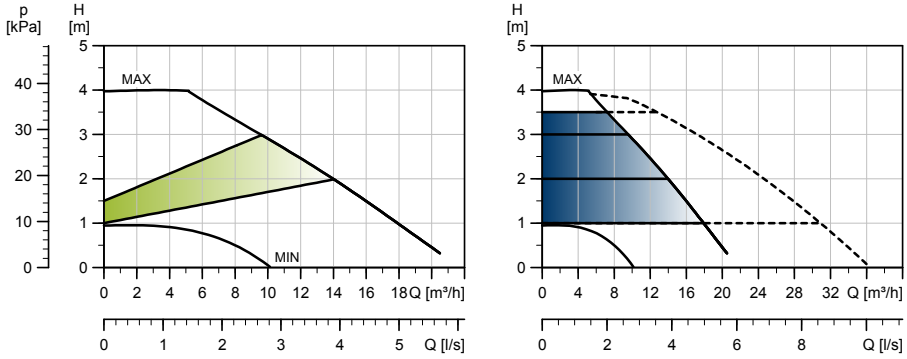
MAGNA3 D 40-150 F



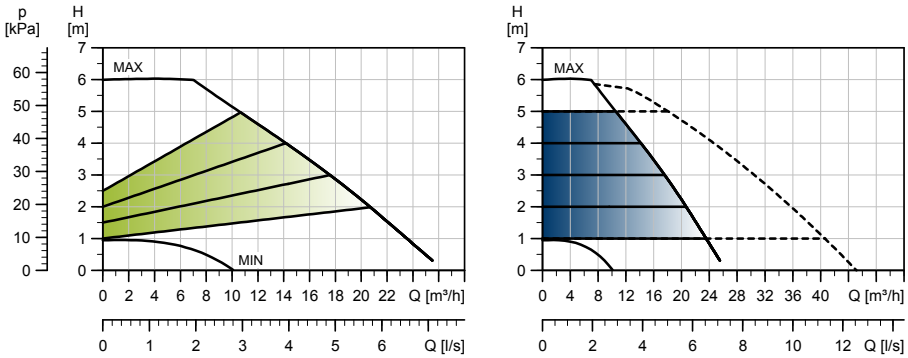
MAGNA3 D 40-180 F



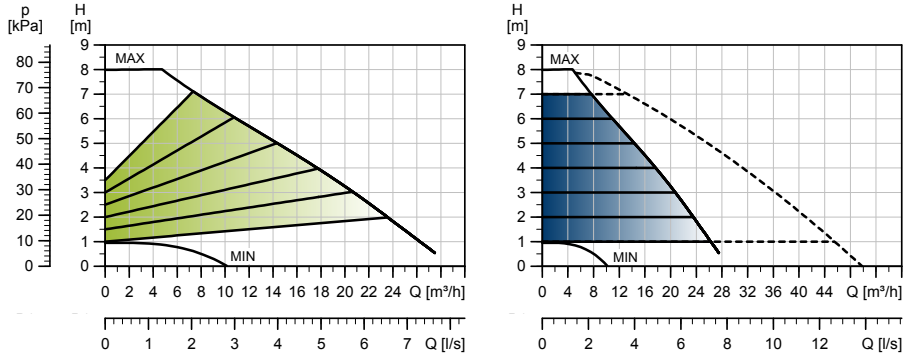
MAGNA3 D 50-40 F



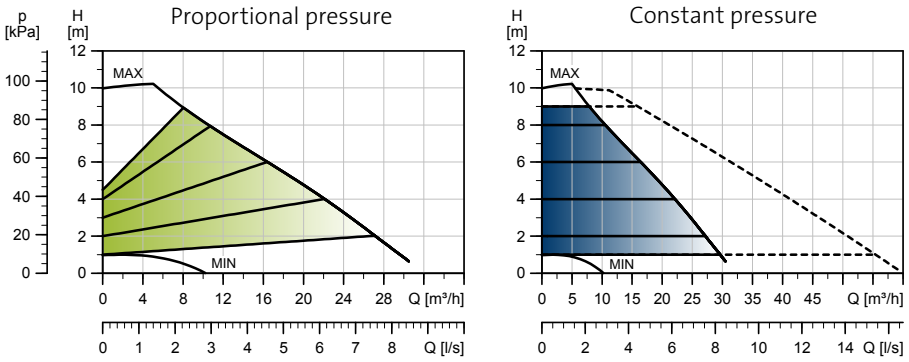
MAGNA3 D 50-60 F



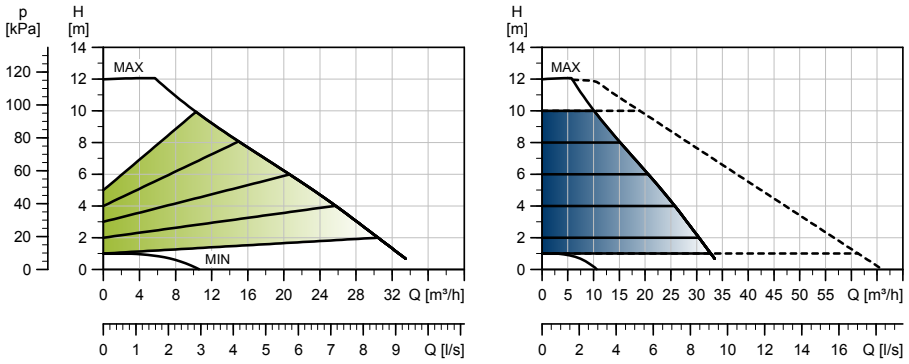
MAGNA3 D 50-80 F



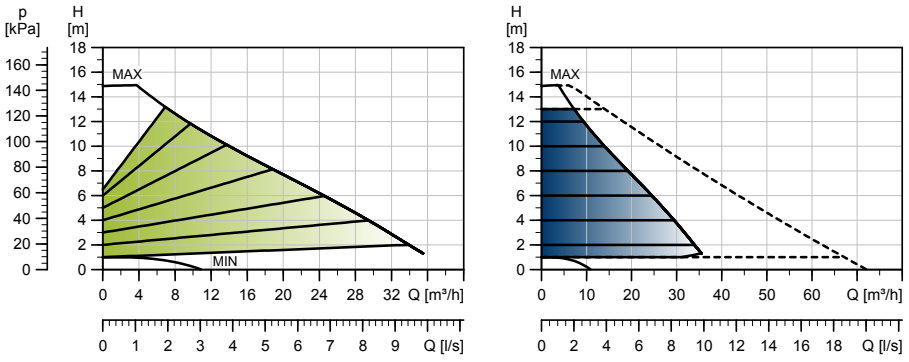
MAGNA3 D 50-100 F



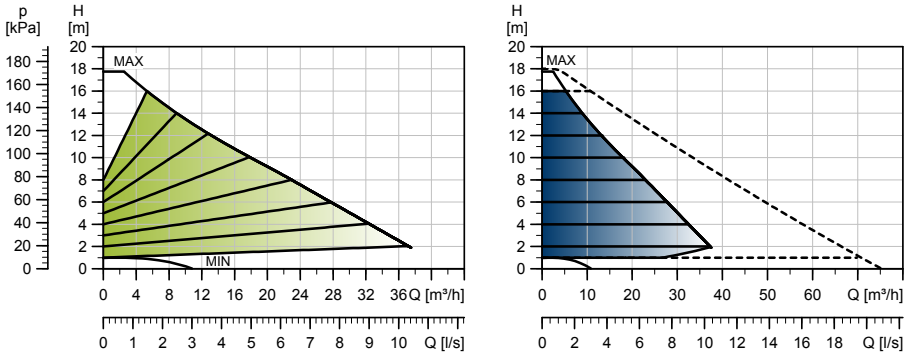
MAGNA3 D 50-120 F



