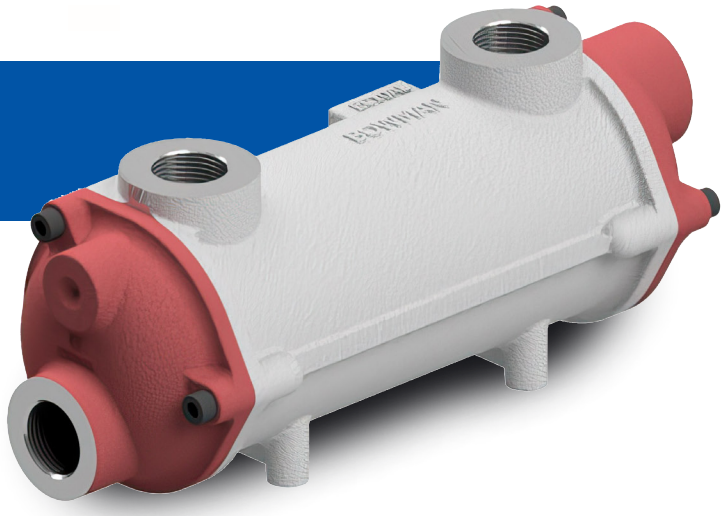
PRODUCT PROFILE

EC Series
Hydraulic Oil Coolers



Introduction

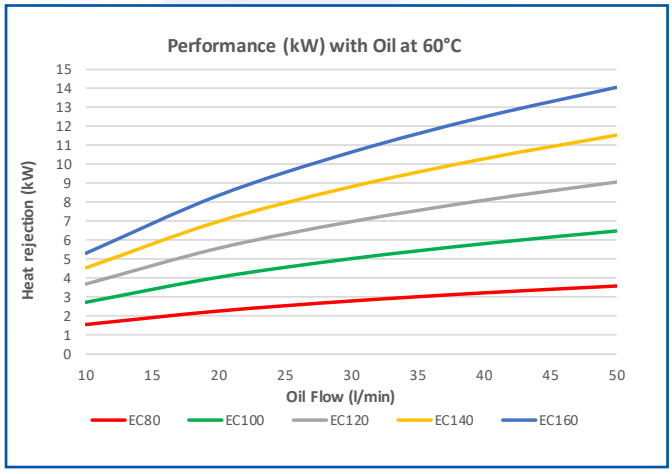
Bowman hydraulic oil coolers offer efficient, reliable heat transfer performance for a wide range of cooling requirements. Suitable for cooling a variety of oils, using either fresh or sea water, they have become the unit of choice for hydraulic engineers the world over.

Typical Performance

Bowman EC oil coolers can remove from around 2kW up to 24kW of heat and the tables and graphs below show examples of their cooling performance throughout the range, using different water flow rates and oil temperatures.

The figures show typical heat transfer performance and any changes in temperature, flow rate or fluids will significantly alter their performance, so whilst this information is provided for guidance, specific application details should be sent to Bowman, or an authorised distributor, to ensure the correct unit is specified.

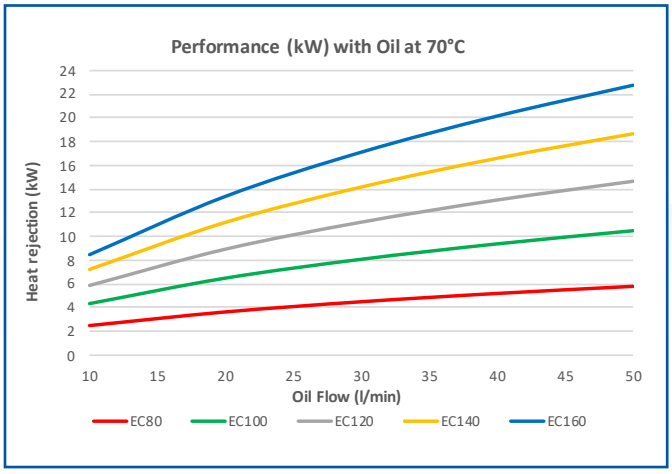
ISO 46 Oil at 60°C on inlet to the cooler
Water inlet temperature: 30°C at 40 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	10 l/min	20 l/min	30 l/min	40 l/min	50 l/min
EC80	1.6	2.3	2.8	3.2	3.6
EC100	2.7	4.1	5.0	5.8	6.5
EC120	3.7	5.6	7.0	8.1	9.1
EC140	4.5	7.0	8.8	10.3	11.5
EC160	5.3	8.4	10.6	12.5	14.1

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	10 l/min	20 l/min	30 l/min	40 l/min	50 l/min
EC80	54.6	56.1	56.8	57.2	57.5
EC100	50.5	53.0	54.2	55.0	55.5
EC120	47.1	50.3	51.9	53.0	53.7
EC140	44.1	47.8	49.8	51.0	52.0
EC160	41.3	45.4	47.6	49.1	50.2

ISO 46 Oil at 70°C on inlet to the cooler
Water inlet temperature: 25°C at 50 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	10 l/min	20 l/min	30 l/min	40 l/min	50 l/min
EC80	2.5	3.7	4.5	5.2	5.8
EC100	4.4	6.5	8.1	9.4	10.5
EC120	5.9	8.9	11.2	13.1	14.7
EC140	7.2	11.2	14.2	16.6	18.7
EC160	8.5	13.4	17.1	20.2	22.8

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	10 l/min	20 l/min	30 l/min	40 l/min	50 l/min
EC80	61.4	63.7	64.8	65.5	66.0
EC100	54.9	58.8	60.7	61.9	62.8
EC120	49.5	54.5	57.1	58.7	59.9
EC140	44.7	50.5	53.6	55.6	57.1
EC160	40.3	46.6	50.2	52.5	54.2

Computer Selection Programme

Given specific details including oil type and flow rate, temperatures of oil and water and heat dissipation required we can use computer aided selection software to accurately select the ideal unit for your application. Please contact our technical sales team or your local Bowman distributor for assistance.

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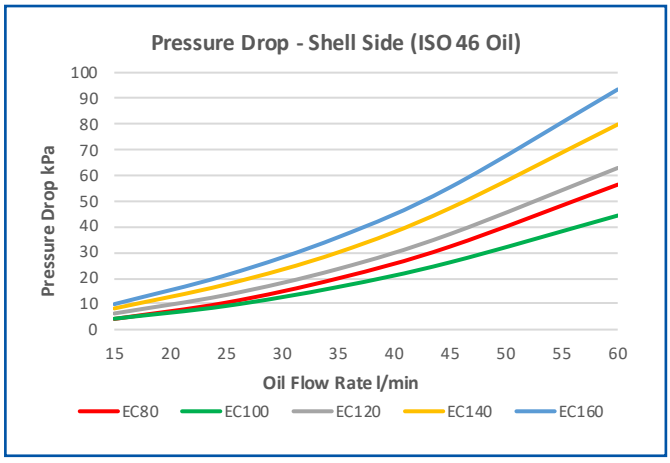
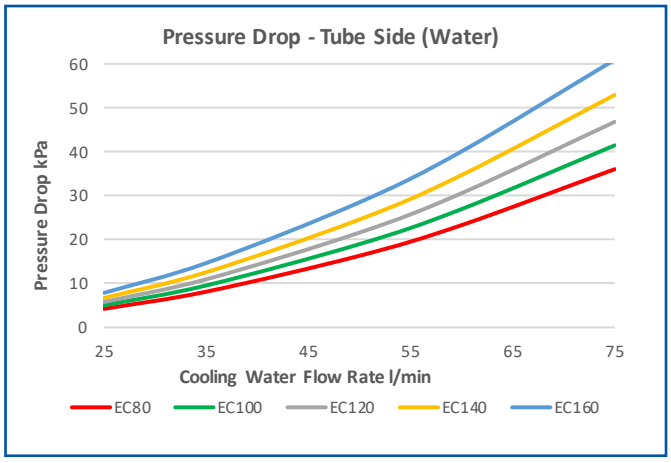
Pressure Drop

The graphs show the typical pressure drop that is expected when using a normal flow, three pass, EC series oil cooler. Where flow rates or pressure drops are too high, we may be able to offer alternative configurations such as high flow, single pass or two pass models which can accept higher flow rates with reduced pressure drop. Alternatively, a different size cooler can be selected. If detailed pressure drop information for specific flows, fluids or temperatures is required, please contact a distributor or our technical sales team.

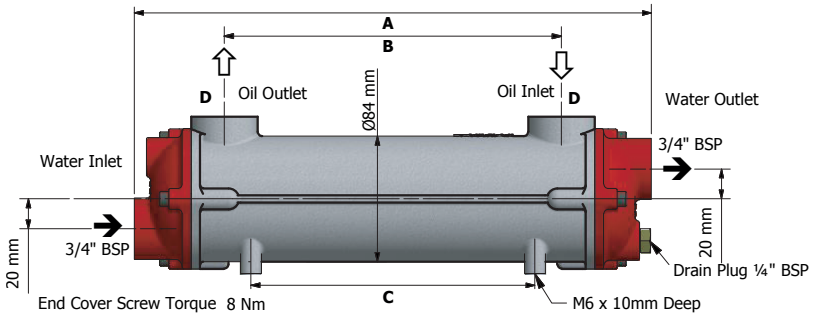




	Pressure Drop (kPa) - Shell Side (ISO 46 Oil)				
Model	15 l/min	25 l/min	35 l/min	45 l/min	60 l/min
EC80	4.2	10.5	19.9	32.3	56.4
EC100	4.2	9.2	16.6	26.2	44.4
EC120	6.3	13.5	23.6	37.2	62.9
EC140	8.3	17.6	30.1	47.2	79.8
EC160	9.9	21.2	36.0	55.4	93.5

	Pressure Drop (kPa) - Tube Side (Water)				
Model	25 l/min	35 l/min	50 l/min	60 l/min	75 l/min
EC80	4.2	8.1	16.3	23.3	36.0
EC100	5.0	9.6	19.0	26.9	41.4
EC120	5.8	11.0	21.6	30.6	46.8
EC140	6.7	12.6	24.6	34.7	52.9
EC160	7.9	14.7	28.5	40.1	60.9

Specification / Materials



Body Diameter 84mm

	Standard	Marine	Other options
Tube	90/10 Cupro Nickel	90/10 Cupro Nickel	Copper, 70/30 Cupro Nickel, Titanium
Shell	Aluminium	Aluminium	Cast Iron (some models)
End Covers	Cast Iron	Composite or Brass / Bronze	2 pass and single pass in cast iron and brass / bronze
Seals	Nitrile	Nitrile	Viton, EPDM

Model	Max Flow	Number of Tubes	Surface Area	Volume(litres)		Weight	A	B	C	D	D*
	Shell side		(m^2)	Shell	Tube	kg	mm	mm	mm	BSP	BSP
EC80	80	61	0.11	0.26	0.31	2.4	174	60	60	½"	N/A
EC100	92	61	0.21	0.49	0.44	3.2	260	140	104	¾"	1"
EC120	77	61	0.31	0.74	0.57	3.8	346	226	190	¾"	1"
EC140	68	61	0.42	0.97	0.71	4.8	444	324	288	¾"	1"
EC160	64	61	0.57	1.3	0.91	5.7	572	452	416	¾"	1"

Please note: Dimensions marked D* are for high flow versions only. EC80 models are not available in high flow versions.

Flow rates – Tube Side

Flow rate is important to the performance of the oil cooler but it is also crucial that minimum and maximum flow rates are adhered to in order to ensure longevity of the unit in service. Please refer to the following table for minimum and maximum flow rates.

