



Air cooled multi-scroll heat pump

Standrad efficiency

Standard sound

- › A series of advantages thanks to the use of large-capacity scroll compressors: increased competitiveness, reduced weight, clearances around the unit
- › **Reduced footprint thanks to the H-shaped frame**
- › Large operation range: ambient temperatures up to 48°C and down to -10°C
- › Ideal solution for **a broad range of comfort and process applications**
- › Compact design to allow easy indoor installation or retrofit operations
- › The unit can be equipped with a hydraulic module optimizing installation time, space and cost
- › Remote controller with superior control logic and easy interface

Heating & Cooling					GWYQ-G-SS	030	065	100	130	150	176	250	
Cooling capacity	Nom.				kW	30	65	101	130	150	176	250	
Heating capacity	Nom.				kW	33	72	110	140	160	187	270	
Power input	Cooling	Nom.			kW	9.6	20.8	32.2	41.2	48.2	56.4	80.6	
	Heating	Nom.			kW	10.2	23.2	34.3	43.3	51.4	60.8	86.2	
Capacity control	Method					Step							
	Minimum capacity				%	50	25	50	50	50	50	25	
EER						3.12	3.12	3.10	3.15	3.11	3.12	3.10	
ESEER						4.56	4.56	4.49	4.60	4.54	4.56	4.53	
COP						3.23	3.10	3.20	3.24	3.11	3.07	3.13	
 Space heating	Average climate water outlet 35°C	General	ηs (Seasonal space heating efficiency)	SCOP	%	142	139	138	142	139	137	138	
						3.6	3.52	3.50	3.62	3.53	3.47	3.53	
						Dimensions	Unit	Height	mm	1,880	1,880	2,000	2,080
		Width	mm	950	950	1,000	1,100	1,100	1,100	1,100	2,100		
		Depth	mm	1,000	2,000	2,000	2,200	2,200	2,200	2,200	3,800		
Weight	Unit				kg	310	630	820	940	980	1,000	1,800	
	Operation weight				kg	320	650	850	980	1,030	1,050	1,900	
Water heat exchanger	Type					Shell & Tube							
	Water flow rate	Cooling	Nom.		l/s	1.4	3.1	4.8	6.2	6.9	7.7	12.2	
		Heating	Nom.		l/s	1.5	3.2	5.3	6.7	7.3	8.2	12.9	
	Water pressure drop	Cooling	Nom.		kPa	40	39	40	42	43	43	45	
		Heating	Nom.		kPa	41	40	41	44	45	45	50	
Water volume				l	10	20	30	40	50	50	100		
Air heat exchanger	Type					High efficiency blue-fin and tube type with integral subcooler							
Compressor	Type					Scroll compressor							
	Quantity					2	4	2	2	2	2	8	
Fan	Type					Direct propeller							
	Quantity					1	2	2	2	2	2	8	
	Air flow rate	Nom.			l/s	3,334	6,667	9,861	13,148	14,200	15,000	26,667	
						Speed							rpm
Sound power level	Cooling	Nom.			dBA	83	84	87	87	89	89	92	
Sound pressure level	Cooling	Nom.			dBA	65	66	70	70	71	71	72	
Operation range	Air side	Cooling	Min.~Max.		°CDB	-10~48							
	Water side	Cooling	Min.~Max.		°CDB	-10~15							
Refrigerant	Type / GWP					R-410A / 2,087.5							
	Circuits					2	4	2	2	2	2	4	
Refrigerant charge	Per circuit				kg/TCO ₂ Eq	7.0 / 14.6	15.0 / 31.3	18.0 / 37.6	21.0 / 43.9	23.0 / 48.0	28.4 / 59.1	35.0 / 73.1	
Piping connections	Evaporator water inlet/outlet (OD)					1" 1/4	1" 1/2	2"	2" 1/2	2" 1/2	2" 1/2	3"	
Unit	Starting current					A	32	50	75	100	110	120	200
	Running current	Cooling	Nom.		A	18	36	60	74	86	100	145	
						Max	A	25	44	65	87	98	108
Power supply	Phase/Frequency/Voltage					Hz/V							
						3~/50/400							

