Pressure	Relief valve inlet	4.458	bar G
	Relief valve outlet	0.500	bar G
	Fluid	Helium	
	Conditions	Superheated gas	
	Gas temperature	6.89	K
	Code	ASME	
Coeff of discharge	K	0.975	
Orifice area		830.3	mm²
Type		25905J34/S, Anderson Greenwood POPRV	
Isentropic expansion coefficient		2.906	
Density		70.8018	kg / m³
Minimum pressure ratio		0.3604	
(Below this pressure ratio, reducing the outlet pressure has no increase in the flow rate)			
Minimum effective outlet pressure		1.6069	bar A
Pressure ratio - actual		0.2766	
Flow regime		Critical Flow	
Capacity correction factor (back pressure)		0.8585	
ax. capacity correction factor (back pressure)		0.8585	
Theoretical flow rate per unit area		5343.6	kg / m².s
Design flow rate		15573.19	kg / hr
		4.3259	kg / s

Set Pressure		Fully Open	Fully Open	Fully Open	Back Pressure	Fully Open	Fully Open
atm	bar G		bar G	bar A	bar	bar G	bar A
4.00	4.053	10%	4.458	5.472	0.000	4.458	5.472
3.80	3.850	10%	4.235	5.249	0.000	4.235	5.249

BS 6759				
Fluid		Helium		
Inlet pressure	P	5.472	bar A	
Outlet pressure	P_b	1.513	bar A	
Fluid conditions		Superheated gas		
Temperature		6.9	K	
Inlet density		70.802	kg / m³	
Inlet specific volume	v	0.014	m³ / kg	
Pressure ratio		0.2766		
Minimum valid pressure ratio		0.3604		
Flow regime		Critical Flow		
Isentropic expnasion coefficient	k	2.906		
Compressibility function	C	3.390		
Back pressure capacity correction factor	K_b	1.000		
Theoretical flow capacity		19.237	kg / hr per mm²	
Coefficient of discharge	K_d	1.0833		
Derated coefficient of discharge	K_dr	0.975		
Orifice area	A_o	830.3	mm²	
Certified flow capacity		15573.2	kg / hr	

AD Merkblatt				
Fluid		Helium		
Inlet pressure	P_o	5.472	bar A	
Outlet pressure	P_ao	1.513	bar A	
Fluid conditions		Superheated gas		
Temperature		6.9	K	
Inlet density		70.802	kg / m³	
Inlet specific volume	v	0.014	m³ / kg	
Pressure ratio		0.2766		
Minimum valid pressure ratio		0.3604		
Flow regime		Critical Flow		
Isentropic expnasion coefficient	k	2.906		
Outflow function	Psi	0.6071		
Outflow coefficient	alpha_w	1.109959		
Orifice area	A_o	830.3	mm²	
Calculated mass flow		15573.2	kg / hr	

ASME			
Fluid		Helium	
Inlet pressure	P_1	79.36	psi A
Outlet pressure	P_b	21.95	psi A
Fluid conditions		Superheated gas	
Temperature	T	12.40	R
Gas compressibility factor	Z	0.5400	
Molar mass		4.0026	lbs / lbmol
Inlet density		4.4200	lb / ft³
Back pressure percentage		0.2766	
Isentropic expnasion coefficient	k	2.906	
Compressibility function	C	446.0	
Back pressure correction factor	K_B	1.000	
Coeff of discharge	K	0.975	
Orifice area	A	1.2870	in²
Relieving capacity	W	34333.01	lbs / hr