	Minimum Flow Rate (l/min) Based on 1m/s Velocity			Maximum Flow Rate (l/min) Sea Water - Based on 2m/s Velocity			Maximum Flow Rate (l/min) Fresh Water - Based on 3m/s Velocity		
Model	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass
EC Series	85	40	25	170	80	50	255	120	75

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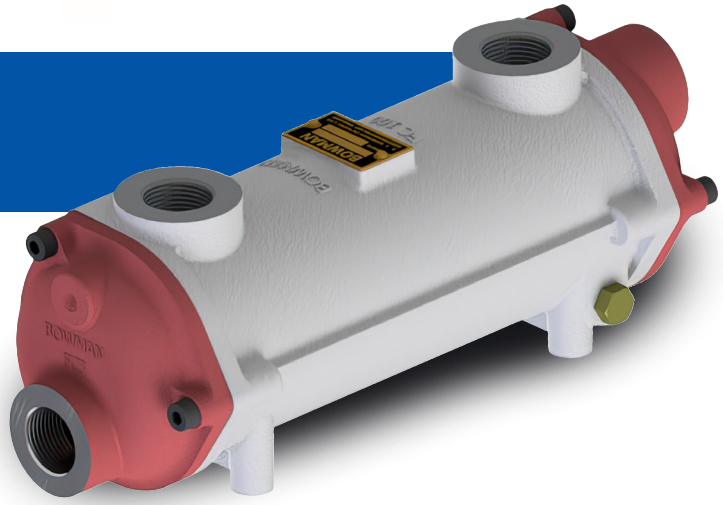
PRODUCT PROFILE

FC Series
Hydraulic Oil Coolers



Introduction

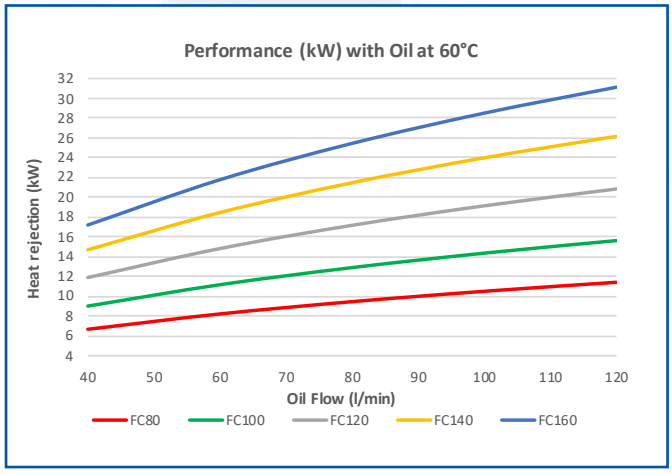
Bowman hydraulic oil coolers offer efficient, reliable heat transfer performance for a wide range of cooling requirements. Suitable for cooling a variety of oils, using either fresh or sea water, they have become the unit of choice for hydraulic engineers the world over.

Typical Performance

Bowman FC oil coolers can remove from around 7kW up to 52kW of heat and the tables and graphs below show examples of their cooling performance throughout the range, using different water flow rates and oil temperatures.

The figures show typical heat transfer performance and any changes in temperature, flow rate or fluids will significantly alter their performance, so whilst this information is provided for guidance, specific application details should be sent to Bowman, or an authorised distributor, to ensure the correct unit is specified.

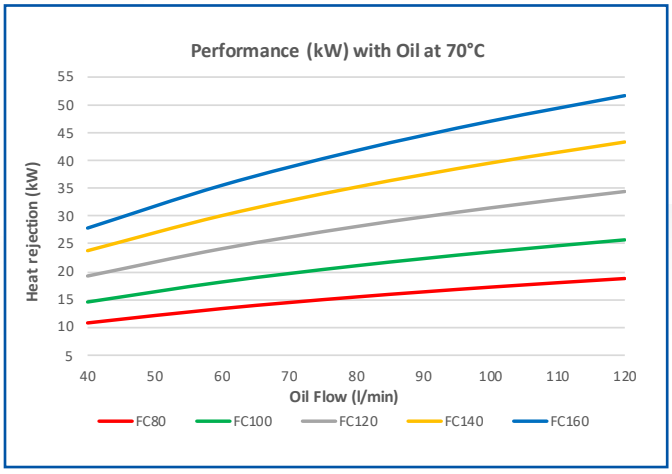
ISO 46 Oil at 60°C on inlet to the cooler
Water inlet temperature: 30°C at 60 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	40 l/min	60 l/min	80 l/min	100 l/min	120 l/min
FC80	6.7	8.2	9.5	10.5	11.4
FC100	9.0	11.2	12.9	14.4	15.6
FC120	11.9	14.8	17.2	19.1	20.8
FC140	14.7	18.5	21.5	24.0	26.2
FC160	17.2	21.8	25.4	28.5	31.1

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	40 l/min	60 l/min	80 l/min	100 l/min	120 l/min
FC80	54.2	55.3	55.9	56.4	56.7
FC100	52.2	53.5	54.4	55.0	55.5
FC120	49.6	51.4	52.5	53.4	54.0
FC140	47.2	49.3	50.7	51.7	52.4
FC160	45.0	47.3	48.9	50.1	51.0

ISO 46 Oil at 70°C on inlet to the cooler
Water inlet temperature: 25°C at 80 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	40 l/min	60 l/min	80 l/min	100 l/min	120 l/min
FC80	10.8	13.4	15.5	17.2	18.8
FC100	14.6	18.2	21.1	23.6	25.7
FC120	19.2	24.1	28.1	31.5	34.4
FC140	23.8	30.1	35.2	39.6	43.3
FC160	27.8	35.5	41.8	47.1	51.7

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	40 l/min	60 l/min	80 l/min	100 l/min	120 l/min
FC80	60.7	62.3	63.4	64.1	64.6
FC100	57.4	59.6	60.9	61.9	62.6
FC120	53.3	56.1	57.9	59.1	60.1
FC140	49.3	52.6	54.8	56.3	57.5
FC160	45.7	49.4	51.9	53.7	55.1

Computer Selection Programme

Given specific details including oil type and flow rate, temperatures of oil and water and heat dissipation required we can use computer aided selection software to accurately select the ideal unit for your application. Please contact our technical sales team or your local Bowman distributor for assistance.

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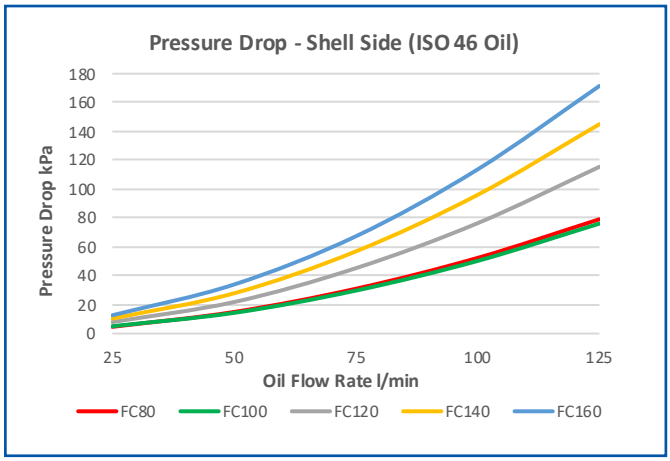
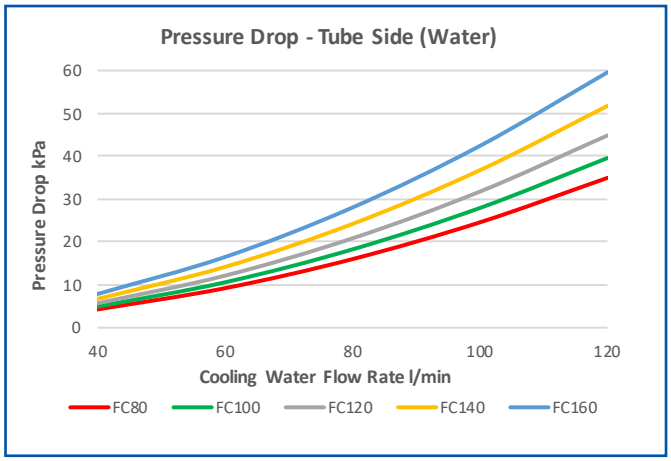
Pressure Drop

The graphs show the typical pressure drop that is expected when using a normal flow, three pass, FC series oil cooler. Where flow rates or pressure drops are too high, we may be able to offer alternative configurations such as high flow, single pass or two pass models which can accept higher flow rates with reduced pressure drop. Alternatively, a different size cooler can be selected. If detailed pressure drop information for specific flows, fluids or temperatures is required, please contact a distributor or our technical sales team.

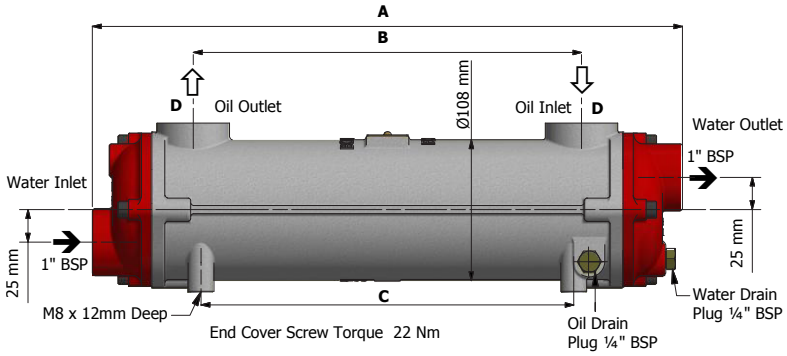




	Pressure Drop (kPa) - Shell Side (ISO 46 Oil)				
Model	25 l/min	50 l/min	75 l/min	100 l/min	125 l/min
FC80	4.7	15.0	31.0	52.4	79.2
FC100	5.1	14.3	29.8	50.3	76.2
FC120	8.0	21.9	45.3	76.5	115.5
FC140	10.4	27.9	56.9	96.1	145.0
FC160	12.7	34.0	67.4	113.7	171.5

	Pressure Drop (kPa) - Tube Side (Water)				
Model	40 l/min	60 l/min	80 l/min	100 l/min	120 l/min
FC80	4.3	9.2	16.0	24.6	34.9
FC100	4.9	10.6	18.3	27.9	39.6
FC120	5.7	12.2	20.9	31.8	44.8
FC140	6.7	14.2	24.2	36.7	51.7
FC160	7.9	16.5	28.0	42.4	59.6

Specification / Materials



Body Diameter 108 mm

	Standard	Marine	Other options
Tube	90/10 Cupro Nickel	90/10 Cupro Nickel	Copper, 70/30 Cupro Nickel, Titanium
Shell	Aluminium	Aluminium	Cast Iron (some models)
End Covers	Cast Iron	Composite or Brass / Bronze	2 pass and single pass in cast iron and brass / bronze
Seals	Nitrile	Nitrile	Viton, EPDM

Model	Max Flow	Number of Tubes	Surface Area	Volume(litres)		Weight	A	B	C	D	D*
	Shell side		(m^2)	Shell	Tube	kg	mm	mm	mm	BSP	BSP
FC80	140	91	0.32	0.75	0.65	5.5	272	116	104	1"	N/A
FC100	145	91	0.47	1.1	0.84	6.3	358	202	190	1"	1¼"
FC120	116	91	0.64	1.5	1.06	7.3	456	300	288	1"	1¼"
FC140	105	91	0.87	2	1.35	9.4	584	428	288	1"	1¼"
FC160	96	91	1.12	2.6	1.68	11	730	574	434	1"	1¼"

Please note: dimensions marked D* are for high flow versions only. FC80 models are not available in high flow versions.

Flow rates – Tube Side

Flow rate is important to the performance of the oil cooler but it is also crucial that minimum and maximum flow rates are adhered to in order to ensure longevity of the unit in service. Please refer to the following table for minimum and maximum flow rates.

