Water Cooled chiller cooling conderserless

ECOLOGICAL
HFC
410A
REFRIGERANT

EWLQ~G/L

SS (Standard Efficiency - Standard Noise) - Cooling Capacity from 87 to 347 kW

CE

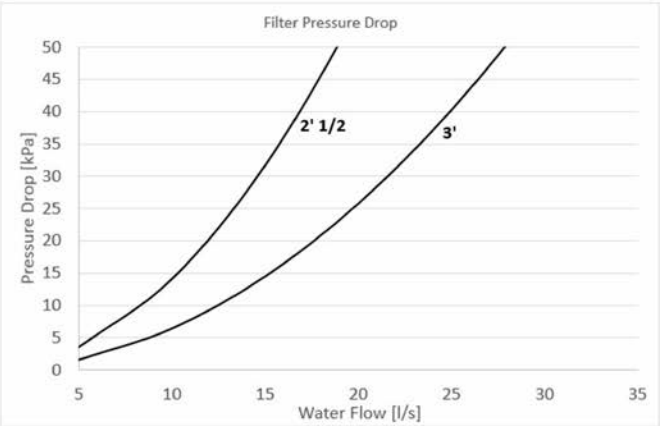
DAIKIN

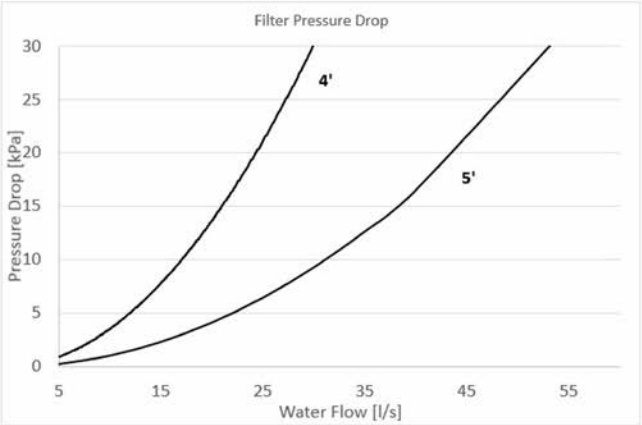
Water filter - Combination matrix

Models			filter		
			2' 1/2	3'	4'
EWWQ090G-SS	EWHQ100G-SS	EWLQ090G-SS	x		
EWWQ100G-SS	EWHQ120G-SS	EWLQ100G-SS	x		
EWWQ120G-SS	EWHQ130G-SS	EWLQ120G-SS	x		
EWWQ130G-SS	EWHQ150G-SS	EWLQ130G-SS	x		
EWWQ150G-SS	EWHQ160G-SS	EWLQ150G-SS	x		
EWWQ170G-SS	EWHQ190G-SS	EWLQ170G-SS	x		
EWWQ190G-SS	EWHQ210G-SS	EWLQ190G-SS	x		
EWWQ210G-SS	EWHQ240G-SS	EWLQ210G-SS	x		
EWWQ240G-SS	EWHQ270G-SS	EWLQ240G-SS		x	
EWWQ300G-SS	EWHQ340G-SS	EWLQ300G-SS		x	
EWWQ360G-SS	EWHQ400G-SS	EWLQ360G-SS			x

