

TOSHIBA



Daiseikai

single or multi-split high-wall units with
DC hybrid inverter



R410A

DAISEIKAI
PURE COMFORT

The further enhanced Daiseikai split system heat pumps are now available as multi-split systems. They combine attractive styling with advanced inverter technology and optimised indoor air quality. They use single inverters for smooth capacity control and perfect comfort conditions. With its exceptional EER levels and superior indoor air quality features the Daiseikai launches a new era in air conditioning.



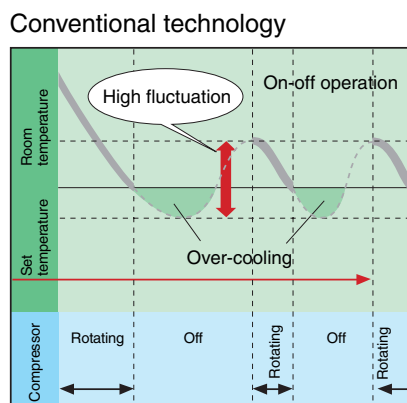
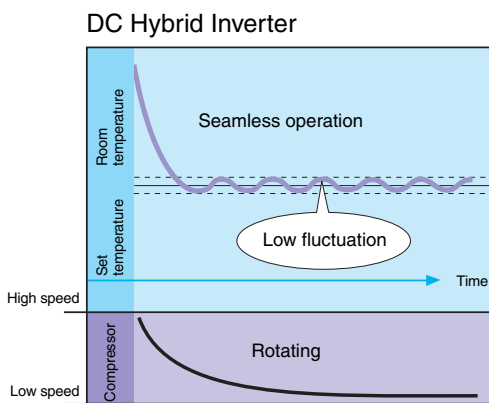
Key features

- Zeolite Plus filter, anti-mould filter, deodorising filter and Plasma Pure filter for fast removal of pollutants and odours
- Air ioniser for optimum relaxed user comfort and enhanced well-being
- Superior EER for lowest energy consumption (up to 20% higher than conventional inverter models).
- Innovative inverter technology for precise temperature control
- With their innovative filtering system these units are ideal for sensitive applications such as doctors' surgeries and small medical rooms, as well as residential and small commercial applications.
- Elegant design with clean lines - the Daiseikai enhances any room
- Precise capacity control at all conditions
- Quiet operation for enhanced user comfort
- Easy installation and maintenance
- Low-vibration twin-rotary compressor
- Easy installation, with 25 m pipe length (with refrigerant added); 15 m pipe length with pre-charge
- High heating capacity for use in areas where temperatures fall to -15°C
- Designed for use with non-ozone depleting refrigerant R410A

Toshiba DC Hybrid Inverter: A smarter way to keep a home comfortable

The key to the Daiseikai's eco-friendly high performance is Toshiba's revolutionary inverter technology, which continuously works to maintain the desired temperature in a room by intelligently varying the frequency of the electrical current to modulate the rotation of the compressor. The DC Hybrid Inverter advances air conditioner technology a huge step

beyond the conventional. Unlike fixed-speed air conditioners, which stop and restart each time the room temperature rises or falls, the Daiseikai operates continuously and dynamically, running at maximum speed when the temperature drops or falls and otherwise running at a much lower, energy-efficient speed to maintain a stable temperature.

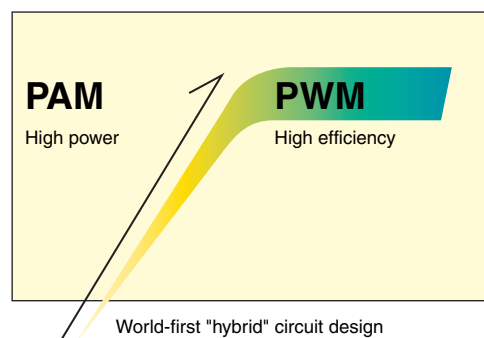
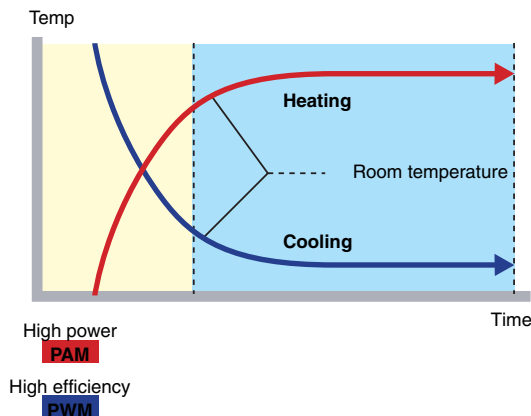


Since the Daiseikai does not start up and shut down as the room temperature changes, it consumes less energy and operates more quietly.