	Minimum Flow Rate (l/min) Based on 1m/s Velocity			Maximum Flow Rate (l/min) Sea Water - Based on 2m/s Velocity			Maximum Flow Rate (l/min) Fresh Water - Based on 3m/s Velocity		
Model	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass
FC Series	115	60	40	230	120	80	380	200	135

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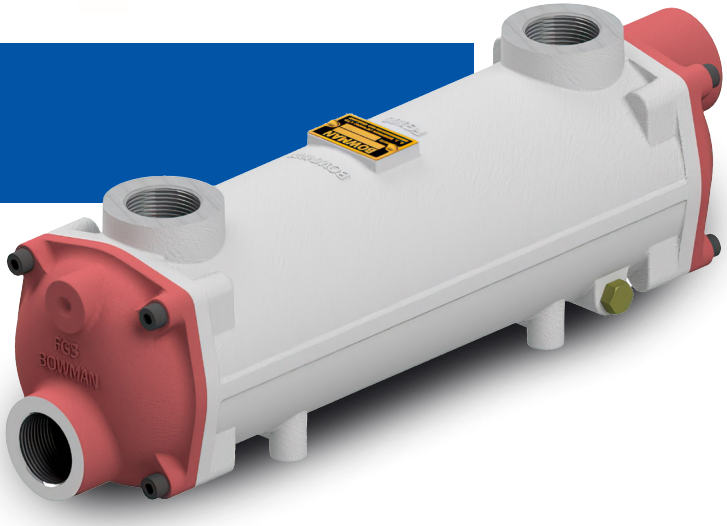
PRODUCT PROFILE

FG Series
Hydraulic Oil Coolers



Introduction

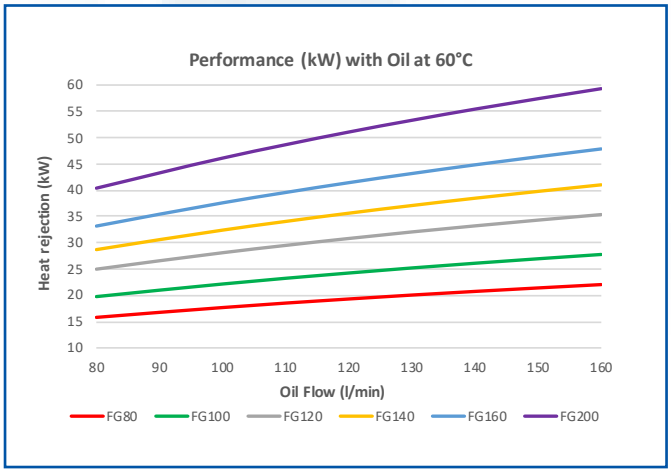
Bowman hydraulic oil coolers offer efficient, reliable heat transfer performance for a wide range of cooling requirements. Suitable for cooling a variety of oils, using either fresh or sea water, they have become the unit of choice for hydraulic engineers the world over.

Typical Performance

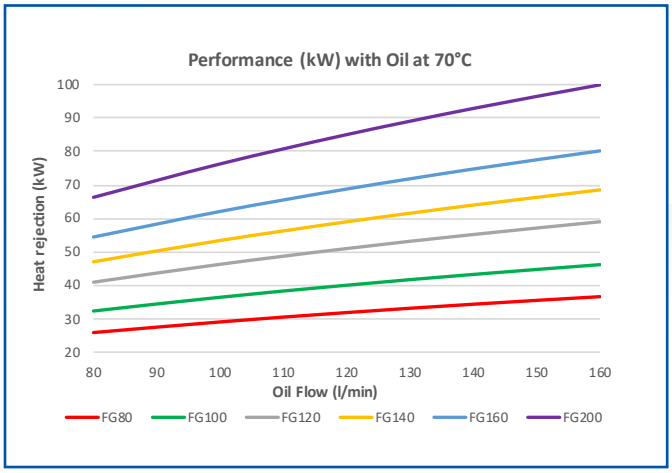
Bowman FG oil coolers can remove from around 16kW up to 100kW of heat and the tables and graphs below show examples of their cooling performance throughout the range, using different water flow rates and oil temperatures.

The figures show typical heat transfer performance and any changes in temperature, flow rate or fluids will significantly alter their performance, so whilst this information is provided for guidance, specific application details should be sent to Bowman, or an authorised distributor, to ensure the correct unit is specified.

ISO 46 Oil at 60°C on inlet to the cooler
Water inlet temperature: 30°C at 80 l/min



ISO 46 Oil at 70°C on inlet to the cooler
Water inlet temperature: 25°C at 110 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	80 l/min	100 l/min	120 l/min	140 l/min	160 l/min
FG80	15.8	17.7	19.3	20.7	22.0
FG100	19.8	22.2	24.2	26.1	27.8
FG120	25.0	28.1	30.8	33.2	35.4
FG140	28.7	32.4	35.6	38.5	41.0
FG160	33.2	37.6	41.4	44.8	47.9
FG200	40.4	46.1	51.1	55.4	59.3

	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	80 l/min	100 l/min	120 l/min	140 l/min	160 l/min
FG80	25.9	29.0	31.8	34.3	36.6
FG100	32.3	36.4	40.0	43.2	46.2
FG120	40.9	46.3	51.0	55.2	59.0
FG140	47.0	53.4	59.0	64.0	68.5
FG160	54.4	62.1	68.8	74.8	80.2
FG200	66.3	76.3	85.1	92.9	99.9

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	80 l/min	100 l/min	120 l/min	140 l/min	160 l/min
FG80	53.1	53.9	54.4	54.9	55.2
FG100	51.4	52.3	53.0	53.5	54.0
FG120	49.1	50.2	51.1	51.8	52.3
FG140	47.5	48.7	49.7	50.4	51.1
FG160	45.5	46.9	48.0	48.8	49.6
FG200	42.3	43.9	45.1	46.2	47.1

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	80 l/min	100 l/min	120 l/min	140 l/min	160 l/min
FG80	58.9	60.0	60.9	61.6	62.1
FG100	56.0	57.4	58.5	59.4	60.1
FG120	52.3	54.0	55.3	56.4	57.3
FG140	49.6	51.5	53.0	54.2	55.2
FG160	46.3	48.4	50.1	51.5	52.6
FG200	40.9	43.3	45.2	46.9	48.2

Computer Selection Programme

Given specific details including oil type and flow rate, temperatures of oil and water and heat dissipation required we can use computer aided selection software to accurately select the ideal unit for your application. Please contact our technical sales team or your local Bowman distributor for assistance.

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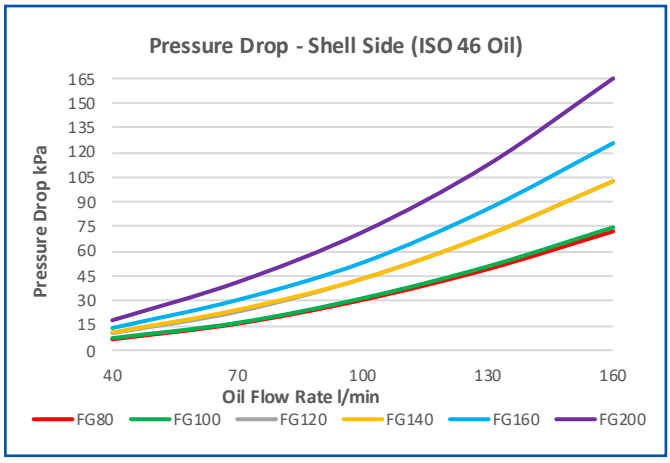
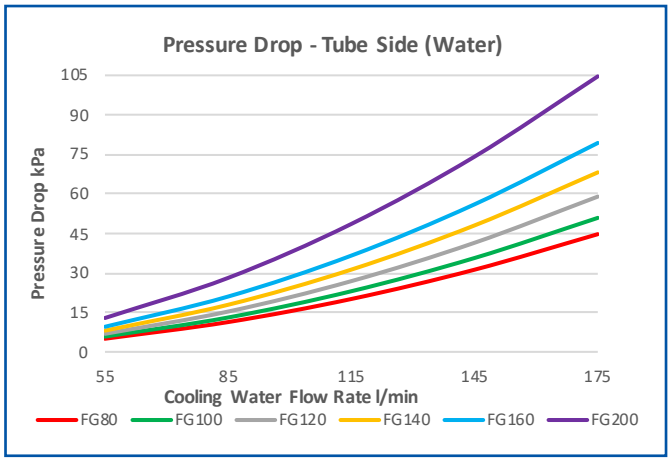
Pressure Drop

The graphs show the typical pressure drop that is expected when using a normal flow, three pass, FG series oil cooler. Where flow rates or pressure drops are too high, we may be able to offer alternative configurations such as high flow, single pass or two pass models which can accept higher flow rates with reduced pressure drop. Alternatively, a different size cooler can be selected. If detailed pressure drop information for specific flows, fluids or temperatures is required, please contact a distributor or our technical sales team.

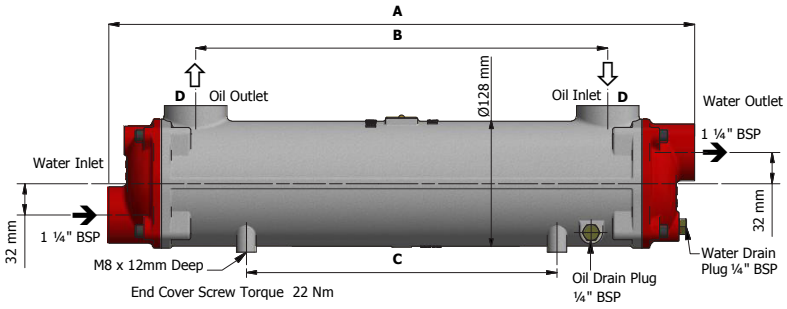




	Pressure Drop (kPa) - Shell Side (ISO 46 Oil)				
Model	40 l/min	70 l/min	100 l/min	130 l/min	160 l/min
FG80	6.6	16.1	30.6	49.3	72.2
FG100	7.4	16.6	31.6	50.9	74.6
FG120	10.4	23.4	43.5	70.1	102.7
FG140	10.8	24.5	43.5	70.1	102.7
FG160	13.5	30.5	53.3	85.9	125.8
FG200	18.2	41.4	71.8	112.7	165.1

	Pressure Drop (kPa) - Tube Side (Water)				
Model	55 l/min	85 l/min	115 l/min	145 l/min	175 l/min
FG80	5.0	11.3	20.1	31.2	44.7
FG100	5.8	13.1	23.0	35.7	50.9
FG120	6.9	15.3	26.9	41.4	59.0
FG140	8.1	17.9	31.3	48.0	68.2
FG160	9.6	21.0	36.6	56.0	79.3
FG200	12.9	28.1	48.6	74.2	104.6

Specification / Materials



Body Diameter 128 mm

	Standard	Marine	Other options
Tube	90/10 Cupro Nickel	90/10 Cupro Nickel	Copper, 70/30 Cupro Nickel, Titanium
Shell	Aluminium	Aluminium	Cast Iron (some models)
End Covers	Cast Iron	Composite or Brass / Bronze	2 pass and single pass in cast iron and brass / bronze
Seals	Nitrile	Nitrile	Viton, EPDM

Model	Max Flow	Number of Tubes	Surface Area	Volume(litres)		Weight	A	B	C	D	D*
	Shell side		(m^2)	Shell	Tube	kg	mm	mm	mm	BSP	BSP
FG80	192	127	0.66	1.64	1.26	8.5	374	196	92	1¼"	1½"
FG100	190	127	0.91	2.4	1.56	10	472	294	190	1¼"	1½"
FG120	160	127	1.22	3	1.96	12	600	422	318	1¼"	1½"
FG140	160	127	1.58	3.9	2.42	14.5	746	568	464	1¼"	1½"
FG160	145	127	2.02	5	2.97	17.5	924	746	642	1¼"	1½"

Please note: Dimensions marked D* are for high flow versions only.

Flow rates – Tube Side

Flow rate is important to the performance of the oil cooler but it is also crucial that minimum and maximum flow rates are adhered to in order to ensure longevity of the unit in service. Please refer to the following table for minimum and maximum flow rates.

