

# Specification Sheet

No.: 1 Tag no. WP-AV-105 Service <b>&lt; Specification &gt;</b> Model HDT Description Three way Control Valve  Valve size 6 inch Port size 6 inch Rated Cv 270 Connection size inch Body rating ANSI150 End connection RF Body material A351CF8 Trim material SUS316 Flow characteristic LINEAR Bonnet type PLAIN Actuator HA4 Manual operator SIDE Valve action DIVISION, REVERSE (Side to bottom at air f Gland packing V-PTFE Gasket V543 Grease --- Air supply 3.5kgf/cm2 Spring range 0.8-2.4kgf/cm2  <b>&lt; Accesories &gt;</b> Positioner / Signal Explosion-proof Signal On-Off action Regurator KZ03-3B-XX Regulator 2 Limit Switch VCX5001 X 2 Action Full Open and Close on Solenoid valve EF8320G174-GRC50 Action En. : Control , De-en.: CV Open Power supply AC110V 60Hz Others	QTY: 1	Product no.: -  <b>&lt;Option&gt;</b> SV0703-105 Indicating unit : "kgf/cm2"  SV0601-001 Air piping Connection: 1/4 NPT  SV0801-E02 Material certificate in English. Scope: valve body, bonnet, plug, seat ring (cage) and stem SV0101-001 Flange facing finish : 125AARH  <b>&lt;Finish&gt;</b> Body: M10B5/10 Diaph. Case: M10B5/10 Yoke: M10B5/10 Paint: Salt resistant																																																																															
<b>&lt;Operating condition&gt;</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Fluid name</th> <th colspan="4" style="text-align: center;">DISTILLATE WATER [ WATER(IEC) ]</th> </tr> <tr> <th></th> <th style="text-align: center;">MAX</th> <th style="text-align: center;">NOR</th> <th style="text-align: center;">MIN</th> <th style="text-align: center;">UNIT</th> </tr> </thead> <tbody> <tr> <td>Flow rate</td> <td style="text-align: center;">183</td> <td style="text-align: center;">159.13</td> <td style="text-align: center;">183</td> <td style="text-align: center;">m3/h</td> </tr> <tr> <td>Inlet pressure</td> <td style="text-align: center;">8</td> <td style="text-align: center;">5.2</td> <td style="text-align: center;">5.2</td> <td style="text-align: center;">kgf/cm2G</td> </tr> <tr> <td>Outlet pressure</td> <td></td> <td></td> <td></td> <td style="text-align: center;">kgf/cm2G</td> </tr> <tr> <td>Diff. pressure</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">5.2</td> <td style="text-align: center;">kgf/cm2</td> </tr> <tr> <td>Shut-off press.</td> <td></td> <td style="text-align: center;">8</td> <td></td> <td style="text-align: center;">kgf/cm2</td> </tr> <tr> <td>Temperature</td> <td style="text-align: center;">40.5</td> <td style="text-align: center;">26</td> <td style="text-align: center;">26</td> <td style="text-align: center;">degC</td> </tr> <tr> <td>Sp.Gr. (liq.)</td> <td style="text-align: center;">0.9924</td> <td style="text-align: center;">0.9971</td> <td style="text-align: center;">0.9971</td> <td style="text-align: center;">water=1</td> </tr> <tr> <td>Sp.Gr.(gas,vapor)</td> <td></td> <td></td> <td></td> <td style="text-align: center;">MW</td> </tr> <tr> <td>Viscosity</td> <td></td> <td></td> <td></td> <td style="text-align: center;">cP</td> </tr> <tr> <td>Flash</td> <td></td> <td></td> <td style="text-align: center;">Cavitation</td> <td style="text-align: center;">%</td> </tr> <tr> <td>Velocity</td> <td style="text-align: center;">2.78</td> <td style="text-align: center;">2.42</td> <td style="text-align: center;">2.78</td> <td style="text-align: center;">m/s</td> </tr> <tr> <td>S.P.L.</td> <td style="text-align: center;">64</td> <td style="text-align: center;">64</td> <td style="text-align: center;">88</td> <td style="text-align: center;">dBA</td> </tr> <tr> <td>Calculated Cv</td> <td style="text-align: center;">301</td> <td style="text-align: center;">262.3</td> <td style="text-align: center;">95.19</td> <td></td> </tr> <tr> <td>Travel</td> <td></td> <td style="text-align: center;">97</td> <td style="text-align: center;">35</td> <td style="text-align: center;">%</td> </tr> </tbody> </table>	Fluid name	DISTILLATE WATER [ WATER(IEC) ]					MAX	NOR	MIN	UNIT	Flow rate	183	159.13	183	m3/h	Inlet pressure	8	5.2	5.2	kgf/cm2G	Outlet pressure				kgf/cm2G	Diff. pressure	0.5	0.5	5.2	kgf/cm2	Shut-off press.		8		kgf/cm2	Temperature	40.5	26	26	degC	Sp.Gr. (liq.)	0.9924	0.9971	0.9971	water=1	Sp.Gr.(gas,vapor)				MW	Viscosity				cP	Flash			Cavitation	%	Velocity	2.78	2.42	2.78	m/s	S.P.L.	64	64	88	dBA	Calculated Cv	301	262.3	95.19		Travel		97	35	%	<b>&lt;Seat Leakage&gt;</b> CLASS IV (SV0201-003)  <b>&lt;Note&gt;</b> Tokumi - Piping size & flow rate should be confirmed because Cv=301 at max flow
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# Specification Sheet