Unique hybrid circuit design integrates PAM and PWM

To make the most of electricity and enable high power operation, Toshiba developed an inverter with a hybrid design. "Hybrid" refers to the integration of two circuits, PAM (Pulse Amplitude Modulation), which assists the compressor when it is operating at high power, and PWM (Pulse Width

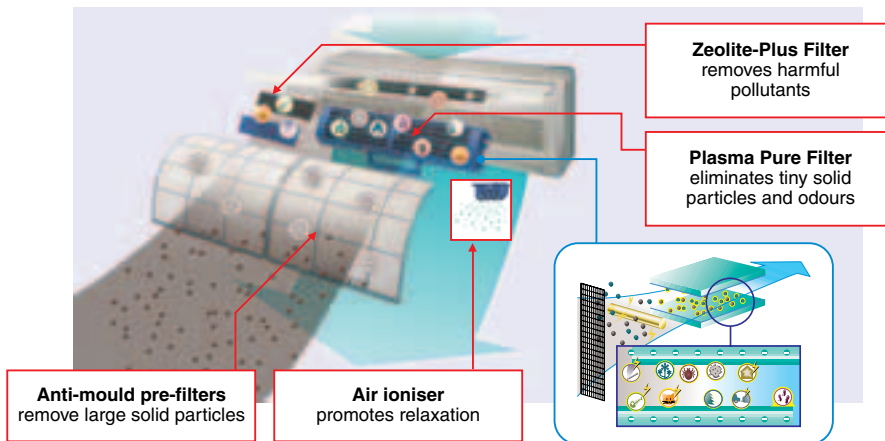
Modulation), which assists the compressor when it is operating at partial load to optimise efficiency. The Daiseikai achieves a high power factor - as high as 95% (meaning little energy goes to waste!) and is a leader in the field in energy savings and low-noise levels.



Daiseikai is a breath of fresh air for the home

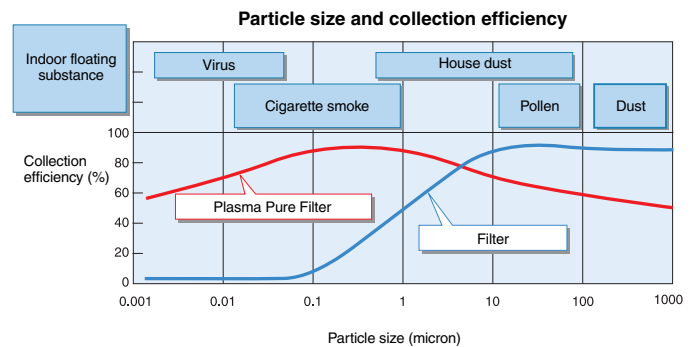
The Daiseikai is fitted with a three-step filtering-and-purifying system that keeps the air in a room continuously fresh. First, large washable pre-filters remove large solid particles from the air. Next, the Plasma Pure Filter eliminates dust, pollen, bacteria and other minute particles as small as 0.01 micron

through its two-stage active electric air purifying process. Third, pollutants such as smoke and kitchen odours are absorbed by Zeolite-Plus and Zeolite-3G filters. The Daiseikai also has a system that emits air ions to help people relax.



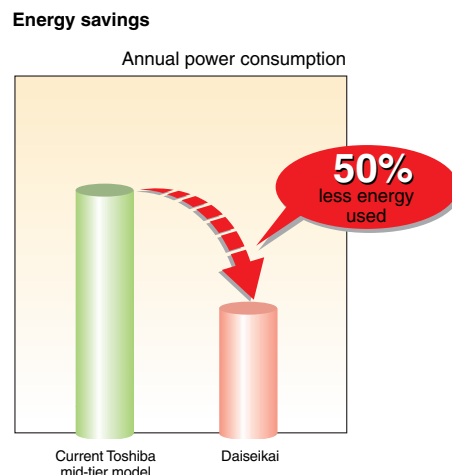
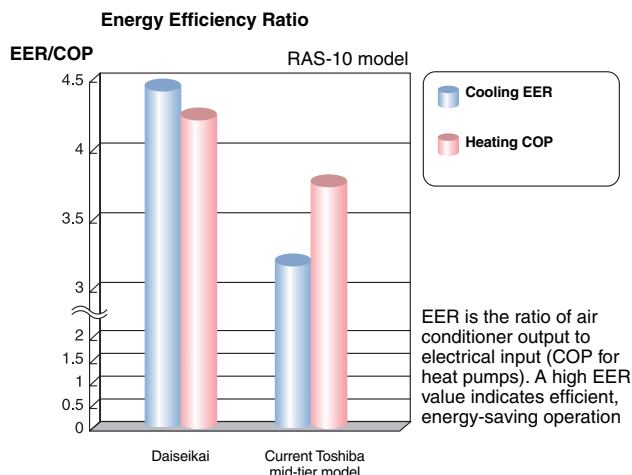
Plasma Pure filter for high performance

