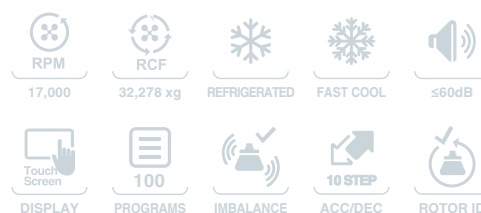




## VELOSPIN 17R

### HIGH SPEED CENTRIFUGE

Multi-purpose refrigerated high-speed centrifuge with both powerful power and high-volume sample handling capability



### ● ● ● STANDARD SPECIFICATION



|                          |                                    |                       |
|--------------------------|------------------------------------|-----------------------|
| Max. RPM                 | 17,000RPM(Angle Rotor)             | 4,000RPM(Swing Rotor) |
| Max. RCF                 | 32,278 xg                          | 3,265 xg              |
| Max. Capacity            | 500ml x 6                          | 250ml x 4             |
| Accel / Decel phase      | 0 ~ 9 ( 10set)                     |                       |
| Set Temp.                | -10°C ~ +40°C ( 1°Cincrements)     |                       |
| Ref. System              | Non-CFC                            |                       |
| Noise Level              | ≤60dB                              |                       |
| Set Time                 | 99 hour 59 min 59sec or continuous |                       |
| Time Count               | At set Speed or from starting      |                       |
| Program                  | 100 memory                         |                       |
| Rotor ID                 | Automatic Recognition              |                       |
| Display                  | 4.3" LCD Touch Screen              |                       |
| RPM Range                | 400 to 17,000 rpm                  |                       |
| Available Rotor Quantity | 12                                 |                       |
| Power Supply             | 230V ± 10%, 50-60Hz, 1Phase        |                       |
| Power Consumption        | 2.8 KW                             |                       |
| Dimension(W x D x H)     | 564 x 673 x 866 mm                 |                       |
| Weight (without rotor)   | 164Kg                              |                       |

## ● ● ● MAIN FEATURE

### ● Wide Range of Application

Various rotor options for multiple purpose in different users

### ● CRYSTE FLIP Touch Controller

- User-friendly 4.3" full color touch LCD controller helps to set the parameter at modern way. All set points are visible at a glance and setting is easy.
- Touch pad lock doesn't allow misuse during operation

### ● A variety of Tubes Applicable

- Various sizes of tube are available from 0.2ml to 500ml
- Proper tube adaptors are selectable

### ● Refrigeration and Fast Cool Function

- Pre-cooling before use is available so that users can minimize to waste their time for preparation
- Refrigeration performance suitable for separation efficiency even at high RPM

### ● Higher Safety in Operation

Motor shaft safety hub system to prevent rotor slippage during high-speed operation Safe locking system of door through interlock function

### ● Silent Operation

Well-balanced motor minimized vibration, which leads to the most silent operation

### ● Ideal Security

Unauthorized access is prohibited through password

### ● Biocontainment Bucket Option

- Option for handling biohazardous materials
- Biocontainment sealing buckets are certified by TUV NORD in compliance with IEC61010-2-020:2016 Annex AA

### ● Energy Saving

- Pre-set energy saving mode can help to reduce the electrical operating cost
- Unnecessary operation without the real-use can be controlled by Standby Mode and Eco Shut-off setting

### ● Drainage

Excessive condensation can be treated by drainage at the bottom of chamber.

