DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

		No.	
GENERAL	Drawing No.(or P&ID No.)	1	
	Valve No. (or Tag No.)	2	SHP-PSV-71651
	Service Line	3	For Technical HVAC A
	Quantity	4	1
	Nozzle Type. Full or Semi	5	Full Nozzle
	Design Type	6	
	A. Safety or Relief		Safety Valve
	B. Conventional or Balanced-Bellows		Conventional
	C. Full Bore, Low or High Lift		Low Lift Type
	Bonnet Type, Open or Close	7	Closed Type
CONN	Size. Inlet / Outlet	8	1/2" x 5/8"
	Inlet. Connection inch	9	PT 1/2
	Outlet Connection inch	10	PF 5/8
MATERIALS	Body & Seat	11	C 3771
	Bonnet	12	C 3771
	Disc	13	TEFLON
	Valve Stem	14	N/A
	Adjust Ring	15	N/A
	Gasket (Body)	16	N/A
	Spring	17	SWOSC-B
	Cap	18	N/A
ACCESS	Cap. Screwed or bolted	19	Screw Type
	Lever(Plain/Packed) or Closed	20	None
	Test Gag	21	No
	Paint Color	22	N / A
BASIC	Code	23	KS B6216 for Gas & Vapor
	Cause of Overpressure	24	No
	Allowable Overpressure	25	10%
SERVICE	Fluid and State	26	GAS
	Required Capacity kg/hr	27	
	Mol. Weight	28	28.01
	Viscosity cP	29	0
	Operating / Set Pressure barg	30	/ 25.5
	Operating / Relieving Temp oC	31	/ 200
	Superimposed Constant Back Pressure barg	32	0
	Superimposed Variable Back Pressure barg	33	0
	Built-up Back Pressure barg	34	0
	Total Back Pressure barg	35	0
	Closing Pressure barg	36	21.68
	Hydrostatic Test barg	37	49.50
	Set Pressure Tolerance	38	±3% of Set Pressure
	Compressibility Factor	39	1.000
	Ratio of Specific Heats	40	1.400
ORIFICE	Calculated Area mm2	41	0.0
	Selected Area mm2	42	25.3
	Orifice Dimension mm	43	11.5
	Valve Capacity kg/hr	44	365
	Model No.	45	HSV-3S1
Cert.	Approved by	46	N/A
	CDTP	47	25.50

QUO.NO. : P25I00214 - 1

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

= **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

= **365** kg/hr

W = Valve Capacity ··	365 kg/hr
W1 = Required Capacity ···	kg/hr
P = Set Pressure ··	25.500 barg
[Conversion unit for calculation]	26.0 kgf/㎠g
A = Selected Area ··	25.3 mm2
A1 = Calculated Area ···	0.0 mm2
Kd = Coefficient of Discharge ··	0.840
C' = Ratio of Specific Heats to the Coefficient ······················	2.65
T = Absolute Temperature ···	473.0 ° K
M = Molecular Weight ···	28.010
Z = Compressibility Factor ···	1.000

