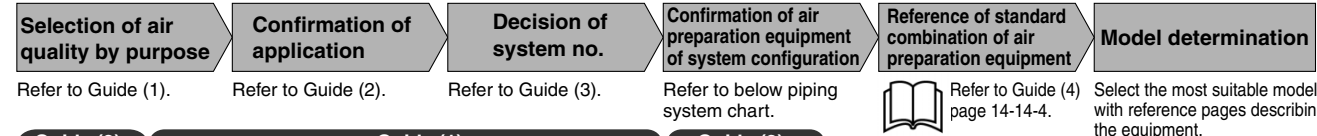


# Air Preparation Equipment

## Model Selection Guide



System No.	Quality of compressed air	Impurity in compressed air				Quality grade <sup>(3)</sup> as system	Application <sup>(2)</sup>
		Solid	Moisture	Oil mist <sup>(1)</sup> density	Odor		
<b>No. 1</b> Air Filter	Traces of dust, moisture and oil can be tolerated	5 μm others 2, 10 20, 40 70, 100	Humidity 100%	5 mg/m <sup>3</sup> (ANR)	Oil odor	—	<ul style="list-style-type: none"> <li>Labor-saving equipment</li> <li>Jigs and tools</li> <li>General cleaning (Air blow gun)</li> </ul>
<b>No. 2</b> Mist Separator	Cases that require air removed with moisture, dust or oil, though air is not dried	0.3 μm	Humidity 100%	1 mg/m <sup>3</sup> (ANR)	Oil odor	—	<ul style="list-style-type: none"> <li>Industrial machinery (metal seals of drivers)</li> </ul>
<b>No. 3</b> Air Filter	Where air free from moisture is required though traces of dust and oil can be tolerated	5 μm others 2, 10 20, 40 70, 100	Atmospheric pressure dew point -17°C (Pressure dew point 10°C)	5 mg/m <sup>3</sup> (ANR)	Oil odor	3, 4, — to 3, 6, —	<ul style="list-style-type: none"> <li>Equipment noted in system 1 that experiences extreme temperature drops at end points.</li> </ul>
<b>No. 4</b> Mist Separator	Where air free from dust, moisture, and oil is specified	0.3 μm	Atmospheric pressure dew point -17°C (Pressure dew point 10°C)	1 mg/m <sup>3</sup> (ANR)	Oil odor	2, 4, 3 to 2, 6, 3	<ul style="list-style-type: none"> <li>Instrumentation (Process industry)</li> <li>General painting</li> <li>Cooling</li> </ul>
<b>No. 5</b> Mist Separator Micro Mist Separator Micro Mist Separator with Prefilter Membrane Air Dryer	Where air from which almost all of moisture, dust, and oil have been removed is specified	0.01 μm	Atmospheric pressure dew point -17°C (Pressure dew point 10°C)	0.1 mg/m <sup>3</sup> (ANR)	Oil odor	1, 4, 2 to 1, 6, 2	<ul style="list-style-type: none"> <li>Pneumatic measuring instruments (Air micrometers)</li> <li>Drying and cleaning</li> </ul>
<b>No. 6</b> Mist Separator Super Mist Separator Micro Mist Separator with Prefilter Membrane Air Dryer	Where air from which all of moisture, dust, and oil have been removed is specified	0.01 μm	Atmospheric pressure dew point -17°C (Pressure dew point 10°C)	0.01 mg/m <sup>3</sup> (ANR)	Some oil odor	1, 4, 1 to 1, 6, 1	<ul style="list-style-type: none"> <li>Electrostatic painting</li> <li>High class painting</li> </ul>
<b>No. 7</b> Mist Separator Super Mist Separator Odor Removal Filter Micro Mist Separator with Prefilter Membrane Air Dryer	Where nearly pure air free from smell as well as moisture, dust and oil is specified	0.01 μm	Atmospheric pressure dew point -17°C (Pressure dew point 10°C)	0.004 mg/m <sup>3</sup> (ANR)	No oil odor	1, 4, 1 to 1, 6, 1	<ul style="list-style-type: none"> <li>Stirring, transporting, drying and packaging</li> <li>For clean room (equivalent up to Class 100, depending on condition.)</li> </ul>
<b>No. 8</b> Mist Separator Heatless Dryer Micro Mist Separator	Where air free from dust and oil is specified along with a lower dew point Case without refrigerated air dryer	0.01 μm	Atmospheric pressure dew point -50°C or less -30°C or less	0.1 mg/m <sup>3</sup> (ANR)	Oil odor	1, 3, 1 to 1, 2, 1	<ul style="list-style-type: none"> <li>Drying electronic components</li> <li>Drying filling tank</li> <li>Transporting powder</li> </ul>

