



# Immersion type COOLANT PUMP Series

Long Life

IE3, GB3, NEMA PREMIUM, KS-C motor

Varieties of standard application



# Reduce annoying pump maintenance

# **Kawamoto Immersion Coolant Pump**

## High pressure pumping for clean liquid

## Application

Pressurised delivery of coolant liquid after primary filtration to machine tool at high pressure.

Realization of longer life of pump with adoption of mechanical sealless and unique relief structure

RCC type Maintenance reduction structure

Tough on dirty liquid

# Application

Dirty liquid generated in the machine tool is pumped to the filtration device.

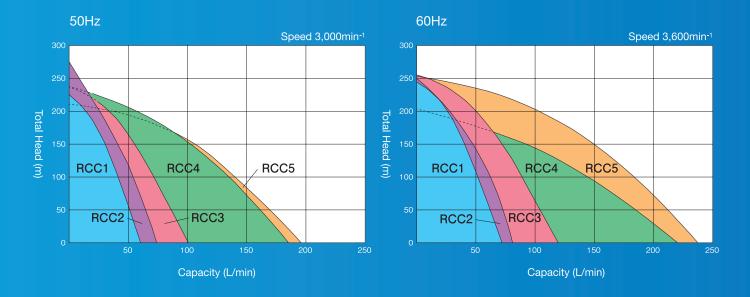
Boasting overwhelming durability, reducing delay to the manufacturing site due to pump trouble.



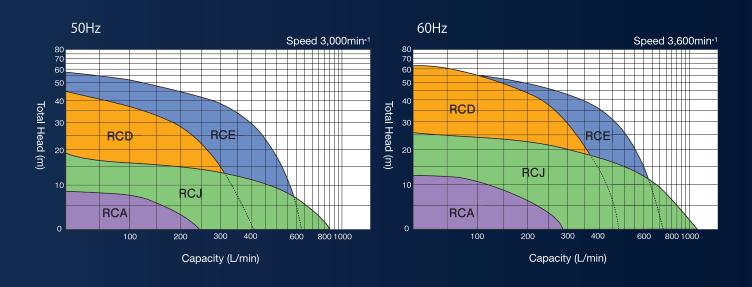


\* Some output is excluded. Also, since the RCA type is small output, it is excluded. Please contact us for details.

#### Selection range



Selection range



# RCC type High pressure type Compliant motor standard IE3 / GB3 / NEMA PREMIUM / KS-C

# **Maintenance reduction structure**

Standar	d Specifications	
Mod	el / Name	RCC Coolant Pump
	Installation location	Indoors
	Installation conditions	Vertical installation (horizontal installation not possible)
Scope of	Ambient	Temperature: 0 to 40°C
application	conditions	Humidity: 90% RH or lower (Non condensing)
application	Liquid type*1	Coolant, other
	Liquid temp	0 to 60°C
	Kinetic viscosity	1 mm <sup>2</sup> /s or lower (Please contuct us about Oiliness)
Motor	Туре	TEFC indoor, 2 poles, three phase 200V class*2
Motor	Efficiency	Premium efficiency (IE3)
*1 Please inc	uire in case of oil-based co	olant fluids.



In addition, for fresh water, hot water, pure water, and washing liquid model are available as special specification.

\*2 Please inquire about 400V class

# **Mechanical sealless structure**

Mechanical sealless structure free from coolant liquid splash caused by mechanical seal breakage.

# **Impeller and Casing**

### Impeller

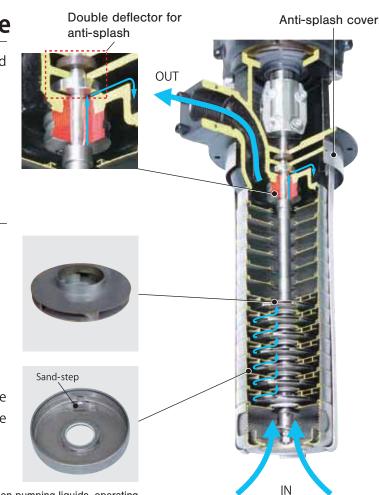
Keep good condition after two million (2,000,000) or more times of start and stop. \*

#### -Test Conditon -

360sw/hr (ON:5sec. OFF:5sec.)

#### Casing

It is the structure that fine chips contained in the fluid are difficult to stay in the casing due to the sand-step structure.



The life-time of pumps and pump components vary depending on pumping liquids, operating condition and so on.

# Unique submerged bearing with relief function

Structure which prevents breakage of pump internal parts from water hammering effect generated when the solenoid valve is closed quickly.

Keep good condition after 1.5 million

(1,500,000) or more times of start and stop. \*

Test Conditon

720 /hr ( Open: 3sec. Close: 2sec.)

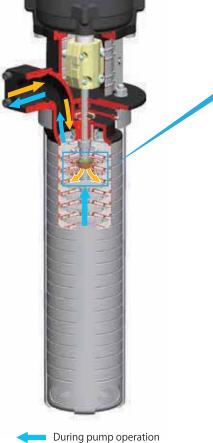
Without the relief function • • •

What is water hammer ?

Phenomenon in which impact/high water pressure occurs in the pipe due to the inertia of the water flow when the water flow in the hydraulic pipe is rapidly closed.

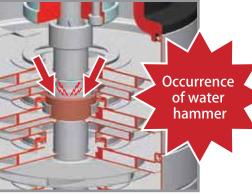
The impeller boss breakage occurs about four million (4,000,000) times (According to our research)

## Pressure situation in the pump during operation and solenoid valve rapid closure.



Structure for escaping water hammer generated at the time of rapid closure of solenoid valve by relief clearance of submerged bearing.

RCC type / Image : submerged bearing with relief valve function.



When there is no relief function



Impeller boss breaks by water hammer

During pump operation

When the solenoid valve is closed quickly

#### Special specifications

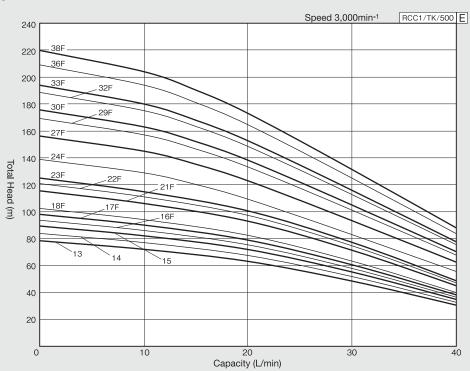
•Many Standards motors are available. GB3, UL & NEMA Premium & KS-C (except 5.5kW) Adjustable terminal box position (90°, 180°, 270°)

Model Explanation RCC 3 - 23 / 23 F  ① Model code

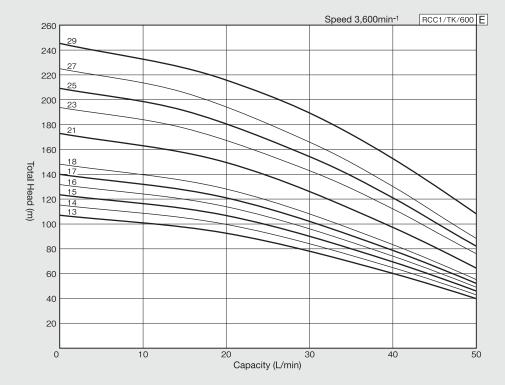
- ② Nominal flow rate (m<sup>3</sup>/hr)
- ③ Number of casing stage number none: for 50/60Hz
- ④ Number of impeller stage number ⑤ F ∶for 50Hz only

Selection chart

RCC1 [50Hz]



RCC1 [60Hz]



\*The above characteristic performance curve is obtained when the number of casing stage and the number of impeller stages are the same.

•Specifications and figures are subject to change without prior notice.