REMARK

DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

GENERAL	Drawing No.(or P&ID No.)	1	
	Valve No. (or Tag No.)	2	SHP-PSV-71652
	Service Line	3	For Technical HVAC B
	Quantity	4	1
	Nozzle Type. Full or Semi	5	Full Nozzle
	Design Type	6	
	A. Safety or Relief		Safety Valve
	B. Conventional or Balanced-Bellows		Conventional
	C. Full Bore, Low or High Lift		Low Lift Type
	Bonnet Type, Open or Close	7	Closed Type
CONN	Size. Inlet / Outlet	8	1/2" x 5/8"
	Inlet. Connection inch	9	PT 1/2
	Outlet Connection inch	10	PF 5/8
MATERIALS	Body & Seat	11	C 3771
	Bonnet	12	C 3771
	Disc	13	TEFLON
	Valve Stem	14	N/A
	Adjust Ring	15	N/A
	Gasket (Body)	16	N/A
	Spring	17	SWOSC-B
	Cap	18	N/A
ACCESS	Cap. Screwed or bolted	19	Screw Type
	Lever(Plain/Packed) or Closed	20	None
	Test Gag	21	No
	Paint Color	22	N / A
BASIC	Code	23	KS B6216 for Gas & Vapor
	Cause of Overpressure	24	No
	Allowable Overpressure	25	10%
SERVICE	Fluid and State	26	GAS
	Required Capacity kg/hr	27	
	Mol. Weight	28	28.01
	Viscosity cP	29	0
	Operating / Set Pressure barg	30	/ 25.5
	Operating / Relieving Temp oC	31	/ 200
	Superimposed Constant Back Pressure barg	32	0
	Superimposed Variable Back Pressure barg	33	0
	Built-up Back Pressure barg	34	0
	Total Back Pressure barg	35	0
	Closing Pressure barg	36	21.68
	Hydrostatic Test barg	37	49.50
	Set Pressure Tolerance	38	±3% of Set Pressure
	Compressibility Factor	39	1.000
	Ratio of Specific Heats	40	1.400
ORIFICE	Calculated Area mm2	41	0.0
	Selected Area mm2	42	25.3
	Orifice Dimension mm	43	11.5
	Valve Capacity kg/hr	44	365
	Model No.	45	HSV-3S1
Cert.	Approved by	46	N/A
	CDTP	47	25.50

QUO.NO. : P25I00214 - 2

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\dfrac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

= **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\dfrac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

= **365** kg/hr

W = Valve Capacity	365 kg/hr
W1 = Required Capacity	kg/hr
P = Set Pressure	25.500 barg
[Conversion unit for calculation]	26.0 kgf/㎠g
A = Selected Area	25.3 mm2
A1 = Calculated Area	0.0 mm2
Kd = Coefficient of Discharge	0.840
C' = Ratio of Specific Heats to the Coefficient	2.65
T = Absolute Temperature	473.0 ° K
M = Molecular Weight	28.010
Z = Compressibility Factor	1.000

REMARK

DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

Project No.			
Project Name			
Date	2025-09-12	By	S.R.HONG
Checked	S.M.PARK	Approved	J.W.HONG

		No.	
GENERAL	Drawing No.(or P&ID No.)	1	
	Valve No. (or Tag No.)	2	SHP-PSV-70951A
	Service Line	3	For Air Con Unit, Provision-A
	Quantity	4	1
	Nozzle Type. Full or Semi	5	Full Nozzle
	Design Type	6	
	A. Safety or Relief		Safety Valve
	B. Conventional or Balanced-Bellows		Conventional
	C. Full Bore, Low or High Lift		Low Lift Type
	Bonnet Type, Open or Close	7	Closed Type
CONN	Size. Inlet / Outlet	8	1/2" x 5/8"
	Inlet. Connection inch	9	PT 1/2
	Outlet Connection inch	10	PF 5/8
MATERIALS	Body & Seat	11	C 3771
	Bonnet	12	C 3771
	Disc	13	TEFLON
	Valve Stem	14	N/A
	Adjust Ring	15	N/A
	Gasket (Body)	16	N/A
	Spring	17	SWOSC-B
	Cap	18	N/A
ACCESS	Cap. Screwed or bolted	19	Screw Type
	Lever(Plain/Packed) or Closed	20	None
	Test Gag	21	No
	Paint Color	22	N / A
BASIC	Code	23	KS B6216 for Gas & Vapor
	Cause of Overpressure	24	No
	Allowable Overpressure	25	10%
SERVICE	Fluid and State	26	GAS
	Required Capacity kg/hr	27	
	Mol. Weight	28	28.01
	Viscosity cP	29	0
	Operating / Set Pressure barg	30	/ 25.5
	Operating / Relieving Temp oC	31	/ 200
	Superimposed Constant Back Pressure barg	32	0
	Superimposed Variable Back Pressure barg	33	0
	Built-up Back Pressure barg	34	0
	Total Back Pressure barg	35	0
	Closing Pressure barg	36	21.68
	Hydrostatic Test barg	37	49.50
	Set Pressure Tolerance	38	±3% of Set Pressure
	Compressibility Factor	39	1.000
	Ratio of Specific Heats	40	1.400
ORIFICE	Calculated Area mm2	41	0.0
	Selected Area mm2	42	25.3
	Orifice Dimension mm	43	11.5
	Valve Capacity kg/hr	44	365
	Model No.	45	HSV-3S1
Cert.	Approved by	46	N/A
	CDTP	47	25.50