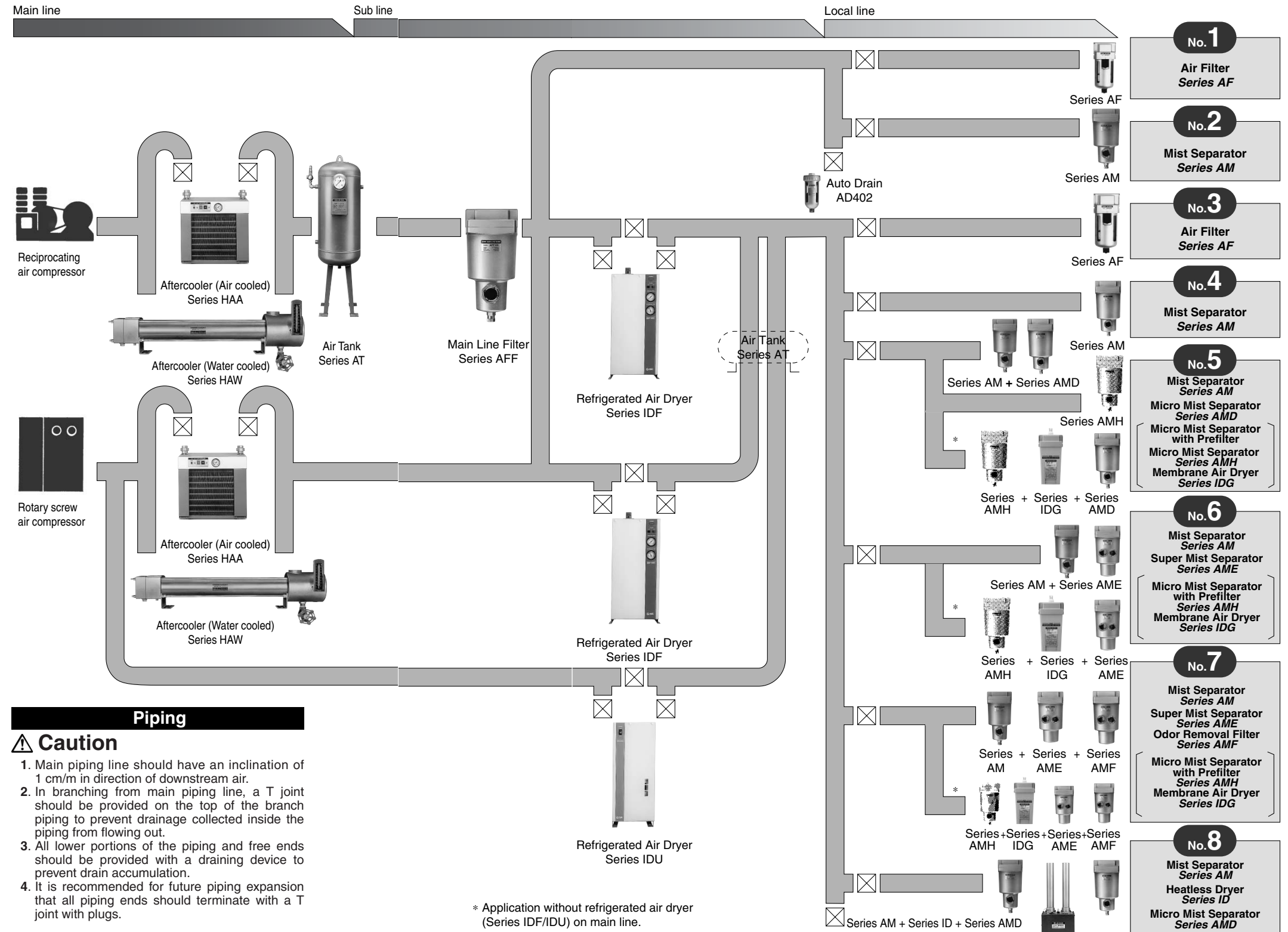
Note 1) • Below about 30 mg/m<sup>3</sup> (ANR) at atmospheric pressure of oil mist density (compressor discharge concentration) on the inlet side.  
 • ANR: 20°C at atmospheric pressure, relative humidity 65%  
 • 1 mg/m<sup>3</sup> (ANR) ≅ 0.8 ppmV/W

Note 2) • If there is a special law under operation, the law has ultimate priority.

