Specification Sheet

No.: 1 QTY: 1

Tag no.

Service Heavy Spindle Oil

< Specification >

Model	VBZ	
Description	Special Butterfly Valve	
Valve size	3	inch
Port size	3	inch
Rated Cv	160	
Connection size		inch
Body rating	ANSI150	
End connection	WAFER	
Body material	BODY: SCPH2/ VANE: SCPH2	
Trim material	STEM: SUS316	
Flow characteristic		
Bonnet type	Extension	
Actuator	HA3D	
Manual operator	SIDE	
Valve action	DIRECT(Air fail open)	
Gland packing	P6610CH+P6528	
Gasket		
Grease	650	
Air supply	2.7kgf/cm2	
Spring range	0.8-2.4kgf/cm2	

< Accesories >

Positioner / Signal	HTP-1D
Exprosion-proof	
Signal	0.2-1.0 kgf/cm2
Regurator	KZ03-2B-XX
Regulator 2	
Limit Switch	
Action	
Solenoid valve	
Action	
Power supply	
Others	

Product no.: -

<Option>

SV0703-105 Indicating unit : "kgf/cm2"

SV0601-001 Air piping Connection: 1/4 NPT

SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap

SV0505-003 Minimum and maximum flow stopper for actuator

<Finish>

Body:	Silver
Diaph. Case:	Yellow
Yoke:	Yellow
Paint:	Standard

<Operating condition>

Fluid name Heavy Spindle Oil [LIQUID]

	MAX	NOR	MIN	UNIT
Flow rate	28.6			m3/h
Inlet pressure	0.402			kgf/cm2A
Outlet pressure				kgf/cm2A
Diff. pressure	0.192			kgf/cm2
Shut-off press.				kgf/cm2
Temperature	269			degC
Sp.Gr. (liq.)	0.722			water=1
Sp.Gr.(gas,vapor)				MW
Viscosity	0.606			cP
Flash				%
Velocity	1.74			m/s
S.P.L.	72			dBA
Calculated Cv	64.74			
Travel				%

<Seat Leakage>

<Note> Tokumi: V93-1803-01 - 1

Original Production No. : 416-8310-1000 in 1974

<Line spec>

Design press.				kgf/cm2G
Design temp.				degC
Line size in/out	3	/	3	inch
Line Sch. / Thick.	40	/	5.5	mm

YAMATAKE

Cv Calculation Sheet

No: 1 TAG NO: CASE: MAX

Flow rate:	28.6	m3/h	Fluid state:	LIQUID		
Inlet Pressure:	0.402	kgf/cm2A	Model:	VBZ		
Outlet pressure:		kgf/cm2A	Valve size:	3		inch
Diff. pressure	0.192	kgf/cm2	Line size In/Out:	3	3	inch
Temperature:	269	degC	Pipe Sch/ Thick:	40	5.5	mm
Sp.Gr. (liq.):	0.722	water=1	Saturated temp.:			degC
Sp.Gr. (gas,vapor):		MW	KC:		0.48	
Viscosity:	0.606	cP				
Vapor pressure:		kgf/cm2A	Velocity:	1.74		m/s
Critical pressure:		kgf/cm2A	S.P.L.:	72		dBA
CP/CV , Z:			Calc. Cv:	64.74		
Flash:		%	Travel:			%

$$Cv(Liq) = \frac{11.56 \times 28.6 m3/h \times Sqr(0.722) \times 1}{Sqr(18.83kPa)} = 64.74$$