QUO.NO. : P25I00214 - 3

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

=   **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

=   **365** kg/hr

W = Valve Capacity	365	kg/hr
W1 = Required Capacity		kg/hr
P = Set Pressure	25.500	barg
[Conversion unit for calculation]	26.0	kgf/㎠g
A = Selected Area	25.3	mm2
A1 = Calculated Area	0.0	mm2
Kd = Coefficient of Discharge	0.840	
C' = Ratio of Specific Heats to the Coefficient	2.65	
T = Absolute Temperature	473.0	° K
M = Molecular Weight	28.010	
Z = Compressibility Factor	1.000	

REMARK

YNV-D-002/②

YNV.Co.,Ltd.

A4(210x297)

DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

Sheet No.	4 of 10	Rev. No.	0
Project No.			
Project Name			
Date	2025-09-12	By	S.R.HONG
Checked	S.M.PARK	Approved	J.W.HONG

GENERAL	Drawing No.(or P&ID No.)	1	
	Valve No. (or Tag No.)	2	SHP-PSV-70951B
	Service Line	3	For Air Con Unit, Provision-B
	Quantity	4	1
	Nozzle Type. Full or Semi	5	Full Nozzle
	Design Type	6	
	A. Safety or Relief		Safety Valve
	B. Conventional or Balanced-Bellows		Conventional
	C. Full Bore, Low or High Lift		Low Lift Type
	Bonnet Type, Open or Close	7	Closed Type
CONN	Size. Inlet / Outlet	8	1/2" x 5/8"
	Inlet. Connection inch	9	PT 1/2
	Outlet Connection inch	10	PF 5/8
MATERIALS	Body & Seat	11	C 3771
	Bonnet	12	C 3771
	Disc	13	TEFLON
	Valve Stem	14	N/A
	Adjust Ring	15	N/A
	Gasket (Body)	16	N/A
	Spring	17	SWOSC-B
	Cap	18	N/A
ACCESS	Cap. Screwed or bolted	19	Screw Type
	Lever(Plain/Packed) or Closed	20	None
	Test Gag	21	No
	Paint Color	22	N / A
BASIC	Code	23	KS B6216 for Gas & Vapor
	Cause of Overpressure	24	No
	Allowable Overpressure	25	10%
SERVICE	Fluid and State	26	GAS
	Required Capacity kg/hr	27	
	Mol. Weight	28	28.01
	Viscosity cP	29	0
	Operating / Set Pressure barg	30	/ 25.5
	Operating / Relieving Temp oC	31	/ 200
	Superimposed Constant Back Pressure barg	32	0
	Superimposed Variable Back Pressure barg	33	0
	Built-up Back Pressure barg	34	0
	Total Back Pressure barg	35	0
	Closing Pressure barg	36	21.68
	Hydrostatic Test barg	37	49.50
	Set Pressure Tolerance	38	±3% of Set Pressure
	Compressibility Factor	39	1.000
	Ratio of Specific Heats	40	1.400
ORIFICE	Calculated Area mm2	41	0.0
	Selected Area mm2	42	25.3
	Orifice Dimension mm	43	11.5
	Valve Capacity kg/hr	44	365
	Model No.	45	HSV-3S1
Cert.	Approved by	46	N/A
	CDTP	47	25.50

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\dfrac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

=   **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\dfrac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