The Daiseikai's Plasma Pure filter purifies air ten times faster than a conventional passive (non-electric) electrostatic filter, which is used in many air conditioners. At the same time, the Daiseikai's high performance Zeolite-Plus and Zeolite-3G filters can eliminate household odours from a 20 m² room in about 30 minutes*.

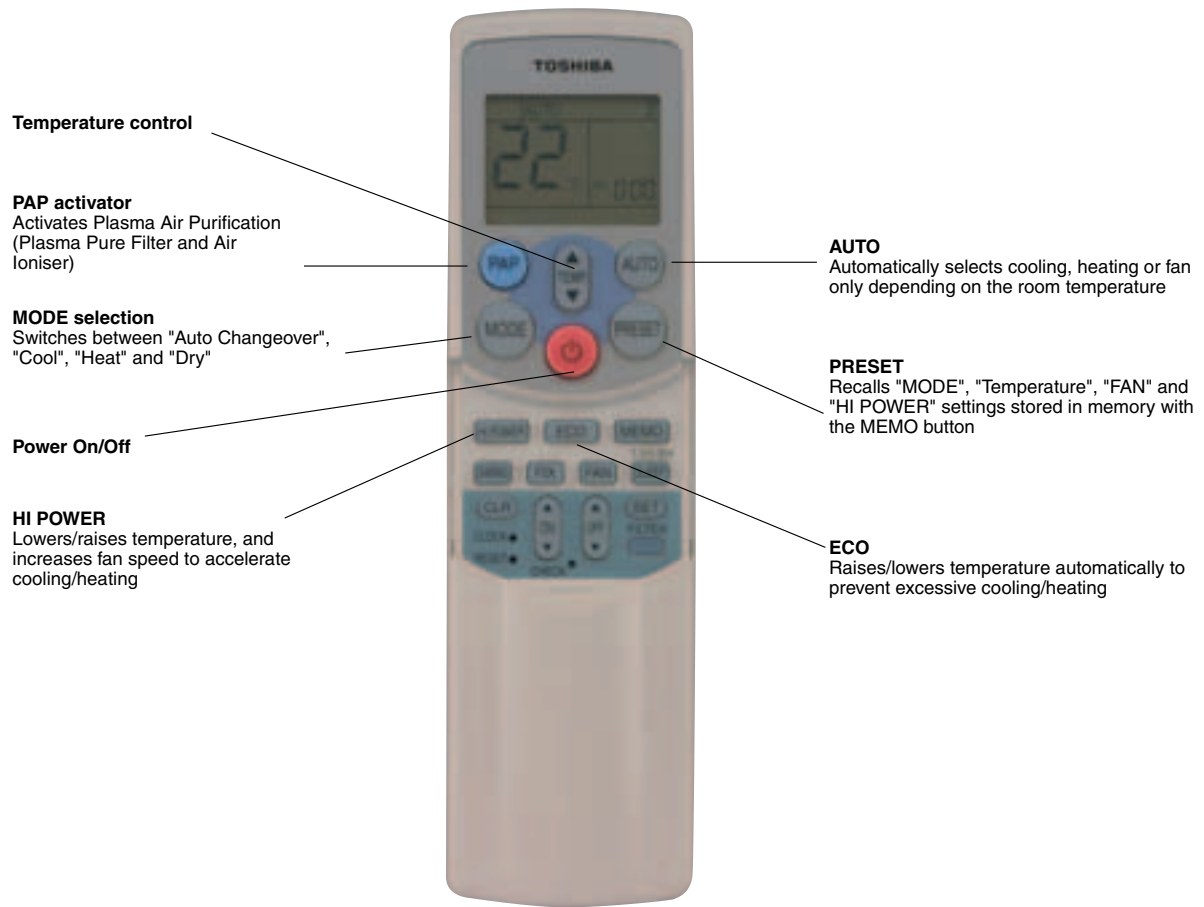


* Based on the Japan Electrical Manufacturers' Association standard JEM1467 for household air cleaners