	Minimum Flow Rate (l/min) Based on 1m/s Velocity			Maximum Flow Rate (l/min) Sea Water - Based on 2m/s Velocity			Maximum Flow Rate (l/min) Fresh Water - Based on 3m/s Velocity		
Model	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass
FG Series	160	85	55	320	170	110	530	270	180

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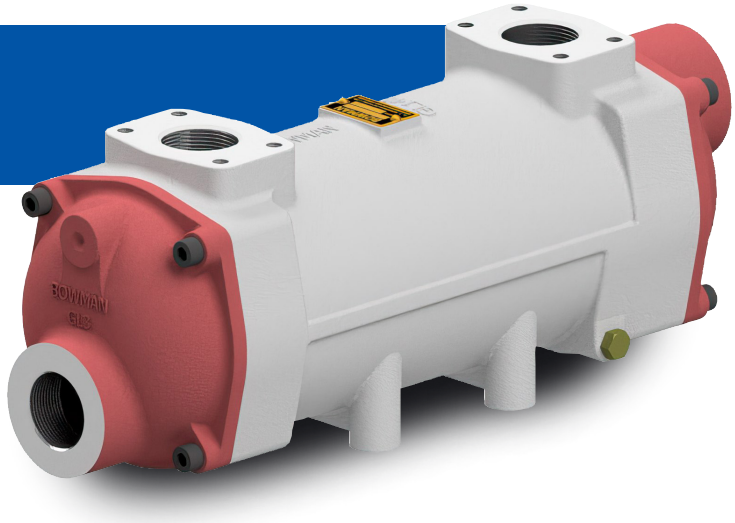
PRODUCT PROFILE

GL Series
Hydraulic Oil Coolers



Introduction

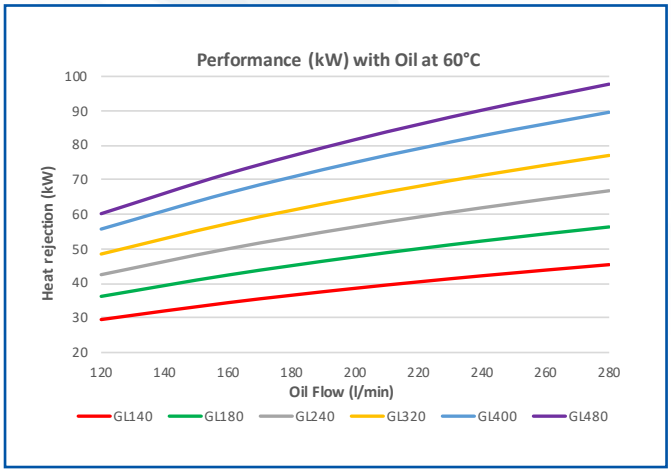
Bowman hydraulic oil coolers offer efficient, reliable heat transfer performance for a wide range of cooling requirements. Suitable for cooling a variety of oils, using either fresh or sea water, they have become the unit of choice for hydraulic engineers the world over.

Typical Performance

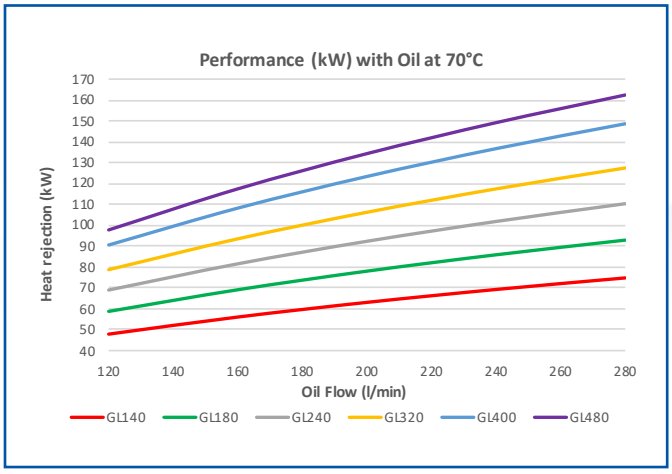
Bowman GL oil coolers can remove from around 30kW up to 162kW of heat and the tables and graphs below show examples of their cooling performance throughout the range, using different water flow rates and oil temperatures.

The figures show typical heat transfer performance and any changes in temperature, flow rate or fluids will significantly alter their performance, so whilst this information is provided for guidance, specific application details should be sent to Bowman, or an authorised distributor, to ensure the correct unit is specified.

ISO 46 Oil at 60°C on inlet to the cooler
Water inlet temperature: 30°C at 150 l/min



ISO 46 Oil at 70°C on inlet to the cooler
Water inlet temperature: 25°C at 200 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	120 l/min	160 l/min	200 l/min	240 l/min	280 l/min
GL140	29.6	34.5	38.6	42.2	45.5
GL180	36.3	42.5	47.7	52.3	56.4
GL240	42.6	50.1	56.4	62.0	66.9
GL320	48.5	57.4	64.8	71.3	77.1
GL400	55.8	66.2	75.1	82.8	89.6
GL480	60.2	71.9	81.7	90.2	97.8

	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	120 l/min	160 l/min	200 l/min	240 l/min	280 l/min
GL140	47.9	56.1	63.1	69.3	74.8
GL180	58.8	69.1	78.0	85.9	92.9
GL240	69.0	81.6	92.3	101.8	110.3
GL320	78.7	93.5	106.2	117.4	127.4
GL400	90.6	108.2	123.4	136.7	148.6
GL480	97.8	117.4	134.3	149.2	162.4

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	120 l/min	160 l/min	200 l/min	240 l/min	280 l/min
GL140	51.4	52.5	53.3	53.9	54.4
GL180	49.5	50.8	51.7	52.4	53.0
GL240	47.6	49.1	50.2	51.0	51.7
GL320	45.9	47.5	48.7	49.6	50.4
GL400	43.7	45.5	46.9	48.0	48.8
GL480	42.4	44.3	45.7	46.9	47.8

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	120 l/min	160 l/min	200 l/min	240 l/min	280 l/min
GL140	56.2	57.9	59.1	60.1	60.8
GL180	53.0	55.0	56.5	57.6	58.6
GL240	50.0	52.3	54.0	55.3	56.4
GL320	47.1	49.7	51.6	53.0	54.2
GL400	43.6	46.4	48.5	50.2	51.6
GL480	41.4	44.3	46.6	48.4	49.8

Computer Selection Programme

Given specific details including oil type and flow rate, temperatures of oil and water and heat dissipation required we can use computer aided selection software to accurately select the ideal unit for your application. Please contact our technical sales team or your local Bowman distributor for assistance.

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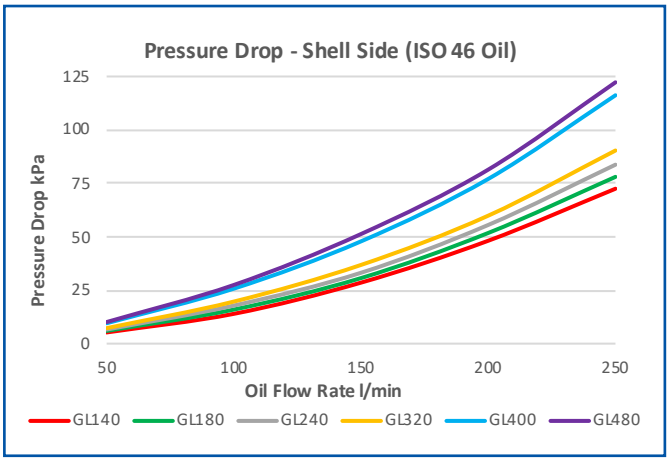
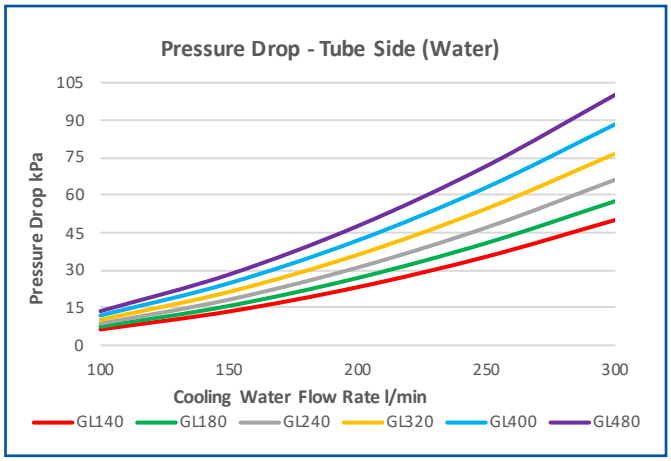
Pressure Drop

The graphs show the typical pressure drop that is expected when using a normal flow, three pass, GL series oil cooler. Where flow rates or pressure drops are too high, we may be able to offer alternative configurations such as high flow, single pass or two pass models which can accept higher flow rates with reduced pressure drop. Alternatively, a different size cooler can be selected. If detailed pressure drop information for specific flows, fluids or temperatures is required, please contact a distributor or our technical sales team.

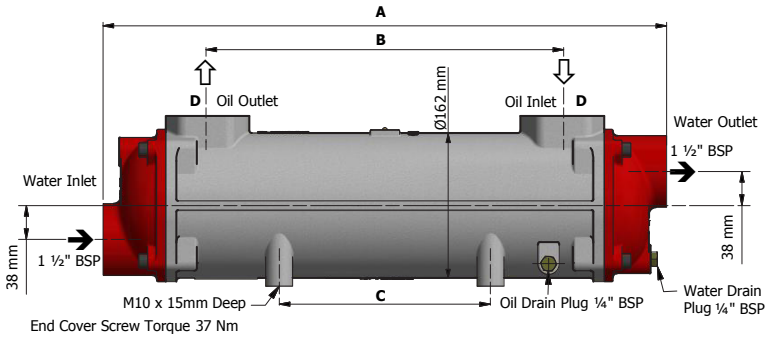




	Pressure Drop (kPa) - Shell Side (ISO 46 Oil)				
Model	50 l/min	100 l/min	150 l/min	200 l/min	250 l/min
GL140	5.3	14.0	28.6	48.2	72.5
GL180	6.0	16.0	30.7	51.8	78.0
GL240	6.6	17.8	33.2	55.6	83.7
GL320	7.3	19.7	36.9	59.9	90.4
GL400	9.6	25.8	47.9	77.1	116.2
GL480	10.2	27.5	51.3	81.5	122.3

	Pressure Drop (kPa) - Tube Side (Water)				
Model	150 l/min	225 l/min	115 l/min	145 l/min	175 l/min
GL140	6.4	13.6	23.3	35.5	50.1
GL180	7.5	15.8	27.0	40.9	57.7
GL240	8.7	18.3	31.1	47.1	66.2
GL320	10.2	21.4	36.2	54.7	76.7
GL400	12.0	24.9	42.0	63.2	88.4
GL480	13.7	28.4	47.8	71.8	100.2

Specification / Materials



Body Diameter 162 mm

	Standard	Marine	Other options
Tube	90/10 Cupro Nickel	90/10 Cupro Nickel	Copper, 70/30 Cupro Nickel, Titanium
Shell	Aluminium	Aluminium	Cast Iron (some models)
End Covers	Cast Iron	Composite or Brass / Bronze	2 pass and single pass in cast iron and brass / bronze
Seals	Nitrile	Nitrile	Viton, EPDM

Model	Max Flow	Number of Tubes	Surface Area	Volume(litres)		Weight	A	B	C	D	D*
	Shell side		(m^2)	Shell	Tube	kg	mm	mm	mm	BSP	BSP
GL140	300	217	1.55	3.6	3.1	18	502	272	108	1½"	Ø 51mm
GL180	285	217	2.1	4.8	3.8	21	630	400	236	1½"	Ø 51mm
GL240	280	217	2.72	6.3	4.6	25	776	546	382	1½"	Ø 51mm
GL320	270	217	3.48	8	5.5	30	954	724	560	1½"	Ø 51mm
GL400	240	217	4.35	10	6.6	36	1156	926	762	1½"	Ø 51mm
GL480	235	217	5.22	12.2	7.7	42	1360	1130	966	1½"	Ø 51mm

Please note: Dimensions marked D* are for high flow versions only.

Flow rates – Tube Side

Flow rate is important to the performance of the oil cooler but it is also crucial that minimum and maximum flow rates are adhered to in order to ensure longevity of the unit in service. Please refer to the following table for minimum and maximum flow rates.