#### RCC1 [50Hz 200V]

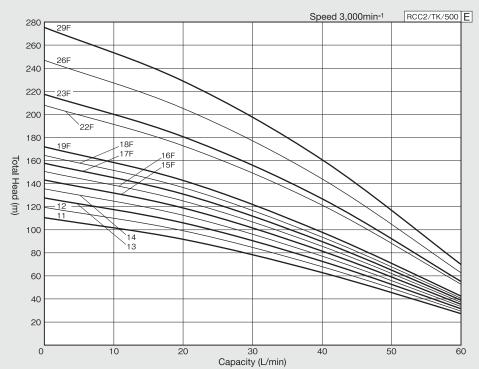
RCCT [50Hz	2, 200	70]													HSI/501	E
Model		Impeller	Ŭ	MAX. AMP	MAX. allowable AMP	Capacity	Total Head	Model		Impeller	Ŭ	MAX. AMP	MAX. allowable AMP	Capacity	Total Head	
	kW	stage	stage	A	A	L/min	m		kW	stage	stage	A	Α	L/min	m	
RCC1-13/13			13					RCC1-22/22F			22					
RCC1-15/13			15					RCC1-25/22F		22	25	4.5			110	
RCC1-17/13		13	17	3			72	RCC1-30/22F		~~~	30	4.5			110	
RCC1-21/13			21					RCC1-33/22F			33					
RCC1-25/13			25					RCC1-23/23F	0.75		23		5.3			
RCC1-14/14			14					RCC1-25/23F			25					
RCC1-15/14	1		15					RCC1-30/23F		23	30	4.6			114	
RCC1-17/14	1	14	17	3.2			77	RCC1-33/23F			33					
RCC1-21/14	1		21					RCC1-36/23F			36					
RCC1-25/14	1		25					RCC1-24/24F			24					
RCC1-15/15			15					RCC1-25/24F			25					
RCC1-17/15		15	17	3.4			82	RCC1-30/24F		24	30	6.1			127	
RCC1-21/15			21	0.4			02	RCC1-33/24F			33					
RCC1-25/15			25					RCC1-36/24F			36		-			
RCC1-16/16F	0.75		16		5.3	10		RCC1-27/27F			27			10	–	
RCC1-17/16F		16	17	3.5			86	RCC1-33/27F		27	33	6.5			145	
RCC1-21/16F	-		21	0.0				RCC1-36/27F			36		-			-
RCC1-25/16F	4		25		-			RCC1-29/29F			29					
RCC1-17/17F	-		17					RCC1-33/29F	1.5	29	33	6.8	9.3		157	
RCC1-21/17F	-	17	21	3.7			90	RCC1-36/29F			36		-			-
RCC1-25/17F	-		25					RCC1-30/30F		00	30				100	
RCC1-30/17F	-		30		-			RCC1-33/30F		30	33	6.9			163	
RCC1-18/18F	-		18					RCC1-36/30F			36		-			-
RCC1-21/18F	-	18	21	3.8			94	RCC1-32/32F		00	32	70			475	
RCC1-25/18F	-		25					RCC1-33/32F		32	33	7.2			175	
RCC1-30/18F RCC1-21/21F	-		30 21		-			RCC1-36/32F			36		-			-
RCC1-21/21F	-		25					RCC1-33/33F RCC1-36/33F		33	33 36	7.4			180	
RCC1-25/21F	-	21	30	4.3			106	RCC1-36/36F		36	36	8.4			194	-
RCC1-30/21F			33						2.2	38	38	8.7	12.4		204	
1 HUUI-33/21F			১৩					RCC1-38/38F		<u> </u>	১৪	0./			204	

## RCC1 [50/60Hz, 200V]

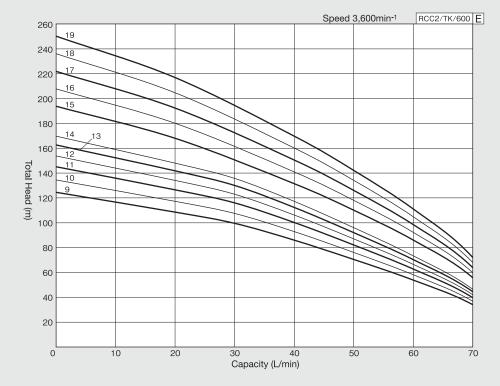
RCC1 [50/6	юHz,	200V	]											RCC1/	HSI/001
Model		Impeller			MAX. allowable AMP		Total Head	Model		Impeller	-		MAX. allowable AMP		Total Head
	kW	stage	-	A	A	L/min	m		kW	stage	<u> </u>	A	A	L/min	m
RCC1-13/13	-		13	4.5				RCC1-21/21	_		21	7.2			
RCC1-15/13	-		15	(4.2)			97	RCC1-25/21			25	(6.9)	9.3		155
RCC1-17/13	-	13	17	[4.1]			(72)	RCC1-30/21	1.5	21	30	[6.8]	(9.3)		(113)
RCC1-21/13	-		21	$\langle 3 \rangle$			(12)	RCC1-33/21	-		33	(5.7)			(110/
RCC1-25/13	4		25	(-)	-			RCC1-36/21			36	(==: ,			
RCC1-14/14	4		14	4.8				RCC1-23/23	_		23	8.3			
RCC1-15/14			15	(4.5)	5.1		104	RCC1-27/23	-		27	(7.9)			177
RCC1-17/14	0.75	14	17	[4.3]	(5.3)		$\langle 77 \rangle$	RCC1-30/23	-	23	30	[7.9]			(127)
RCC1-21/14	-		21	(3.2)			(,,,,	RCC1-33/23	-		33	$\langle 6.4 \rangle$			(1277
RCC1-25/14	4		25	(/	-			RCC1-36/23	-		36	(== .,	-		
RCC1-15/15	4		15	5.1				RCC1-25/25	_		25	8.9		15	
RCC1-17/15	4		17	(4.7)			111	RCC1-27/25	2.2		27	(8.5)	12.3	〈10〉	191
RCC1-21/15	-	15	21	[4.6]			(82)	RCC1-30/25		25	30	[8.4]	(12.4)		(137)
RCC1-25/15	4		25	$\langle 3.4 \rangle$			(02/	RCC1-33/25	-		33	(6.7)			(1077
RCC1-30/15			30	(0.17		15		RCC1-36/25			36				
RCC1-16/16	4		16	5.9		〈10〉		RCC1-27/27			27	9.6			
RCC1-17/16	4		17	(5.7)			120	RCC1-30/27		27	30	(9)			205
RCC1-21/16	1	16	21	[5.7]			(88)	RCC1-33/27		21	33	[8.9]			$\langle 147 \rangle$
RCC1-25/16	1		25	$\langle 5 \rangle$			\00/	RCC1-36/27			36	$\langle 7 \rangle$			
RCC1-30/16	1		30	(0)				RCC1-29/29			29	10.8 (10.6)	18.5		224
RCC1-17/17			17	6.2				RCC1-33/29	3.7	29	33	[10.7]	(18)		(160)
RCC1-21/17			21	(5.9)	9.3		127	RCC1-36/29			36	(9.9)	\10/		100/
RCC1-25/17	1.5	17	25	[5.9]	(9.3)		(93)	≫Inside of ( )	1 ic 220	nv r	1 ic 220	21/			
RCC1-30/17			30	(5.2)	\9.3/		\93/	· · /				'			
RCC1-33/17			33	\0.2/				$\langle \rangle$ is 200V	, whe	n oper	ating a	t 50 Hz	<u>Z</u>		
RCC1-18/18			18	6.4											
RCC1-21/18			21	(6.2)			134								
RCC1-25/18		18	25	[6.1]											
RCC1-30/18			30	(5.3)			<98>								
RCC1-33/18			33	\3.3/											

Selection chart

#### RCC2 [50Hz]



RCC2 [60Hz]



- \*The above characteristic performance curve is obtained when the number of casing stage and the number of impeller stages are the same.
  - For the products with more casing stages than the impeller stage number, the characteristics may be degraded due to the pressure loss of the added adjustment casing.