Superior Energy Efficiency Ratio (EER)/Coefficient of Performance (COP)



User-friendly remote control



ADJUSTABLE LOUVRE



AUTO DIAGNOSIS



AUTOMATIC CHANGE-OVER



AUTOMATIC SWING LOUVRE



DEHUMIDIFYING FUNCTION



EASY FILTER REMOVAL



HIGH POWER



THREE FAN SPEEDS



TRIPLE ACTION FILTERING SYSTEM



WASHABLE FRONT PANEL



ZEOLITE FILTER

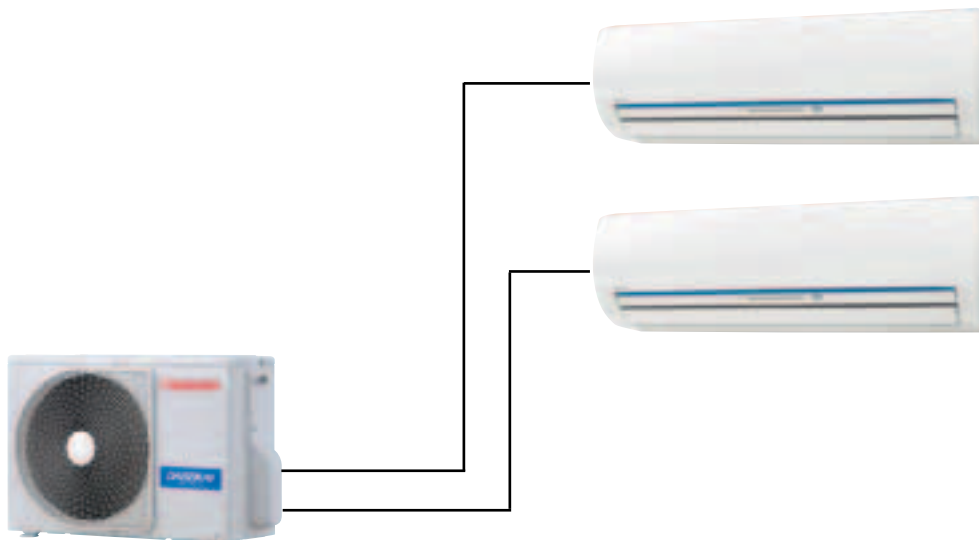
Technical specifications, single-split heat pump units

Outdoor unit		RAS-10EAVP-E	RAS-13EAVP-E	RAS-16EAVP-E
Indoor unit		RAS-B10EKVP-E	RAS-B13EKVP-E	RAS-B16EKVP-E
Cooling capacity (min./rated/max.)	kW	0.5/2.5/3.5	0.6/3.5/4.5	0.8/4.5/5.0
Power input, cooling	kW	0.55	0.92	1.38
EER, cooling	W/W	4.55	3.80	3.25
Annual power consumption	kWh	275	460	690
Energy label, cooling	A	A	A	A
Heating capacity (min./rated/max.)	kW	0.6/3.2/5.8	0.6/4.2/6.6	0.8/5.5/7.8
Power input, heating	kW	0.71	0.97	1.51
COP, heating	W/W	4.51	4.31	3.65
Energy label, heating	A	A	A	A
Indoor unit		RAS-B10EKVP-E	RAS-B13EKVP-E	RAS-B16EKVP-E
Fan type		Tangential	Tangential	Tangential
Air flow, cooling (high/medium/low)	l/s (m ³ /h)	157/106/81 (562/381/292)	163/109/81 (588/394/292)	181/120/91 (653/432/328)
Air flow, heating (high/medium/low)	l/s (m ³ /h)	176/136/81 (632/490/292)	182/142/81 (654/511/292)	189/161/91 (681/580/328)
Sound pressure level, cooling (high/low)	dB(A)	42/25	43/26	45/28
Sound power level, cooling (high/low)	dB(A)	55/38	56/39	58/41
Sound pressure level, heating (high/low)	dB(A)	43/25	44/26	45/28
Sound power level, heating (high/low)	dB(A)	56/38	57/39	58/41
Dimensions, height x width x depth	mm	250 x 790 x 215	250 x 790 x 215	250 x 790 x 215
Weight	kg	9	9	9
Outdoor unit		RAS-10EAVP-E	RAS-13EAVP-E	RAS-16EAVP-E
Fan type		Propeller	Propeller	Propeller
Air flow	l/s (m ³ /h)	597 (2149)	669 (2408)	669 (2408)
Sound pressure level, cooling/heating	dB(A)	46/47	48/50	49/50
Sound power level, cooling/heating	dB(A)	59/60	61/63	62/63
Dimensions, height x width x depth	mm	550 x 780 x 290	550 x 780 x 290	550 x 780 x 290
Weight	kg	38	38	38
Compressor		DC twin rotary	DC twin rotary	DC twin rotary
Pipe connections		Flare	Flare	Flare
Gas	in	3/8	3/8	1/2
Liquid	in	1/4	1/4	1/4
Pipe length, maximum	m	25	25	25
Pipe length, precharged	m	15	15	15
Maximum height difference	m	10	10	10
Condensate pipe diameter (OD)	mm	8	8	8
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50
Operating range, cooling	°C	5 to 43°C	5 to 43°C	5 to 43°C
Operating range, heating	°C	-15 to 24°C	-15 to 24°C	-15 to 24°C