=   **365** kg/hr

W = Valve Capacity ··	365 kg/hr
W1 = Required Capacity ···	kg/hr
P = Set Pressure ··	25.500 barg
[Conversion unit for calculation]	26.0 kgf/㎠g
A = Selected Area ··	25.3 mm2
A1 = Calculated Area ···	0.0 mm2
Kd = Coefficient of Discharge ·································	0.840
C' = Ratio of Specific Heats to the Coefficient ···········	2.65
T = Absolute Temperature ··	473.0 °K
M = Molecular Weight ··	28.010
Z = Compressibility Factor ·······································	1.000

REMARK

QUO.NO. : P25I00214 - 4

DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

	Sheet No.	5 of 10	Rev. No.	0
	Project No.			
	Project Name			
	Date	2025-09-12	By	S.R.HONG
	Checked	S.M.PARK	Approved	J.W.HONG

			No	
GENERAL	Drawing No.(or P&ID No.)		1	
	Valve No. (or Tag No.)		2	SHP-PSV-71651
	Service Line		3	for Air Con Unit, LQ Normal A1
	Quantity		4	1
	Nozzle Type. Full or Semi		5	Full Nozzle
	Design Type		6	
	A. Safety or Relief			Safety Valve
	B. Conventional or Balanced-Bellows			Conventional
	C. Full Bore, Low or High Lift			Low Lift Type
	Bonnet Type, Open or Close		7	Closed Type
CONN	Size. Inlet / Outlet		8	1/2" x 5/8"
	Inlet. Connection	inch	9	PT 1/2
	Outlet Connection	inch	10	PF 5/8
MATERIALS	Body & Seat		11	C 3771
	Bonnet		12	C 3771
	Disc		13	TEFLON
	Valve Stem		14	N/A
	Adjust Ring		15	N/A
	Gasket (Body)		16	N/A
	Spring		17	SWOSC-B
	Cap		18	N/A
ACCESS	Cap. Screwed or bolted		19	Screw Type
	Lever(Plain/Packed) or Closed		20	None
	Test Gag		21	No
	Paint Color		22	N / A
BASIC	Code		23	KS B6216 for Gas & Vapor
	Cause of Overpressure		24	No
	Allowable Overpressure		25	10%
SERVICE	Fluid and State		26	GAS
	Required Capacity	kg/hr	27	
	Mol. Weight		28	28.01
	Viscosity	cP	29	0
	Operating / Set Pressure	barg	30	/ 25.5
	Operating / Relieving Temp	oC	31	/ 200
	Superimposed Constant Back Pressure	barg	32	0
	Superimposed Variable Back Pressure	barg	33	0
	Built-up Back Pressure	barg	34	0
	Total Back Pressure	barg	35	0
	Closing Pressure	barg	36	21.68
	Hydrostatic Test	barg	37	49.50
	Set Pressure Tolerance		38	±3% of Set Pressure
	Compressibility Factor		39	1.000
	Ratio of Specific Heats		40	1.400
ORIFICE	Calculated Area	mm2	41	0.0
	Selected Area	mm2	42	25.3
	Orifice Dimension	mm	43	11.5
	Valve Capacity	kg/hr	44	365
	Model No.		45	HSV-3S1
Cert.	Approved by		46	N/A
	CDTP		47	25.50

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

= **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

= **365** kg/hr

W = Valve Capacity	365	kg/hr
W1 = Required Capacity		kg/hr
P = Set Pressure	25.500	barg
[Conversion unit for calculation]	26.0	kgf/㎠g
A = Selected Area	25.3	mm2
A1 = Calculated Area	0.0	mm2
Kd = Coefficient of Discharge	0.840	
C' = Ratio of Specific Heats to the Coefficient	2.65	
T = Absolute Temperature	473.0	° K
M = Molecular Weight	28.010	
Z = Compressibility Factor	1.000	