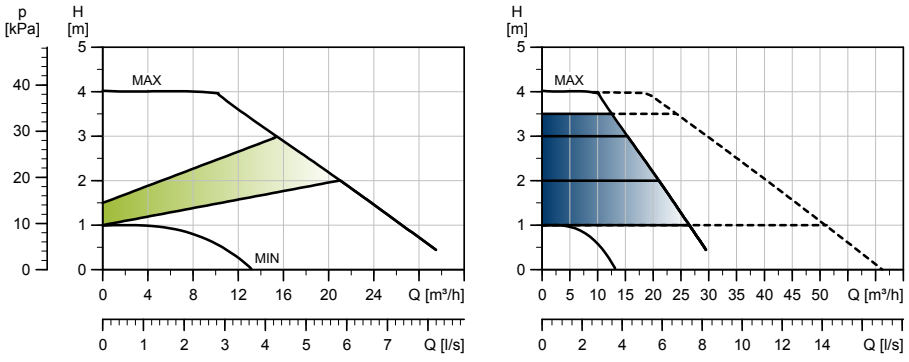
MAGNA3 D 50-150 F



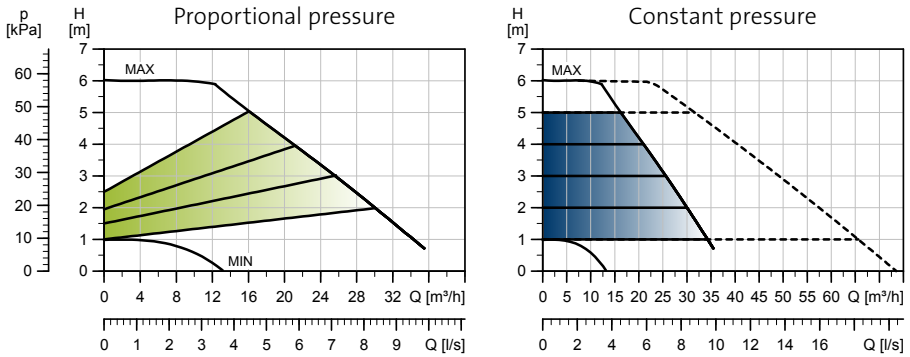
MAGNA3 D 50-180 F



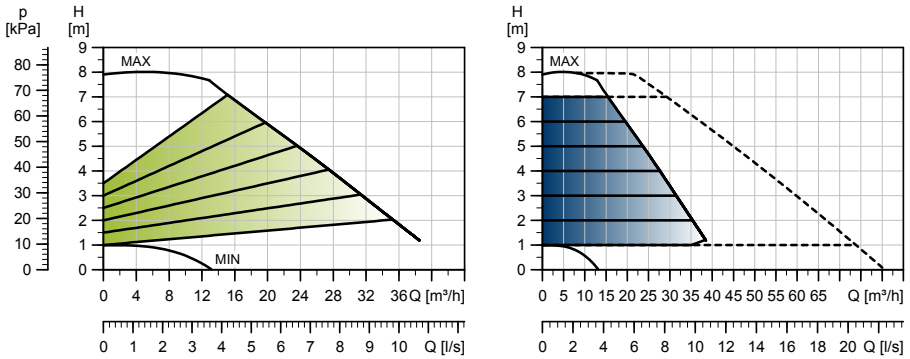
MAGNA3 D 65-40 F



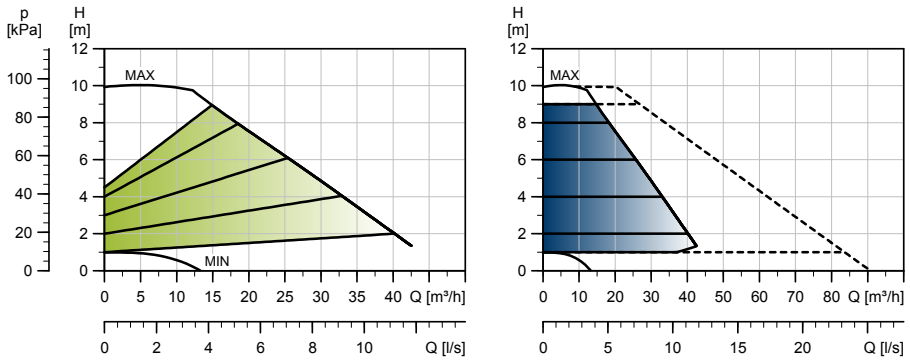
MAGNA3 D 65-60 F



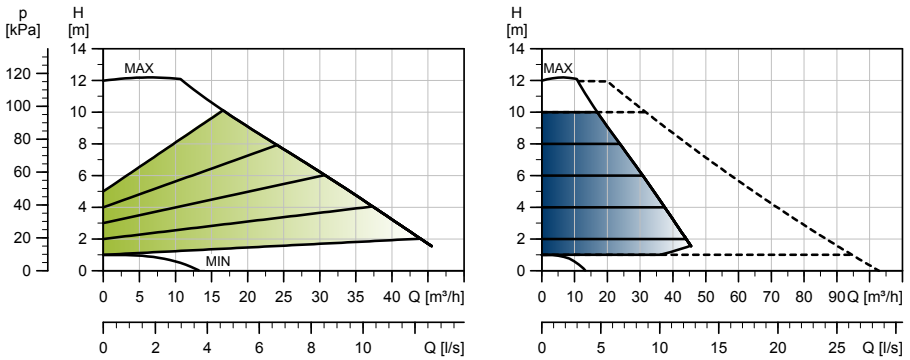
MAGNA3 D 65-80 F



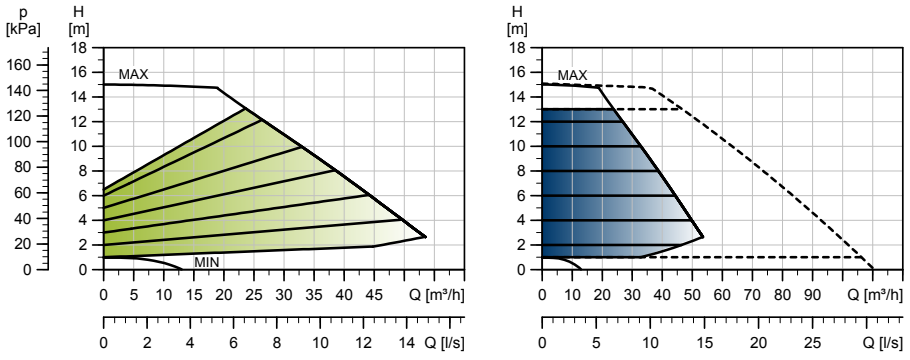
MAGNA3 D 65-100 F



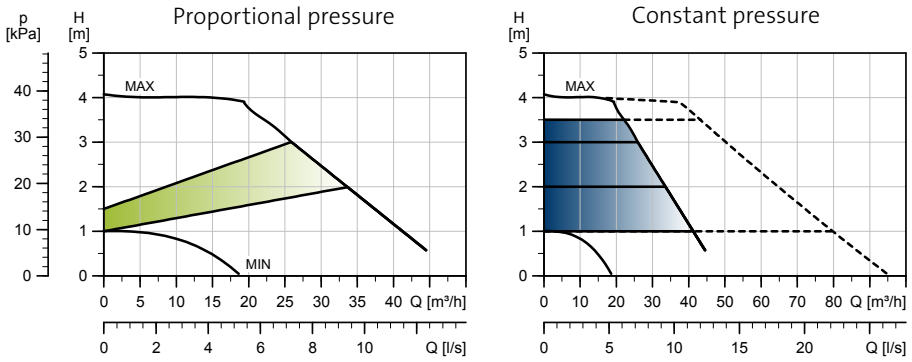
MAGNA3 D 65-120 F