	Minimum Flow Rate (l/min) Based on 1m/s Velocity			Maximum Flow Rate (l/min) Sea Water - Based on 2m/s Velocity			Maximum Flow Rate (l/min) Fresh Water - Based on 3m/s Velocity		
Model	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass
GL Series	280	145	100	560	290	200	900	470	320

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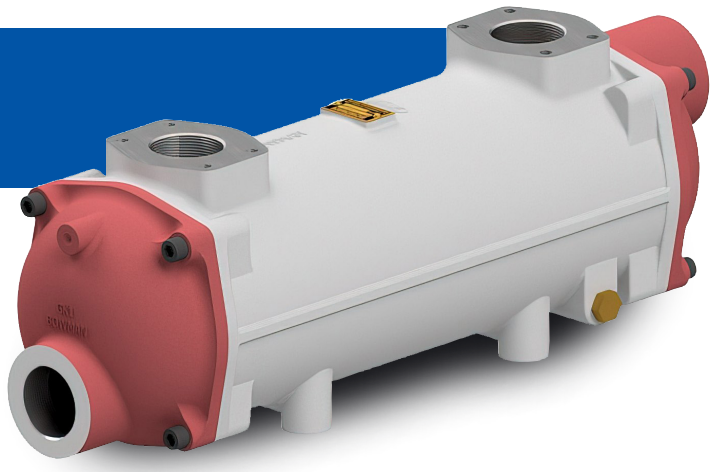
PRODUCT PROFILE

GK Series
Hydraulic Oil Coolers



Introduction

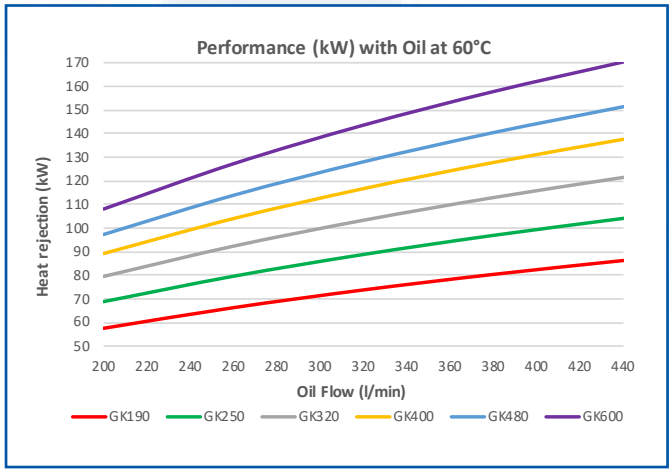
Bowman hydraulic oil coolers offer efficient, reliable heat transfer performance for a wide range of cooling requirements. Suitable for cooling a variety of oils, using either fresh or sea water, they have become the unit of choice for hydraulic engineers the world over.

Typical Performance

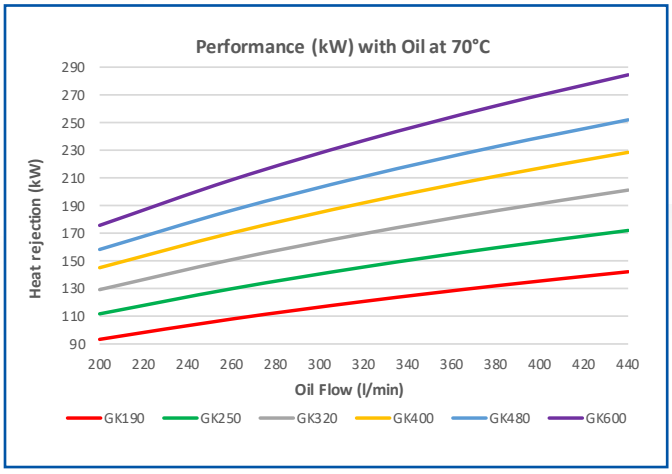
Bowman GK oil coolers can remove from around 58kW up to 285kW of heat and the tables and graphs below show examples of their cooling performance throughout the range, using different water flow rates and oil temperatures.

The figures show typical heat transfer performance and any changes in temperature, flow rate or fluids will significantly alter their performance, so whilst this information is provided for guidance, specific application details should be sent to Bowman, or an authorised distributor, to ensure the correct unit is specified.

ISO 46 Oil at 60°C on inlet to the cooler
Water inlet temperature: 30°C at 225 l/min



ISO 46 Oil at 70°C on inlet to the cooler
Water inlet temperature: 25°C at 300 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	200 l/min	260 l/min	320 l/min	380 l/min	440 l/min
GK190	57.5	66.3	73.8	80.3	86.2
GK250	68.8	79.6	88.8	96.9	104.1
GK320	79.5	92.3	103.3	112.9	121.4
GK400	89.2	104.0	116.7	127.8	137.6
GK480	97.3	113.9	128.1	140.4	151.4
GK600	108.1	127.3	143.6	157.8	170.4

	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	200 l/min	260 l/min	320 l/min	380 l/min	440 l/min
GK190	93.4	108.0	120.8	132.0	142.2
GK250	111.8	129.9	145.6	159.5	172.0
GK320	129.3	150.9	169.7	186.3	201.2
GK400	145.2	170.3	192.0	211.2	228.5
GK480	158.3	186.6	211.0	232.6	251.9
GK600	175.8	208.6	237.0	262.1	284.5

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	200 l/min	260 l/min	320 l/min	380 l/min	440 l/min
GK190	50.0	51.1	52.0	52.7	53.2
GK250	48.0	49.3	50.3	51.1	51.8
GK320	46.1	47.6	48.7	49.7	50.4
GK400	44.4	46.0	47.3	48.3	49.1
GK480	42.9	44.7	46.0	47.1	48.0
GK600	41.0	42.8	44.3	45.5	46.5

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	200 l/min	260 l/min	320 l/min	380 l/min	440 l/min
GK190	53.8	55.6	57.0	58.0	58.9
GK250	50.6	52.7	54.2	55.5	56.5
GK320	47.5	49.8	51.6	53.0	54.2
GK400	44.6	47.2	49.1	50.7	52.0
GK480	42.3	44.9	47.0	48.7	50.1
GK600	39.1	41.9	44.1	45.9	47.5

Computer Selection Programme

Given specific details including oil type and flow rate, temperatures of oil and water and heat dissipation required we can use computer aided selection software to accurately select the ideal unit for your application. Please contact our technical sales team or your local Bowman distributor for assistance.

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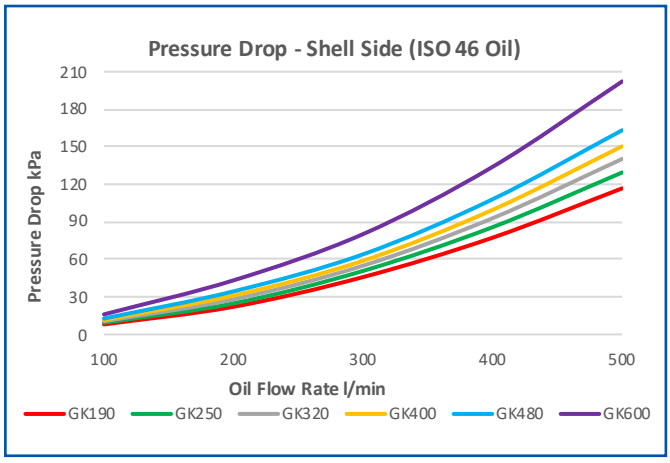
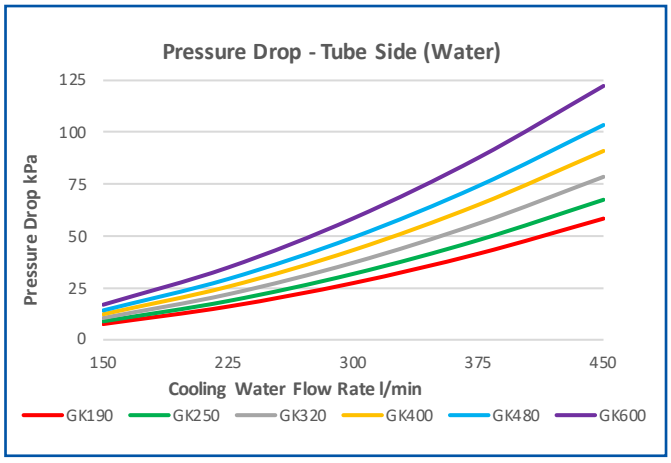
Pressure Drop

The graphs show the typical pressure drop that is expected when using a normal flow, three pass, GK series oil cooler. Where flow rates or pressure drops are too high, we may be able to offer alternative configurations such as high flow, single pass or two pass models which can accept higher flow rates with reduced pressure drop. Alternatively, a different size cooler can be selected. If detailed pressure drop information for specific flows, fluids or temperatures is required, please contact a distributor or our technical sales team.

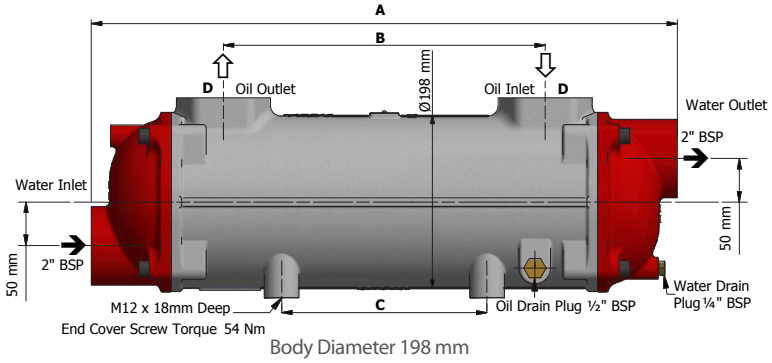




	Pressure Drop (kPa) - Shell Side (ISO 46 Oil)				
Model	100 l/min	200 l/min	300 l/min	400 l/min	500 l/min
GK190	8.1	22.2	45.9	77.4	116.8
GK250	9.4	24.9	50.8	85.8	129.5
GK320	10.6	28.1	55.0	92.9	140.3
GK400	11.6	31.2	58.9	99.6	150.4
GK480	12.8	34.5	64.1	108.1	163.2
GK600	16.1	43.3	80.3	134.0	202.3

	Pressure Drop (kPa) - Tube Side (Water)				
Model	150 l/min	225 l/min	115 l/min	145 l/min	175 l/min
GK190	7.6	16.0	27.4	41.5	58.4
GK250	8.9	18.7	31.8	48.1	67.5
GK320	10.5	22.0	37.2	56.1	78.5
GK400	12.4	25.7	43.3	65.1	91.0
GK480	14.2	29.4	49.4	74.1	103.5
GK600	17.0	34.9	58.6	87.8	122.3

Specification / Materials



Body Diameter 198 mm

	Standard	Marine	Other options
Tube	90/10 Cupro Nickel	90/10 Cupro Nickel	Copper, 70/30 Cupro Nickel, Titanium
Shell	Aluminium	Aluminium	Cast Iron (some models)
End Covers	Cast Iron	C coat or Brass / Bronze	2 pass and single pass in cast iron and brass / bronze
Seals	Nitrile	Nitrile	Viton, EPDM

Model	Max Flow	Number of Tubes	Surface Area	Volume(litres)		Weight	A	B	C	D	D*
	Shell side		(m^2)	Shell	Tube	kg	mm	mm	mm	BSP	mm
GK190	460	331	3.17	7	6.3	34	674	370	236	2"	Ø 64
GK250	445	331	4.12	9	7.5	39	820	516	382	2"	Ø 64
GK320	430	331	5.27	11.6	9	46	998	694	560	2"	Ø 64
GK400	420	331	6.58	14.6	10.6	54	1200	896	762	2"	Ø 64
GK480	400	331	7.9	17.4	12.3	62	1404	1100	966	2"	Ø 64
GK600	365	331	9.89	22.1	14.7	74	1708	1404	1270	2"	Ø 64

Please note: Dimensions marked D* are for high flow versions only.

Flow rates – Tube Side

Flow rate is important to the performance of the oil cooler but it is also crucial that minimum and maximum flow rates are adhered to in order to ensure longevity of the unit in service. Please refer to the following table for minimum and maximum flow rates.