## ● ● ● ORDER INFORMATION

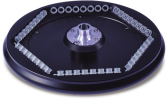


























|             | ITEM         | DESCRIPTIONS  | ORDER CODE  |
|-------------|--------------|---|---|
| Main Body   | VELOSPIN 17R | VELOSPIN 17R, without rotor, 230V / 50~60Hz                   | VL17R-MB  |
| Angle Rotor | A480.2H      | 0.2ml x 48 fixed angle rotor for PCR tubes (Max 12,000RPM)    | VL-AR1  |
|             | A301.5H      | 1.5/2.0ml x 30 fixed angle rotor (Max 17,000RPM)              | VL-AR2  |
|             | A481.5H      | 1.5/2.0ml x 48 fixed angle rotor (Max 13,000RPM)              | VL-AR3  |
|             | A1215H       | 15ml x 12 fixed angle rotor (Max 17,000RPM)                   | VL-AR4  |
|             | A1215HC      | 15ml x 12 fixed angle rotor for conical tubes (Max 15,000RPM) | VL-AR5  |
|             | A650H        | 50ml x 6 fixed angle rotor (Max 17,000RPM)                    | VL-AR7  |
|             | A650HC       | 50ml x 6 fixed angle rotor for conical tubes (Max 15,000RPM)  | VL-AR8  |
|             | A850H        | 50ml x 8 fixed angle rotor (Max 15,000RPM)                    | VL-AR9  |
|             | A685H        | 85ml x 6 fixed angle rotor (Max 15,000RPM)                    | VL-AR10   |
|             | A6250H       | 250ml x 6 fixed angle rotor (Max 10,000RPM)                   | VL-AR11   |
|             | A6500H       | 500ml x 6 fixed angle rotor (Max 8,000RPM)                    | VL-AR12   |
|             | Swing Rotor  | S4250HE   | 250ml x 4-wing rotor for rectangular/micro plate buckets (Max 4,000RPM) |













## ●●● AVAILABLE ANGLE ROTORS





LAB.SAFETY

CENTRIFUGES

























LAB.BASIC

|                                 |   |   |   |   |   |   |   |   |
|---------------------------------|---|---|---|---|---|---|---|---|
| <b>Rotor</b>                    |    |   |   |   |    |   |   |   |
|                                 | Fixed Angle Rotor : $\angle 45^\circ$<br>48 x 0.2ml<br>Radius(mm) : 83.5            |   | Fixed Angle Rotor : $\angle 45^\circ$<br>30 x 1.5ml<br>Radius(mm) : 94.8            |   | Fixed Angle Rotor : $\angle 45^\circ$<br>48 x 1.5ml<br>Radius(mm) : 94.8              |   |   |   |
| <b>Item</b>                     | <b>A480.2H</b>  |   | <b>A301.5H</b>  |   | <b>A481.5H</b>  |   |   |   |
| <b>Tube</b>                     |    |  |    |  |    |    |    |    |
| <b>Volume (ml)</b>              | 0.2   | 0.2ml Strips  | 0.2   | 0.5   | 1.5/2.0   | 0.2   | 0.5   | 1.5/2.0   |
| <b>Adaptor / tube rack</b>      |   |   |    |  |   |    |    |   |
| <b>Item</b>                     | -   | -   | F1.5A-0.2   | F1.5A-0.5   | -   | F1.5A-0.2   | F1.5A-0.5   | -   |
| <b>Number per rack / rotor</b>  | 48  | 6   | 30  | 30  | 30  | 48  | 48  | 48  |
| <b>Adaptor bore (mm)</b>        | 6.5   | 6.5   | 6.5   | 8   | 11.1  | 6.5   | 8   | 11.1  |
| <b>Max. height for use (mm)</b> | -   | -   | 44  | 50  | 61  | In 51<br>Out 44   | In 62<br>Out 54   | In 70<br>Out 61   |
| <b>RPM</b>                      | 12,000  | 12,000  | 17,000  | 17,000  | 17,000  | 13,000  | 13,000  | 13,000  |
| <b>Radius (mm)</b>              | 83.5  | 83.5  | 80.3  | 86.7  | 94.8  | In 70.3<br>Out 80.3   | In 76.7<br>Out 86.7   | In 84.8<br>Out 94.8   |
| <b>RCF</b>                      | 13,443  | 13,443  | 25,945  | 28,013  | 30,630  | In 13,283<br>Out 15,172   | In 14,492<br>Out 16,381   | In 16,022<br>Out 17,912   |
| <b>Rotor</b>                    |  |   |  |   |  |   |  |   |
|                                 | Fixed Angle Rotor : $\angle 28^\circ$<br>12 x 15ml<br>Radius(mm) : 97.1             |   | Fixed Angle Rotor : $\angle 25^\circ$<br>12 x 15ml Conical<br>Radius(mm) : 100.9    |   | Fixed Angle Rotor : $\angle 30^\circ$<br>6 x 50ml<br>Radius(mm) : 99.9                |   | Fixed Angle Rotor : $\angle 25^\circ$<br>6 x 50ml Conical<br>Radius(mm) : 95.7        |   |
| <b>Item</b>                     | <b>A1215H</b>   |   | <b>A1215HC</b>  |   | <b>A650H</b>  |   | <b>A650HC</b>   |   |
| <b>Tube</b>                     |  |   |  |   |  |  |  |  |
| <b>Volume (ml)</b>              | 15(16)  |   | 15 Conical  |   | 15 Conical  | 50  | 15 Conical  | 50 Conical  |
| <b>Adaptor / tube rack</b>      |   |   |   |   |  |   |  |   |
| <b>Item</b>                     | -   |   | -   |   | F50A-15C  | -   | F50A-15C  | -   |
| <b>Number per rack / rotor</b>  | 12  |   | 12  |   | 6   | 6   | 6   | 6   |
| <b>Adaptor bore (mm)</b>        | 18.0  |   | 17.0  |   | 17.0  | 29.0  | 17.0  | 30.0  |
| <b>Max. height for use (mm)</b> | 117   |   | 129   |   | 122   | 120   | 124   | 121   |
| <b>RPM</b>                      | 17,000  |   | 15,000  |   | 17,000  | 17,000  | 15,000  | 15,000  |
| <b>Radius (mm)</b>              | 97.1  |   | 100.9   |   | 94.3  | 99.9  | 91.3  | 95.7  |
| <b>RCF</b>                      | 31,373  |   | 25,381  |   | 30,469  | 32,278  | 22,967  | 24,073  |