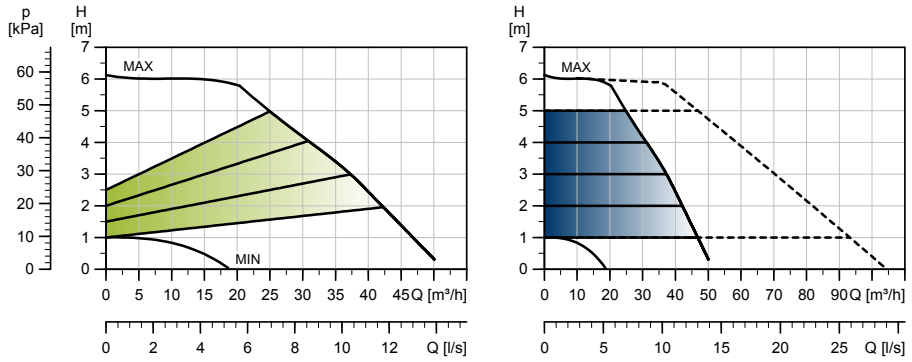
MAGNA3 D 65- 150 F



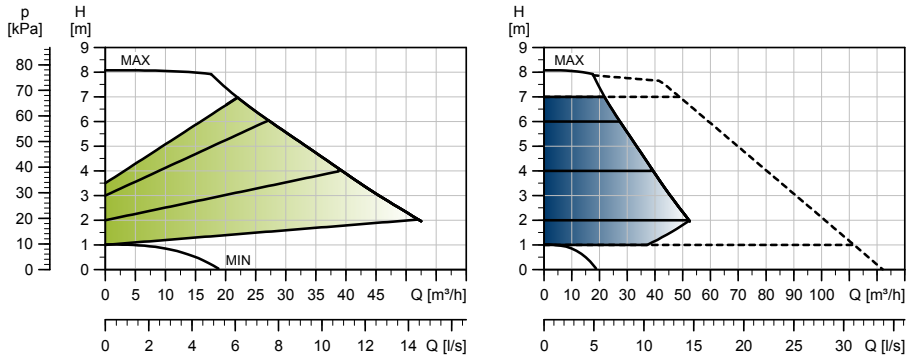
MAGNA3 D 80-40 F



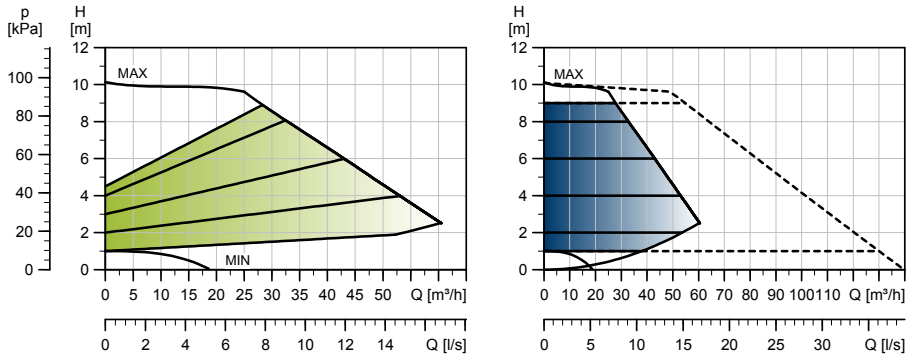
MAGNA3 D 80-60 F



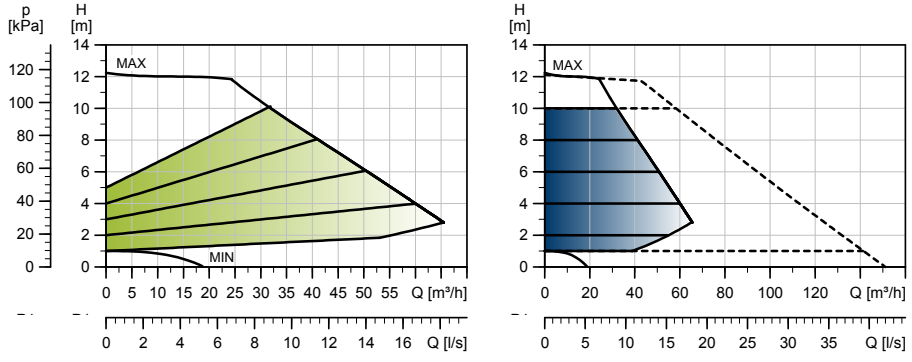
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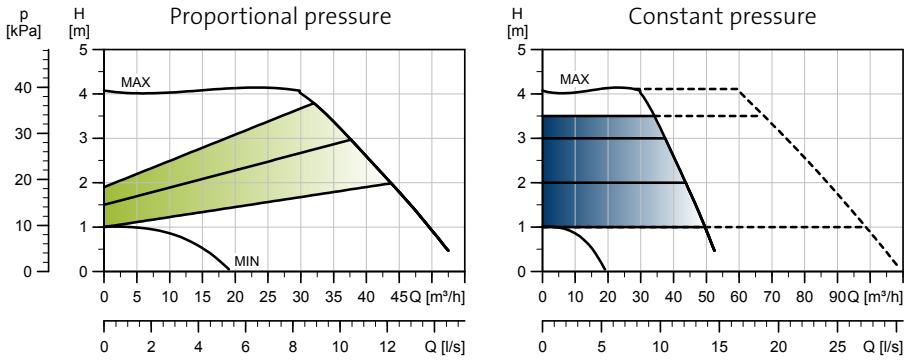
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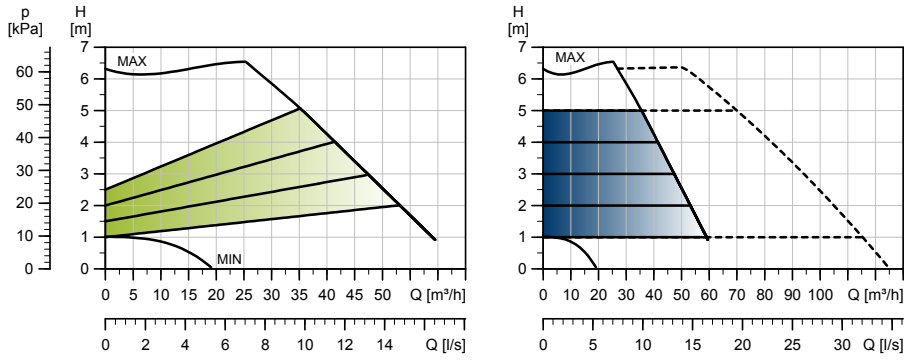
MAGNA3 D 80-120 F