•Specifications and figures are subject to change without prior notice.

#### RCC2 [50Hz, 200V]

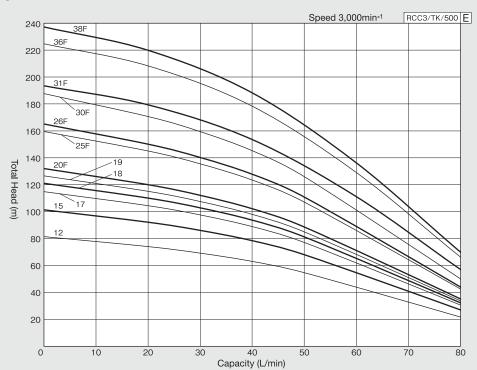
RCC2 [50Hz	z, 200	JV]												RCC2/	HSI/500
Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head	Model		Impeller	Ŭ	MAX. AMP	MAX. allowable AMP	Capacity	Total Head
	kW	stage	stage	A	A	L/min	m		kW	stage	stage	Α	A	L/min	m
RCC2-11/11			11					RCC2-16/16F			16				
RCC2-13/11			13					RCC2-18/16F		16	18	7.2			75
RCC2-15/11		11	15	5.8			56	RCC2-22/16F		10	22	1.2			75
RCC2-18/11		''	18	5.0			50	RCC2-26/16F			26				
RCC2-22/11			22					RCC2-17/17F			17				
RCC2-26/11			26					RCC2-18/17F		17	18	7.5			78
RCC2-12/12			12					RCC2-22/17F	1.5		22	7.5	9.3		70
RCC2-13/12			13					RCC2-26/17F	1.5		26		9.3		
RCC2-15/12		12	15	6.1			60	RCC2-18/18F			18				
RCC2-18/12		12	18	0.1			00	RCC2-22/18F		18	22	7.8		45	81
RCC2-22/12			22					RCC2-26/18F			26			45	
RCC2-26/12			26					RCC2-19/19F			19				
RCC2-13/13	1.5		13		9.3	45		RCC2-22/19F		19	22	8.1			84
RCC2-15/13	1.5		15		9.3	45		RCC2-26/19F			26				
RCC2-18/13		13	18	6.4			64	RCC2-22/22F		22	22	9.7			105
RCC2-22/13			22					RCC2-26/22F		_ 22	26	9.7			105
RCC2-26/13			26					RCC2-23/23F	2.2	23	23	10.1	12.4		110
RCC2-14/14			14					RCC2-26/23F	2.2	23	26	10.1	12.4		110
RCC2-15/14			15					RCC2-26/26F		26	26	11.1			125
RCC2-18/14		14	18	6.6			68	RCC2-29/29F		29	29	12.2			140
RCC2-22/14			22												
RCC2-26/14			26												
RCC2-15/15F			15												
RCC2-18/15F		15	18	6.9			71								
RCC2-22/15F		15	22	0.9											
RCC2-26/15F			26												

## RCC2 [50/60Hz, 200V]

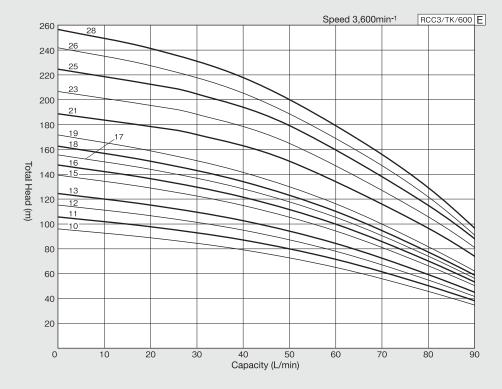
RCC2 [50/6	0Hz,	200V	]											RCC2/	HSI/000	E
Model		Impeller	U U	MAX. AMP	MAX. allowable AMP	Capacity	Total Head	Model	Motor	Impeller	-	MAX. AMP	MAX. allowable AMP	Capacity	Total Head	
	kW	stage	stage	A	A	L/min	m		kW	stage	stage	A	Α	L/min	m	
RCC2-9/9			9					RCC2-14/14			14	9.3				
RCC2-11/9			11	6.5				RCC2-15/14			15	(8.8)	9.3		96	
RCC2-13/9			13	(6.3)			70	RCC2-18/14	1.5	14	18	[8.6]	(9.3)		<pre>68</pre>	
RCC2-15/9		9	15	[6.2]			$\langle 46 \rangle$	RCC2-22/14			22	(6.6)	\9.3/		\00/	
RCC2-18/9			18	(5.3)			\40/	RCC2-26/14			26					
RCC2-22/9			22					RCC2-15/15			15	10.7				
RCC2-26/9			26					RCC2-18/15		15	18	(10)			110	
RCC2-10/10			10					RCC2-22/15		15	22	[9.8]			$\langle 72 \rangle$	
RCC2-13/10			13	7.1				RCC2-26/15			26	$\langle 7.4 \rangle$				
RCC2-15/10		10	15	(6.8)			76	RCC2-16/16			16	11.4				
RCC2-18/10		10	18	[6.7]			(51)	RCC2-18/16	]	10	18	(10.6)		50	118	
RCC2-22/10			22	(5.5)				RCC2-22/16	1	16	22	[10.3]		50	$\langle 77 \rangle$	
RCC2-26/10			26					RCC2-26/16	1		26	(7.7)		<45>		
RCC2-11/11			11		1			RCC2-17/17	1		17	12	12.3			
RCC2-13/11			13	7.7	9.3	50		RCC2-18/17	2.2	47	18	(11.2)	(12.4)		126	
RCC2-15/11	1.5		15	(7.3)	(9.3)	<45>	82	RCC2-22/17	1	17	22	[10.9]			(82)	
RCC2-18/11		11	18	[7.2]			(56)	RCC2-26/17	1		26	(8.1)				
RCC2-22/11			22	(5.8)				RCC2-18/18	1		18	12.2 (11.7)	1			
RCC2-26/11			26	1 /				RCC2-22/18	1	18	22	(11.7)			134	
RCC2-12/12			12		1			RCC2-26/18	1		26	(8.4)			$\langle 87 \rangle$	
RCC2-13/12			13	8.2				RCC2-19/19	1		19	12.3				
RCC2-15/12			15	(7.8)			87	RCC2-22/19	1	19	22	(12.2)			142	
RCC2-18/12		12	18	[7.6]			(60)	RCC2-26/19	1		26	[12] 〈8.7〉			$\langle 92 \rangle$	
RCC2-22/12			22	$\langle 6 1 \rangle$			(/					(0)				۰.
RCC2-26/12			26	(,				※Inside of ( )	) is 22(	)V, (	〕is 23(	DV,				
RCC2-13/13			13	0.0	1			< > is 200V	/, whe	n opera	ating a	t 50 Hz	7			
RCC2-15/13			15	8.8				, ,	,		u					
RCC2-18/13		13	18	(8.3)			92									
RCC2-22/13			22	[8.1]			〈64〉									
RCC2-26/13			26	(6.4)												

Selection chart

#### RCC3 [50Hz]



RCC3 [60Hz]



\*The above characteristic performance curve is obtained when the number of casing stage and the number of impeller stages are the same.

•Specifications and figures are subject to change without prior notice.