Technical specifications, multi-split heat pump units

Indoor unit, heat pump		RAS-B10EKVP-E		RAS-B13EKVP-E		RAS-B16EKVP-E	
Outdoor unit		14	18	14	18	18	
Cooling capacity (min./rated/max.)	kW	1.1/2.5/3.2	1.1/2.7/3.2	1.1/3.5/3.8	1.1/3.7/4.2	1.1/4.5/4.9	
Power input, cooling	kW	0.57	0.60	1.1	1.1	1.5	
EER, cooling	W/W	4.39	4.50	3.18	3.36	3.00	
Annual power consumption	kWh	285	300	550	550	750	
Energy label, cooling		A	A	B	A	C	
Heating capacity (min./rated/max.)	kW	0.5/3.2/4.4	0.7/4.0/5.2	0.7/4.2/4.7	0.7/5.0/6.5	0.7/5.5/6.9	
Power input, heating	kW	0.85	1.20	1.25	1.80	1.90	
COP, heating	W/W	3.76	3.33	3.36	2.78	2.89	
Energy label, heating		A	C	C	E	D	
Indoor unit		RAS-B10EKVP-E		RAS-B13EKVP-E		RAS-B16EKVP-E	
Fan type		Tangential		Tangential		Tangential	
Air flow, cooling (high/medium/low)	l/s (m³/h)	157/106/81 (562/381/292)		163/109/81 (588/394/292)		181/120/91 (653/432/328)	
Air flow, heating (high/medium/low)	l/s (m³/h)	176/136/81 (632/490/292)		182/142//81 (654/511/292)		189/161/91 (681/580/328)	
Sound pressure level, cooling (high/low)	dB(A)	42/25		43/26		45/28	
Sound power level, cooling (high/low)	dB(A)	55/38		56/39		58/41	
Sound pressure level, heating (high/low)	dB(A)	43/25		44/26		45/28	
Sound power level, heating (high/low)	dB(A)	56/38		57/39		58/41	
Dimensions, height x width x depth	mm	250 x 790 x 215		250 x 790 x 215		250 x 790 x 215	
Weight	kg	9		9		9	
Outdoor unit		RAS-M14EAV-E		RAS-M18EAV-E			
Number of indoor units		2-room multi-split		2-room multi-split			
EER cooling/COP heating	W/W	3.70/4.36		3.25/3.62			
Fan type		Propeller		Propeller			
Air flow	l/s (m³/h)	505 (1820)		583 (2100)			
Sound pressure level, cooling/heating	dB(A)	46/48		48/50			
Sound power level, cooling/heating	dB(A)	59/61		61/63			
Dimensions, height x width x depth	mm	550 x 780 x 290		550 x 780 x 290			
Weight	kg	36		40			
Compressor		DC twin rotary		DC twin rotary			
Pipe connections		Flare		Flare			
Gas	in	3/8		3/8			
Liquid	in	1/4		1/4			
Pipe length, maximum (per unit/total)	m	20/30		20/30			
Pipe length, pre-charged	m	20		20			
Maximum height difference	m	10		10			
Condensate pipe diameter (OD)	mm	8		8			
Power supply	V-ph-Hz	220/240-1-50		220/240-1-50			
Operating range, cooling	°C	5 to 43°C		5 to 43°C			
Operating range, heating	°C	-10 to 24°C		-10 to 24°C			