Air cooled multi-scroll heat pump

High efficiency

Reduced sound

- › Reliable and efficient scroll compressors with high EER values
- › A series of advantages thanks to the use of large-capacity scroll compressors: increased competitiveness, reduced weight, clearances around the unit
- › **Reduced footprint thanks to the H-shaped frame**
- › Large operation range: ambient temperatures up to 55°C and down to -10°C
- › Ideal solution for **a broad range of comfort and process applications**
- › Compact design to allow easy indoor installation or retrofit operations
- › The unit can be equipped with a hydraulic module optimizing installation time, space and cost
- › Remote controller with superior control logic and easy interface



GWYQ-G-SS/XR

Digital controller

Heating & Cooling					GWYQ-G-XR	030	065	100	130	150	176	250
Cooling capacity	Nom.				kW	30	65	101	130	150	176	250
Heating capacity	Nom.				kW	33	72	110	140	160	187	270
Power input	Cooling	Nom.			kW	9.4	19.2	30.1	38.4	46.0	50.5	78.0
	Heating	Nom.			kW	10.0	21.5	33.0	40.3	50.0	54.8	80.0
Capacity control	Method											
	Minimum capacity				%	50	25	50	50	50	50	25
EER						3.20	3.38	3.30	3.47	3.26	3.48	3.20
ESEER						4.62	4.70	4.59	4.70	4.58	4.72	4.58
COP						3.30	3.34	3.3	3.4	3.30	3.4	3.25
Space heating	Average climate water outlet 35°C	General	ηs (Seasonal space heating efficiency)	%								
					SCOP	144	145	143	146	143	146	141
Dimensions	Unit	Height			mm	1,880	1,880	2,000	2,080	2,080	2,080	2,080
		Width			mm	950	950	1,000	1,100	1,100	1,100	2,100
		Depth			mm	1,000	2,000	2,000	2,200	2,200	2,200	3,800
Weight	Unit				kg	310	630	820	940	980	1,000	1,800
	Operation weight				kg	320	650	850	980	1,030	1,050	1,900
Water heat exchanger	Type								Shell & Tube			
	Water flow rate	Cooling	Nom.		l/s	1.4	3.1	4.8	6.2	6.9	7.7	12.2
		Heating	Nom.		l/s	1.5	3.2	5.3	6.7	7.3	8.2	12.9
	Water pressure drop	Cooling	Nom.		kPa	40	39	40	42	43	43	45
		Heating	Nom.		kPa	41	40	41	44	45	45	50
Water volume					l	10	20	30	40	50	50	100
Air heat exchanger	Type								High efficiency blue-fin and tube type with integral subcooler			
	Compressor								Scroll compressor			
Fan	Quantity					2	4	2	2	2	2	8
	Type								Direct propeller			
	Quantity					1	2	2	2	2	2	8
Air flow rate	Nom.				l/s	3,334	6,667	9,861	13,148	14,200	15,000	26,667
	Speed				rpm				1,360			
Sound power level	Cooling	Nom.			dBA	78	80	83	84	84	85	87
Sound pressure level	Cooling	Nom.			dBA	61	63	65	66	66	68	70
Operation range	Air side	Cooling	Min.~Max.		°CDB				-10~-55			
	Water side	Cooling	Min.~Max.		°CDB				-10~-15			
Refrigerant	Type / GWP								R-410A / 2,087.5			
	Circuits	Quantity				2	4	2	2	2	2	4
Refrigerant charge	Per circuit				kg/TCO, Eq	7.0 / 14.6	15.0 / 31.3	18.0 / 37.6	21.0 / 43.9	23.0 / 48.0	28.4 / 59.1	35.0 / 73.1
Piping connections	Evaporator water inlet/outlet (OD)					1" 1/4	1" 1/2	2"	2" 1/2	2" 1/2	2" 1/2	3"
Unit	Starting current	Max			A	30	48	70	95	105	110	190
	Running current	Cooling	Nom.		A	17	35	54	69	82	89	140
		Max			A	23	42	60	80	94	96	160
Power supply	Phase/Frequency/Voltage				Hz/V				3~/50/400			

Air cooled multi-scroll heat pump

High efficiency

Standard/low sound

› Class A efficiency in heating mode

- › Extended operation range: ambient temperatures from -10°C up to +46°C in cooling mode and down to -17°C in heating mode
- › 2 truly independent refrigerant circuits
- › Reduced footprint thanks to the **V-shaped frame** (GWYQ160-230F-XS/XL & GWYQ160-220F-XR)
- › Reliable and efficient scroll compressors with **high EER values**
- › Chiller series design entirely based on new European directives (EN14511, EN14825)
- › Top serviceability level thanks to reduced weight, compact footprint and optimized components accessibility