#### RCC3 [50Hz, 200V]

	_, _ 0													RCC3/	HSI/500
Model		· ·	Casing		MAX. allowable AMP	Capacity	Total Head	Model		Impeller			MAX. allowable AMP	Capacity	Total Head
	kW	stage	stage	A	A	L/min	m		kW	stage	stage	A	A	L/min	m
RCC3-12/12			12					RCC3-20/20F			20				
RCC3-15/12		10	15				74	RCC3-23/20F		20	23	7			100
RCC3-19/12		12	19	5.3			74	RCC3-26/20F		20	26	/			120
RCC3-23/12			23					RCC3-30/20F			30				
RCC3-15/15			15					RCC3-25/25F			25				
RCC3-19/15		15	19	5.9			92	RCC3-30/25F	1 5	25	30	8.2	9.3		145
RCC3-23/15			23					RCC3-36/25F	1.5		36		9.3		
RCC3-17/17			17					RCC3-26/26F			26			20	
RCC3-23/17	1.5	17	23	6.3	9.3	20	104	RCC3-30/26F		26	30	8.4		20	150
RCC3-26/17			26					RCC3-36/26F			36				
RCC3-18/18			18					RCC3-30/30F		30	30	9.3			170
RCC3-23/18		18	23	6.5			110	RCC3-36/30F		30	36	9.3			170
RCC3-26/18			26					RCC3-31/31F		31	31	10.3			179
RCC3-19/19			19					RCC3-36/31F		31	36	10.3	10.4		179
RCC3-23/19		19	23	0.0			115	RCC3-36/36F	2.2	36	36	11.6	12.4		207
RCC3-26/19		19	26	6.8			115	RCC3-38/38F		38	38	12.1			218
RCC3-30/19			30												

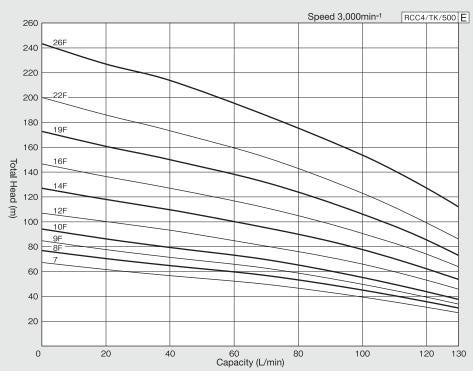
## RCC3 [50/60Hz, 200V]

RCC3 [50/6	0112,	2001	1												HSI/001
Model		Impeller		MAX. AMP	MAX. allowable AMP	Capacity	Total Head	Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head
	kW	stage	stage	А	A	L/min	m		kW	stage	stage	А	A	L/min	m
RCC3-10/10			10	5.7				RCC3-18/18			18	9.1			
RCC3-12/10			12	(5.6)			88	RCC3-23/18		18	23	(8.6)			147
RCC3-15/10		10	15	[5.6]			88   ⟨62⟩	RCC3-26/18		18	26	[8.4]			(110)
RCC3-19/10			19	(4.9)			(02)	RCC3-30/18			30	$\langle 6.5 \rangle$	0.0		
RCC3-23/10			23	\4.9/				RCC3-19/19	1.5		19	9.3	9.3		
RCC3-11/11			11	6.2	]			RCC3-23/19			23	(9)	(9.3)		154
RCC3-15/11		4.4	15	(6)			96	RCC3-26/19		19	26	[8.8]			154
RCC3-19/11		11	19	[5.9]			〈68〉	RCC3-30/19			30	(6.8)			(115)
RCC3-23/11			23	(5.1)				RCC3-36/19			36	\0.0/			
RCC3-12/12			12	6.6	1			RCC3-21/21			21	11.3		1	
RCC3-15/12		10	15	(6.3)			104	RCC3-23/21			23				170
RCC3-19/12		12	19	[6.3]			$\langle 74 \rangle$	RCC3-26/21		21	26	(10.5)			176
RCC3-23/12			23	$\langle 5.3 \rangle$				RCC3-30/21			30	[10.3]		0.5	(125)
RCC3-13/13			13	7	1			RCC3-36/21	1		36	〈7.7〉		25	
RCC3-15/13	1.5		15	(6.7)	9.3	25	112	RCC3-23/23	1		23	12.1	12.3	〈20〉	
RCC3-19/13		13	19	[6.6]	(9.3)	$\langle 20 \rangle$	〈80〉	RCC3-26/23	2.2		26	(11.4)	(12.4)		192
RCC3-23/13			23	(5.5)			(==)	RCC3-30/23		23	30	[11.1]			(135)
RCC3-15/15			15	7.9	1			RCC3-36/23			36	$\langle 8.2 \rangle$			
RCC3-19/15			19	(7.5)			126	RCC3-25/25			25	123	1		
RCC3-23/15		15	23	[7.3]			(92)	RCC3-30/25		25	30	(12.2) [11.9]			207
RCC3-26/15			26	(5.9)			(/	RCC3-36/25			36	(8.7)			(145)
RCC3-16/16			16	8.3	1			RCC3-26/26			26	14.1			
RCC3-19/16			19	(7.8)			133	RCC3-30/26		26	30	(13.4) [13.3]			222
RCC3-23/16		16	23	[7.7]			(98)	RCC3-36/26			36	(10.7)	18.5		(157)
RCC3-26/16			26	(6.1)			(00)	RCC3-28/28	3.7		28	15	(18)		
RCC3-17/17			17	8.7	1			RCC3-30/28	1	28	30	(14.2)	\		235
RCC3-23/17			23	(8.2)			140	RCC3-36/28	1		36	[14.1] 〈11〉			(168)
RCC3-26/17		17	26	[8.1]			(104)								
RCC3-30/17			30	(6.3)				※Inside of ( )			) is 23(				

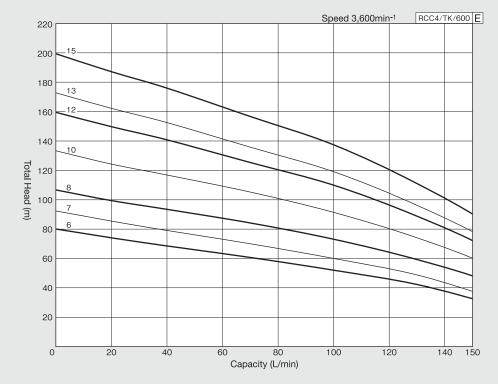
RCC

Selection chart

RCC4 [50Hz]



RCC4 [60Hz]



\*The above characteristic performance curve is obtained when the number of casing stage and the number of impeller stages are the same.

•Specifications and figures are subject to change without prior notice.

#### RCC4 [50Hz, 200V]

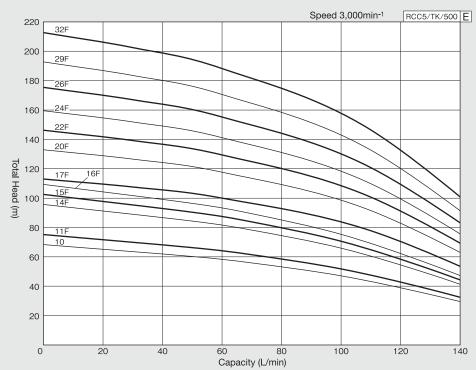
RCC4 [50H	z, 20	UV]												RCC4/	HSI/500
Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head	Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head
	kW	stage	stage	А	A	L/min	m		kW	stage	stage	Α	A	L/min	m
RCC4-7/7			7					RCC4-10/10F			10				
RCC4-8/7			8					RCC4-12/10F			12				
RCC4-10/7			10					RCC4-14/10F	1.5	10	14	8.1	9.3		64
RCC4-12/7		7	12	6.4			47	RCC4-16/10F	1.5		16	0.1	9.3		04
RCC4-14/7			14	0.4			47	RCC4-19/10F			19				
RCC4-16/7			16					RCC4-22/10F			22				
RCC4-19/7			19					RCC4-12/12F			12				
RCC4-22/7			22					RCC4-14/12F			14				
RCC4-8/8F			8					RCC4-16/12F		12	16	9.9			76
RCC4-10/8F			10					RCC4-19/12F			19				
RCC4-12/8F	1.5		12		9.3	80		RCC4-22/12F	2.2		22		12.4	80	
RCC4-14/8F	1.5	8	14	7	9.3	00	52	RCC4-14/14F			14			00	
RCC4-16/8F			16					RCC4-16/14F		14	16	11.2			90
RCC4-19/8F			19					RCC4-19/14F		14	19	11.2			90
RCC4-22/8F			22					RCC4-22/14F			22				
RCC4-9/9F			9					RCC4-16/16F			16				
RCC4-10/9F			10					RCC4-19/16F		16	19	13.7			105
RCC4-12/9F			12					RCC4-22/16F	3.7		22		18		
RCC4-14/9F		9	14	7.5			58	RCC4-19/19F	3.7	19	19	155	10		124
RCC4-16/9F			16					RCC4-22/19F			22	15.5			
RCC4-19/9F			19					RCC4-22/22F		22	22	17.5			143
RCC4-22/9F			22					RCC4-26/26F	5.5	26	26	19.6	25.5		175