Note 3) • It describes the grade of compressed air quality based on ISO8573-1: 1991 and JIS B 8392-1: 2000.  
 (Refer to table on top in following page.)

International Standard	ISO 8573-1: 1991	Degrees of Quality	
Japanese Industrial Standard	JIS B 8392-1: 2000	Degrees of Quality	
Degrees of quality	Max. particle diameter (μm)	Min. pressure dew point (°C)	Max. oil density (mg/m <sup>3</sup> )
1	0.1	-70	0.01
2	1	-40	0.1
3	5	-20	1.0
4	15	+3	5
5	40	+7	25
6	—	+10	—

Indication  
 Example) Solid particle diameter 0.1 μm  
 Pressure dew point 3°C  
 Oil density 0.1 mg/m<sup>3</sup>  
 For these cases, degree of quality is specified as 1, 4, and 2 respectively.



- No. 1**  
Air Filter  
Series AF
- No. 2**  
Mist Separator  
Series AM
- No. 3**  
Air Filter  
Series AF
- No. 4**  
Mist Separator  
Series AM
- No. 5**  
Mist Separator Series AM  
Micro Mist Separator Series AMD  
Micro Mist Separator with Prefilter Series AMH  
Membrane Air Dryer Series IDG
- No. 6**  
Mist Separator Series AM  
Super Mist Separator Series AME  
Micro Mist Separator with Prefilter Series AMH  
Membrane Air Dryer Series IDG
- No. 7**  
Mist Separator Series AM  
Super Mist Separator Series AME  
Odor Removal Filter Series AMF
- No. 8**  
Mist Separator Series AM  
Heatless Dryer Series ID  
Micro Mist Separator Series AMD

## Air Preparation Equipment

### Air Preparation Equipment Selection Chart/Guide (4)

- \* A standard combination is shown. The end number expresses bore or power supply. Refer to pages described to each equipment for detail.  
 \* “—” symbol in the graph shows no applicable equipment.  
 \* Air volume is the reference values as compared with the compressor's output.

