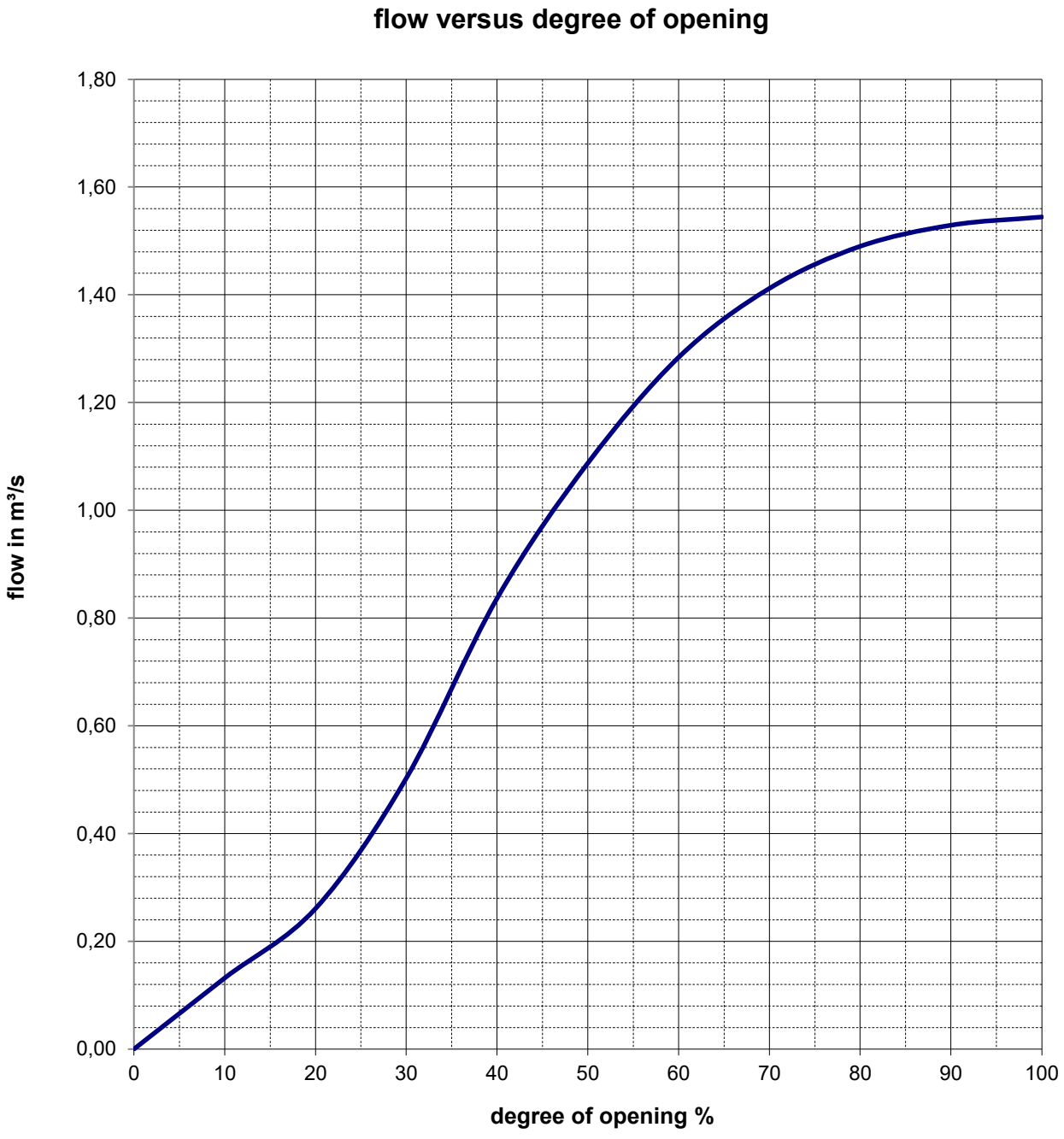
Project

VAG - RIKO Plunger Valve	nominal size	**700**	**[mm]**	29.11.2021
Pressure rate	pressure	40	bar	Herold
Anti cavitation cylinder		SZ 30		
Static upstream pressure	H up	278	[mWC]	
Static downstream pressure	H down	37	[mWC]	
Pipe diameter upstream side	size pipe up	800	[mm]	
Zeta value pipe upstream side	Zeta pipe up	450	estimated	
Pipe diameter downstream side	size pipe down	800	[mm]	
Zeta value pipe downstream side	Zeta pipe down	8	estimated	
		0		
Zeta value VAG plunger valve	ξ	25,0		
Max. performance VAG RIKO - Qmax	Qmax	1,54	m³/s	