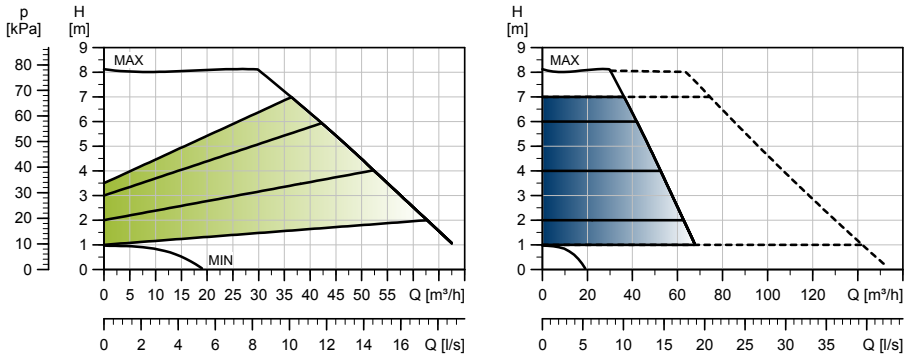
MAGNA3 D 100-40 F



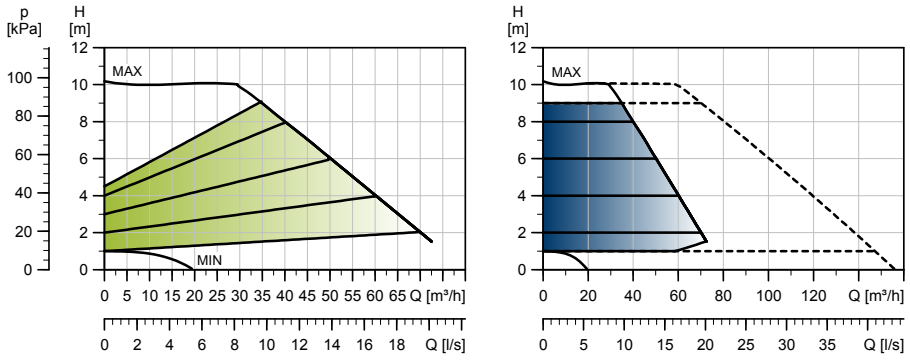
MAGNA3 D 100-60 F



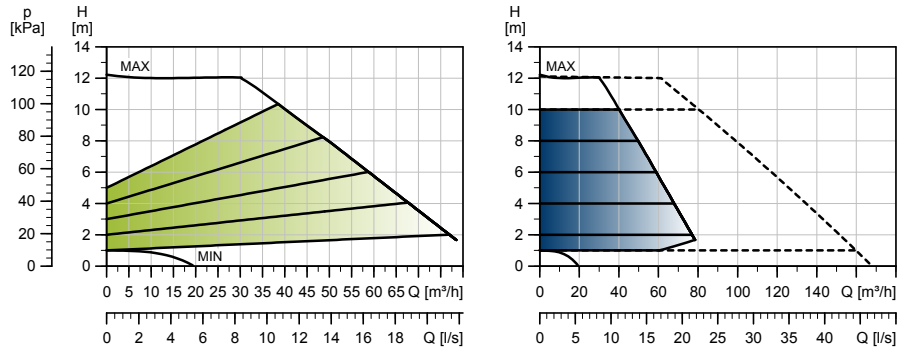
MAGNA3 D 100-80 F



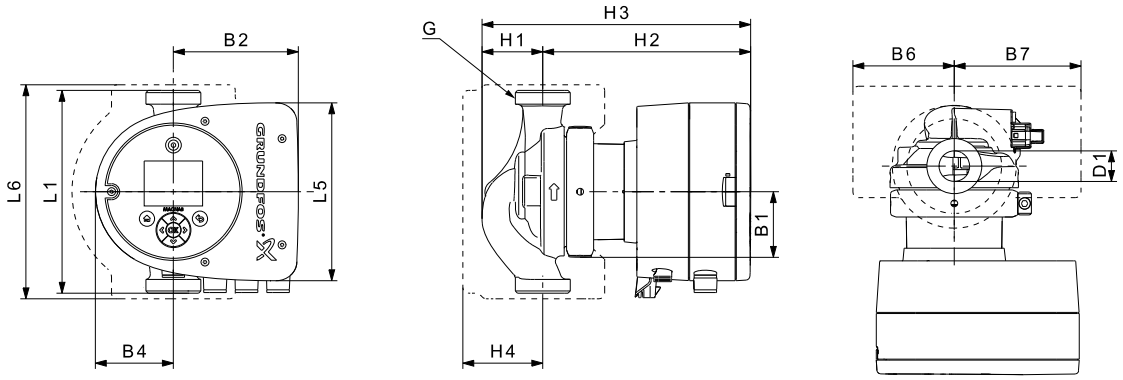
MAGNA3 D 100-100 F



MAGNA3 D 100-120 F

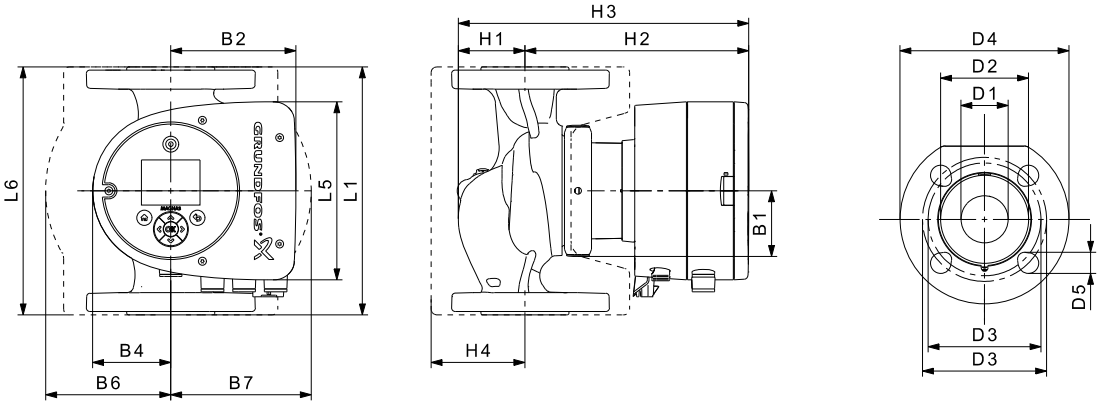


Dimensional drawings



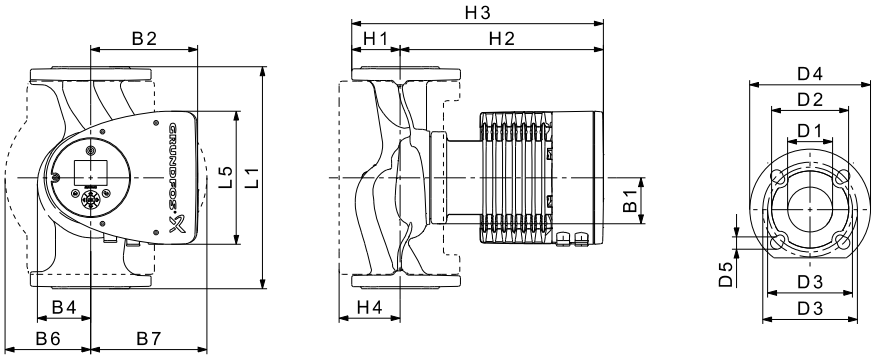


Pump Type	Dimensions (mm)													G (inch)	Weight (kg)		Max Amps
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1		Net	Gross	
MAGNA3 25-40 (N)	180	158	190	58	111	69	90	113	54	185	239	71	25	1 ½"	4.8	5.3	0.46
MAGNA3 25-60 (N)	180	158	190	58	111	69	90	113	54	185	239	71	25	1 ½"	4.8	5.3	0.75
MAGNA3 25-80 (N)	180	158	190	58	111	69	90	113	54	185	239	71	25	1 ½"	4.8	5.3	1.02
MAGNA3 25-100 (N)	180	158	190	58	111	69	90	113	54	185	239	71	25	1 ½"	4.8	5.3	1.33
MAGNA3 25-120 (N)	180	158	190	58	111	69	90	113	54	185	239	71	25	1 ½"	4.8	5.3	1.56
MAGNA3 32-40 (N)	180	158	190	58	111	69	90	113	54	185	239	71	32	2"	4.8	5.3	0.61
MAGNA3 32-60 (N)	180	158	190	58	111	69	90	113	54	185	239	71	32	2"	4.8	5.3	0.91
MAGNA3 32-80 (N)	180	158	190	58	111	69	90	113	54	185	239	71	32	2"	4.8	5.3	1.19
MAGNA3 32-100 (N)	180	158	190	58	111	69	90	113	54	185	239	71	32	2"	4.8	5.3	1.47