#### For Reciprocating Compressors

Air compressor		Aftercooler <sup>(1)</sup>		Air tank	Main line filter	Refrigerated air dryer <sup>(2) (5)</sup>		Local line					
Power (kW)	Flow capacity (m <sup>3</sup> /min) (ANR)	Air cooled type	Water cooled type			50 Hz area	60 Hz area	Mist separator	Micro mist separator with prefilter	Micro mist separator	Membrane <sup>(3)</sup> air dryer	Super mist separator	Odor removal filter
0.75	0.1	HAA7-06	HAW2-04	AT6C-04	AFF2B-03	IDF1D-1	IDF1D-1	AM150-03	AMH150-03	AMD150-03	IDG10-03	AME150-03	AMF150-03
1.5	0.2	HAA7-06	HAW2-04	AT6C-04	AFF2B-03	IDF2D-1	IDF2D-1	AM150-03	AMH150-03	AMD150-03	IDG20-03	AME150-03	AMF150-03
2.2	0.3	HAA7-06	HAW7-06	AT6C-04	AFF2B-03	IDF3D-*	IDF3D-*	AM150-03	AMH250-03	AMD250-03	IDG30-03	AME250-03	AMF250-03
3.7	0.5	HAA7-06	HAW7-06	AT6C-04	AFF4B-03	IDF4D-*	IDF4D-*	AM250-03	AMH250-03	AMD250-03	IDG50-03	AME250-03	AMF250-03
5.5	0.7	HAA7-06	HAW7-06	AT6C-04	AFF4B-04	IDF6D-*	IDF6D-*	AM250-04	AMH350-04	AMD350-04	IDG75-04	AME350-04	AMF350-04
7.5	1.0	HAA15-10	HAW22-14	AT11C-06	AFF8B-04	IDF8D-*	IDF8D-*	AM350-04	AMH350-04	AMD350-04	IDG100-04	AME350-04	AMF350-04
11	1.5	HAA15-10	HAW22-14	AT11C-06	AFF8B-06	IDF11C-*	IDF11C-*	AM350-06	AMH450-06	AMD450-06	—	AME450-06	AMF450-06
15	2.0	HAA22-14	HAW22-14	AT22C-14	AFF11B-06	IDF15C-*	IDF15C-*	AM450-06	AMH450-06	AMD450-06	—	AME450-06	AMF450-06
22	3.0	HAA37-14	HAW37-14	AT22C-14	AFF22B-10	IDF22C1-3	IDF22C1-3	AM550-10	AMH550-06	AMD550-10	—	AME550-10	AMF550-10
27	3.5	HAA37-14	HAW37-14	AT37C-14	AFF22B-10	IDF22C1-3	IDF22C1-3	AM550-10	AMH550-10	AMD550-10	—	AME550-10	AMF550-10
37	5.0	—	HAW55-20	AT37C-14	AFF37B-14	IDF37C1-3	IDF37C1-3	AM650-14	AMH650-14	AMD650-14	—	AME650-14	AMF650-14
55	7.5	—	HAW75-20	AT55C-20	AFF75 <sup>△</sup> -20	IDF55C-3	IDF55C-3	AM850-20	AMH850-20	AMD850-20	—	AME850-20	AMF850-20
75	10.0	—	HAW110-30	AT75C-20	AFF75 <sup>△</sup> -20	IDF75C-3	IDF75C-3	AM850-20	AMH850-20	AMD850-20	—	AME850-20	AMF850-20
110	15.0	—	—	AT125C-30	AFF125A-30	IDF120D-3	IDF120D-3	—	—	AMD910-30	—	—	AMF900-30
150	20.0	—	—	AT150C-40	AFF125A-30	IDF120D-3	IDF120D-3	—	—	AMD910-30	—	—	AMF900-30
220	30.0	—	—	AT220C-40	AFF220A-40	IDF150D-3	IDF150D-3	—	—	AMD1010-40	—	—	AMF1000-40

#### For Rotary Screw Compressors (With Aftercooler)

Air compressor		Aftercooler <sup>(1)</sup>		Refrigerated air dryer <sup>(2) (5)</sup>		Local line					
Power (kW)	Flow capacity (m <sup>3</sup> /min) (ANR)	Air cooled type	Water cooled type	50 Hz area	60 Hz area	Mist separator	Micro mist separator with prefilter	Micro mist separator	Membrane <sup>(3)</sup> air dryer	Super mist separator	Odor removal filter
2.2	0.3	HAA7-06	HAW2-04	IDF3D-*	IDF3D-*	AM150-03	AMH250-03	AMD250-03	IDG30-03	AME250-03	AMF250-03
3.7	0.5	HAA7-06	HAW7-06	IDF4D-*	IDF4D-*	AM250-03	AMH250-03	AMD250-03	IDG50-03	AME250-03	AMF250-03
5.5	0.75	HAA7-06	HAW7-06	IDF6D-*	IDF6D-*	AM250-04	AMH350-04	AMD350-04	IDG75-04	AME350-04	AMF350-04
7.5	1.0	HAA7-06	HAW7-06	IDF8D-*	IDF8D-*	AM350-04	AMH350-04	AMD350-04	IDG100-04	AME350-04	AMF350-04
11	1.5	HAA15-10	HAW22-14	IDF11C-*	IDF11C-*	AM350-06	AMH450-06	AMD450-06	—	AME450-06	AMF450-06
15	2.2	HAA15-10	HAW22-14	IDF15C-*	IDF15C-*	AM450-10	AMH550-10	AMD550-10	—	AME550-10	AMF550-10
22	3.3	HAA22-14	HAW22-14	IDF22C1-3	IDF22C1-3	AM550-10	AMH550-10	AMD550-10	—	AME550-10	AMF550-10
37	5.8	HAA37-14	HAW37-14	IDF37C1-3	IDF37C1-3	AM650-14	AMH650-14	AMD650-14	—	AME650-14	AMF650-14
55	8.5	—	HAW55-20	IDF55C-3	IDF55C-3	AM850-20	AMH850-20	AMD850-20	—	AME850-20	AMF850-20
75	12.0	—	HAW75-20	IDF120D-3	IDF75D-3	AM850-20	AMH850-20	AMD850-20	—	AME850-20	AMF850-20
110	17.5	—	HAW110-30	IDF120D-3	IDF120D-3	—	—	AMD910-30	—	—	AMF900-30
150	27.5	—	—	IDF150D-3	IDF150D-3	—	—	AMD910-40	—	—	AMF1000-40
220	40.0	—	—	IDF240D-3	IDF240D-3	—	—	AMD1010-40	—	—	AMF1000-40