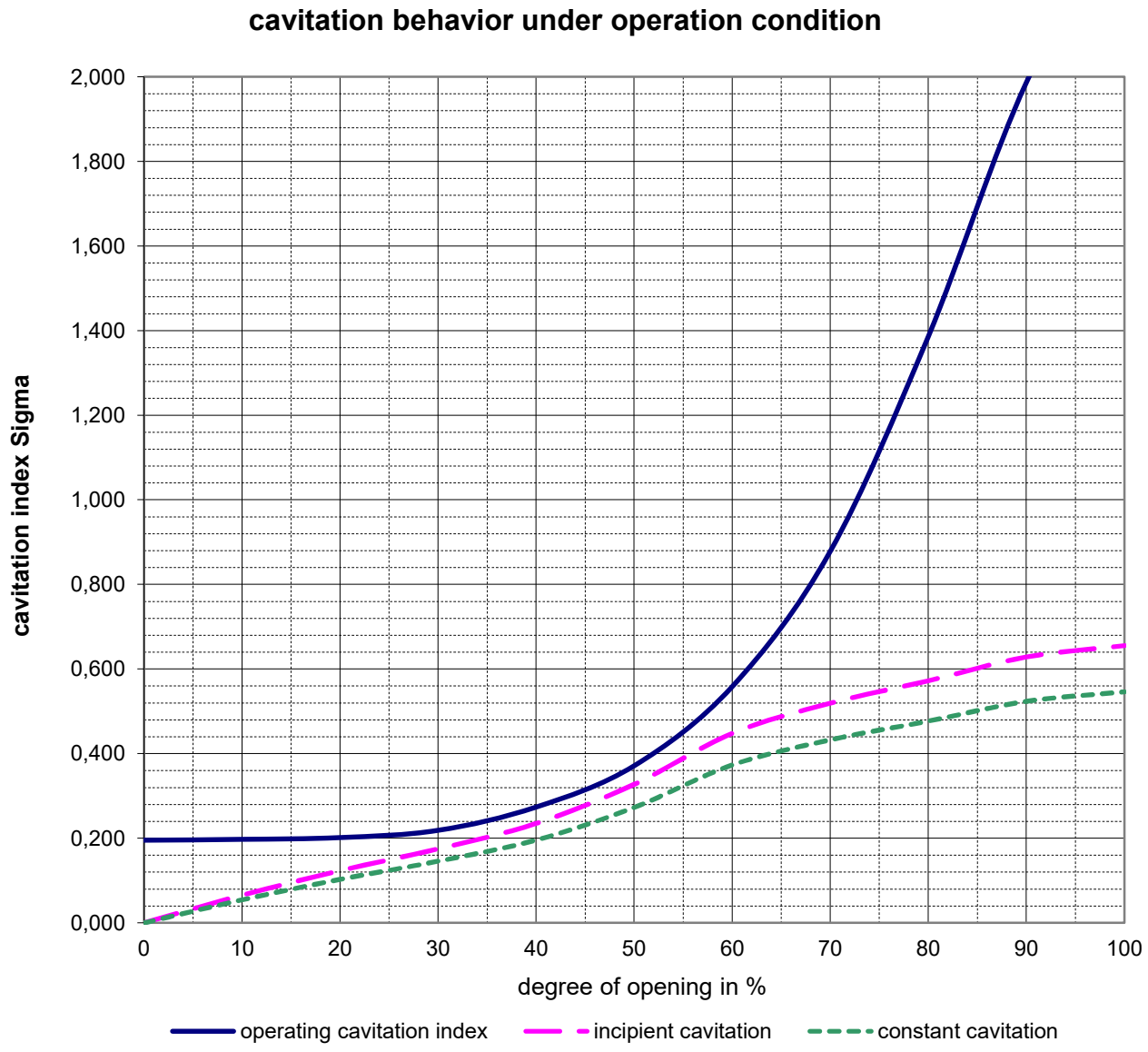
Comment: The upstream and downstream pipe Zeta Values are recalculated from Table 3-2



Projekt:

		0		
VAG - RIKO Plunger Valve	nominal size	**700**	**[mm]**	29.11.2021
Pressure rate	pressure	40		Herold
Anti cavitation cylinder		SZ 30		
Static upstream pressure	H up	278	[mWS]	
Static downstream pressure	H down	37	[mWS]	
Pipe diameter upstream side	size pipe up	800	[mm]	
Zeta value pipe upstream side	Zeta pipe up	450	estimated	
Pipe diameter downstream side	size pipe down	800	[mm]	
Zeta value pipe downstream side	Zeta pipe down	8	estimated	
		0		
Zeta value VAG plunger valve		25,0		
Max. performance VAG RIKO - Qmax	Qmax	2	[m³/s]	

Comment: The upstream and downstream pipe Zeta Values are recalculated from Table 3-2