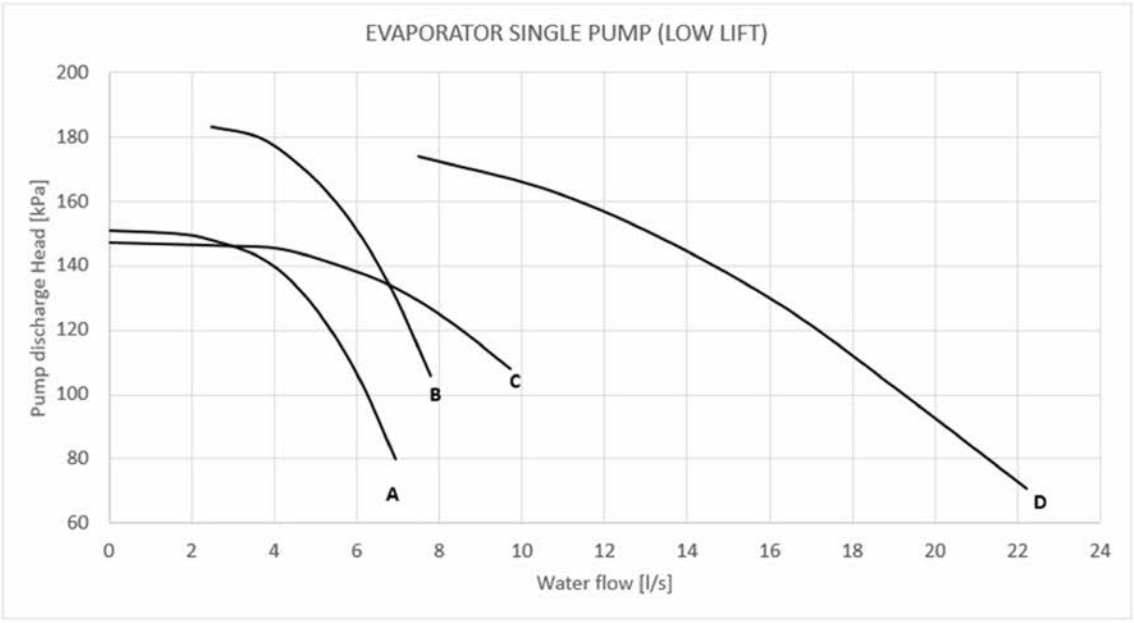
Models		filter		
		3'	4'	5'
EWWQ180L-SS	EWLQ180L-SS	x		
EWWQ205L-SS	EWLQ205L-SS	x		
EWWQ230L-SS	EWLQ230L-SS	x		
EWWQ260L-SS	EWLQ260L-SS	x		
EWWQ290L-SS	EWLQ290L-SS	x		
EWWQ330L-SS	EWLQ330L-SS		x	
EWWQ380L-SS	EWLQ380L-SS		x	
EWWQ430L-SS	EWLQ430L-SS		x	
EWWQ480L-SS	EWLQ480L-SS		x	
EWWQ540L-SS	EWLQ540L-SS		x	
EWWQ600L-SS	EWLQ600L-SS			x
EWWQ660L-SS	EWLQ660L-SS			x
EWWQ720L-SS	EWLQ720L-SS			x