<p>No.: 2 QTY: 1</p> <p>Tag no. WP-LICV-101</p> <p>Service</p> <p><b>&lt; Specification &gt;</b></p> <p>Model HCB</p> <p>Description Pressure Balanced Cage Type Control Valves</p> <p>Valve size 6 inch</p> <p>Port size 6 inch</p> <p>Rated Cv 360</p> <p>Connection size inch</p> <p>Body rating ANSI150</p> <p>End connection RF</p> <p>Body material A351CF3M</p> <p>Trim material SUS316L</p> <p>Flow characteristic EQ%</p> <p>Bonnet type PLAIN</p> <p>Actuator HA3</p> <p>Manual operator SIDE</p> <p>Valve action REVERSE(Air fail close)</p> <p>Gland packing V-PTFE</p> <p>Gasket V543,V8590</p> <p>Grease ---</p> <p>Air supply 4.0kgf/cm2</p> <p>Spring range 0.8-2.4kgf/cm2</p> <p><b>&lt; Accesories &gt;</b></p> <p>Positioner / Signal AVP300-PSD3B-1CYT-X</p> <p>Explosion-proof Water-proof, 1/4 NPT, 1/2 NPT</p> <p>Signal 4-20 Madc</p> <p>Regurator KZ03-2B-XX</p> <p>Regulator 2</p> <p>Limit Switch</p> <p>Action</p> <p>Solenoid valve EF8320G174-GRC50</p> <p>Action En. : Control , De-en.: CV Close</p> <p>Power supply AC110V 60Hz</p> <p>Others</p>	<p>Product no.: -</p> <p><b>&lt;Option&gt;</b></p> <p>SV0703-105 Indicating unit : "kgf/cm2"</p> <p>SV0601-001 Air piping Connection: 1/4 NPT</p> <p>SV0801-E02 Material certificate in English. Scope: valve body, bonnet, plug, seat ring (cage) and stem</p> <p>SV0101-001 Flange facing finish : 125AARH</p> <p>SV0505-002 Maximum flow stopper for actuator</p> <p><b>&lt;Finish&gt;</b></p> <p>Body: M10B5/10</p> <p>Diaph. Case: M10B5/10</p> <p>Yoke: M10B5/10</p> <p>Paint: Salt resistant</p>																																																																																												
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# Specification Sheet

<p>No.: 5 QTY: 1</p> <p>Tag no. WP-TRCV-108</p> <p>Service</p> <p><b>&lt; Specification &gt;</b></p> <p>Model HSC</p> <p>Description Cage Type Single Seated Control Valves</p> <p>Valve size 4 inch</p> <p>Port size 2 inch</p> <p>Rated Cv 50</p> <p>Connection size inch</p> <p>Body rating ANSI150</p> <p>End connection RF</p> <p>Body material A216WCB</p> <p>Trim material SUS316L STELLITE</p> <p>Flow characteristic EQ%</p> <p>Bonnet type PLAIN</p> <p>Actuator HA2</p> <p>Manual operator SIDE</p> <p>Valve action REVERSE(Air fail close)</p> <p>Gland packing V-PTFE</p> <p>Gasket V543</p> <p>Grease</p> <p>Air supply 2.7bar</p> <p>Spring range 0.8-2.4bar</p> <p><b>&lt; Accesories &gt;</b></p> <p>Positioner / Signal AVP300-FSD2D-1CYN-X</p> <p>Explosion-proof FM Explosionproof and Flameproof, 1/4 NPT, 1/2</p> <p>Signal 4-20 mA DC</p> <p>Regulator KZ03-2B-XX</p> <p>Regulator 2</p> <p>Limit Switch</p> <p>Action</p> <p>Solenoid valve</p> <p>Action</p> <p>Power supply</p> <p>Others</p>	<p>Product no.: -</p> <p><b>&lt;Option&gt;</b></p> <p>SV0703-102 Indicating unit : "bar"</p> <p>SV0601-001 Air piping Connection: 1/4 NPT</p> <p>SV0801-E02 Material certificate in English. Scope: valve body, bonnet, plug, seat ring (cage) and stem</p> <p>SV0101-001 Flange facing finish : 125AARH</p> <p><b>&lt;Finish&gt;</b></p> <p>Body: M10B5/10</p> <p>Diaph. Case: M10B5/10</p> <p>Yoke: M10B5/10</p> <p>Paint: Salt resistant</p>																																																																																												
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# Specification Sheet