# RCC4 [50/60Hz, 200V]

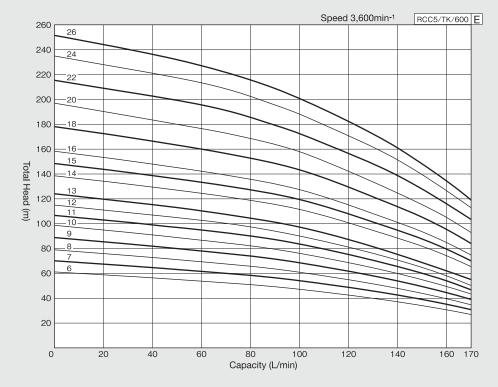
RCC4 [50/6	oOHz,	200	′]											RCC4/	HSI/001
Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head	Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head
	kW	stage	stage	A	A	L/min	m		kW	stage	stage	Α	Α	L/min	m
RCC4-6/6			6					RCC4-10/10			10				
RCC4-7/6			7					RCC4-12/10			12	12.3			
RCC4-8/6			8	7.8				RCC4-14/10	2.2	10	14	(12.2)			91
RCC4-10/6			10	(7.4)			52	RCC4-16/10	2.2		16	[11.9]	(12.4)		$\langle 66 \rangle$
RCC4-12/6		6	12	[7.3]			3∠ ⟨40⟩	RCC4-19/10			19	$\langle 8.7 \rangle$			
RCC4-14/6			14	(5.9)			\40/	RCC4-22/10			22				
RCC4-16/6			16	\3.3/				RCC4-12/12			12	15.9			
RCC4-19/6			19		9.3			RCC4-14/12			14	(15)			110
RCC4-22/6	1.5		22		(9.3)			RCC4-16/12		12	16	[14.8]			(84)
RCC4-7/7			7		\9.3/			RCC4-19/12			19	(11.4)		100	\04/
RCC4-8/7			8					RCC4-22/12			22	(11.47)		<80>	
RCC4-10/7			10	8.9		100		RCC4-13/13			13	17.1			
RCC4-12/7		7	12	(8.4)		〈80〉	60	RCC4-14/13	3.7		14	(16)	18.5		119
RCC4-14/7			14	[8.2]			$\langle 47 \rangle$	RCC4-16/13	3.7	13	16	[15.7]	〈18〉		<pre>/90</pre>
RCC4-16/7			16	(6.4)				RCC4-19/13			19	(12)			(90/
RCC4-19/7			19					RCC4-22/13			22				
RCC4-22/7			22					RCC4-15/15			15	18.5			
RCC4-8/8			8					RCC4-16/15		15	16	(18.1)			137
RCC4-10/8			10	10.8				RCC4-19/15		15	19	[17.7]			(102)
RCC4-12/8			12	(10)	12.3		73	RCC4-22/15			22	(13.1)			
RCC4-14/8	2.2	8	14	[9.8]	(12.4)		√3 √3	×Incido of (	1:00	ov r	1:000	01/			
RCC4-16/8			16	(7.4)	\\12.4/		\34/	*Inside of (							
RCC4-19/8			19	1 11.47				‴〈 〉is 200'	V, whe	en opei	rating a	at 50 H	Z		
RCC4-22/8			22												

Selection chart

#### RCC5 [50Hz]



RCC5 [60Hz]



%The above characteristic performance curve is obtained when the number of casing stage and the number of impeller stages are the same.

•Specifications and figures are subject to change without prior notice.

## RCC5 [50Hz, 200V]

RCC5 [50H:	z, 20	0V]												RCC5/	HSI/500
Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head	Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head
	kW	stage	stage	Α	Α	L/min	m		kW	stage	stage	А	A	L/min	m
RCC5-10/10			10					RCC5-20/20F			20				
RCC5-14/10		10	14	6.5			62	RCC5-24/20F		20	24	11.6			123
RCC5-16/10		10	16	0.5			02	RCC5-29/20F		20	29	11.0			123
RCC5-20/10			20					RCC5-32/20F	2.2		32		12.4		
RCC5-11/11F			11					RCC5-22/22F			22		12.4		
RCC5-14/11F		11	14	6.9			68	RCC5-24/22F		22	24	12.4			135
RCC5-16/11F			16	0.5			00	RCC5-29/22F		~~	29	12.4			100
RCC5-20/11F			20					RCC5-32/22F			32				
RCC5-14/14F			14					RCC5-24/24F			24			40	
RCC5-16/14F	1.5	14	16	8.2	9.3		86	RCC5-29/24F		24	29	14.6			150
RCC5-20/14F		14	20	0.2			00	RCC5-32/24F			32				
RCC5-24/14F			24		_	40		RCC5-26/26F			26				
RCC5-15/15F			15					RCC5-29/26F	3.7	26	29	15.5	18		162
RCC5-20/15F		15	20	8.6			92	RCC5-32/26F			32		.		
RCC5-24/15F			24					RCC5-29/29F		29	29	16.8			180
RCC5-16/16F			16					RCC5-32/29F			32		.		
RCC5-20/16F		16	20	9			98	RCC5-32/32F		32	32	18			198
RCC5-24/16F		10	24	5			50								
RCC5-29/16F			29												
RCC5-17/17F			17												
RCC5-20/17F	2,2	17	20	10.1	12.4		105								
RCC5-24/17F			24												
RCC5-29/17F			29		L										

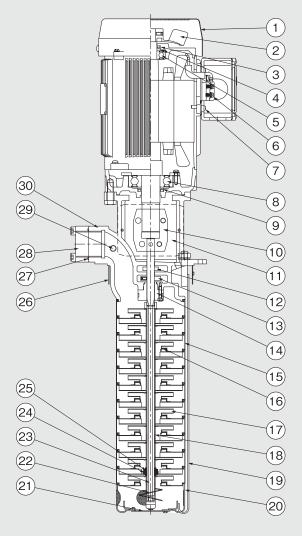
### RCC5 [50/60Hz, 200V]