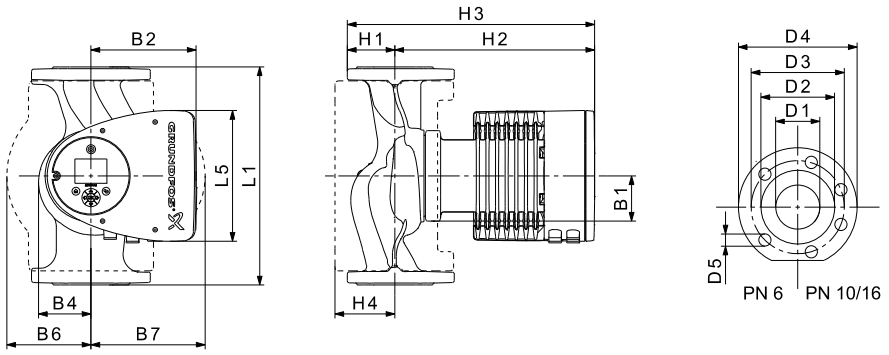


Pump Type	Dimensions (mm)																	Weight (kg)		Max Amps
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5	Net	Gross	
MAGNA3 32-40 F (N)	220	158	220	58	111	69	100	110	65	185	250	82	32	76	90/100	140	14/19	7.8	8.3	0.61
MAGNA3 32-60 F (N)	220	158	220	58	111	69	100	110	65	185	250	82	32	76	90/100	140	14/19	7.8	8.3	0.91
MAGNA3 32-80 F (N)	220	158	220	58	111	69	100	110	65	185	250	82	32	76	90/100	140	14/19	7.8	8.3	1.19
MAGNA3 32-100 F (N)	220	158	220	58	111	69	100	110	65	185	250	82	32	76	90/100	140	14/19	7.8	8.3	1.47
MAGNA3 40-40 F (N)	220	158	220	58	111	69	105	105	65	199	264	83	40	84	100/110	150	14/19	9.8	10.4	0.80
MAGNA3 40-60 F (N)	220	158	220	58	111	69	105	105	65	199	264	83	40	84	100/110	150	14/19	9.9	10.4	1.47



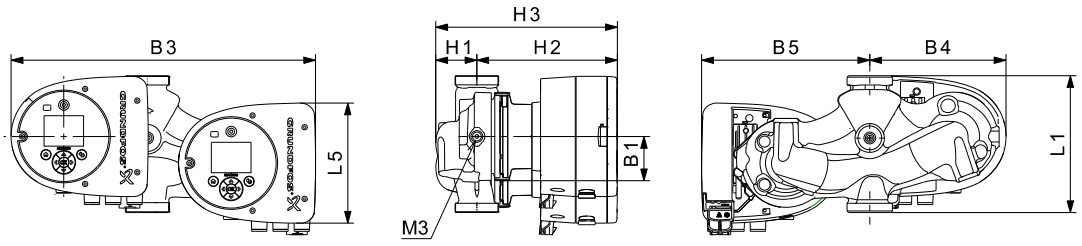


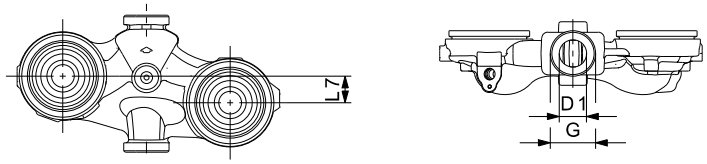
	Dimensions (mm)																Weight (kg)		Max Amps
Pump Type	**L1**	**L5**	**B1**	**B2**	**B4**	**B6**	**B7**	**H1**	**H2**	**H3**	**H4**	**D1**	**D2**	**D3**	**D4**	**D5**	**Net**	**Gross**	
MAGNA3 40-80 F (N)	220	204	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19	15.9	18.7	1.2
MAGNA3 40-100 F (N)	220	204	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19	15.9	18.7	1.56
MAGNA3 40-120 F (N)	250	204	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19	15.5	18.2	1.95
MAGNA3 40-150 F (N)	250	204	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19	15.5	18.2	2.69
MAGNA3 40-180 F (N)	250	204	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19	15.5	18.7	2.68
MAGNA3 50-40 F (N)	240	204	84	164	73	127	127	71	304	374	97	50	102	110/125	165	14/19	17.0	20.4	0.67
MAGNA3 50-60 F (N)	240	204	84	164	73	127	127	71	304	374	97	50	102	110/125	165	14/19	17.0	20.4	1.13
MAGNA3 50-80 F (N)	240	204	84	164	73	127	127	71	304	374	97	50	102	110/125	165	14/19	17.0	20.4	1.46
MAGNA3 50-100 F (N)	280	204	84	164	73	127	127	72	304	376	97	50	102	110/125	165	14/19	17.6	21.1	1.91
MAGNA3 50-120 F (N)	280	204	84	164	73	127	127	72	304	376	97	50	102	110/125	165	14/19	17.6	21.1	2.37
MAGNA3 50-150 F (N)	280	204	84	164	73	127	127	72	304	376	97	50	102	110/125	165	14/19	18.3	22.0	2.78
MAGNA3 50-180 F (N)	280	204	84	164	73	127	127	72	304	376	97	50	102	110/125	165	14/19	18.3	22.0	3.35
MAGNA3 65-40 F (N)	340	204	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19	20.2	23.8	0.90
MAGNA3 65-60 F (N)	340	204	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19	20.2	23.8	1.57
MAGNA3 65-80 F (N)	340	204	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19	21.0	24.7	2.12
MAGNA3 65-100 F (N)	340	204	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19	21.0	24.7	2.70
MAGNA3 65-120 F (N)	340	204	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19	21.0	24.7	3.38
MAGNA3 65-150 F (N)	340	204	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19	24.0	27.8	5.68





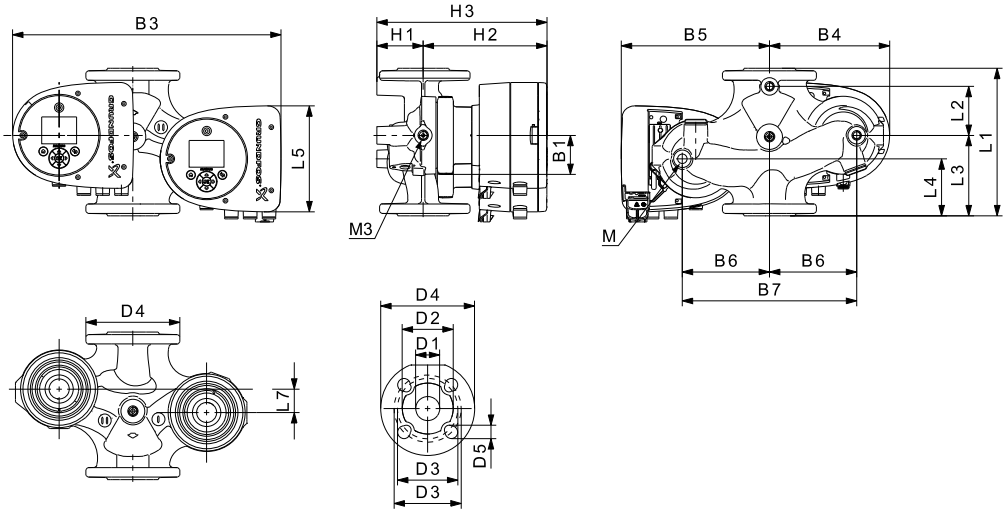
	Dimensions (mm)																weight (kg)		Max Amps
Pump Type	**L1**	**L5**	**B1**	**B2**	**B4**	**B6**	**B7**	**H1**	**H2**	**H3**	**H4**	**D1**	**D2**	**D3**	**D4**	**D5**	**Net**	**Gross**	
MAGNA3 80-40 F	360	204	84	164	73	163	163	96	318	413	115	80	128	150	200	19	25.8	28.8	1.47
MAGNA3 80-60 F	360	204	84	164	73	163	163	96	318	413	115	80	128	150	200	19	25.8	29.1	2.35
MAGNA3 80-80 F	360	204	84	164	73	163	163	96	318	413	115	80	128	150	200	19	28.0	32.0	3.17
MAGNA3 80-100 F	360	204	84	164	73	163	163	96	318	413	115	80	128	150	200	19	28.8	32.6	4.60
MAGNA3 80-120 F	360	204	84	164	73	163	163	96	318	413	115	80	128	150	200	19	28.8	32.6	5.72
MAGNA3 100-40 F	450	204	84	164	73	178	178	103	330	433	120	100	160	170	220	19	32.3	36.4	2.06
MAGNA3 100-60 F	450	204	84	164	73	178	178	103	330	433	120	100	160	170	220	19	32.3	36.4	2.94
MAGNA3 100-80 F	450	204	84	164	73	178	178	103	330	433	120	100	160	170	220	19	33.1	37.3	4.31
MAGNA3 100-100 F	450	204	84	164	73	178	178	103	330	433	120	100	160	170	220	19	33.1	37.0	5.5
MAGNA3 100-120 F	450	204	84	164	73	178	178	103	330	433	120	100	160	170	220	19	33.1	37.0	6.97