	Minimum Flow Rate (l/min) Based on 1m/s Velocity			Maximum Flow Rate (l/min) Sea Water - Based on 2m/s Velocity			Maximum Flow Rate (l/min) Fresh Water - Based on 3m/s Velocity		
Model	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass
GK Series	450	225	150	900	450	300	1400	690	460

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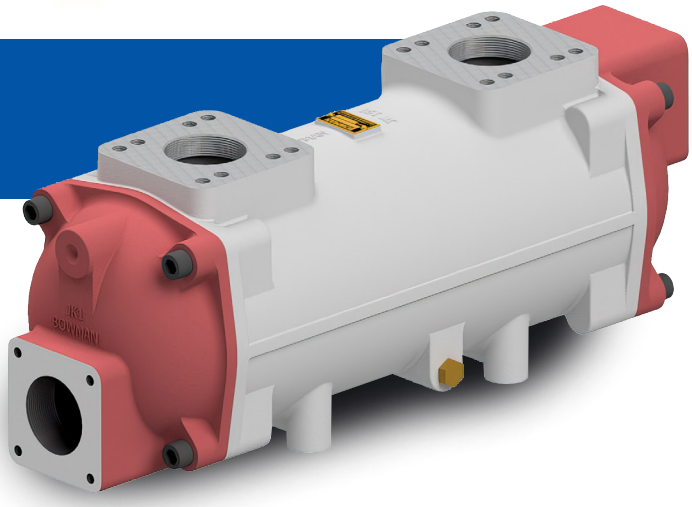
PRODUCT PROFILE

JK Series
Hydraulic Oil Coolers



Introduction

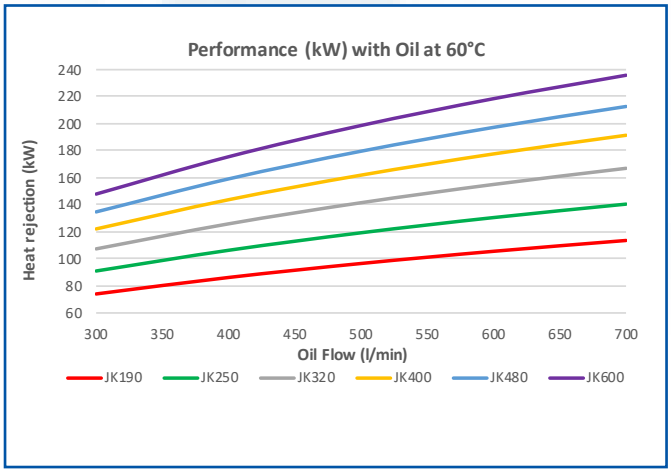
Bowman hydraulic oil coolers offer efficient, reliable heat transfer performance for a wide range of cooling requirements. Suitable for cooling a variety of oils, using either fresh or sea water, they have become the unit of choice for hydraulic engineers the world over.

Typical Performance

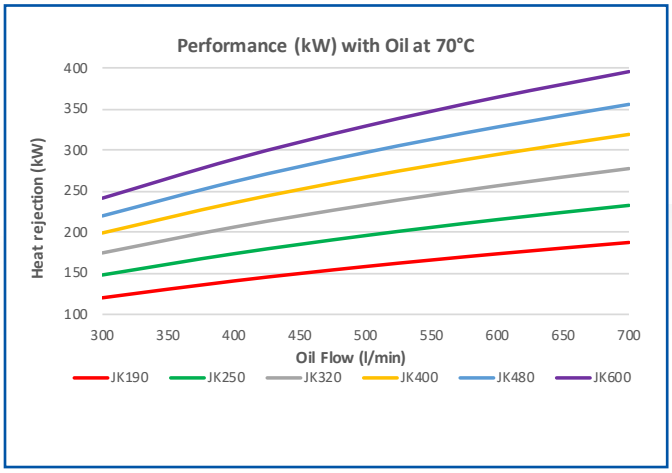
Bowman JK oil coolers can remove from around 74kW up to 395kW of heat and the tables and graphs below show examples of their cooling performance throughout the range, using different water flow rates and oil temperatures.

The figures show typical heat transfer performance and any changes in temperature, flow rate or fluids will significantly alter their performance, so whilst this information is provided for guidance, specific application details should be sent to Bowman, or an authorised distributor, to ensure the correct unit is specified.

ISO 46 Oil at 60°C on inlet to the cooler
Water inlet temperature: 30°C at 300 l/min



ISO 46 Oil at 70°C on inlet to the cooler
Water inlet temperature: 25°C at 400 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	300 l/min	400 l/min	500 l/min	600 l/min	700 l/min
JK190	74.0	86.2	96.6	105.6	113.6
JK250	91.0	106.4	119.3	130.6	140.5
JK320	107.4	125.9	141.6	155.1	167.0
JK400	122.1	143.8	162.0	177.7	191.5
JK480	134.7	159.2	179.7	197.3	212.8
JK600	147.9	175.6	198.7	218.5	235.9

	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	300 l/min	400 l/min	500 l/min	600 l/min	700 l/min
JK190	120.2	140.7	158.2	173.7	187.5
JK250	147.9	173.8	195.9	215.3	232.6
JK320	174.8	206.2	233.0	256.5	277.4
JK400	199.0	235.8	267.2	294.6	319.0
JK480	219.8	261.5	297.0	328.0	355.5
JK600	241.3	288.8	329.1	364.2	395.4

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	300 l/min	400 l/min	500 l/min	600 l/min	700 l/min
JK190	51.4	52.5	53.3	53.9	54.4
JK250	49.4	50.7	51.7	52.4	53.0
JK320	47.5	49.0	50.1	51.0	51.7
JK400	45.8	47.5	48.7	49.7	50.5
JK480	44.3	46.1	47.5	48.5	49.4
JK600	42.7	44.6	46.1	47.3	48.2

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	300 l/min	400 l/min	500 l/min	600 l/min	700 l/min
JK190	56.2	57.9	59.1	60.0	60.8
JK250	52.9	55.0	56.5	57.6	58.5
JK320	49.7	52.1	53.9	55.2	56.3
JK400	46.9	49.5	51.4	53.0	54.2
JK480	44.4	47.2	49.3	51.0	52.4
JK600	41.8	44.8	47.1	48.9	50.4

Computer Selection Programme

Given specific details including oil type and flow rate, temperatures of oil and water and heat dissipation required we can use computer aided selection software to accurately select the ideal unit for your application. Please contact our technical sales team or your local Bowman distributor for assistance.

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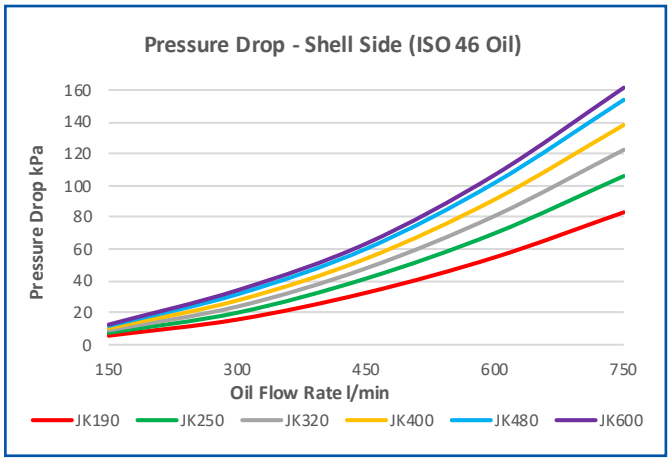
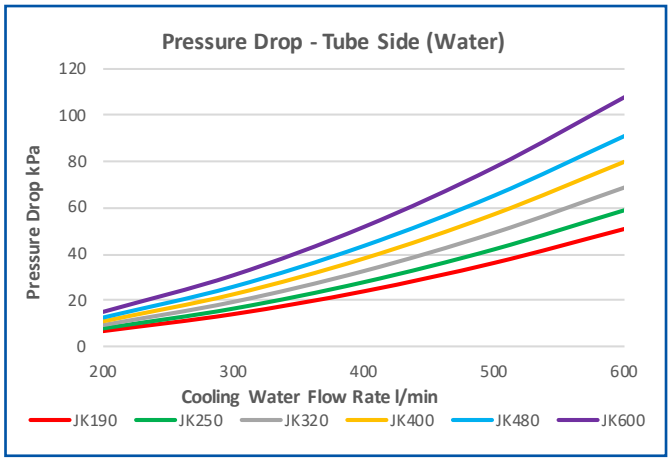
Pressure Drop

The graphs show the typical pressure drop that is expected when using a normal flow, three pass, JK series oil cooler. Where flow rates or pressure drops are too high, we may be able to offer alternative configurations such as high flow, single pass or two pass models which can accept higher flow rates with reduced pressure drop. Alternatively, a different size cooler can be selected. If detailed pressure drop information for specific flows, fluids or temperatures is required, please contact a distributor or our technical sales team.

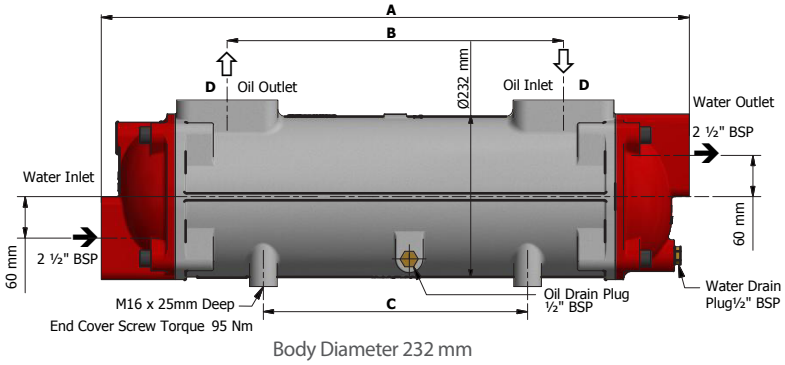




	Pressure Drop (kPa) - Shell Side (ISO 46 Oil)				
Model	150 l/min	300 l/min	450 l/min	600 l/min	750 l/min
JK190	5.7	15.9	32.7	55.0	83.2
JK250	7.6	20.2	41.7	70.1	106.0
JK320	9.1	24.1	48.1	81.0	122.5
JK400	10.5	27.9	54.2	91.4	138.0
JK480	12.0	31.8	60.4	101.8	153.9
JK600	12.8	34.3	63.6	106.8	161.5

	Pressure Drop (kPa) - Tube Side (Water)				
Model	200 l/min	300 l/min	400 l/min	500	600 l/min
JK190	6.7	14.0	23.9	36.1	50.8
JK250	7.8	16.4	27.8	42.0	58.9
JK320	9.3	19.3	32.6	49.1	68.8
JK400	10.9	22.6	38.1	57.2	79.9
JK480	12.5	25.9	43.5	65.2	91.0
JK600	15.0	30.9	51.7	77.4	107.8

Specification / Materials



Body Diameter 232 mm

	Standard	Marine	Other options
Tube	90/10 Cupro Nickel	90/10 Cupro Nickel	Copper, 70/30 Cupro Nickel, Titanium
Shell	Aluminium	Aluminium	Cast Iron (some models)
End Covers	Cast Iron	C coat or Brass / Bronze	2 pass and single pass in cast iron and brass / bronze
Seals	Nitrile	Nitrile	Viton, EPDM

Model	Max Flow	Number of Tubes	Surface Area	Volume(litres)		Weight	A	B	C	D	D*
	Shell side		(m^2)	Shell	Tube	kg	mm	mm	mm	BSP	mm
JK190	830	469	4.52	9.7	8.8	58	704	340	236	2½"	Ø 76
JK250	740	469	5.87	12.5	10.4	66	850	486	382	2½"	Ø 76
JK320	690	469	7.51	16.1	12.5	78	1028	664	560	2½"	Ø 76
JK400	650	469	9.37	20.3	14.7	92	1230	866	762	2½"	Ø 76
JK480	620	469	11.25	24.2	17.1	105	1434	1070	966	2½"	Ø 76
JK600	600	469	14.09	30.7	20.4	126	1738	1374	1270	2½"	Ø 76

Please note: dimensions marked D* are for high flow versions only.