|                                 |   |   |  |   |   |   |
|---------------------------------|---|---|--|---|---|---|
| <b>Rotor</b>                    |  <p>Fixed Angle Rotor : <math>\angle 30^\circ</math><br/>8 x 50ml<br/>Radius(mm) : 103.4</p> |   |  <p>Fixed Angle Rotor : <math>\angle 25^\circ</math><br/>6 x 85ml<br/>Radius(mm) : 99.8</p> |   |   |   |
| <b>Item</b>                     | <b>A850H</b>  |   | <b>A685H</b>   |   |   |   |
| <b>Tube</b>                     |    |  |   |  |  |  |
| <b>Volume (ml)</b>              | 15 Conical  | 50  | 15 Conical   | 50 Conical  | 50  | 85  |
| <b>Adaptor / tube rack</b>      |    |   |   |  |  |   |
| <b>Item</b>                     | F50A-15C  | -   | F85A-15C   | F85A-50C  | F85A-50   | -   |
| <b>Number per rack / rotor</b>  | 8   | 8   | 6  | 6   | 6   | 6   |
| <b>Adaptor bore (mm)</b>        | 17.0  | 29.0  | 17.0   | 30.0  | 29.0  | 39  |
| <b>Max. height for use (mm)</b> | 123   | 120   | 123  | 122   | 118   | 118   |
| <b>RPM</b>                      | 15,000  | 12,000  | 15,000   | 15,000  | 15,000  | 15,000  |
| <b>Radius (mm)</b>              | 97.8  | 103.4   | 90.7   | 94.8  | 95.3  | 99.8  |
| <b>RCF</b>                      | 24,602  | 26,010  | 22,816   | 23,847  | 23,973  | 25,105  |