Heating & Cooling					GWYQ-F-XS/XL				160	190	210	230	310	340	380	400	430	510	570	630		
Cooling capacity	Nom.				kW	164	184	205	231	304	335	376	401	427	502	565	624					
Heating capacity	Nom.				kW	173	197	227	254	329	362	404	429	463	535	607	674					
Power input	Cooling	Nom.			kW	57.6	63.3	70.3	79.3	102	114	129	138	145	172	195	214					
	Heating	Nom.			kW	54.0	61.6	70.5	79.2	101	113	126	133	140	167	190	210					
Capacity control	Method				%	Step																
	Minimum capacity					25.0										17.0						
EER						2.84	2.91	2.92		2.99	2.93	2.91	2.90	2.94	2.92	2.90	2.91					
ESEER						3.73	3.89	3.81	3.71	4.07	4.19	3.99	3.96	4.14	4.20	3.98	4.06					
COP						3.20		3.22		3.21	3.24	3.21		3.23	3.30	3.21	3.20	3.21				
 Space heating	Average climate water outlet 35°C	General	ηs (Seasonal space heating efficiency)	%																		
Dimensions	Unit	Height			mm	2,270				2,220												
		Width			mm	1,200				2,258												
		Depth			mm	4,370		5,270		4,125				5,025		5,925		6,825				
Weight (XS)	Unit				kg	1,430	1,850	2,300	2,350	2,900	2,910	2,920	3,730	3,750	4,250	4,280	4,670					
	Operation weight				kg	1,470	1,890	2,340	2,390	2,980	2,990	3,000	3,840	3,850	4,370	4,400	4,780					
Weight (XL)	Unit				kg	1,520	1,940	2,400	2,440	3,060	3,070	3,080	3,890	3,900	4,400	4,440	4,820					
	Operation weight				kg	1,570	1,980	2,440	2,480	3,130	3,150	3,160	3,990	4,010	4,520	4,550	4,940					
Water heat exchanger	Type				Plate heat exchanger																	
	Water flow rate	Cooling	Nom.	l/s	7.8	8.8	9.8	11.1	14.6	16.0	18.0	19.2	20.4	24.0	27.1	29.9						
		Heating	Nom.	l/s	8.3	9.5	10.9	12.2	15.9	17.5	19.5	20.7	22.3	25.8	29.3	32.5						
	Water pressure drop	Cooling	Nom.	kPa	22	28	36	40	21	27	30	29	34	37	42	56						
		Heating	Nom.	kPa	25	32	43	50	25	31	37	33	40	43	50	66						
	Water volume				l	18				44				60		70						
Air heat exchanger	Type				High efficiency fin and tube type with integral subcooler																	
Compressor	Type				Scroll compressor																	
	Quantity				4												6					
Fan	Type				Direct propeller																	
	Quantity				4			5			8			10			12		14			
	Air flow rate	Nom.	l/s		22,577	21,593	26,992		43,187				55,213	53,983	64,780		75,577					
	Speed				rpm	900																
Sound power level (XS)	Cooling	Nom.	dBA			92	94	95		97	98	99			100							
Sound power level (XL)	Cooling	Nom.	dBA			89	92	93		95			96			97		98				
Sound pressure level (XS)	Cooling	Nom.	dBA			72	74	75	76	77	78		79			80						
Sound pressure level (XL)	Cooling	Nom.	dBA			70	73		74	75				76	77							
Operation range	Air side	Cooling	Min.~Max.	°CDB	-10~-46																	
		Heating	Min.~Max.	°CDB	-17~-20																	
	Water side	Cooling	Min.~Max.	°CDB	-13~-15																	
		Heating	Min.~Max.	°CDB	25~-50																	
Refrigerant	Type / GWP				R-410A / 2,087.5																	
	Circuits				2																	
Refrigerant charge	Per circuit	kg/TCO ₂ Eq			16.0 / 33.4	20.0 / 41.8		24.0 / 50.1	35.0 / 73.1	36.0 / 75.2	35.0 / 73.1	46.0 / 96.0		55.0 / 114.8	52.5 / 109.6	68.0 / 142.0						
Piping connections	Evaporator water inlet/outlet (OD)				2.5"																	
Unit	Starting current	Max	A		282	536	353	560	600	516	637	659	666	648	787	827						
	Running current	Cooling	Nom.	A	115	140	128	162	193	205	235	251	257	307	353	384						
		Max	A		138	165	164	196	246	264	295	316	330	396	442	491						
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/400																	