Flow rates – Tube Side

Flow rate is important to the performance of the oil cooler but it is also crucial that minimum and maximum flow rates are adhered to in order to ensure longevity of the unit in service. Please refer to the following table for minimum and maximum flow rates.

	Minimum Flow Rate (l/min) Based on 1m/s Velocity			Maximum Flow Rate (l/min) Sea Water - Based on 2m/s Velocity			Maximum Flow Rate (l/min) Fresh Water - Based on 3m/s Velocity		
Model	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass
JK Series	600	300	200	1200	600	400	2000	1000	660

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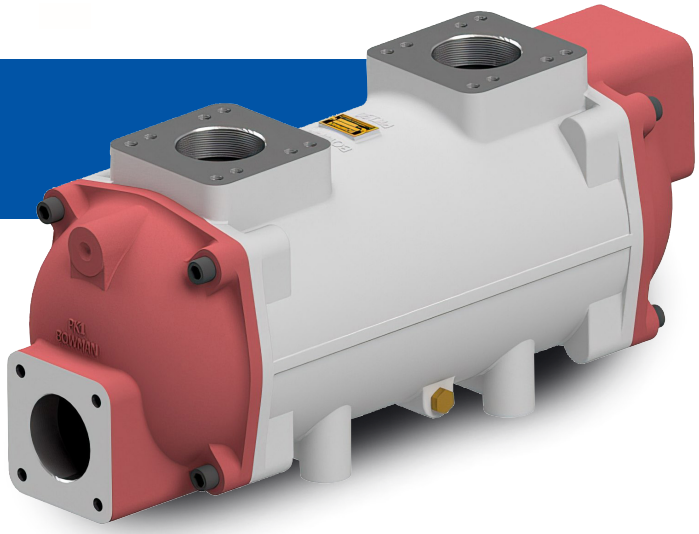
PRODUCT PROFILE

PK Series
Hydraulic Oil Coolers



Introduction

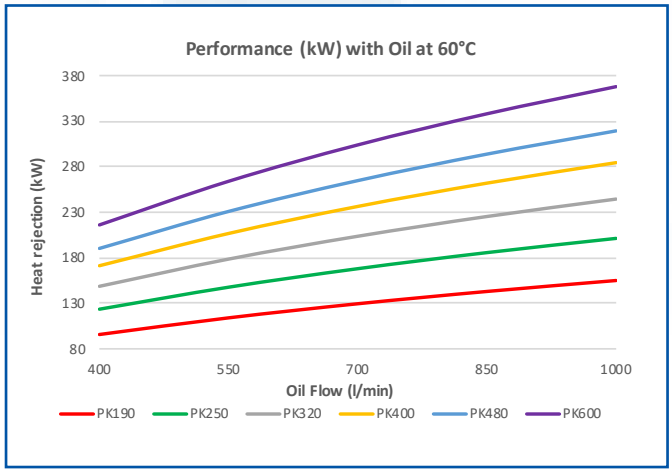
Bowman hydraulic oil coolers offer efficient, reliable heat transfer performance for a wide range of cooling requirements. Suitable for cooling a variety of oils, using either fresh or sea water, they have become the unit of choice for hydraulic engineers the world over.

Typical Performance

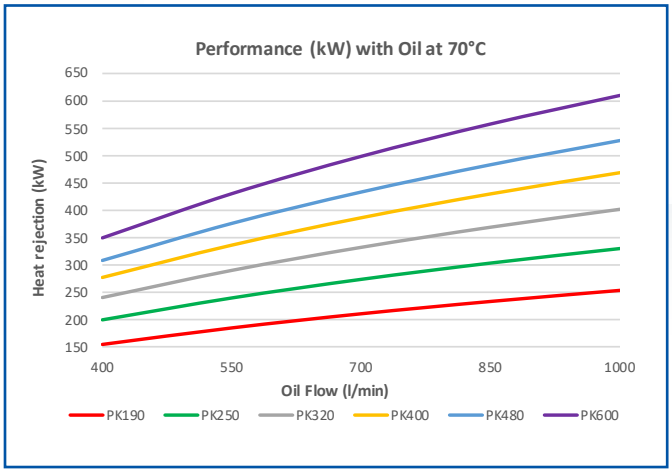
Bowman PK oil coolers can remove from around 96kW up to 610kW of heat and the tables and graphs below show examples of their cooling performance throughout the range, using different water flow rates and oil temperatures.

The figures show typical heat transfer performance and any changes in temperature, flow rate or fluids will significantly alter their performance, so whilst this information is provided for guidance, specific application details should be sent to Bowman, or an authorised distributor, to ensure the correct unit is specified.

ISO 46 Oil at 60°C on inlet to the cooler
Water inlet temperature: 30°C at 500 l/min



ISO 46 Oil at 70°C on inlet to the cooler
Water inlet temperature: 25°C at 650 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	400 l/min	550 l/min	700 l/min	850 l/min	1000 l/min
PK190	95.8	114.0	129.5	143.0	155.0
PK250	123.6	147.7	168.0	185.7	201.3
PK320	148.7	178.6	203.6	225.3	244.4
PK400	171.3	206.7	236.4	261.9	284.4
PK480	190.3	230.9	264.7	293.8	319.3
PK600	216.1	264.0	303.9	338.1	367.9

	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	400 l/min	550 l/min	700 l/min	850 l/min	1000 l/min
PK190	154.3	184.5	210.3	232.9	253.1
PK250	199.3	239.3	273.3	303.1	329.7
PK320	240.1	289.8	331.9	368.7	401.5
PK400	276.9	336.0	386.0	429.7	468.5
PK480	308.0	375.8	433.1	483.0	527.3
PK600	349.3	430.1	498.4	557.6	609.8

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	400 l/min	550 l/min	700 l/min	850 l/min	1000 l/min
PK190	51.7	52.8	53.6	54.2	54.6
PK250	49.2	50.7	51.7	52.4	53.0
PK320	47.0	48.7	49.9	50.8	51.5
PK400	45.0	46.9	48.2	49.3	50.1
PK480	43.3	45.3	46.8	47.9	48.9
PK600	41.0	43.2	44.8	46.1	47.2

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	400 l/min	550 l/min	700 l/min	850 l/min	1000 l/min
PK190	56.7	58.4	59.7	60.6	61.3
PK250	52.7	54.9	56.5	57.7	58.6
PK320	49.1	51.7	53.6	55.0	56.1
PK400	45.8	48.7	50.8	52.5	53.8
PK480	43.1	46.2	48.5	50.2	51.7
PK600	39.3	42.6	45.1	47.1	48.8

Computer Selection Programme

Given specific details including oil type and flow rate, temperatures of oil and water and heat dissipation required we can use computer aided selection software to accurately select the ideal unit for your application. Please contact our technical sales team or your local Bowman distributor for assistance.

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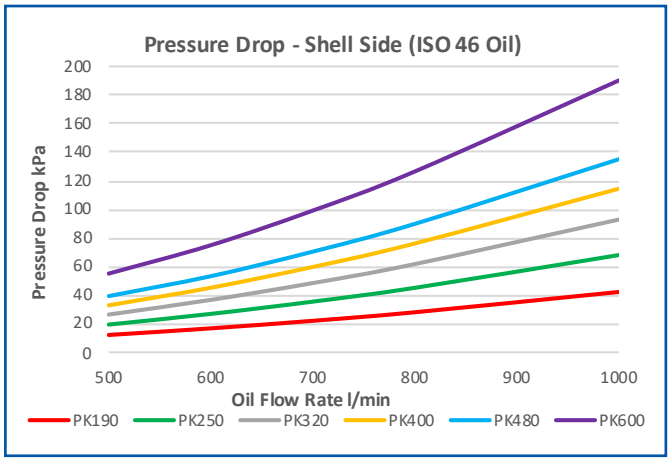
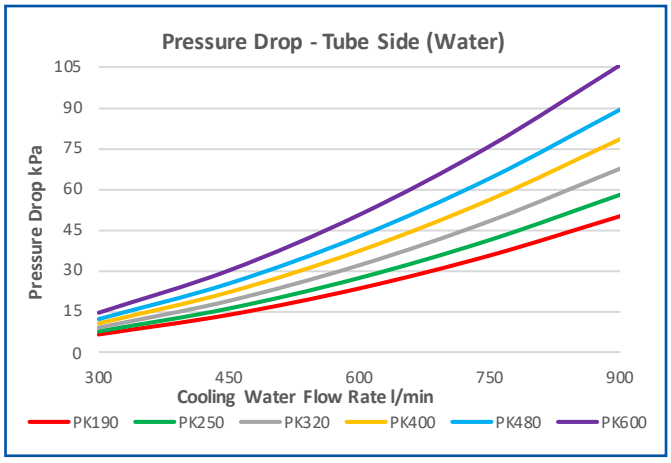
Pressure Drop

The graphs show the typical pressure drop that is expected when using a normal flow, three pass, PK series oil cooler. Where flow rates or pressure drops are too high, we may be able to offer alternative configurations such as high flow, single pass or two pass models which can accept higher flow rates with reduced pressure drop. Alternatively, a different size cooler can be selected. If detailed pressure drop information for specific flows, fluids or temperatures is required, please contact a distributor or our technical sales team.

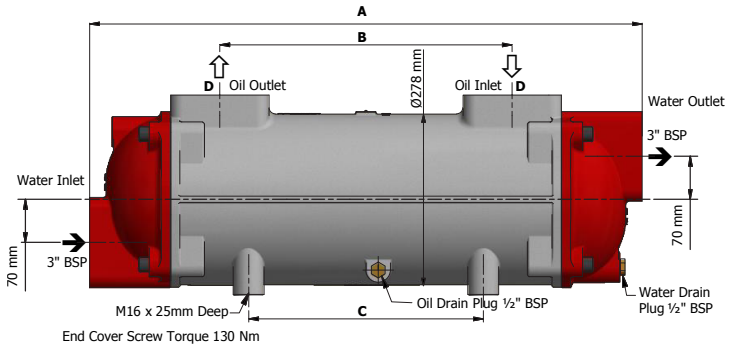




	Pressure Drop (kPa) - Shell Side (ISO 46 Oil)				
Model	500 l/min	600 l/min	700 l/min	800 l/min	1000 l/min
PK190	12.2	16.8	22.1	28.0	42.2
PK250	19.5	26.9	35.5	45.1	68.1
PK320	26.5	36.7	48.5	61.8	92.9
PK400	32.9	45.2	59.8	76.2	114.5
PK480	39.4	53.3	70.5	89.9	135.1
PK600	55.2	75.0	99.2	126.6	190.3

	Pressure Drop (kPa) - Tube Side (Water)				
Model	300 l/min	450 l/min	600 l/min	750 l/min	900 l/min
PK190	6.5	13.8	23.5	35.6	50.1
PK250	7.7	16.1	27.4	41.3	58.0
PK320	9.1	18.9	32.0	48.3	67.6
PK400	10.6	22.1	37.4	56.2	78.5
PK480	12.2	25.3	42.7	64.1	89.4
PK600	14.6	30.1	50.7	75.9	105.7

Specification / Materials



	Standard	Marine	Other options
Tube	90/10 Cupro Nickel	90/10 Cupro Nickel	Copper, 70/30 Cupro Nickel, Titanium
Shell	Aluminium	Aluminium	Cast Iron (some models)
End Covers	Cast Iron	C coat or Brass / Bronze	2 pass and single pass in cast iron and brass / bronze
Seals	Nitrile	Nitrile	Viton, EPDM

Body Diameter 278 mm

Model	Max Flow	Number of Tubes	Surface Area	Volume(litres)		Weight	A	A1	B	C	D	D*
	Shell side		(m^2)	Shell	Tube	kg	mm	mm	mm	mm	BSP	mm
PK190	1600	721	6.98	13.6	16	81	754	706	330	236	3"	Ø 108
PK250	1240	721	9.06	17.7	18.6	94	900	852	476	382	3"	Ø 108
PK320	1060	721	11.6	22.6	21.8	110	1078	1030	654	560	3"	Ø 108
PK400	950	721	14.48	28.5	25.3	125	1280	1232	856	762	3"	Ø 108
PK480	890	721	17.39	34	29	140	1484	1436	1060	966	3"	Ø 108
PK600	750	721	21.77	42.5	34.4	158	1788	1740	1364	1270	3"	Ø 108

Please note: dimensions marked D* are for high flow versions only; dimensions marked A1 are for marine versions only.