#### For Rotary Screw Compressors (Without Aftercooler)

Air compressor		Refrigerated air dryer with built-in air cooled aftercooler <sup>(4) (6)</sup>				Local line					
Power (kW)	Flow capacity (m <sup>3</sup> /min) (ANR)	50 Hz area		60 Hz area		Mist separator	Micro mist separator with prefilter	Micro mist separator	Membrane <sup>(3)</sup> air dryer	Super mist separator	Odor removal filter
		1.5	0.2	IDU3D-*	IDU3D-*						
2.2	0.3	IDU3D-*	IDU3D-*	IDU3D-*	IDU3D-*	AM150-03	AMH250-03	AMD250-03	IDG30-03	AME250-03	AMF250-03
3.7	0.5	IDU4D-*	IDU4D-*	IDU4D-*	IDU4D-*	AM250-03	AMH250-03	AMD250-03	IDG50-03	AME250-03	AMF250-03
5.5	0.75	IDU6D-*	IDU6D-*	IDU6D-*	IDU6D-*	AM250-04	AMH350-04	AMD350-04	IDG75-04	AME350-04	AMF350-04
7.5	1.0	IDU8D-*	IDU8D-*	IDU8D-*	IDU8D-*	AM350-04	AMH350-04	AMD350-04	IDG100-04	AME350-04	AMF350-04
11	1.5	IDU11C-*	IDU11C-*	IDU11C-*	IDU11C-*	AM350-06	AMH450-06	AMD450-06	—	AME450-06	AMF450-06
15	2.2	IDU15C-*	IDU15C-*	IDU15C-*	IDU15C-*	AM450-10	AMH550-10	AMD550-10	—	AME550-10	AMF550-10
22	3.3	IDU22C1-3	IDU22C1-3	IDU22C1-3	IDU22C1-3	AM550-10	AMH550-10	AMD550-10	—	AME550-10	AMF550-10
37	5.8	IDU37C1-3	IDU37C1-3	IDU37C1-3	IDU37C1-3	AM650-14	AMH650-14	AMD650-14	—	AME650-14	AMF650-14
55	8.5	IDU55C-3	IDU55C-3	IDU55C-3	IDU55C-3	AM850-20	AMH850-20	AMD850-20	—	AME850-20	AMF850-20
75	12.0	IDU75C-3	IDU75C-3	IDU75C-3	IDU75C-3	AM850-20	AMH850-20	AMD850-20	—	AME850-20	AMF850-20
110	17.5	—	—	—	—	—	—	AMD910-30	—	—	AMF900-30
150	27.5	—	—	—	—	—	—	AMD1010-40	—	—	AMF1000-40
220	40.0	—	—	—	—	—	—	AMD1010-40	—	—	AMF1000-40

- Note 1) Air cooled aftercooler Inlet air temperature: 60°C, Ambient temperature: 32°C  
 Water cooled aftercooler Inlet air temperature: 180°C  
 Inlet temperature of cooling water: 30°C  
 Note 2) Series IDF Inlet air temperature: Saturated at 35°C (IDF1D), saturated at 40°C (IDF2D to 240D), Ambient temperature: 32°C  
 Note 3) Series IDG Inlet air temperature: Saturated at 25°C, Ambient temperature: 25°C  
 Note 4) Series IDU Inlet air temperature: 60°C (IDU3D to 6D), 55°C (IDU8D to 37C1), 50°C (IDU55C, 75C), Ambient temperature: 32°C  
 Note 5) \* means voltage indication symbol (IDF3D to 15C), (-1: Haploid 100 VAC, -2: Haploid 200 VAC)  
 Note 6) \* means voltage indication symbol (IDU3D to 15C), (-1: Haploid 100 VAC, -2: Haploid 200 VAC)



