

# **IQS - New generation IQ Single Phase**

## **Performance and Motor data**

### **Issue 3 - October 2005**

**IQS Range includes all control and indication features of the standard IQ range. Refer to Publications E110E and E120E.**  
**Requirement for options Extra contacts, Negative switching and Auxiliary I/O for bus systems must be referred to Rotork. All other options are available.**

#### **IQS voltage range**

**IQS is available for single phase voltages 230V 50/60Hz and 115V 50/60Hz. +/-10%**

#### **IQS torque/speed range**

**IQS torque/speed range is limited by starting current. IQS35 is not available at 115V**

#### **IQS rating**

**IQS is rated S2 - 25%, 60 starts per hour. If applications require a higher duty cycle, please apply to Rotork.**

#### **IQS temperature range.**

**The standard temperature range is - 20 C to + 70C ( - 4 to 158 F).**  
**Special low temperature build is available to - 40 to + 40 C (-40 to 104 F).**  
**Actuator builds below - 40 C are not available.**



## IQS Performance Data 115 - 230V AC Single Phase

<b>Output rpm</b>	<b>18</b> <b>21</b>	<b>24</b> <b>29</b>	<b>36</b> <b>43</b>	<b>48</b> <b>57</b>	<b>72</b> <b>86</b>	<b>96</b> <b>115</b>	<b>144</b> <b>173</b>	<b>50Hz</b> <b>60Hz</b>
<b>IQS12</b>	<b>65</b> <b>48</b>	<b>60</b> <b>44</b>	<b>45</b> <b>33</b>	<b>40</b> <b>30</b>	<b>30</b> <b>22</b>	<b>25</b> <b>18</b>		<b>NM</b> <b>lbft</b>
<b>IQS20</b>	<b>165</b> <b>122</b>	<b>130</b> <b>96</b>	<b>130</b> <b>96</b>	<b>125</b> <b>92</b>	<b>100</b> <b>74</b>	<b>80</b> <b>59</b>	<b>60</b> <b>44</b>	<b>NM</b> <b>lbft</b>
<b>IQS35*</b>	<b>450</b> <b>332</b>	<b>400</b> <b>295</b>	<b>350</b> <b>258</b>	<b>320</b> <b>236</b>	<b>230</b> <b>170</b>	<b>190</b> <b>140</b>	<b>135</b> <b>100</b>	<b>NM</b> <b>lbft</b>

\* IQS 35 not available at 115V

Actuator output speed 144/173 rpm is not recommended for direct mounted gate valve applications

## IQS Single Phase 50Hz Supplies - Motor Performance Data

Issue 3 Date 14/01/05

### 230V - 50Hz

Size	rpm	Poles	Rated Torque		Locked Rotor		Rated Torque	Average Load			Efficiency %
			NM	lb.ft	Amps	P.F.		Amps	KW	P.F.	
IQS12	18	4	65	48	7.5	0.97	3	2.2	0.4	0.8	55
	24	4	60	44	7.5	0.97	3	2.2	0.42	0.8	55
	36	4	45	33	7.5	0.97	3	2.2	0.42	0.8	55
	48	4	40	30	7.5	0.97	3	2.2	0.35	0.8	55
	72	4	30	22	7.5	0.97	3	2.2	0.35	0.8	55
	96	4	25	18	7.5	0.97	3	2.2	0.35	0.8	55
IQS20	18	4	165	122	22	0.95	7.2	5.2	0.72	0.6	50
	24	4	130	96	22	0.95	7.2	5.2	0.72	0.6	50
	36	4	130	96	22	0.95	7.2	5.2	0.72	0.6	50
	48	4	125	92	22	0.95	7.2	5.2	0.72	0.6	50
	72	4	100	74	22	0.95	7.2	5.2	0.72	0.6	50
	96	4	80	59	22	0.95	7.2	5.2	0.72	0.6	50
	144	4	60	44	22	0.95	7.2	5.2	0.72	0.6	50
IQS35	18	4	450	332	34	0.93	9.5	5.3	1.1	0.91	84
	24	4	400	295	34	0.93	9.5	5.3	1.1	0.91	84
	36	2	350	258	64	0.9	15.5	7	1.3	0.81	74
	48	2	320	236	64	0.9	15.5	7	1.3	0.81	74
	72	2	230	170	64	0.9	15.5	7	1.3	0.81	74
	96	2	190	140	64	0.9	15.5	7	1.3	0.81	74
	144	2	135	100	64	0.9	15.5	7	1.3	0.81	74