Flow rates – Tube Side

Flow rate is important to the performance of the oil cooler but it is also crucial that minimum and maximum flow rates are adhered to in order to ensure longevity of the unit in service. Please refer to the following table for minimum and maximum flow rates.

	Minimum Flow Rate (l/min) Based on 1m/s Velocity			Maximum Flow Rate (l/min) Sea Water - Based on 2m/s Velocity			Maximum Flow Rate (l/min) Fresh Water - Based on 3m/s Velocity		
Model	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass
PK Series	1000	500	325	2000	1000	650	3000	1500	1000

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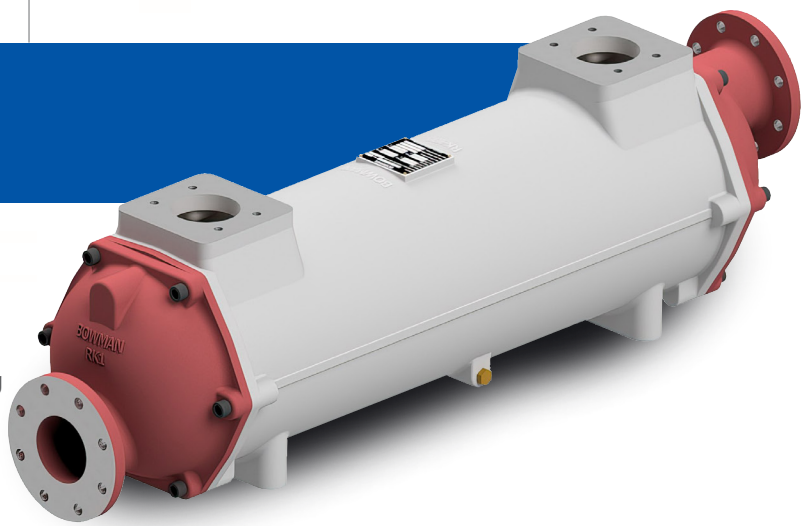
PRODUCT PROFILE

RK Series
Hydraulic Oil Coolers



Introduction

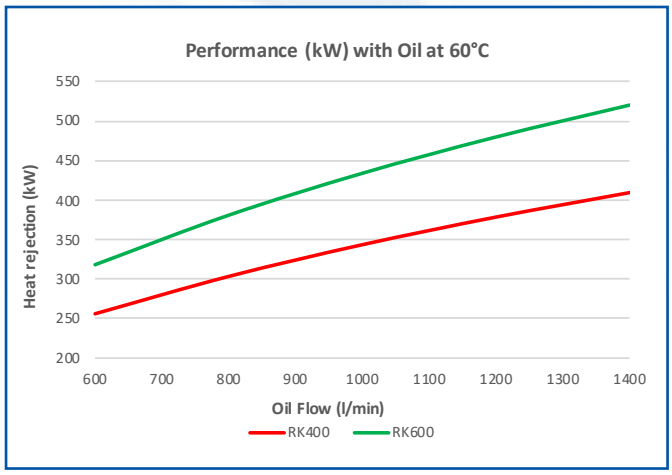
Bowman hydraulic oil coolers offer efficient, reliable heat transfer performance for a wide range of cooling requirements. Suitable for cooling a variety of oils, using either fresh or sea water, they have become the unit of choice for hydraulic engineers the world over.

Typical Performance

Bowman RK oil coolers can remove from around 256kW up to 851kW of heat and the tables and graphs below show examples of their cooling performance throughout the range, using different water flow rates and oil temperatures.

The figures show typical heat transfer performance and any changes in temperature, flow rate or fluids will significantly alter their performance, so whilst this information is provided for guidance, specific application details should be sent to Bowman, or an authorised distributor, to ensure the correct unit is specified.

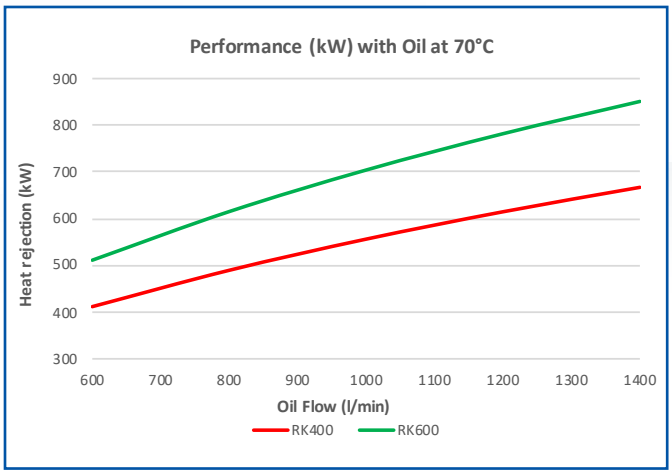
ISO 46 Oil at 60°C on inlet to the cooler
Water inlet temperature: 30°C at 725 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	600 l/min	800 l/min	1000 l/min	1200 l/min	1400 l/min
RK400	256.1	303.3	343.4	378.3	409.2
RK600	318.1	380.7	433.6	479.5	519.8

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	600 l/min	800 l/min	1000 l/min	1200 l/min	1400 l/min
RK400	45.1	46.8	48.0	49.0	49.8
RK600	41.4	43.3	44.8	46.0	47.0

ISO 46 Oil at 70°C on inlet to the cooler
Water inlet temperature: 25°C at 900 l/min



	Heat Dissipation (kW) vs Oil Flow Rate (l/min)				
Model	600 l/min	800 l/min	1000 l/min	1200 l/min	1400 l/min
RK400	411.8	489.6	556.3	614.9	667.2
RK600	511.3	615.3	704.2	782.0	851.0

	Oil Outlet Temp (°C) vs Oil Flow Rate (l/min)				
Model	600 l/min	800 l/min	1000 l/min	1200 l/min	1400 l/min
RK400	46.1	48.7	50.7	52.2	53.5
RK600	40.1	43.1	45.4	47.3	48.8

Computer Selection Programme

Given specific details including oil type and flow rate, temperatures of oil and water and heat dissipation required we can use computer aided selection software to accurately select the ideal unit for your application. Please contact our technical sales team or your local Bowman distributor for assistance.

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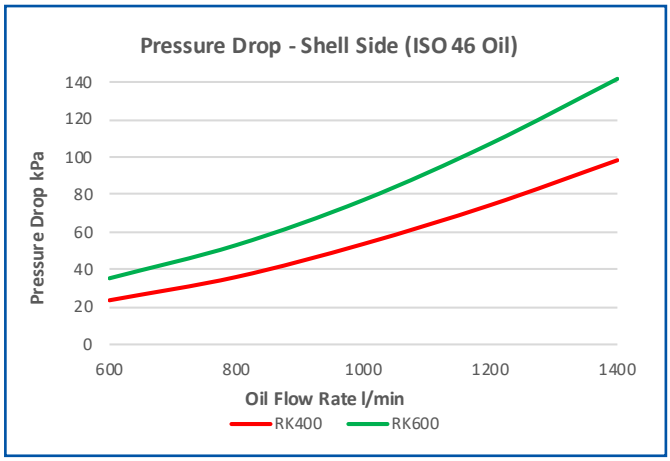
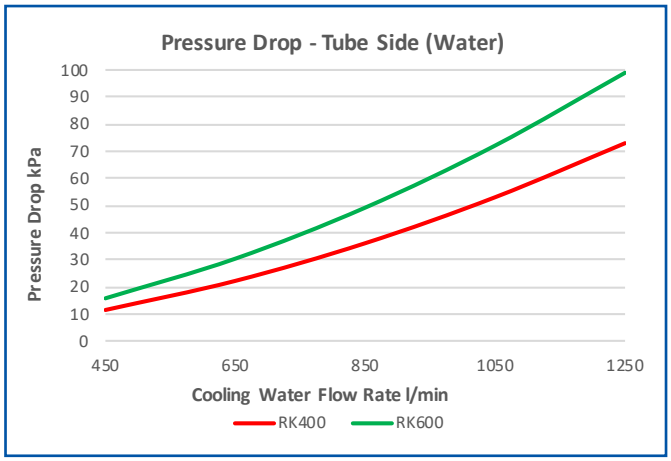
Pressure Drop

The graphs show the typical pressure drop that is expected when using a normal flow, three pass, RK series oil cooler. Where flow rates or pressure drops are too high, we may be able to offer alternative configurations such as high flow, single pass or two pass models which can accept higher flow rates with reduced pressure drop. Alternatively, a different size cooler can be selected. If detailed pressure drop information for specific flows, fluids or temperatures is required, please contact a distributor or our technical sales team.

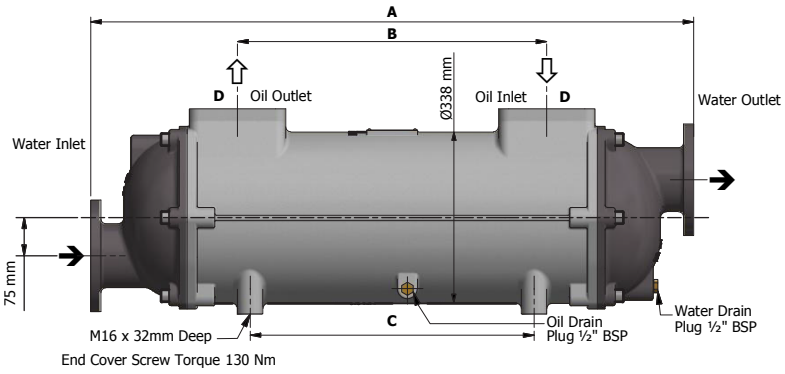




	Pressure Drop (kPa) - Shell Side (ISO 46 Oil)				
Model	600 l/min	800 l/min	1000 l/min	1200 l/min	1400 l/min
RK400	23.6	36.0	53.6	74.4	98.3
RK600	35.4	53.1	77.1	107.1	141.7

	Pressure Drop (kPa) - Tube Side (Water)				
Model	450 l/min	650 l/min	850 l/min	1050 l/min	1250 l/min
RK400	11.4	22.2	36.1	53.0	73.0
RK600	15.8	30.4	49.2	72.1	99.0

Specification / Materials



Body Diameter 338 mm

	Standard	Marine	Other options
Tube	90/10 Cupro Nickel	90/10 Cupro Nickel	Copper, 70/30 Cupro Nickel, Titanium
Shell	Aluminium	Aluminium	N/A
End Covers	Cast Iron	C coat or Brass / Bronze	N/A
Seals	Nitrile	Nitrile	Viton, EPDM

Model	Max Flow	Number of Tubes	Surface Area	Volume(litres)		Weight	A	B	C	D	D*
	Shell side		(m^2)	Shell	Tube	kg	mm	mm	mm	BSP	mm
RK400	1450	1027	20.67	43.4	37.9	186	1392	812	762	Ø 102	Ø 127
RK600	1240	1027	31.08	65.2	50.1	246	1900	1320	1270	Ø 102	Ø 127

Please note: dimensions marked D* are for high flow versions only.

Flow rates – Tube Side

Flow rate is important to the performance of the oil cooler but it is also crucial that minimum and maximum flow rates are adhered to in order to ensure longevity of the unit in service. Please refer to the following table for minimum and maximum flow rates.

	Minimum Flow Rate (l/min) Based on 1m/s Velocity			Maximum Flow Rate (l/min) Sea Water - Based on 2m/s Velocity			Maximum Flow Rate (l/min) Fresh Water - Based on 3m/s Velocity		
Model	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass	1 Pass	2 Pass	3 Pass
RK Series	1400	700	450	2800	1400	900	4300	2150	1400

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