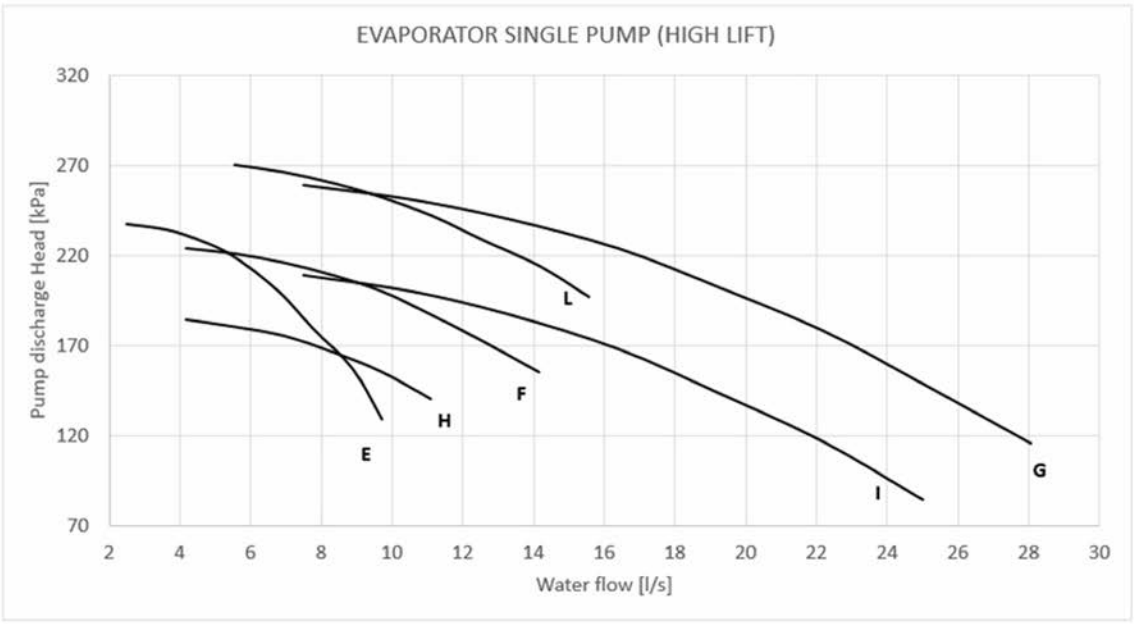
Filter pressure drops



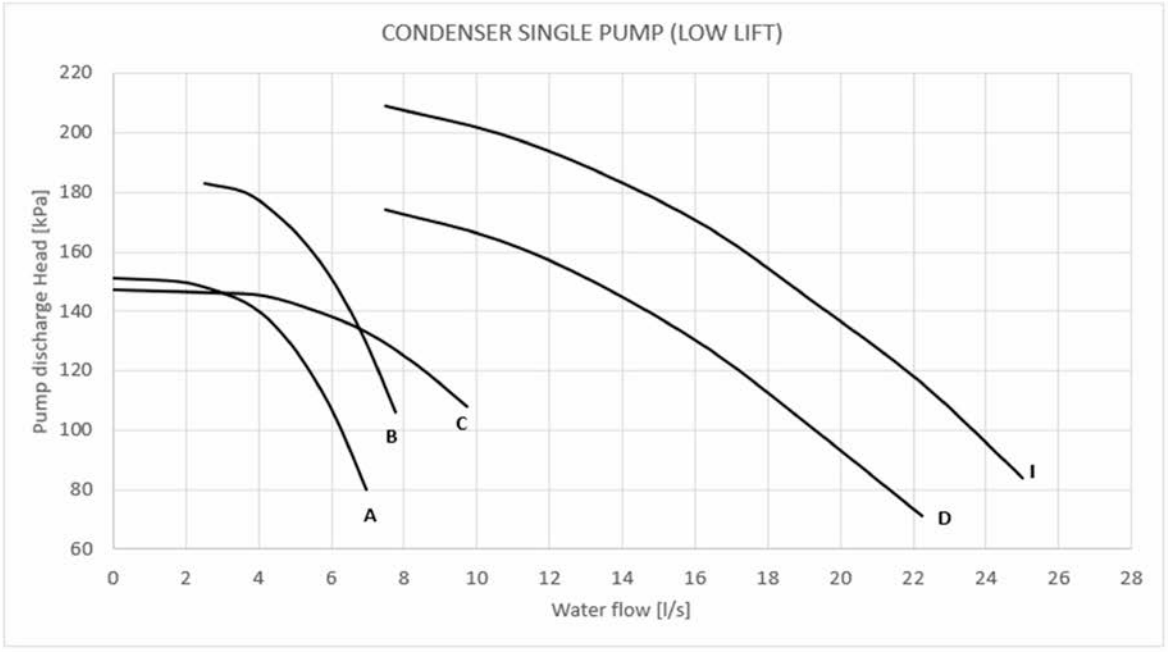


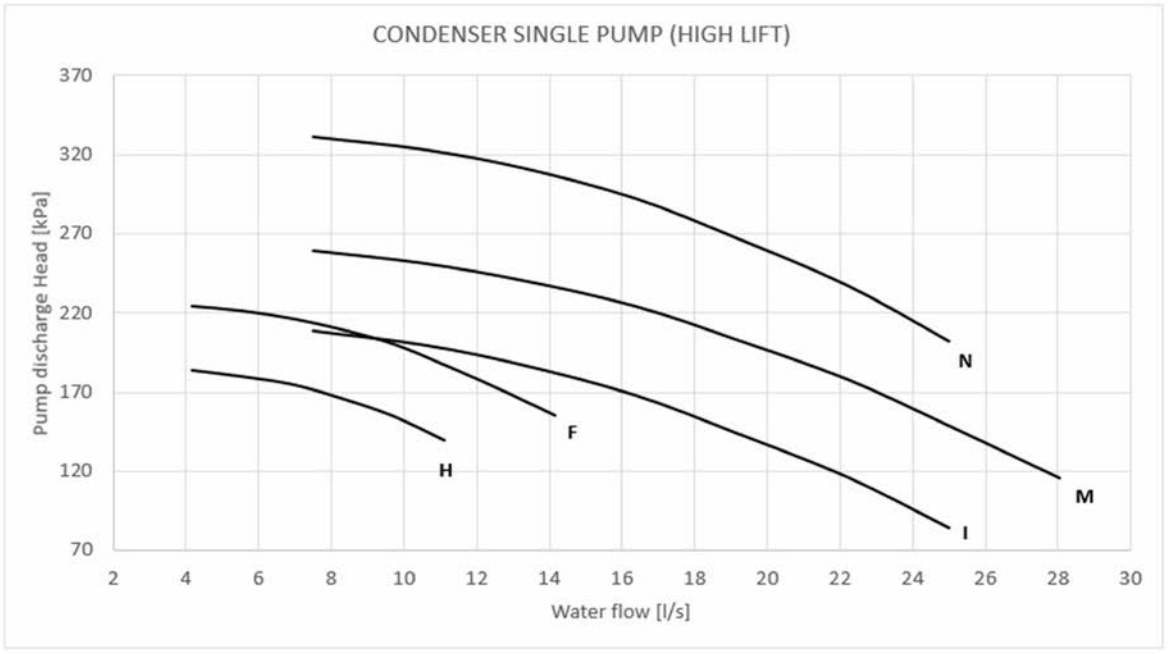
Water Pump Kit





Note
- the above curves are referred to the discharge head of the pump only, not including pressure drops in the unit
- when using mixture of water and glycol please contact the factory as above specification can change





Note
- the above curves are referred to the discharge head of the pump only, not including pressure drops in the unit
- when using mixture of water and glycol please contact the factory as above specification can change

Water Pump Kit - Technical Information

	Models			ref	Pump Motor Power [kW]	Pumo Motor Current [A]	Power Supply [V-ph-Hz]	PN	Motor Protection	Insulation [Class]	Working Temperature [°C]
EVAPORATOR SINGLE PUMP (LOW LIFT)	EWWQ090G-SS	EWHQ100G-SS	EWLQ090G-SS	A	1,1	2,38	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ100G-SS	EWHQ120G-SS	EWLQ100G-SS	A	1,1	2,38	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ120G-SS	EWHQ130G-SS	EWLQ120G-SS	A	1,1	2,38	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ130G-SS	EWHQ150G-SS	EWLQ130G-SS	B	1,5	3,18	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ150G-SS	EWHQ160G-SS	EWLQ150G-SS	C	1,5	3,18	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ170G-SS	EWHQ190G-SS	EWLQ170G-SS	C	1,5	3,18	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ190G-SS	EWHQ210G-SS	