REMARK

QUO.NO. : P25I00214 - 5

DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

GENERAL	Drawing No.(or P&ID No.)	1	
	Valve No. (or Tag No.)	2	SHP-PSV-71652
	Service Line	3	for Air Con Unit, LQ Normal A2
	Quantity	4	1
	Nozzle Type. Full or Semi	5	Full Nozzle
	Design Type	6	
	A. Safety or Relief		Safety Valve
	B. Conventional or Balanced-Bellows		Conventional
	C. Full Bore, Low or High Lift		Low Lift Type
	Bonnet Type, Open or Close	7	Closed Type
CONN	Size. Inlet / Outlet	8	1/2" x 5/8"
	Inlet. Connection inch	9	PT 1/2
	Outlet Connection inch	10	PF 5/8
MATERIALS	Body & Seat	11	C 3771
	Bonnet	12	C 3771
	Disc	13	TEFLON
	Valve Stem	14	N/A
	Adjust Ring	15	N/A
	Gasket (Body)	16	N/A
	Spring	17	SWOSC-B
	Cap	18	N/A
ACCESS	Cap. Screwed or bolted	19	Screw Type
	Lever(Plain/Packed) or Closed	20	None
	Test Gag	21	No
	Paint Color	22	N / A
BASIC	Code	23	KS B6216 for Gas & Vapor
	Cause of Overpressure	24	No
	Allowable Overpressure	25	10%
SERVICE	Fluid and State	26	GAS
	Required Capacity kg/hr	27	
	Mol. Weight	28	28.01
	Viscosity cP	29	0
	Operating / Set Pressure barg	30	/ 25.5
	Operating / Relieving Temp oC	31	/ 200
	Superimposed Constant Back Pressure barg	32	0
	Superimposed Variable Back Pressure barg	33	0
	Built-up Back Pressure barg	34	0
	Total Back Pressure barg	35	0
	Closing Pressure barg	36	21.68
	Hydrostatic Test barg	37	49.50
	Set Pressure Tolerance	38	±3% of Set Pressure
	Compressibility Factor	39	1.000
	Ratio of Specific Heats	40	1.400
ORIFICE	Calculated Area mm2	41	0.0
	Selected Area mm2	42	25.3
	Orifice Dimension mm	43	11.5
	Valve Capacity kg/hr	44	365
	Model No.	45	HSV-3S1
Cert.	Approved by	46	N/A
	CDTP	47	25.50

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

= **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

= **365** kg/hr

W = Valve Capacity	365	kg/hr
W1 = Required Capacity		kg/hr
P = Set Pressure	25.500	barg
[Conversion unit for calculation]	26.0	kgf/㎠g
A = Selected Area	25.3	mm2
A1 = Calculated Area	0.0	mm2
Kd = Coefficient of Discharge	0.840	
C' = Ratio of Specific Heats to the Coefficient	2.65	
T = Absolute Temperature	473.0	° K
M = Molecular Weight	28.010	
Z = Compressibility Factor	1.000	