### 115V - 50Hz

Size	rpm	Poles	Rated Torque		Locked Rotor		Rated Torque	Average Load			Efficiency %
			NM	lb.ft	Amps	P.F.		Amps	KW	P.F.	
IQS12	18	4	65	48	15	0.98	5.5	4.3	0.4	0.8	50
	24	4	60	44	15	0.98	5.5	4.3	0.4	0.8	50
	36	4	45	33	15	0.98	5.5	4.3	0.4	0.8	50
	48	4	40	30	15	0.98	5.5	4.3	0.4	0.8	50
	72	4	30	22	15	0.98	5.5	4.3	0.4	0.8	50
	96	4	25	18	15	0.98	5.5	4.3	0.4	0.8	50
IQS20	18	4	165	122	41	0.95	14	10	0.72	0.6	50
	24	4	130	96	41	0.95	14	10	0.72	0.6	50
	36	4	130	96	41	0.95	14	10	0.72	0.6	50
	48	4	125	92	41	0.95	14	10	0.72	0.6	50
	72	4	100	74	41	0.95	14	10	0.72	0.6	50
	96	4	80	59	41	0.95	14	10	0.72	0.6	50
	144	4	60	44	41	0.95	14	10	0.72	0.6	50

## IQS Single Phase 60Hz Supplies - Motor Performance Data

Issue 3 Date 14/010/05

### 230V - 60Hz

Size	rpm	Poles	Rated Torque		Locked Rotor		Rated Torque		Average Load			Efficiency %
			NM	lb.ft	Amps	P.F.	Amps	Amps	KW	P.F		
<b>IQS12</b>	21	4	65	48	7.4	0.97	3.4	1.6	0.34	0.92	60	
	29	4	60	44	7.4	0.97	3.4	1.6	0.34	0.92	60	
	43	4	45	33	7.4	0.97	3.4	1.6	0.34	0.92	60	
	57	4	40	30	7.4	0.97	3.4	1.6	0.34	0.92	60	
	86	4	30	22	7.4	0.97	3.4	1.6	0.34	0.92	60	
	115	4	25	18	7.4	0.97	3.4	1.6	0.34	0.92	60	
<b>IQS20</b>	21	4	165	122	22	0.95	7.2	5.2	0.72	0.6	50	
	29	4	130	96	22	0.95	7.2	5.2	0.72	0.6	50	
	43	4	130	96	22	0.95	7.2	5.2	0.72	0.6	50	
	57	4	125	92	22	0.95	7.2	5.2	0.72	0.6	50	
	86	4	100	74	22	0.95	7.2	5.2	0.72	0.6	50	
	115	4	80	59	22	0.95	7.2	5.2	0.72	0.6	50	
<b>IQS35</b>	21	4	450	332	30	0.9	12	7.5	1.2	0.71	60	
	29	4	400	295	30	0.9	12	7.5	1.2	0.71	60	
	43	2	350	258	56	0.85	19	8	1.5	0.83	85	
	57	2	320	236	56	0.85	19	8	1.5	0.83	85	
	86	2	230	170	56	0.85	19	8	1.5	0.83	85	
	115	2	190	140	56	0.85	19	8	1.5	0.83	85	
172	2	135	100	56	0.85	19	8	1.5	0.83	85		

### 115V - 60Hz

Size	rpm	Poles	Rated Torque		Locked rotor		Rated torque		Average Load			Efficiency %
			NM	lb.ft	Amps	P.F.	Amps	Amps	KW	P.F		
<b>IQS12</b>	21	4	65	48	14	0.98	7	2.5	0.26	0.91	55	
	29	4	60	44	14	0.98	7	2.5	0.26	0.91	55	
	43	4	45	33	14	0.98	7	2.5	0.26	0.91	55	
	57	4	40	30	14	0.98	7	2.5	0.26	0.91	55	
	86	4	30	22	14	0.98	7	2.5	0.26	0.91	55	
	115	4	25	18	14	0.98	7	2.5	0.26	0.91	55	
<b>IQS20</b>	21	4	165	122	41	0.95	14	10	0.72	0.6	50	
	29	4	130	96	41	0.95	14	10	0.72	0.6	50	
	43	4	130	96	41	0.95	14	10	0.72	0.6	50	
	57	4	125	92	41	0.95	14	10	0.72	0.6	50	
	86	4	100	74	41	0.95	14	10	0.72	0.6	50	
	115	4	80	59	41	0.95	14	10	0.72	0.6	50	
172	4	60	44	41	0.95	14	10	0.72	0.6	50		