RCC5 [50/6	0Hz,	200V	′]											RCC5/	HSI/000
Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head	Model	Motor	Impeller	Casing	MAX. AMP	MAX. allowable AMP	Capacity	Total Head
model	kW	stage	stage	А	Α	L/min	m	model	kW	stage	stage	Α	A	L/min	m
RCC5-6/6			6					RCC5-14/14			14	14			
RCC5-8/6			8	6.2				RCC5-16/14			16	(13.3)			127
RCC5-10/6		6	10	(6)			55	RCC5-20/14		14	20	[13.3]			$\langle 90 \rangle$
RCC5-14/6		0	14	[6]			(39)	RCC5-24/14			24	(10.6)			\90/
RCC5-16/6			16	<5.1>				RCC5-29/14			29	10.0/			
RCC5-20/6			20					RCC5-15/15			15	14.9			
RCC5-7/7			7	7				RCC5-16/15			16	(14.1)			136
RCC5-10/7			10	(6.7)			60	RCC5-20/15		15	20	[13.9]			
RCC5-14/7		7	14	[6.6]			63 〈45〉	RCC5-24/15			24	(10.9)			〈96〉
RCC5-16/7			16	<pre>(5.4)</pre>			(45)	RCC5-29/15			29	10.9/			
RCC5-20/7			20	\3.4/				RCC5-16/16			16	15.7			
RCC5-8/8			8	7.8				RCC5-20/16	3.7		20	(14.8)	18.5		145
RCC5-10/8	1.5		10	(7.4)	9.3		74	RCC5-24/16	3./	16	24	[14.6]	(18)		
RCC5-14/8		8	14	[7.2]	(9.3)		71	RCC5-29/16	1		29	(11.2)			(102)
RCC5-16/8			16	<5.8>			〈51〉	RCC5-32/16	1		32	\\\.2/			
RCC5-20/8			20	\0.0/				RCC5-18/18	1		18	17.5			
RCC5-9/9			9	8.6	1			RCC5-20/18	1		20	(16.4)		50	100
RCC5-10/9			10				70	RCC5-24/18	1	18	24			$\langle 40 \rangle$	163
RCC5-14/9		9	14	(8.1)		50	79	RCC5-29/18	1		29	[16.1]			(114)
RCC5-16/9			16	[7.9]		50	$\langle 57 \rangle$	RCC5-32/18	1		32	(12)			
RCC5-20/9			20	〈6.1〉		$\langle 40 \rangle$		RCC5-20/20	1		20	18.5			
RCC5-10/10			10	9.3	1			RCC5-24/20	1		24	(17.9)			180
RCC5-14/10			14	(8.8)			87	RCC5-29/20	1	20	29	[17.5]			(126)
RCC5-16/10		10	16	[8.6]			$\langle 62 \rangle$	RCC5-32/20	1		32	(12.8)			
RCC5-20/10			20	(6.5)				RCC5-22/22			22	20.3			
RCC5-11/11			11	11				RCC5-24/22	1		24	(18.8)			198
RCC5-14/11			14	(10.2)			97	RCC5-29/22	1	22	29	[18.1]			(140)
RCC5-16/11		11	16	[10]			$\langle 70 \rangle$	RCC5-32/22	1		32	(13.2)			
RCC5-20/11			20	$\langle 7.4 \rangle$			(,	RCC5-24/24	1		24	22 (20.3)	25.5		
RCC5-12/12			12		1			RCC5-29/24	5.5	24	29	[(20.3)	(25.5)		215
RCC5-14/12			14	11.8				RCC5-32/24	1		32	(14.1)	\20.0/		(152)
RCC5-16/12		12	16	(11)	12.3		105	RCC5-26/26	1		26	23.7			
RCC5-20/12	2.2		20	[10.8]	(12.4)		$\langle 76 \rangle$	RCC5-29/26	1	26	29	(21.8)			232
RCC5-24/12			24	<7.8>	12.4/			RCC5-32/26	1		32	(15)			(164)
RCC5-13/13			13	10.0	1										
RCC5-14/13			14	12.3				≫Inside of (							
RCC5-16/13		13	10	(11.8)			113	< > is 200\	/, whe	n oper	ating a	t 50 Hz	Z		
RCC5-20/13			20	[11.5]			<82>				-				
RCC5-24/13			24	<8.3>											

RCC

#### Structure drawing

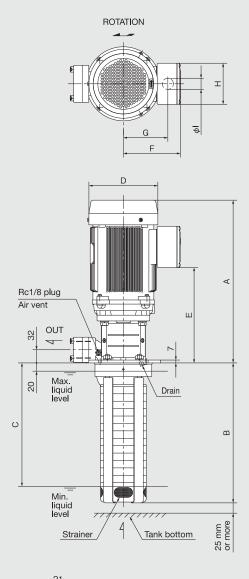
The drawing is the typical drawing, so it might vary depending on models.

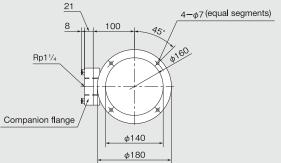


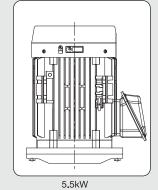
No.	Name	Material	No.	Name	Material
1	Fan cover	SPCC	16	Liner ring	PTFE
2	Fan	PA	17	Impeller	SUS304
3	Oil seal	NBR	18	Sleeve	SUS304
4	Wave washer	SK-85M	19	Band	SUS304
5	Ball bearing		20	Suction casing	SUS304
6	Solderless terminal	SWRM	21	Strainer	SUS304
7	Earth screw	C2700	22	Support screw	SUS304
8	Ball bearing		23	Shaft	SUS431
9	Oil seal	NBR	24	Submerged bearing	SiC
10	Couplling	FC0205	25	Sleeve	SiC
11	Couplling cover	SUS304	26	Cover	SUS304
12	Deflector	FKM	27	O ring	FKM
13	Deflector	SUS304	28	Flange	FC200
14	Bush	FCD450	29	Plug	SWCH10K
15	Stage casing	SUS304	30	Discharge casing	FC200

RCC/HC/000 E

Please inquire specification sheets and drawings in case of actual work plans.







unit:	mm

Motor output	E	F	G	Н	1
0.75	211	134	107	86	22
1.5	232	139	108	100	27
2.2	249	152	121	100	27
3.7	279	152	121	100	27
5.5	185	218	175	137	35

▲

RCC/D/000 E

#### **BCC1** [50H<sub>7</sub>]

RCC1 [50H:	Z]															uni	it: mm
Model	Motor	Impeller	Casing			с	D	Mass	Model	Motor	Impeller	Casing	^	Б	С	D	Mass
Widder	kW	stage	stage	A	В			kg	Model	kW	stage	stage	A	В			kg
RCC1-13/13			13		358	318		25	RCC1-22/22F			22		520	480		27
RCC1-15/13	1		15		394	354	1	25	RCC1-25/22F	1	22	25		574	534	1	28
RCC1-17/13	1	13	17		430	390	1	26	RCC1-30/22F	1	22	30		664	624	1	29
RCC1-21/13	1		21		502	462	1	26	RCC1-33/22F	1		33		718	678	]	29
RCC1-25/13			25		574	534		27	RCC1-23/23F	0.75		23	367	538	498		28
RCC1-14/14			14		376	336		25	RCC1-25/23F	]		25		574	534	]	28
RCC1-15/14	]		15		394	354		25	RCC1-30/23F	]	23	30		664	624		29
RCC1-17/14	]	14	17		430	390		26	RCC1-33/23F	]		33		718	678	]	29
RCC1-21/14	]		21		502	462		26	RCC1-36/23F			36		772	732	]	30
RCC1-25/14			25		574	534		27	RCC1-24/24F			24		556	516		33
RCC1-15/15			15		394	354		26	RCC1-25/24F			25		574	534		33
RCC1-17/15	]	15	17		430	390		26	RCC1-30/24F	]	24	30		664	624		34
RCC1-21/15	]	15	21		502	462		26	RCC1-33/24F	]		33		718	678	]	34
RCC1-25/15	]		25		574	534		27	RCC1-36/24F	]		36		772	732	1100	35
RCC1-16/16F	0.75		16	367	412	372	4100	26	RCC1-27/27F			27		610	570	φ168	34
RCC1-17/16F	]0.75	16	17	307	430	390	φ168	26	RCC1-33/27F		27	33		718	678		35
RCC1-21/16F		10	21		502	462		27	RCC1-36/27F			36		772	732		35
RCC1-25/16F	]		25		574	534		27	RCC1-29/29F	]		29		646	606	]	34
RCC1-17/17F	]		17		430	390		26	RCC1-33/29F	1.5	29	33	396	718	678	]	35
RCC1-21/17F		17	21		502	462		27	RCC1-36/29F			36		772	732		35
RCC1-25/17F			25		574	534		27	RCC1-30/30F			30		664	624		34
RCC1-30/17F			30		664	624		28	RCC1-33/30F		30	33		718	678		35
RCC1-18/18F			18		448	408		26	RCC1-36/30F			36		772	732		35
RCC1-21/18F		18	21		502	462		27	RCC1-32/32F			32		700	660		35
RCC1-25/18F		10	25		574	534		27	RCC1-33/32F		32	33		718	678		35
RCC1-30/18F			30		664	624		28	RCC1-36/32F			36		772	732		36
RCC1-21/21F			21		502	462		27	RCC1-33/33F		33	33		718	678		35
RCC1-25/21F		21	25		574	534		28	RCC1-36/33F		33	36		772	732		36
RCC1-30/21F			30		664			29	RCC1-36/36F	2.2	36	36	413	772	732	4104	41
RCC1-33/21F			33		718	678		29	RCC1-38/38F	2.2	38	38	413	808	768	φ194	41
Model name w	/ithou	t F at	the er	nd are	share	d wit	h 60 H	7								DCC1	/d/500