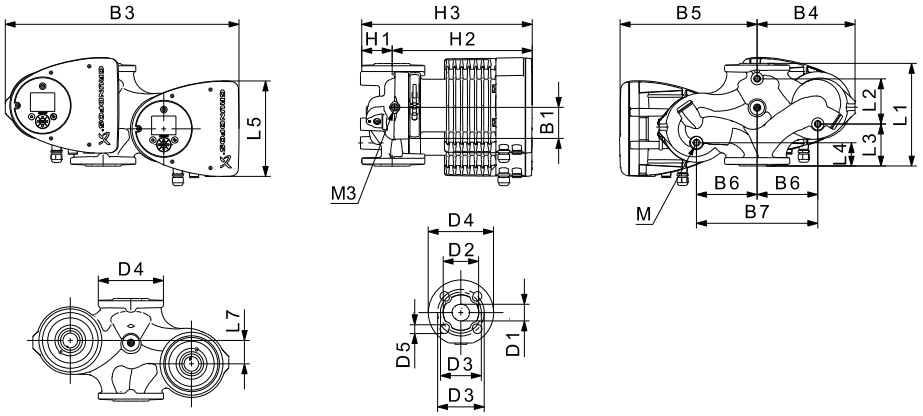


	Dimensions (mm)											G (inch)	M3	weight (kg)		Max Amps
Pump Type	**L1**	**L5**	**L7**	**B1**	**B3**	**B4**	**B5**	**H1**	**H2**	**H3**	**D1**			**Net**	**Gross**	
MAGNA3 D 32-40	180	158	35	58	400	179	221	54	185	239	32	2"	1/4"	13.2	14.0	0.61
MAGNA3 D 32-60	180	158	35	58	400	179	221	54	185	239	32	2"	1/4"	13.2	14.0	0.91
MAGNA3 D 32-80	180	158	35	58	400	179	221	54	185	239	32	2"	1/4"	13.2	14.0	1.19
MAGNA3 D 32-100	180	158	35	58	400	179	221	54	185	239	32	2"	1/4"	13.2	14.0	1.47



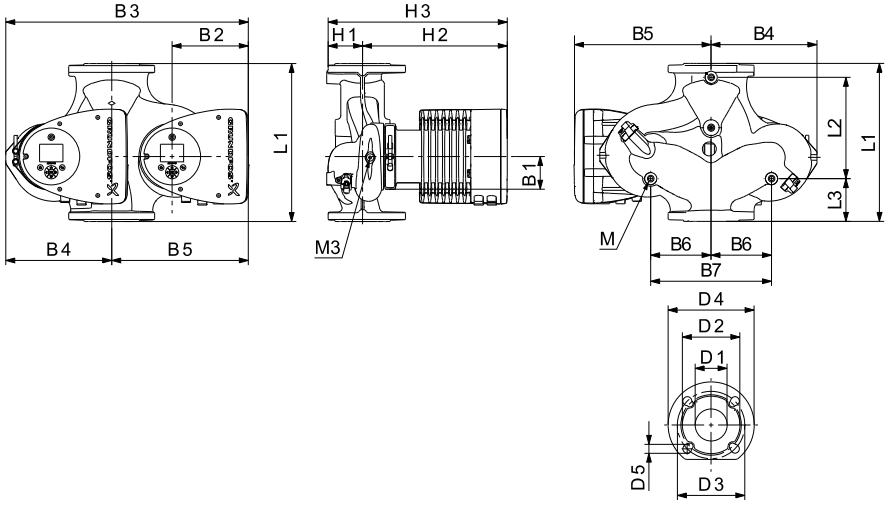


	Dimensions (mm)																				Rp	weight (kg)		Max Amps
Pump Type	**L1**	**L2**	**L3**	**L4**	**L5**	**L7**	**B1**	**B3**	**B4**	**B5**	**B6**	**B7**	**H1**	**H2**	**H3**	**D1**	**D2**	**D3**	**D4**	**D5**	**M**	**M3**	**Net**	**Gross**	
MAGNA3 D 32-40 F	220	73	120	85	158	35	58	400	179	221	130	260	69	185	254	32	76	90/100	140	14/19	M12	1/4"	15.6	16.3	0.61
MAGNA3 D 32-60 F	220	73	120	85	158	35	58	400	179	221	130	260	69	185	254	32	76	90/100	140	14/19	M12	1/4"	15.6	16.3	0.91
MAGNA3 D 32-80 F	220	73	120	85	158	35	58	400	179	221	130	260	69	185	254	32	76	90/100	140	14/19	M12	1/4"	15.6	16.3	1.19
MAGNA3 D 32-100 F	220	73	120	85	158	35	58	400	179	221	130	260	69	185	254	32	76	90/100	140	14/19	M12	1/4"	15.6	16.3	1.47
MAGNA3 D 40-40 F	220	53	140	60	158	15	58	452	211	241	130	260	76	199	275	40	84	100/110	150	14/19	M12	1/4"	19.9	20.6	0.80
MAGNA3 D 40-60 F	220	53	140	60	158	15	58	452	211	241	130	260	76	199	275	40	84	100/110	150	14/19	M12	1/4"	19.9	20.6	1.47



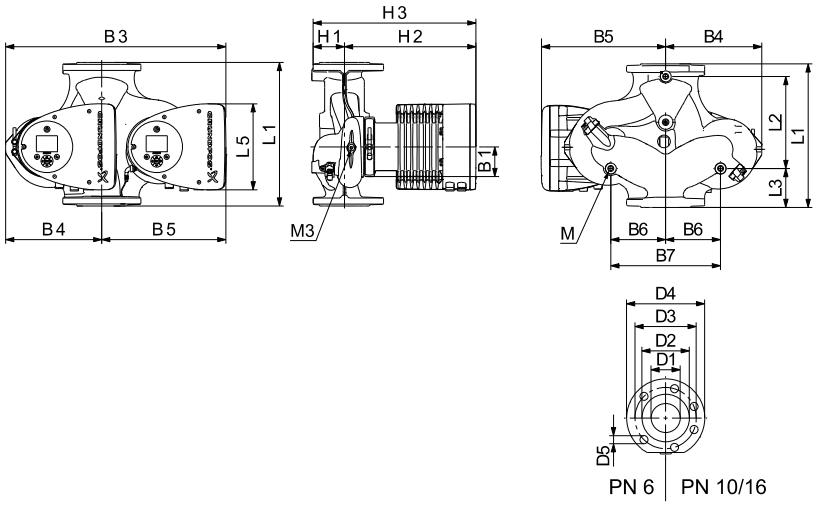


	Dimensions (mm)																					Rp	weight (kg)		Max Amps
Pump Type	**L1**	**L2**	**L3**	**L4**	**L5**	**L7**	**B1**	**B3**	**B4**	**B5**	**B6**	**B7**	**H1**	**H2**	**H3**	**D1**	**D2**	**D3**	**D4**	**D5**	**M**	**M3**	**Net**	**Gross**	
MAGNA3 D 32-120 F	220	97	90	50	204	50	84	502	210	294	130	260	68	300	368	32	76	90/100	140	14/19	M12	1/4"	30.0	30.3	1.49
MAGNA3 D 40-80 F	220	53	140	60	204	15	84	502	210	294	130	260	76	303	379	40	84	100/110	150	14/19	M12	1/4"	32.6	32.8	1.21
MAGNA3 D 40-100 F	220	53	140	60	204	15	84	502	210	294	130	260	76	303	379	40	84	100/110	150	14/19	M12	1/4"	32.6	32.8	1.61
MAGNA3 D 50-40 F	240	48	160	45	204	45	84	515	221	294	130	260	75	304	379	50	102	110/125	165	14/19	M12	1/4"	33.0	41.8	0.66
MAGNA3 D 50-60 F	240	48	160	45	204	45	84	515	221	294	130	260	75	304	379	50	102	110/125	165	14/19	M12	1/4"	33.0	41.8	1.11
MAGNA3 D 50-80 F	240	48	160	45	204	45	84	515	221	294	130	260	75	304	379	50	102	110/125	165	14/19	M12	1/4"	33.0	41.8	1.45