EWLQ190G-SS	C	1,5	3,18	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ210G-SS	EWHQ240G-SS	EWLQ210G-SS	D	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ240G-SS	EWHQ270G-SS	EWLQ240G-SS	D	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ300G-SS	EWHQ340G-SS	EWLQ300G-SS	D	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ360G-SS	EWHQ400G-SS	EWLQ360G-SS	D	3	6,27	400-3ph-50Hz	16	IP55	F	-25 / 120
EVAPORATOR SINGLE PUMP (HIGH LIFT)	EWWQ090G-SS	EWHQ100G-SS	EWLQ090G-SS	E	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ100G-SS	EWHQ120G-SS	EWLQ100G-SS	E	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ120G-SS	EWHQ130G-SS	EWLQ120G-SS	E	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ130G-SS	EWHQ150G-SS	EWLQ130G-SS	H	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ150G-SS	EWHQ160G-SS	EWLQ150G-SS	H	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ170G-SS	EWHQ190G-SS	EWLQ170G-SS	F	3	6,27	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ190G-SS	EWHQ210G-SS	EWLQ190G-SS	F	3	6,27	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ210G-SS	EWHQ240G-SS	EWLQ210G-SS	L	4	7,62	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ240G-SS	EWHQ270G-SS	EWLQ240G-SS	I	4	7,62	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ300G-SS	EWHQ340G-SS	EWLQ300G-SS	I	4	7,62	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ360G-SS	EWHQ400G-SS	EWLQ360G-SS	G	5,5	10,5	400-3ph-50Hz	16	IP55	F	-25 / 120