Technical specifications, multi-split heat pump units

Combination ratings

Indoor units: RAS-B10EKVP-E, RAS-B13EKVP-E - outdoor unit: RAS-M14EAV-E

Cooling, 230 V		Two-room multi-split											
Operating status	Combination		Unit capacity		Cooling capacity			Power input			Operating current		
	Unit A	Unit B	Unit A	Unit B	Min.	Rated	Max.	Min.	Rated	Max.	Min.	Rated	Max.
1 unit operation	10		2.5		1.1	2.5	3.2	255	730	980	1.59	3.73	5.01
	13		3.5		1.1	3.5	3.8	255	1100	1300	1.59	5.31	6.28
2 unit operation	10	10	1.95	1.95	1.4	3.9	4.4	260	1210	1460	1.62	5.85	6.68
	13	10	2.33	1.67	1.4	4.0	4.5	260	1230	1490	1.62	5.63	6.82

Indoor units: RAS-B10EKVP-E, RAS-B13EKVP-E - outdoor unit: RAS-M14EAV-E

Heating, 230 V		Two-room multi-split											
Operating status	Combination		Unit capacity		Cooling capacity			Power input			Operating current		
	Unit A	Unit B	Unit A	Unit B	Min.	Rated	Max.	Min.	Rated	Max.	Min.	Rated	Max.
1 unit operation	10		3.2		0.7	3.2	4.0	170	1050	1400	1.06	5.37	6.41
	13		4.2		0.7	4.2	4.4	170	1200	1500	1.06	5.49	6.86
2 unit operation	10	10	2.15	2.15	0.9	4.3	4.6	170	1170	1400	1.06	5.35	6.41
	13	10	2.50	1.90	0.9	4.4	4.7	170	1190	1425	1.06	5.45	6.52

Indoor units: RAS-B10EKVP-E, RAS-B13EKVP-E, RAS-B16EKVP-E - outdoor unit: RAS-M18EAV-E

Cooling, 230 V		Two-room multi-split											
Operating status	Combination		Unit capacity		Cooling capacity			Power input			Operating current		
	Unit A	Unit B	Unit A	Unit B	Min.	Rated	Max.	Min.	Rated	Max.	Min.	Rated	Max.
1 unit operation	10		2.7		1.1	2.7	3.2	255	750	920	1.59	3.84	4.71
	13		3.7		1.1	3.7	4.2	255	1220	1420	1.59	6.24	6.86
	16		4.5		1.1	4.5	4.9	255	1500	1800	1.59	7.25	8.70
2 unit operation	10	10	2.55	2.55	1.4	5.1	6.1	260	1580	2150	1.62	7.23	9.84
	13	10	3.01	2.19	1.4	5.2	6.2	260	1600	2170	1.62	7.32	9.93
	13	13	2.60	2.60	1.4	5.2	6.2	260	1600	2170	1.62	7.32	9.93
	16	10	3.25	1.95	1.4	5.2	6.2	260	1600	2170	1.62	7.32	9.93

Indoor units: RAS-B10EKVP-E, RAS-B13EKVP-E, RAS-B16EKVP-E - outdoor unit: RAS-M18EAV-E

Heating, 230 V		Two-room multi-split											
Operating status	Combination		Unit capacity		Cooling capacity			Power input			Operating current		
	Unit A	Unit B	Unit A	Unit B	Min.	Rated	Max.	Min.	Rated	Max.	Min.	Rated	Max.
1 unit operation	10		4.0		0.7	4.0	5.2	170	1440	1700	1.06	6.59	7.78
	13		5.0		0.7	5.0	6.5	170	2050	2530	1.06	9.38	11.58
	16		5.5		0.7	5.5	6.9	170	2300	2530	1.06	10.53	11.58
2 unit operation	10	10	3.20	3.20	0.9	6.4	8.3	170	1720	2390	1.06	7.87	10.94
	13	10	3.72	2.98	0.9	6.7	8.7	170	1810	2450	1.06	8.28	11.21
	13	13	3.35	3.35	0.9	6.7	8.7	170	1810	2450	1.06	8.28	11.21
	16	10	3.88	2.82	0.9	6.7	8.7	170	1810	2450	1.06	8.28	11.21



Toshiba products are supplied by:

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