	Dimensions (mm)																			Rp	weight (kg)		Max Amps
Pump Type	**L1**	**L2**	**L3/L4**	**L5**	**B1**	**B3**	**B4**	**B5**	**B6**	**B7**	**H1**	**H2**	**H3**	**D1**	**D2**	**D3**	**D4**	**D5**	**M**	**M3**	**Net**	**Gross**	
MAGNA3 D 50-100 F	280	175	75	204	84	517	223	294	130	260	75	304	379	50	102	110/125	165	14/19	M12	1/4"	33.3	42.1	1.91
MAGNA3 D 50-120 F	280	175	75	204	84	517	223	294	130	260	75	304	379	50	102	110/125	165	14/19	M12	1/4"	33.3	42.1	2.37
MAGNA3 D 50-150 F	280	175	75	204	84	517	223	294	130	260	75	304	379	50	102	110/125	165	14/19	M12	1/4"	34.7	43.9	2.78
MAGNA3 D 50-180 F	280	175	75	204	84	517	223	294	130	260	75	304	379	50	102	110/125	165	14/19	M12	1/4"	34.7	43.9	3.35
MAGNA3 D 65-40 F	340	218	92	204	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	M12	1/4"	36.9	45.8	0.89
MAGNA3 D 65-60 F	340	218	92	204	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	M12	1/4"	36.9	45.8	1.57
MAGNA3 D 65-80 F	340	218	92	204	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	M12	1/4"	38.7	47.6	2.12
MAGNA3 D 65-100 F	340	218	92	204	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	M12	1/4"	38.7	47.6	2.97
MAGNA3 D 65-120 F	340	218	92	204	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	M12	1/4"	38.7	47.6	3.36
MAGNA3 D 65-150 F	340	218	92	204	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	M12	1/4"	44.6	53.7	5.68





	Dimensions (mm)																			Rp	weight (kg)		Max Amps
Pump Type	**L1**	**L2**	**L3/L4**	**L5**	**B1**	**B3**	**B4**	**B5**	**B6**	**B7**	**H1**	**H2**	**H3**	**D1**	**D2**	**D3**	**D4**	**D5**	**M**	**M3**	**Net**	**Gross**	
MAGNA3 D 80-40 F	360	218	102	204	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	M12	1/4"	45.8	55.8	1.50
MAGNA3 D 80-60 F	360	218	102	204	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	M12	1/4"	45.8	55.8	2.39
MAGNA3 D 80-80 F	360	218	102	204	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	M12	1/4"	45.8	55.8	2.39
MAGNA3 D 80-100 F	360	218	102	204	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	M12	1/4"	51.6	63.4	4.62
MAGNA3 D 80-120 F	360	218	102	204	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	M12	1/4"	51.6	63.1	5.74
MAGNA3 D 100-40 F	450	243	147	204	84	551	252	299	135	270	103	330	434	100	160	170	220	19	M12	1/4"	58.8	71.3	2.06
MAGNA3 D 100-60 F	450	243	147	204	84	551	252	299	135	270	103	330	434	100	160	170	220	19	M12	1/4"	58.8	71.3	2.94
MAGNA3 D 100-80 F	450	243	147	204	84	551	252	299	135	270	103	330	434	100	160	170	220	19	M12	1/4"	60.4	73.2	4.36
MAGNA3 D 100-100 F	450	243	147	204	84	551	252	299	135	270	103	330	434	100	160	170	220	19	M12	1/4"	60.4	73.2	5.51
MAGNA3 D 100-120 F	450	243	147	204	84	551	252	299	135	270	103	330	434	100	160	170	220	19	M12	1/4"	60.4	73.2	6.98



Operating Conditions

General recommendations

Water in heating systems	Water quality should be maintained to current industry standards. Systems should be flushed to remove solids. Water treatment should be maintained to ensure system components do not corrode. System pressure should be maintained to prevent air ingress into the system pipework.
Water containing glycol	Max. viscosity = 50 C St = 50% water/50% ethylene glycol at -10°C

Liquid temperature

Application	Temperature range
General	-10°C to +110°C

Ambient conditions

Ambient temperature during operation	0°C to +40°C
Ambient temperature during storage and transport	-40°C to +70°C
Relative air humidity	Maximum 95%

Maximum operating pressure

PN 6: 6 bar / 0.6 MPa
PN 10: 10 bar / 1.0 MPa

Minimum inlet pressure

The following relative minimum inlet pressure must be available at the pump inlet during operation to avoid cavitation noise and damage to the pumps bearings.

Note: The values in the table below apply to single-head pumps and twin-head pumps in single-head operation.

Single-head pumps DN	**Liquid temperature**		
	75°C	95 °C	110 °C
	Inlet pressure (bar)		
25-40/60/80/100/120	0.10	0.35	1.0
32-40/60/80/100	0.10	0.35	1.0
32-120	0.90	1.30	1.9
40-40/60	0.10	0.35	1.0
40-80/100	0.10	0.50	1.0
40-120/150/180	0.10	0.50	1.0
50-40/60/80	0.10	0.40	1.0
50-100	0.10	0.50	1.0
50-120	0.10	0.50	1.0
50-150/180	0.70	1.20	1.7
65-40/60/80/100	0.70	1.20	1.7
65-120	0.70	1.20	1.7
65-150	0.70	1.20	1.7
80-40/60/80/100/120	0.50	1.00	1.5
100-40/60/80/100/120	0.70	1.20	1.7

In the case of twin-head operation the inlet pressure must be increased by 0.1 bar above the stated values for single-head pumps or twin-head pumps in single-head operation.

Note: Actual inlet pressure plus pump pressure against a closed valve must be lower than the maximum permissible system pressure.

Additional operating modes for multi-pump setup

Multi-pump function
The multi-pump function enables the control of single-head pumps connected in parallel and twin-head pumps without the use of external controllers. The pumps in a multi-pump system communicate with each other via the wireless GENIair connection.

A multi-pump system is set up via a selected pump, i.e. the master pump (first selected pump). All Grundfos pumps with a wireless GENIair connection can be connected to the multi-pump system.

Pump system:
- Twin-head pump.
- Two single-head pumps connected in parallel. The pumps must be of equal size and type. Each pump requires a non-return valve in series with the pump.

Alternating operation
Only one pump is operating at a time. The change from one pump to the other depends on time or energy. If a pump fails, the other pump will take over automatically.

Back-up operation
One pump is operating continuously. The back-up pump is operated at intervals to prevent seizing up. If the duty pump stops due to a fault, the back-up pump will start automatically. No auto changeover panel is required.

Readings and settings on the pump

Control panel and display
The MAGNA3 pump features a TFT display with intuitive and user-friendly interface. The control panel has self-explanatory push-buttons made of high-quality silicone for precise navigation in the menu structure. The control panel is designed to give the user quick and easy access to pump and performance data on site.