REMARK

QUO.NO. : P25I00214 - 6

DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

GENERAL	Drawing No.(or P&ID No.)	1	
	Valve No. (or Tag No.)	2	SHP-PSV-71653
	Service Line	3	for Air Con Unit, LQ Normal B1
	Quantity	4	1
	Nozzle Type. Full or Semi	5	Full Nozzle
	Design Type	6	
	A. Safety or Relief		Safety Valve
	B. Conventional or Balanced-Bellows		Conventional
	C. Full Bore, Low or High Lift		Low Lift Type
	Bonnet Type, Open or Close	7	Closed Type
CONN	Size. Inlet / Outlet	8	1/2" x 5/8"
	Inlet. Connection inch	9	PT 1/2
	Outlet Connection inch	10	PF 5/8
MATERIALS	Body & Seat	11	C 3771
	Bonnet	12	C 3771
	Disc	13	TEFLON
	Valve Stem	14	N/A
	Adjust Ring	15	N/A
	Gasket (Body)	16	N/A
	Spring	17	SWOSC-B
	Cap	18	N/A
ACCESS	Cap. Screwed or bolted	19	Screw Type
	Lever(Plain/Packed) or Closed	20	None
	Test Gag	21	No
	Paint Color	22	N / A
BASIC	Code	23	KS B6216 for Gas & Vapor
	Cause of Overpressure	24	No
	Allowable Overpressure	25	10%
SERVICE	Fluid and State	26	GAS
	Required Capacity kg/hr	27	
	Mol. Weight	28	28.01
	Viscosity cP	29	0
	Operating / Set Pressure barg	30	/ 25.5
	Operating / Relieving Temp °C	31	/ 200
	Superimposed Constant Back Pressure barg	32	0
	Superimposed Variable Back Pressure barg	33	0
	Built-up Back Pressure barg	34	0
	Total Back Pressure barg	35	0
	Closing Pressure barg	36	21.68
	Hydrostatic Test barg	37	49.50
	Set Pressure Tolerance	38	±3% of Set Pressure
	Compressibility Factor	39	1.000
	Ratio of Specific Heats	40	1.400
ORIFICE	Calculated Area mm2	41	0.0
	Selected Area mm2	42	25.3
	Orifice Dimension mm	43	11.5
	Valve Capacity kg/hr	44	365
	Model No.	45	HSV-3S1
Cert.	Approved by	46	N/A
	CDTP	47	25.50

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

= **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

= **365** kg/hr

W = Valve Capacity ··	365 kg/hr
W1 = Required Capacity ·······························	kg/hr
P = Set Pressure ··	25.500 barg
[Conversion unit for calculation]	26.0 kgf/㎠g
A = Selected Area ···	25.3 mm2
A1 = Calculated Area ······································	0.0 mm2
Kd = Coefficient of Discharge ·····················	0.840
C' = Ratio of Specific Heats to the Coefficient ·······	2.65
T = Absolute Temperature ·····························	473.0 °K
M = Molecular Weight ·····································	28.010
Z = Compressibility Factor ····························	1.000

REMARK

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DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

		Sheet No.	8 of 10	Rev. No.	0
		Project No.			
		Project Name			
		Date	2025-09-12	By	S.R.HONG
		Checked	S.M.PARK	Approved	J.W.HONG

GENERAL	Drawing No.(or P&ID No.)	1		
	Valve No. (or Tag No.)	2	SHP-PSV-71654	
	Service Line	3	for Air Con Unit, LQ Normal B2	
	Quantity	4	1	
	Nozzle Type. Full or Semi	5	Full Nozzle	
	Design Type	6		
	A. Safety or Relief		Safety Valve	
	B. Conventional or Balanced-Bellows		Conventional	
	C. Full Bore, Low or High Lift		Low Lift Type	
	Bonnet Type, Open or Close	7	Closed Type	
CONN	Size. Inlet / Outlet	8	1/2" x 5/8"	
	Inlet. Connection · inch	9	PT 1/2	
	Outlet Connection · inch	10	PF 5/8	
MATERIALS	Body & Seat	11	C 3771	
	Bonnet	12	C 3771	
	Disc	13	TEFLON	
	Valve Stem	14	N/A	
	Adjust Ring	15	N/A	
	Gasket (Body)	16	N/A	
	Spring	17	SWOSC-B	
	Cap	18	N/A	
ACCESS	Cap. Screwed or bolted	19	Screw Type	
	Lever(Plain/Packed) or Closed	20	None	
	Test Gag	21	No	
	Paint Color	22	N / A	
BASIC	Code	23	KS B6216 for Gas & Vapor	
	Cause of Overpressure	24	No	
	Allowable Overpressure	25	10%	
SERVICE	Fluid and State	26	GAS	
	Required Capacity · kg/hr	27		
	Mol. Weight	28	28.01	
	Viscosity · cP	29	0	
	Operating / Set Pressure · barg	30	/ 25.5	
	Operating / Relieving Temp · °C	31	/ 200	
	Superimposed Constant Back Pressure · barg	32	0	
	Superimposed Variable Back Pressure · barg	33	0	
	Built-up Back Pressure · barg	34	0	
	Total Back Pressure · barg	35	0	
	Closing Pressure · barg	36	21.68	
	Hydrostatic Test · barg	37	49.50	
	Set Pressure Tolerance	38	±3% of Set Pressure	
	Compressibility Factor	39	1.000	
	Ratio of Specific Heats	40	1.400	
ORIFICE	Calculated Area · mm2	41	0.0	
	Selected Area · mm2	42	25.3	
	Orifice Dimension · mm	43	11.5	
	Valve Capacity · kg/hr	44	365	
	Model No.	45	HSV-3S1	
Cert.	Approved by	46	N/A	
	CDTP	47	25.50	