|                                 |  |  |  |  |  |  |
|---------------------------------|--|--|--|--|--|--|
| <b>Rotor</b>                    |  <p>Fixed Angle Rotor : <math>\angle 25^\circ</math><br/>6 x 250ml<br/>Radius(mm) : 138.4</p> |  |  <p>Fixed Angle Rotor : <math>\angle 25^\circ</math><br/>6 x 500ml<br/>Radius(mm) : 158</p> |  |  |  |
| <b>Item</b>                     | <b>A6250H</b>  |  | <b>A6500H</b>  |  |  |  |
| <b>Tube</b>                     |   |  |   |  |  |  |
| <b>Volume (ml)</b>              | 250  |  | 500  |  |  |  |
| <b>Adaptor / tube rack</b>      |  |  |  |  |  |  |
| <b>Item</b>                     | -  |  | -  |  |  |  |
| <b>Number per rack / rotor</b>  | 6  |  | 6  |  |  |  |
| <b>Adaptor bore (mm)</b>        | 62.0   |  | 70.0   |  |  |  |
| <b>Max. height for use (mm)</b> | 126  |  | 169  |  |  |  |
| <b>RPM</b>                      | 10,000   |  | 8,000  |  |  |  |
| <b>Radius (mm)</b>              | 138.4  |  | 158  |  |  |  |
| <b>RCF</b>                      | 15,473   |  | 11,305   |  |  |  |

## ••• AVAILABLE SWING ROTORS

| S4250HE   | EB250   |   | EBS250  |   |   |   |   |   |   |   | BW250   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  |  |   |   |   |   |   |   |   |   |   |  |
|   | S250ET-3-12   | S250ET-5-12   | S250ET-10-12  | S250ET-15-12  | S250ET-15C-9  | S250ET-50-4   | S250ET-50C-3  | S250ET-85-2   | S250EA-250  |   |   |   |
|   |  |  |  |  |  |  |  |  |  |   |   |   |
| Swing Out Rotor<br>Max. RPM : 4,000<br>Radius(mm) : 182.5<br>Max. RCF : 3,265     |  |  |  |  |  |  |  |  |  |  |  |   |
| <b>Volume (ml)</b>  | 3   | 5   | 10  | 15  | 15 Conical  | 50  | 50 Conical  | 85  | 250   | MTP   | DWP   |   |
| <b>Number per rack / rotor</b>  | 12/48   | 12/48   | 12/48   | 12/48   | 9/36  | 4/16  | 3/12  | 2/8   | 1/4   | 4/16  | 1/4   |   |
| <b>Adaptor bore (mm)</b>  | 13.2  | 13.2  | 16  | 17.2  | 17  | 29.5  | 29.5  | 38.5  | 62.5  | -   | -   |   |
| <b>Max. height for use (mm)</b>   | 124   | 124   | 124   | 124   | 127   | 124   | 127   | 124   | 138   | -   | -   |   |
| <b>RPM</b>  | 4,000   | 4,000   | 4,000   | 4,000   | 4,000   | 4,000   | 4,000   | 4,000   | 4,000   | 4,000   | 4,000   |   |
| <b>Radius (mm)</b>  | 177.5   | 177.5   | 177.5   | 177.5   | 180.7   | 177.5   | 180.5   | 177.5   | 180.5   | 153.5   | 153.5   |   |
| <b>RCF</b>  | 3,175   | 3,175   | 3,175   | 3,175   | 3,232   | 3,175   | 3,229   | 3,175   | 3,229   | 2,746   | 2,746   |   |



## HIGH EFFICIENCY IN REFRIGERATION APPLICATION

Precise and stable temperature assurance is important when it comes to handle samples that are sensitive to temperature changes.

CRYSTE has developed an optimized temperature control system, so that even at high speed, the sample temperature is maintained without exceeding the set temperature. Moreover, rapid pre-cooling is possible before use, which helps minimize the risk of temperature denaturation of the sample and reducing the waiting time for the experiment.

After use, it is convenient because it is equipped with a drain hole which can drain moisture that is generated due to the difference in the temperature between the inside and outside of the chamber or the number of washes used when cleaning the inside.