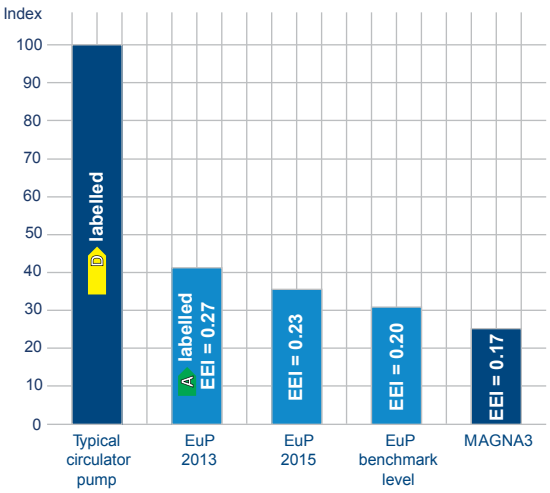
When the pump is started up for the first time, the user is presented with a start-up guide enabling easy setting of the pump. Additionally, the “Assist” menu can guide the user through the various settings of the pump.

Factory setting

Button	Function
⌂	Goes to the "Home" menu.
↩	Returns to the previous action.
‹ ›	Navigates between main menus, displays and digits. When the menu is changed, the display will always show the top display of the new menu.
^ v	Navigates between submenus.
OK	Saves changed values, resets alarms and expands the value field.

The pumps have been factory-set to AUTO*ADAPT* without Automatic Night Setback.

The MAGNA3 is energy-optimised and complies with the EuP Directive (Commission Regulation (EC) No 641/2009) which is effective as from 1st January 2013.



The graph shows the energy consumption index for a typical circulator pump compared to the various EEI limits.

With an energy efficiency index (EEI) well below the EuP benchmark level, you can achieve energy savings of up to 75 % compared to a typical circulator pump and thus a remarkably fast return on investment. This means, of course, that the MAGNA3 more than meets the standards of the EuP legislation.

For more information about the new energy directive, please visit: http://energy.grundfos.com

Grundfos blueflux®

The Grundfos blueflux® label is your guarantee that the MAGNA3 incorporates the most energy-efficient motor currently available. Grundfos blueflux® motors are designed to cut the power consumption by up to 60 % and thus reduce CO2 emissions and operating costs

Grundfos GO

The Grundfos GO gives you intuitive handheld wireless remote pump control, as well as access to Grundfos online tools whenever and wherever you need them. With the Grundfos GO Remote or a smartphone, it is possible to get the following information about the MAGNA3:



- product photo
- pump performance curves
- dimensional sketches
- wiring diagram
- quotation text
- technical data
- service parts list
- PDF files, such as data booklet and installation and operating instructions.
- Information is accessed via a QR code on the pump name plate

Benefits on the GO

The real benefits of the GO come to light when interacting with new generation of intelligent interactive pumps such as the Grundfos MAGNA3 family. With this new generation it is no longer necessary to connect the pumps to a CIU box. This is because you can now simply specify the pump with accessory CIM modules that support all commonly used fieldbus standards. This means that the pump is Building Management Systems ready – straight from the box.



Comparison chart

The following tables show comparisons of features between the new MAGNA1, MAGNA3 and the preceeding MAGNA and UPS product ranges.

MAGNA3 should be compared to the **Magna** range
MAGNA1 should be compared to the **UPS** range.






Curve Options and Control Choices

Feature	MAGNA3	Magna	MAGNA1	UPS
AUTOadapt	✓	✓	X	X
FLOWadapt	✓	X	X	X
Flow Limit	✓	X	X	X
Proportional Pressure	✓	✓	✓	X
Constant Pressure	✓	✓	✓	X
Fixed Pump Speeds	✓	✓	✓	✓
Night Set Back	✓	✓	X	X

Communication

Feature	MAGNA3	Magna	MAGNA1	UPS
Analogue Input	✓	X	X	X
Relay Outputs	✓	✓	X	X
Digital Inputs	✓	✓	X	X
Infra Red (R100)	X	✓	X	X
Wireless (GO remote)	✓	X	X	X

Twin Pump Control Choices

Feature	MAGNA3	Magna	MAGNA1	UPS
Duty/Standby Rotation	✓	✓	X	X
Automatic changeover on fault.	✓	✓	X	X
Cascade Option	✓	X	X	X

Table shows product comparison for product replacements of UPS models in the installed base.

UPS Models	**Equivalent MAGNA Models**	
UPS 25-55	MAGNA1 25-40	MAGNA3 25-40
UPS 25-80	MAGNA1 25-60 to MAGNA1 25-80	MAGNA3 25-60 to MAGNA3 25-80
UPS 25-100	MAGNA1 25-100	MAGNA3 25-100
UPS 32-55	MAGNA1 32-60	MAGNA3 32-60
UPS 32-80	MAGNA1 32-80	MAGNA3 32-80
UPS 32-100	MAGNA1 32-100	MAGNA3 32-100
UPS 40-50	MAGNA1 40-40 F + Spacer 96281076*	MAGNA3 40-40 F + Spacer 96281076*
UPS 40-80	MAGNA1 40-60 F + Spacer 96281076*	MAGNA3 40-60 F + Spacer 96281076*
UPSD 40-50	MAGNA1 D 40-40 F + Spacer 96281076*	MAGNA3 D 40-40 F + Spacer 96281076
UPSD 40-80	MAGNA1 D 40-60 F + Spacer 96281076*	MAGNA3 D 40-60 F + Spacer 96281076*
Single Phase UPS Models	**Equivalent MAGNA1 Models**	**Equivalent MAGNA3 Models**
UPS(D) 32-30/4	MAGNA1 (D) 32-40	MAGNA3 (D) 32-40
UPS(D 32-60/2	MAGNA1 (D) 32-100	MAGNA3 (D) 32-100
UPS(D) 32-120/2	MAGNA1 (D) 32-120	MAGNA3 (D) 32-120
UPS(D) 40-30/4	MAGNA1 (D) 40-40 + Spacer 96281076*	MAGNA3 (D) 40-40 + Spacer 96281076*
UPS(D) 40-60/4	MAGNA1 (D) 40-60 + Spacer 96281076*	MAGNA3 (D) 40-60 + Spacer 96281076*
UPS(D) 40-60/2	MAGNA1 (D) 40-60 + Spacer 96281076*	MAGNA3 (D) 40-80 + Spacer 96281076*
UPS(D) 40-120/2	MAGNA1 (D) 40-120	MAGNA3 (D) 40-120
UPS(D) 40-180/2	MAGNA1 (D) 40-150	MAGNA3 (D) 40-150
UPS(D) 40-185	MAGNA1 (D) 40-180	MAGNA3 (D) 40-180
UPS(D) 50-30/4	MAGNA1 (D) 50-40 + Spacer 96281077**	MAGNA3 (D) 50-40 + Spacer 96281077**
UPS(D) 50-60/4	MAGNA1 (D) 50-60 + Spacer 96281077**	MAGNA3 (D) 50-60 + Spacer 96281077**
UPS(D) 50-60/2	MAGNA1 (D) 50-60 + Spacer 96281077**	MAGNA3 (D) 50-60 + Spacer 96281077**
UPS(D) 50-120/2	MAGNA1 (D) 50-120	MAGNA3 (D) 50-120
UPS(D) 50-180/2	MAGNA1 (D) 50-150	MAGNA3 (D) 50-150
UPS(D) 50-185	MAGNA1 (D) 50-180	MAGNA3 (D) 50-180
UPS(D) 65-30/4	MAGNA1 (D) 65-40	MAGNA3 (D) 65-40
UPS(D) 65-60/4	MAGNA1 (D) 65-60	MAGNA3 (D) 65-60
UPS(D) 65-60/2	MAGNA1 (D) 65-60	MAGNA3 (D) 65-60
UPS(D) 65-120/2	MAGNA1 (D) 65-120	MAGNA3 (D) 65-120

* On these 40mm MAGNA1 and MAGNA3 models an additional spacer kit for replacement purposes may be required. Code number 96281076.
**On these 50mm MAGNA1 and MAGNA3 models an additional spacer kit for replacement purposes may be required. Code number 96281077.

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