	Models		ref	Pump Motor Power [kW]	Pumo Motor Current [A]	Power Supply [V-ph-Hz]	PN	Motor Protection	Insulation [Class]	Working Temperature [°C]
CONDENSER SINGLE PUMP (LOW LIFT)	EWWQ090G-SS	EWHQ100G-SS	A	1,1	2,38	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ100G-SS	EWHQ120G-SS	A	1,1	2,38	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ120G-SS	EWHQ130G-SS	B	1,5	3,18	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ130G-SS	EWHQ150G-SS	C	1,5	3,18	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ150G-SS	EWHQ160G-SS	C	1,5	3,18	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ170G-SS	EWHQ190G-SS	D	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ190G-SS	EWHQ210G-SS	D	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ210G-SS	EWHQ240G-SS	D	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ240G-SS	EWHQ270G-SS	D	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ300G-SS	EWHQ340G-SS	D	3	6,27	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ360G-SS	EWHQ400G-SS	I	4	7,62	400-3ph-50Hz	16	IP55	F	-25 / 120
CONDENSER SINGLE PUMP (HIGH LIFT)	EWWQ090G-SS	EWHQ100G-SS	H	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ100G-SS	EWHQ120G-SS	H	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ120G-SS	EWHQ130G-SS	H	2,2	4,54	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ130G-SS	EWHQ150G-SS	F	3	6,27	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ150G-SS	EWHQ160G-SS	F	3	6,27	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ170G-SS	EWHQ190G-SS	I	4	7,62	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ190G-SS	EWHQ210G-SS	I	4	7,62	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ210G-SS	EWHQ240G-SS	I	4	7,62	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ240G-SS	EWHQ270G-SS	I	4	7,62	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ300G-SS	EWHQ340G-SS	M	5,5	10,5	400-3ph-50Hz	16	IP55	F	-25 / 120
	EWWQ360G-SS	EWHQ400G-SS	N	7,5	14,1	400-3ph-50Hz	16	IP55	F	-25 / 120

How to calculate the overall chiller water side pressure drops (pump by others)

In order to calculate the overall pressure drops introduced by the chiller in an installation the following points have to be considered:
- The pressure drop value showed in CSS (Chiller Selection Software) are referred to chiller's evaporator only
- This multiscroll series is not equipped as standard with water filter. The filter is selectable as option and mounted externally from the unit.

Overall chiller pressure drops = evaporator [kPa] + Filter pressure drop [kPa]

a) Select the chiller with CSS tool, you get easily the design water flow rate and the corresponding 'evaporator pressure drops' value (in CSS tool kPa figures are referred to evaporator only).
b) Refer to table "Water filter and piping diameter - Combination Matrix" to know what filter size and piping diameter correspond to the selected chiller.
c) Considering the design flow rate and water filter size and piping diameter, from graph "Filter pressure drops" get the corresponding kPa value.
d) By adding the values at point a and c, 'Overall chiller pressure drops' figure is got.

How to calculate the chiller external available pressure head with Single/Twin pumps kit option (factory supplied)

In order to calculate the chiller external available pressure head with Single pumps kit option (factory supplied) the following points have to be considered:
-The pressure drop values showed in CSS (Chiller Selection Software) are referred to chiller's evaporator only.
- This multiscroll series is not equipped as standard with water filter. The filter is selectable as option and mounted externally from the unit.
Chiller external available pressure head = pump discharge head [kPa] – evaporator pressure drop [kPa] –Single/Twin pumps kit pressure drop (including filter) [kPa]
a) Select the pump characteristic from the graph (refer to the Technical information table in order to get the pump curve corresponding to the selected unit) and get the corresponding 'Pump Discharge Head'.
b) Select the chiller with CSS tool at design conditions, you get easily the design water flow rate and the corresponding "evaporator pressure drop" (in CSS tool kPa figures are referred to evaporator only)
c) If the option 115 "Water filter" has been selected, considering the design flow rate and water filter size from the Filter combination matxix, from graph "Filter pressure drops" get the corresponding kPa value.
f) By considering the values at point a, b and c you can easily calculate the chiller external available pressure head as pump discharge head – evaporator pressure drop – filter pressure drop.
Note: when using mixture of water and glycol please contact the factory as above specification could change

In all of us,
a green heart

Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.

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