Air cooled multi-scroll heat pump

High efficiency

Reduced sound



Heating & Cooling					GWYQ-F-XR	160	180	200	220	300	330	360	390	420	490	550	610
Cooling capacity	Nom.				kW	158	178	199	223	296	326	363	389	415	487	546	606
Heating capacity	Nom.				kW	173	197	227	254	329	362	404	429	463	535	607	674
Power input	Cooling	Nom.			kW	56.2	62.3	68.4	77.9	97.4	111	127	134	141	167	191	210
	Heating	Nom.			kW	54.0	61.6	70.5	79.2	101	113	126	133	140	167	190	210
Capacity control	Method					Step											
	Minimum capacity				%	25.0										17.0	
EER						2.81	2.86	2.92	2.87	3.04	2.93	2.86	2.90	2.93	2.91	2.85	2.89
ESEER						4.33	4.39	4.38	4.19	4.63	4.68	4.37	4.44	4.60	4.83	4.50	4.62
COP						3.20		3.22	3.21	3.24	3.21		3.23	3.30	3.21	3.20	3.21
	Average climate water outlet 35°C	General	ηs (Seasonal space heating efficiency)	%	SCOP	128	134	129		143	147	-					
						3.28	3.42	3.31	3.30	3.64	3.75	-					
Dimensions	Unit	Height			mm	2,270					2,220						
		Width			mm	1,200					2,258						
		Depth			mm	4,370		5,270		4,125		5,025		5,925		6,825	
Weight	Unit				kg	1,520	1,940	2,400	2,440	3,060	3,070	3,080	3,890	3,900	4,400	4,440	4,820
	Operation weight				kg	1,570	1,980	2,440	2,480	3,130	3,150	3,160	3,990	4,010	4,520	4,550	4,940
Water heat exchanger	Type					Plate heat exchanger											
	Water flow rate	Cooling	Nom.		l/s	7.5	8.5	9.6	10.7	14.2	15.6	17.4	18.6	19.8	23.3	26.1	29.0
		Heating	Nom.		l/s	8.3	9.5	10.9	12.2	15.9	17.5	19.5	20.7	22.3	25.8	29.3	32.5
	Water pressure drop	Cooling	Nom.		kPa	20	26	34	38	20	25	28	27	32	35	39	53
		Heating	Nom.		kPa	25	32	43	50	25	31	37	33	40	43	50	66
	Water volume				l	18				44			60		70		
Air heat exchanger	Type					High efficiency fin and tube type with integral subcooler											
Compressor	Type					Scroll compressor											
	Quantity					4										6	
Fan	Type					Direct propeller											
	Quantity					4		5		8		10		12		14	
	Air flow rate	Nom.			l/s	17,380	16,564	20,706		33,129		42,431	41,411	49,693		57,975	
	Speed				rpm	700											
Sound power level	Cooling	Nom.			dBA	83	84	86		88		89	90		92		
Sound pressure level	Cooling	Nom.			dBA	64	65	66	67	69		70		71			
Operation range	Air side	Cooling	Min.~Max.		°CDB	-10~-46											
		Heating	Min.~Max.		°CDB	-17~-20											
	Water side	Cooling	Min.~Max.		°CDB	-13~-15											
						25~50											
			Heating	Min.~Max.		°CDB											
Refrigerant	Type / GWP					R-410A / 2,087.5											
	Circuits	Quantity				2											
Refrigerant charge	Per circuit				kg/TCO ₂ Eq	16.0 / 33.4	18.0 / 37.6	20.0 / 41.8	24.0 / 50.1	35.0 / 73.1	36.0 / 75.2	35.0 / 73.1	46.0 / 96.0		55.0 / 114.8		680/1420
Piping connections	Evaporator water inlet/outlet (OD)					2.5"					3"						
Unit	Starting current	Max			A	276	530	346	553	589	505	626	645	652	631	770	807
	Running current	Cooling	Nom.		A	114	138	126	160	187	201	232	245	252	301	350	379
		Max			A	133	160	157	189	235	253	283	302	316	379	425	471
Power supply	Phase/Frequency/Voltage				Hz/V	3~/50/400											