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\dfrac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

= **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\dfrac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

= **365** kg/hr

W = Valve Capacity ··	365	kg/hr
W1 = Required Capacity ··		kg/hr
P = Set Pressure ···	25.500	barg
[Conversion unit for calculation]	26.0	kgf/㎠g
A = Selected Area ···	25.3	mm2
A1 = Calculated Area ···	0.0	mm2
Kd = Coefficient of Discharge ·······························	0.840	
C' = Ratio of Specific Heats to the Coefficient ············	2.65	
T = Absolute Temperature ····································	473.0	° K
M = Molecular Weight ··	28.010	
Z = Compressibility Factor ····································	1.000	

REMARK

DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

GENERAL	Drawing No.(or P&ID No.)	1	
	Valve No. (or Tag No.)	2	SHP-PSV-71655
	Service Line	3	for Air Con Unit, Emergency A
	Quantity	4	1
	Nozzle Type. Full or Semi	5	Full Nozzle
	Design Type	6	
	A. Safety or Relief		Safety Valve
	B. Conventional or Balanced-Bellows		Conventional
	C. Full Bore, Low or High Lift		Low Lift Type
	Bonnet Type, Open or Close	7	Closed Type
CONN	Size. Inlet / Outlet	8	1/2" x 5/8"
	Inlet. Connection inch	9	PT 1/2
	Outlet Connection inch	10	PF 5/8
MATERIALS	Body & Seat	11	C 3771
	Bonnet	12	C 3771
	Disc	13	TEFLON
	Valve Stem	14	N/A
	Adjust Ring	15	N/A
	Gasket (Body)	16	N/A
	Spring	17	SWOSC-B
	Cap	18	N/A
ACCESS	Cap. Screwed or bolted	19	Screw Type
	Lever(Plain/Packed) or Closed	20	None
	Test Gag	21	No
	Paint Color	22	N / A
BASIC	Code	23	KS B6216 for Gas & Vapor
	Cause of Overpressure	24	No
	Allowable Overpressure	25	10%
SERVICE	Fluid and State	26	GAS
	Required Capacity kg/hr	27	
	Mol. Weight	28	28.01
	Viscosity cP	29	0
	Operating / Set Pressure barg	30	/ 25.5
	Operating / Relieving Temp oC	31	/ 200
	Superimposed Constant Back Pressure barg	32	0
	Superimposed Variable Back Pressure barg	33	0
	Built-up Back Pressure barg	34	0
	Total Back Pressure barg	35	0
	Closing Pressure barg	36	21.68
	Hydrostatic Test barg	37	49.50
	Set Pressure Tolerance	38	±3% of Set Pressure
	Compressibility Factor	39	1.000
	Ratio of Specific Heats	40	1.400
ORIFICE	Calculated Area mm2	41	0.0
	Selected Area mm2	42	25.3
	Orifice Dimension mm	43	11.5
	Valve Capacity kg/hr	44	365
	Model No.	45	HSV-3S1
Cert.	Approved by	46	N/A
	CDTP	47	25.50

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\dfrac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

=   **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\dfrac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

=   **365** kg/hr

W = Valve Capacity	365	kg/hr
W1 = Required Capacity		kg/hr
P = Set Pressure	25.500	barg
[Conversion unit for calculation]	26.0	kgf/㎠g
A = Selected Area	25.3	mm2
A1 = Calculated Area	0.0	mm2
Kd = Coefficient of Discharge	0.840	
C' = Ratio of Specific Heats to the Coefficient	2.65	
T = Absolute Temperature	473.0	° K
M = Molecular Weight	28.010	
Z = Compressibility Factor	1.000	

REMARK

DATA SHEET
SAFETY RELIEF VALVE

YNV CO., LTD.