\*Model name without F at the end are shared with 60 Hz

#### RCC1 [50/60Hz]

RCC1/d/500 E

																uni	t: mm
Model		1	Casing	А	в	с	D	Mass	Model		Impeller	Ŭ	А	В	с	D	Mass
	kW	stage	stage					kg		kW	stage	stage					kg
RCC1-13/13			13		358			25	RCC1-21/21			21		502	462		32
RCC1-15/13			15		394			25	RCC1-25/21	1		25		574	534		33
RCC1-17/13		13	17		430			26	RCC1-30/21	1.5	21	30	396	664		φ168	33
RCC1-21/13	1		21		502	462	-	26	RCC1-33/21	1		33		718	678		34
RCC1-25/13	4		25		574	534		27	RCC1-36/21			36		772	732		34
RCC1-14/14	4		14		376			25	RCC1-23/23	1		23		538	498		37
RCC1-15/14	4		15		394			25	RCC1-27/23	1		27		610	570		37
RCC1-17/14	0.75	14	17	367	430	390		26	RCC1-30/23	1	23	30		664	624		38
RCC1-21/14	4		21		502	462	-	26	RCC1-33/23	4		33		718	678		38
RCC1-25/14	4		25		574	534		27	RCC1-36/23	1		36		772	732		39
RCC1-15/15	4		15		394	354		26	RCC1-25/25	1		25		574	534		37
RCC1-17/15	4		17		430	390		26	RCC1-27/25	2.2		27	413	610	570		37
RCC1-21/15	1	15	21		502	462		26	RCC1-30/25	2.2	25	30	410	664	624		38
RCC1-25/15	4		25		574	534		27	RCC1-33/25	4		33		718		φ194	38
RCC1-30/15			30		664	624	φ168	28	RCC1-36/25	4		36		772	732		39
RCC1-16/16	4		16		412	372	<b>\$100</b>	01	RCC1-27/27	4		27		610	570		38
RCC1-17/16	4		17		430			31	RCC1-30/27	1	27	30		664	624		38
RCC1-21/16	1	16	21		502	462		32	RCC1-33/27	1	21	33		718	678		39
RCC1-25/16	4		25		574	534	-	32	RCC1-36/27			36		772	732		39
RCC1-30/16	4		30		664	624	_	33	RCC1-29/29	4		29		646			43
RCC1-17/17	4		17		430	390	4	31	RCC1-33/29	3.7	29	33	443	718			44
RCC1-21/17	4		21		502	462	-	32	RCC1-36/29			36		772	732		44
RCC1-25/17	1.5	17	25	396	574	534		32								RCC1	/d/000 E
RCC1-30/17	4		30		664		-	33									
RCC1-33/17	4		33		718	678		34									
RCC1-18/18	-		18		448		-	31									
RCC1-21/18	-		21		502	462		32									
RCC1-25/18	1	18	25		574			32									
RCC1-30/18			30		664			33									
RCC1-33/18			33		718	678		34									

RCC2 [50Hz]

RCC2 [50Hz	zj															uni	t: mm
Model	Motor	Impeller	Casing	A	В	с	D	Mass	Model	Motor	Impeller	Casing	А	В	С	D	Mass
	kW	stage	stage					kg		kW	stage	stage					kg
RCC2-11/11			11		322	282		27	RCC2-16/16F			16		412	372		29
RCC2-13/11			13		358			28	RCC2-18/16F		16	18		448	408		29
RCC2-15/11		11	15		394			28	RCC2-22/16F		10	22		520	480		30
RCC2-18/11			18		448			29	RCC2-26/16F			26		592	552		30
RCC2-22/11			22		520	480		29	RCC2-17/17F			17		430	390		29
RCC2-26/11			26		592			30	RCC2-18/17F		17	18		448	408		29
RCC2-12/12			12		340	300		28	RCC2-22/17F	1.5		22	396	520	480	4160	30
RCC2-13/12			13		358	318		28	RCC2-26/17F	1.5		26	390	592	552	φ168	31
RCC2-15/12		12	15		394	354		28	RCC2-18/18F			18		448	408		29
RCC2-18/12		12	18		448	408		29	RCC2-22/18F		18	22		520	480		30
RCC2-22/12			22		520	480		29	RCC2-26/18F			26		592	552		31
RCC2-26/12			26		592	552		30	RCC2-19/19F			19		466	426		30
RCC2-13/13	1.5		13	396	358	318	+100	28	RCC2-22/19F		19	22		520	480		30
RCC2-15/13	1.5		15	390	394	354	φ168	28	RCC2-26/19F			26		592	552		31
RCC2-18/13		13	18		448	408		29	RCC2-22/22F		00	22		520	480		36
RCC2-22/13			22		520	480	]	29	RCC2-26/22F		22	26		592	552	]	37
RCC2-26/13			26		592	552	]	30	RCC2-23/23F		23	23	410	538	498	1101	36
RCC2-14/14			14		376	336		28	RCC2-26/23F	2.2	23	26	413	592	498 552	φ194	37
RCC2-15/14			15		394	354		28	RCC2-26/26F		26	26		592	552		37
RCC2-18/14		14	18		448	408		29	RCC2-29/29F		29	29		646	606		38
RCC2-22/14			22		520	480	]	30	*Model name v	withou	it E at	t the e	nd are	- shar	ed	RCC2	2/d/500 E
RCC2-26/14			26		592	552	]	30	with 60 Hz	, vittilo	acru		na ur	c shar	cu		
RCC2-15/15F			15		394	354	]	29	WIGH 00 112								
RCC2-18/15F		15	18		448	408		29									
RCC2-22/15F		15	22		520	480		30									
RCC2-26/15F			26		592	552		30									