Air cooled screw inverter heat pump

Standard efficiency

Standard sound

- › Ideal solution for commercial comfort cooling and/or heating applications
- › Optimum ESEER values
- › 2-3 truly independent refrigerant circuits
- › Low starting current
- › DX shell and tube evaporator – one pass refrigerant side to minimize pressure drops
- › Standard electronic expansion valve
- › Optimised defrost cycles
- › Partial and total heat recovery option available
- › Power factor up to 0.95
- › PID microprocessor control

Heating & Cooling				GWYD-BZSS	250	270	290	320	340	370	380	410	440	460	510	520	580						
Cooling capacity	Nom.			kW	253	272	291	323	337	363	380	411	433	455	502	519	580						
Heating capacity	Nom.			kW	271	298	325	334	350	380	412	445	465	477	533	561	618						
Power input	Cooling	Nom.		kW	91.3	101	110	117	125	135	144	154	165	163	182	189	218						
	Heating	Nom.		kW	91.4	100	108	118	126	133	143	157	167	165	178	186	208						
Capacity control	Method				Stepless																		
	Minimum capacity			%	13.0									9.0									
EER					2.77	2.70	2.65	2.75	2.69	2.68	2.63	2.66	2.62	2.79	2.76	2.74	2.67						
ESEER					3.93	3.92	3.89	3.95	3.89	3.90	3.82	3.91	3.89	4.18	4.01		3.93						
COP					2.96	2.97	3.00	2.82	2.78	2.85	2.88	2.83	2.79	2.88	2.99	3.01	2.97						
Space heating	Average climate water outlet 35℃	General	ηs (Seasonal space heating efficiency)	%	125								-										
			SCOP		3.21		3.20		3.21		-												
Dimensions	Unit	Height		mm	2,335										2,280								
		Width		mm	2,254																		
		Depth		mm	3,547			4,428				5,329		6,659									
Weight	Unit			kg	3,410	3,455	3,500	3,870		3,940	4,010	4,390		5,015	5,495	5,735							
	Operation weight			kg	3,550	3,595	3,640	4,010		4,068	4,138	4,518		5,255	5,724	5,964	5,953						
Water heat exchanger	Type				Single pass shell & tube																		
	Water flow rate	Cooling	Nom.	l/s	12.1	13.0	13.9	15.5	16.2	17.4	18.2	19.7	20.8	21.8	24.1	24.9	27.8						
		Heating	Nom.	l/s	13.1	14.4	15.7	16.1	16.9	18.3	19.8	21.4	22.4	23.0	25.6	27.0	29.7						
	Water pressure drop	Cooling	Nom.	kPa	40	46	44	50	55	60	65	74	80	47	85	91	61						
		Heating	Nom.	kPa	30	35	52	37	40	45	51	59	64	42	63	69	59						
	Water volume			l	138			133			128			240	229		218						
Air heat exchanger	Type				High efficiency fin and tube type with integral subcooler																		
Compressor	Type				Single screw compressor																		
	Quantity				2									3									
Fan	Type				Direct propeller																		
	Quantity				6			8			10			12									
	Air flow rate	Nom.		l/s	31,729	31,422	31,115	42,306		42,337	41,487	52,882		63,458	62,640	61,652	62,231						
	Speed			rpm	900																		
Sound power level	Cooling	Nom.		dBA	101							102		104									
Sound pressure level	Cooling	Nom.		dBA	82							83		84									
Operation range	Air side	Cooling	Min.~Max.	℃CDB	-10~45																		
		Heating	Min.~Max.	℃CDB	-10~20																		
	Water side	Cooling	Min.~Max.	℃CDB	-8~15																		
		Heating	Min.~Max.	℃CDB	35~55																		
Refrigerant	Type / GWP				R-134a / 1,430																		
	Circuits	Quantity			2									3									
Refrigerant charge	Per circuit			kg/TCO _{Eq}	43.0/61.5	44.0/62.9	43.0/61.5	46.0/65.8	46.5/66.5		47.0/67.2	50.0/71.5			47.0/67.2		49.0/70.1						
Piping connections	Evaporator water inlet/outlet (OD)				139.7mm																		
Unit	Starting current	Max		A	150			181		204		224	238	245	300	323							
	Running current	Cooling	Nom.	A	137	150	164	176	188	202	214	229	244	246	270	281	322						
		Max		A	211		212	254	288			316	336	329	398	432							
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/400																		