GENERAL	Drawing No.(or P&ID No.)	1	
	Valve No. (or Tag No.)	2	SHP-PSV-71656
	Service Line	3	for Air Con Unit, Emergency B
	Quantity	4	1
	Nozzle Type. Full or Semi	5	Full Nozzle
	Design Type	6	
	A. Safety or Relief		Safety Valve
	B. Conventional or Balanced-Bellows		Conventional
	C. Full Bore, Low or High Lift		Low Lift Type
	Bonnet Type, Open or Close	7	Closed Type
CONN	Size. Inlet / Outlet	8	1/2" x 5/8"
	Inlet. Connection inch	9	PT 1/2
	Outlet Connection inch	10	PF 5/8
MATERIALS	Body & Seat	11	C 3771
	Bonnet	12	C 3771
	Disc	13	TEFLON
	Valve Stem	14	N/A
	Adjust Ring	15	N/A
	Gasket (Body)	16	N/A
	Spring	17	SWOSC-B
	Cap	18	N/A
ACCESS	Cap. Screwed or bolted	19	Screw Type
	Lever(Plain/Packed) or Closed	20	None
	Test Gag	21	No
	Paint Color	22	N / A
BASIC	Code	23	KS B6216 for Gas & Vapor
	Cause of Overpressure	24	No
	Allowable Overpressure	25	10%
SERVICE	Fluid and State	26	GAS
	Required Capacity kg/hr	27	
	Mol. Weight	28	28.01
	Viscosity cP	29	0
	Operating / Set Pressure barg	30	/ 25.5
	Operating / Relieving Temp oC	31	/ 200
	Superimposed Constant Back Pressure barg	32	0
	Superimposed Variable Back Pressure barg	33	0
	Built-up Back Pressure barg	34	0
	Total Back Pressure barg	35	0
	Closing Pressure barg	36	21.68
	Hydrostatic Test barg	37	49.50
	Set Pressure Tolerance	38	±3% of Set Pressure
	Compressibility Factor	39	1.000
	Ratio of Specific Heats	40	1.400
ORIFICE	Calculated Area mm2	41	0.0
	Selected Area mm2	42	25.3
	Orifice Dimension mm	43	11.5
	Valve Capacity kg/hr	44	365
	Model No.	45	HSV-3S1
Cert.	Approved by	46	N/A
	CDTP	47	25.50

QUO.NO. : P25I00214 - 10

CALCULATION

* Calculated of Area

$$A1 = \frac{W1}{C' \times K_d \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9}$$

= 0.0 / [2.65*0.84*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9]

= **0.0** mm²

* Calculated of Capacity

$$W = C' \times K_d \times A \times (P \times 1.1 + 1.033) \times \sqrt{\frac{M}{ZT}} \times 0.9$$

= 2.65*0.84*25.3*(26.0*1.1+1.033)*√{28.01/(1.0*473)}*0.9

= **365** kg/hr

W = Valve Capacity ··	365	kg/hr
W1 = Required Capacity ·······································		kg/hr
P = Set Pressure ···	25.500	barg
[Conversion unit for calculation]	26.0	kgf/㎠g
A = Selected Area ··	25.3	mm2
A1 = Calculated Area ··	0.0	mm2
Kd = Coefficient of Discharge ·······························	0.840	
C' = Ratio of Specific Heats to the Coefficient ············	2.65	
T = Absolute Temperature ······································	473.0	° K
M = Molecular Weight ··	28.010	
Z = Compressibility Factor ·····································	1.000	

REMARK

YNV-D-002/② 　　　　　　　　　　　YNV.Co.,Ltd. 　　　　　　　　　　　A4(210x297)