

	UNITS	REQUESTED	PROVIDED BY VENDOR
1 GENERAL DATA			
1.1	Number of pumps	2x110%	
1.2	KKS numbers	40GHC61 AP001 / 40GHC62 AP001	
1.3	Manufacturer / Model	(Note 1)	
1.4	Installation	Outdoor	
1.5	Design and manufacturing codes	ISO 9905, 5199, 9908 or equivalent (Note 1)	
1.6	Service	Demineralized water distribution	
1.7	Pumped Fluid	Demineralized water	
1.8	Temperature min / max	°C	1 / 43
1.9	Density	kg/m3	1000 (at 5°C)
2 PUMPS RATED POINT			
2.1	Flow per pump at discharge	m3/h	12.852
2.2	Required Total Dinamic Head	m	35.96
2.3	NPSH available / required	m	7,209 / 4,758 maximum (Note 5)
2.4	Suction pressure	bar a	0,762 to 1,836 (Note 6)
2.5	TDH at shutoff	m	135% of rated TDH (Note 2)
2.6	Minimum flow	m3/h	30% of rated flow (Note 7)
2.7	Design pressure / hydraulic test pressure	bar g	(Note 1)
2.8	Efficiency at design point	%	(Note 1)
2.9	Pump power	kW	(Note 1)
2.10	Pump Speed	rpm	(Note 1)
3 TECHNICAL FEATURES			
3.1	Pump type		Horizontal centrifugal
3.2	Pump model		(Note 1)
3.3	Number of stages		1
3.4	Impeller diameter		
3.4.1	Rated	mm	(Note 1)
3.4.2	Max	mm	At least 4 mm bigger than rated impeller
3.4.3	Min	mm	(Note 1)
3.5	Mechanical seal		Included
3.6	Mechanical seal fluid		Pumped fluid
3.7	Motor-pump assembly first critical speed	rpm	> 120% of nominal speed
3.8	Max. reversal speed allowable for the motor-pump assembly	rpm	(Note 1)
3.9	Motor-pump coupling		Flexible adjustable with spacer (Note 9)
3.10	Radial bearing type		(Note 1)
3.11	Axial bearing type		(Note 1)
3.12	Lubrication		(Note 1)
3.13	Lubrication piping		(Note 1)
4 DRIVER			
4.1	Motor Type		TEFC
4.2	Motor Manufacturer		(Note 1)
4.3	Motor Voltage/Phase/Frequency	(V / - / Hz)	400 / 3 / 50
4.4	Motor Nominal power	(kW)	(Note 1)
4.5	Motor Rated current / Ratio starting current - rated current	(A / -)	d starting current is not exceed 5.5 times rated current
4.6	Motor Speed	rpm	Single speed
4.7	Enclosure Classification	IP	
4.8	Motor indoor/outdoor		IP 54/IP 55
4.9	Terminal boxes and other equipment		IP 65
4.10	Motor insulation class / Maximum heating class		F / B
4.11	Motor Accesories		
5 MATERIALS (note 1)			
5.1	Pump-motor support base		Structural steel ASTM A36 or equivalent
5.2	Pressure casing		AISI 316 or equivalent
5.3	Inner case parts		AISI 316 or equivalent
5.4	Impeller		AISI 316 or equivalent
5.5	Wear rings		Hard faced AISI 316 or equivalent
5.6	Shaft		AISI 316 or equivalent
5.7	Bushings		AISI 316 or equivalent
5.8	Case and gland studs		AISI 4140 or equivalent
5.9	Case gasket		AISI 316 spiral wound
6 ACCESORIES			
6.1	Anchor (foundation) bolts		Included
6.2	Vent/Drains valves in the casing		Included
6.3	Motor winding temperature		(Note 1)
6.4	Pressure gauge (suction and discharge)		Included
6.5	Filters upstream pumps (one per each pump) including PDIT (Instruments)		Included (Note 10)
6.7	Counter flange, gasket, bolts, nuts, washers in vendor scope		Included
7 DIMENSIONS AND LOADS			
7.1	Pump size (length / width / height)	mm	(Note 1)
7.2	Motor size (length / width / height)	mm	(Note 1)
7.3	Total assembled group (length / width / height)	mm	(Note 1)
7.4	Weights		(Note 1)
7.5	Pump	kg	(Note 1)
7.6	Electric motor	kg	(Note 1)
7.7	Total (empty)	kg	(Note 1)
7.8	Total (full of water)	kg	(Note 1)
8 CONNECTIONS			
8.1	Suction nozzle (diameter / type and class)		(Note 1) / flanged RF ASME B16.5 class 150
8.2	Discharge nozzle (diameter / type and class)		(Note 1) / flanged RF ASME B16.5 class 150
8.3	Max. forces on nozzles Fx/Fy/Fz	kg	2 times API 610 loads
8.4	Max. moments on nozzles Mx/My/Mz	kg-m	2 times API 610 loads