Air cooled screw inverter heat pump

Standard efficiency
Low sound



Heating & Cooling					GWYD-BZSL				250	270	290	320	330	360	370	400	430	450	490	510	570
Cooling capacity	Nom.				kW	247	265	290	315	330	353	370	401	423	446	490	507	565			
Heating capacity	Nom.				kW	271	298	325	334	350	380	412	445	465	477	533	561	618			
Power input	Cooling	Nom.			kW	89.5	99.5	110	115	123	134	144	151	163	158	177	186	216			
	Heating	Nom.			kW	91.4	100	108	118	126	133	143	157	167	165	178	186	208			
Capacity control	Method				%	Stepless															
	Minimum capacity					13.0										9.0					
EER						2.76	2.66	2.62	2.75	2.68	2.64	2.57	2.66	2.59	2.83	2.77	2.73	2.61			
ESEER						4.06	4.04	4.03	4.17	4.09	4.04	4.01	4.06	4.02	4.18	4.16	4.10	3.98			
COP						2.96	2.97	3.00	2.82	2.78	2.85	2.88	2.83	2.79	2.88	2.99	3.01	2.97			
	Space heating	Average climate water outlet 35°C	General	ηs (Seasonal space heating efficiency)	%	125										-					
						3.21		3.20		3.21		-									
Dimensions	Unit	Height	Width	Depth	mm	2,335										2,280					
Weight	Unit					kg	3,750	3,795	3,840	4,210		4,280	4,350	4,730		5,525	6,005	6,245			
	Operation weight					kg	3,888	3,933	3,978	4,343		4,408	4,478	4,858		5,765	6,234	6,474	6,463		
Water heat exchanger	Type					Single pass shell & tube															
	Water flow rate	Cooling	Nom.		l/s	11.8	12.7	13.9	15.1	15.8	16.9	17.7	19.2	20.3	21.4	23.5	24.3	27.1			
		Heating	Nom.		l/s	13.1	14.4	15.7	16.1	16.9	18.3	19.8	21.4	22.4	23.0	25.6	27.0	29.7			
	Water pressure drop	Cooling	Nom.		kPa	38	44	42	48	53	57	62	71	77	45	82	87	58			
		Heating	Nom.		kPa	30	35	52	37	40	45	51	59	64	42	63	69	59			
Air heat exchanger	Water volume				l	138			133			128			240		229		218		
	Type					High efficiency fin and tube type with integral subcooler															
	Compressor					Single screw compressor															
	Quantity					2										3					
Fan	Type					Direct propeller															
	Quantity					6			8			10			12						
	Air flow rate	Cooling	Nom.		l/s	24,432	24,264	24,095	32,576		32,628	32,127	40,720		48,863	48,415	47,732	48,191			
	Speed					rpm	700														
Sound power level	Cooling	Nom.				dBA	94			95							97				
Sound pressure level	Cooling	Nom.				dBA	76										77				
Operation range	Air side	Cooling	Min.~Max.		°CDB	-10~45															
		Heating	Min.~Max.		°CDB	-10~20															
	Water side	Cooling	Min.~Max.		°CDB	-8~15															
		Heating	Min.~Max.		°CDB	35~55															
Refrigerant	Type / GWP					R-134a / 1,430															
	Circuits	Quantity				2										3					
Refrigerant charge	Per circuit	kg/TCO ₂ Eq				43.0 / 61.5	44.0 / 62.9	43.0 / 61.5	46.0 / 65.8	46.5 / 66.5		47.0 / 67.2	50.0 / 71.5		47.0 / 67.2		49.0 / 70.1				
Piping connections	Evaporator water inlet/outlet (OD)					139.7mm															
Unit	Starting current	Max			A	145	146		176	199			217	231	234	288	311	305			
	Running current	Cooling	Nom.		A	134	148	163	171	184	199	212	224	240	238	263	275	319			
		Max			A	202	203		243	277			302	322	313	381	415	406			
Power supply	Phase/Frequency/Voltage				Hz/V	3~/50/400															