<p>No.: 6 QTY: 1</p> <p>Tag no. WP-PCV-171</p> <p>Service</p> <p><b>&lt; Specification &gt;</b></p> <p>Model HLC</p> <p>Description Small-Port Cage Guide Type Single Seated Control Valves</p> <p>Valve size 1 inch</p> <p>Port size Cv=4.0 inch</p> <p>Rated Cv 4.0</p> <p>Connection size inch</p> <p>Body rating ANSI150</p> <p>End connection RF</p> <p>Body material A216WCB</p> <p>Trim material SUS316 STELLITE</p> <p>Flow characteristic EQ%</p> <p>Bonnet type PLAIN</p> <p>Actuator PSA1</p> <p>Manual operator ---</p> <p>Valve action REVERSE(Air fail close)</p> <p>Gland packing V-PTFE</p> <p>Gasket V543</p> <p>Grease ---</p> <p>Air supply 2.7bar</p> <p>Spring range 0.8-2.4bar</p> <p><b>&lt; Accesories &gt;</b></p> <p>Positioner / Signal AVP300-FSD2D-1CYS-X</p> <p>Explosion-proof FM Explosionproof and Flameproof, 1/4 NPT, 1/2</p> <p>Signal 4-20 mADC</p> <p>Regurator KZ03-2B-XX</p> <p>Regulator 2</p> <p>Limit Switch VCX5001</p> <p>Action Full Close on</p> <p>Solenoid valve</p> <p>Action</p> <p>Power supply</p> <p>Others</p>	<p>Product no.: -</p> <p><b>&lt;Option&gt;</b></p> <p>SV0703-102 Indicating unit : "bar"</p> <p>SV0601-001 Air piping Connection: 1/4 NPT</p> <p>SV0801-E02 Material certificate in English. Scope: valve body, bonnet, plug, seat ring (cage) and stem</p> <p>SV0101-001 Flange facing finish : 125AARH</p> <p><b>&lt;Finish&gt;</b></p> <p>Body: M10B5/10</p> <p>Diaph. Case: M10B5/10</p> <p>Yoke: M10B5/10</p> <p>Paint: Salt resistant</p>																																																																																																						
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<p>No.: 7 QTY: 1</p> <p>Tag no. WP-PCV-271</p> <p>Service</p> <p><b>&lt; Specification &gt;</b></p> <p>Model HLC</p> <p>Description Small-Port Cage Guide Type Single Seated Control Valves</p> <p>Valve size 1 inch</p> <p>Port size Cv=4.0 inch</p> <p>Rated Cv 4.0</p> <p>Connection size inch</p> <p>Body rating ANSI150</p> <p>End connection RF</p> <p>Body material A216WCB</p> <p>Trim material SUS316 STELLITE</p> <p>Flow characteristic EQ%</p> <p>Bonnet type PLAIN</p> <p>Actuator PSA1</p> <p>Manual operator ---</p> <p>Valve action REVERSE(Air fail close)</p> <p>Gland packing V-PTFE</p> <p>Gasket</p> <p>Grease ---</p> <p>Air supply 2.7bar</p> <p>Spring range 0.8-2.4bar</p> <p><b>&lt; Accesories &gt;</b></p> <p>Positioner / Signal AVP300-FSD2D-1CYS-X</p> <p>Explosion-proof FM Explosionproof and Flameproof, 1/4 NPT, 1/2</p> <p>Signal 4-20 mADC</p> <p>Regurator KZ03-2B-XX</p> <p>Regulator 2</p> <p>Limit Switch VCX5001</p> <p>Action Full Close on</p> <p>Solenoid valve</p> <p>Action</p> <p>Power supply</p> <p>Others</p>	<p>Product no.: -</p> <p><b>&lt;Option&gt;</b></p> <p>SV0703-102 Indicating unit : "bar"</p> <p>SV0601-001 Air piping Connection: 1/4 NPT</p> <p>SV0801-E02 Material certificate in English. Scope: valve body, bonnet, plug, seat ring (cage) and stem</p> <p>SV0101-001 Flange facing finish : 125AARH</p> <p><b>&lt;Finish&gt;</b></p> <p>Body: M10B5/10</p> <p>Diaph. Case: M10B5/10</p> <p>Yoke: M10B5/10</p> <p>Paint: Salt resistant</p>																																																																																												
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