#### RCC2 [50/60Hz]

	, , , , , , , , , , , , , , , , , , , ,															uni	t: mm							
Model		1 '	Casing stage	A	В	с	D	Mass kg	Model	Motor		Casing stage	А	В	С	D	Mass kg							
RCC2-9/9		otago	9		286	246		27	RCC2-14/14	1	olugo	14		376	336		28							
RCC2-11/9	1		11		322			27	RCC2-15/14			15		394	354		28							
RCC2-13/9	1		13			318		28	RCC2-18/14	1.5	14	18	396	448	408	<i></i> ተ68								
RCC2-15/9	1	9	15			354		28	RCC2-22/14		• •	22	000	520	480	φ100	30							
RCC2-18/9	1		18	1	448		1	28	RCC2-26/14			26		592	552		30							
RCC2-22/9	1		22	1	520		1	29	RCC2-15/15			15		394	354		34							
RCC2-26/9	1		26	1	592		1	30	RCC2-18/15			18		448	408		35							
RCC2-10/10	1		10	1	304		1	27	RCC2-22/15	1	15	22		520	480		36							
RCC2-13/10	1		13	1	358	318	1	28	RCC2-26/15			26		592	552		36							
RCC2-15/10	1	10	15	1		354	1	28	RCC2-16/16			16		412	372		35							
RCC2-18/10	1		18	1	448				]			1	1	28	RCC2-18/16		10	18		448	408		35	
RCC2-22/10	1		22	1	520	480			29	RCC2-22/16		16	22		520	480		36						
RCC2-26/10				-					26		592	552		30	RCC2-26/16			26		592	552		36	
RCC2-11/11	]		11	]	322	22 282	φ168								27	RCC2-17/17			17	44.0	430	390		35
RCC2-13/11	1		13	2000	358	318		28	RCC2-18/17	2.2	17	18	413	448	408	φ194	35							
RCC2-15/11	1.5	4.4	15	396	394 354 <sup>9</sup>	φ168		φ168	φισο	28	RCC2-22/17		17	22		520	480		36					
RCC2-18/11		11	18		448	408					29	RCC2-26/17			26		592	552		36				
RCC2-22/11			22		520				29	RCC2-18/18			18		448	408		35						
RCC2-26/11			26		592			30	RCC2-22/18		18	22		520	480		36							
RCC2-12/12			12		340		1	1	1		28	RCC2-26/18			26		592	552		37				
RCC2-13/12			13			318		28	RCC2-19/19			19		466	426		36							
RCC2-15/12		12	15		394	354		28	RCC2-22/19		19	22		520	480		36							
RCC2-18/12		12	18		448			29	RCC2-26/19			26		592	552		37							
RCC2-22/12			22		520			29								RCC2	/d/000							
RCC2-26/12			26		592			30																
RCC2-13/13			13			318		28																
RCC2-15/13	1		15			354		28																
RCC2-18/13		13	13	18		448 4			29															
RCC2-22/13							22		520 48			29												
RCC2-26/13			26		592	552		30																

RCC

unit: mm

#### RCC3 [50Hz]

RCC3 [50H	ZJ															uni	it: mm						
Model	Motor	otor Impeller Ca		A	В	с	D	Mass	Model	Motor	Impeller	Casing	А	В	С	D	Mass						
	kW	stage	stage					kg		kW	stage	stage					kg						
RCC3-12/12			12		340	300		30	RCC3-20/20F			20		484	444		32						
RCC3-15/12		12	15		394	354		30	RCC3-23/20F		20	23		538	498		32						
RCC3-19/12		12	19		466	426		31	RCC3-26/20F		20	26		592	552		33						
RCC3-23/12			23		538	498		31	RCC3-30/20F			30		664	624		33						
RCC3-15/15			15		394	354		31	RCC3-25/25F			25		574	534		33						
RCC3-19/15		15	19		466	426		31	RCC3-30/25F	1.5	25	30	200	664	624	44.00	34						
RCC3-23/15	1	17	17	17	17	23		538	498				32	RCC3-36/25F	- 1.5		36	396	772	732	¢168	35	
RCC3-17/17	1					17		430 390	390	]	31	RCC3-26/26F	]		26		592	552		33			
RCC3-23/17	1.5					17	17	17	17	17	23	396	538	498	φ168	32	RCC3-30/26F		26	30		664	624
RCC3-26/17	1			26		592	552	(	32	RCC3-36/26F			36		772	732	1	35					
RCC3-18/18	1		18		448	408		31	RCC3-30/30F		00	30		664	624		34						
RCC3-23/18	1	18	23		538	498		32	RCC3-36/30F	1	30	36		772	732		35						
RCC3-26/18	1		26		592	552	]	33	RCC3-31/31F		0.1	31		682	642		37						
RCC3-19/19	]		19		466	426	]	32	RCC3-36/31F		31	36	44.0	772	732		38						
RCC3-23/19	]	10	23		538	498	]	32	RCC3-36/36F	2.2	36	36	413	772	732	φ194	38						
RCC3-26/19	1	19	26		592	552	1	33	RCC3-38/38F		38	38		808	768		39						
RCC3-30/19			30		664	624	1	33	*Model name	witho	ut F a	t the e	end ar	e shar	ed	RCC3	3/d/500						

with 60 Hz

#### RCC3 [50/60Hz]

																uni	t: mm				
Model	Motor	Impeller	Casing	A	В	с	D	Mass	Model	Motor	Impeller	Casing	A	В	с	D	Mass				
	kW	stage	stage					kg		kW	stage	stage			-		kg				
RCC3-10/10			10		304	264		29	RCC3-18/18			18		448	408		31				
RCC3-12/10			12		340	300		30	RCC3-23/18		18	23		538	498		32				
RCC3-15/10		10	15		394	354		30	RCC3-26/18		10	26		592	552		33				
RCC3-19/10			19		466	426		31	RCC3-30/18			30		664	624		33				
RCC3-23/10			23		538	498		31	RCC3-19/19	1.5		19	396	466	426		32				
RCC3-11/11			11		322	282		29	RCC3-23/19			23		538	498		32				
RCC3-15/11		11	15		394	354		30	RCC3-26/19		19	26		592	552		33				
RCC3-19/11		' '	19		466	426		31	RCC3-30/19			30		664	624		33				
RCC3-23/11			23		538	498		31	RCC3-36/19			36		772	732		34				
RCC3-12/12			12		340	300		30	RCC3-21/21			21		502	462		35				
RCC3-15/12		12	15		394	354		30	RCC3-23/21			23		538	498		36				
RCC3-19/12			19		466	426		31	RCC3-26/21		21	26		592	552	4	36				
RCC3-23/12			23		538	498		31	RCC3-30/21			30		664	624		37				
RCC3-13/13			13	13		358 318		φ168	30	RCC3-36/21			36		772	732		38			
RCC3-15/13	1.5			15	396	394			φ168	30	RCC3-23/23	2.2		23	413	538	498		36		
RCC3-19/13		13	19		466	426						31	RCC3-26/23	2.2	23	26	413	592	552		36
RCC3-23/13			23		538	498			32	RCC3-30/23		23	30		664	624		37			
RCC3-15/15			15		394	354			1	31	RCC3-36/23			36		772	732	A101	38		
RCC3-19/15		15	19		466	426			31	RCC3-25/25			25		574	534	φ194	37			
RCC3-23/15		15	15	23		538	498		32	RCC3-30/25		25	30		664	624		37			
RCC3-26/15								26		592	552		32	RCC3-36/25			36		772	732	
RCC3-16/16			16		412	372		31	RCC3-26/26			26		592	552		42				
RCC3-19/16		16	19		466	426		31	31 RCC3-30/26 32 RCC3-36/26		26	30		664	624		43				
RCC3-23/16		16	23		538	498		32		3.7		36	443	772	732		44				
RCC3-26/16			26		592	552		32	RCC3-28/28	3.7		28	443	628	588		43				
RCC3-17/17							17		430	390		31	31 RCC3-30/28		28	30		664	624		43
RCC3-23/17			23		538	498		32	RCC3-36/28			36		772	732		44				
RCC3-26/17			26		592	552		32								RCC3	/d/000				
RCC3-30/17			30		664	624		33													