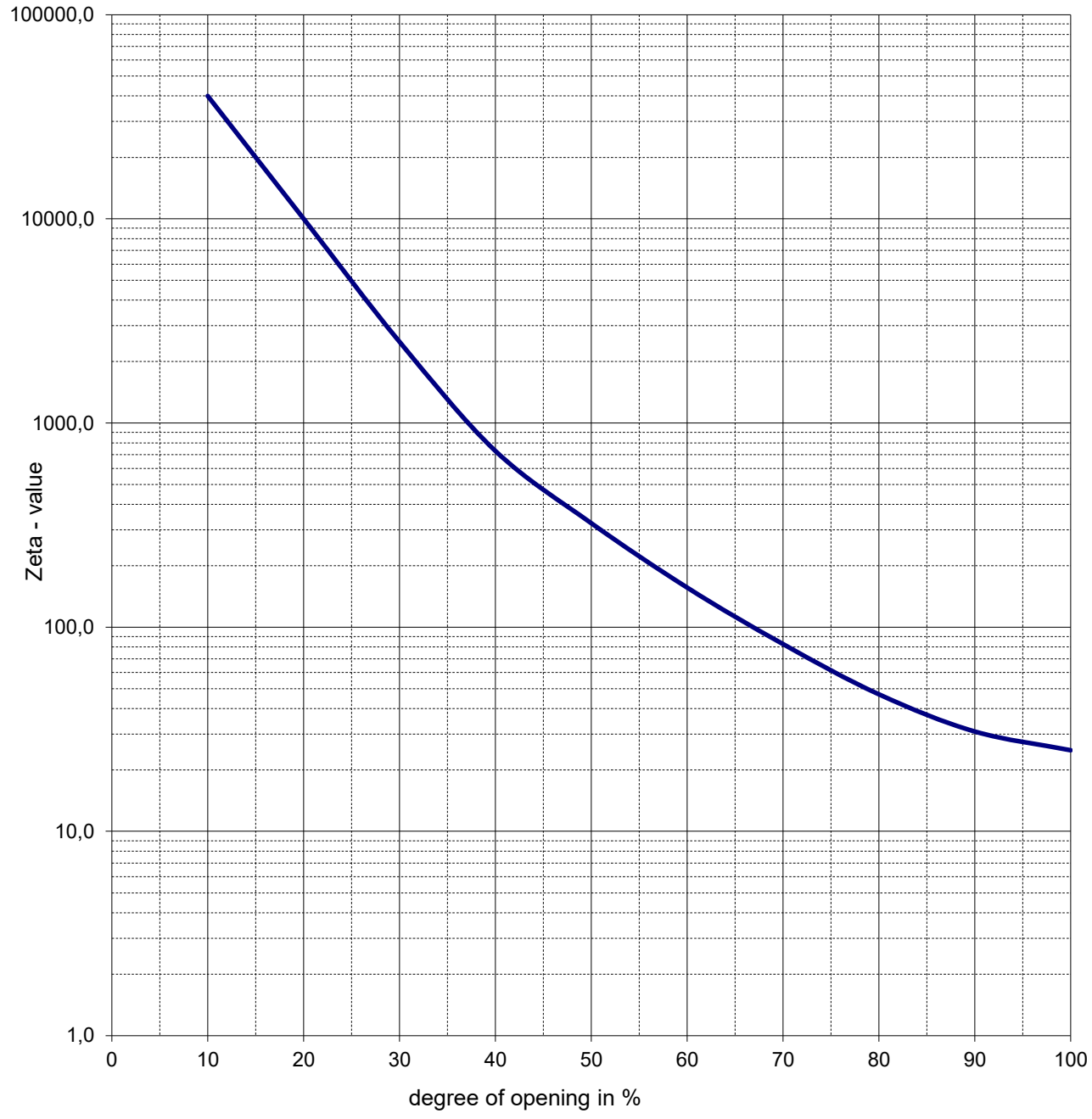
the cavitation index σ is calculated with the folloing equation

$$\sigma = \frac{H_{down} + H_{atmosphere} - H_{vapor}}{(H_{up} - H_{down}) + \frac{v^2}{2 * g}}$$

Projekt:

		0		
VAG - RIKO Plunger Valve	**DN**	**700**	**[mm]**	29.11.2021
Pressure rate	PN	**40**		Herold
Anti cavitation cylinder		SZ 30		
Static upstream pressure	H up	278	[mWS]	
Static downstream pressure	H down	37	[mWS]	
Pipe diameter upstream side	size pipe up	800	[mm]	
Zeta value pipe upstream side	Zeta pipe up	450	estimated	
Pipe diameter downstream side	size pipe down	800	[mm]	
Zeta value pipe downstream side	Zeta pipe down	8	estimated	
		0		
Zeta value VAG plunger valve		25,0		
Max. performance VAG RIKO - Qmax	Qmax	1,54	[m³/s]	

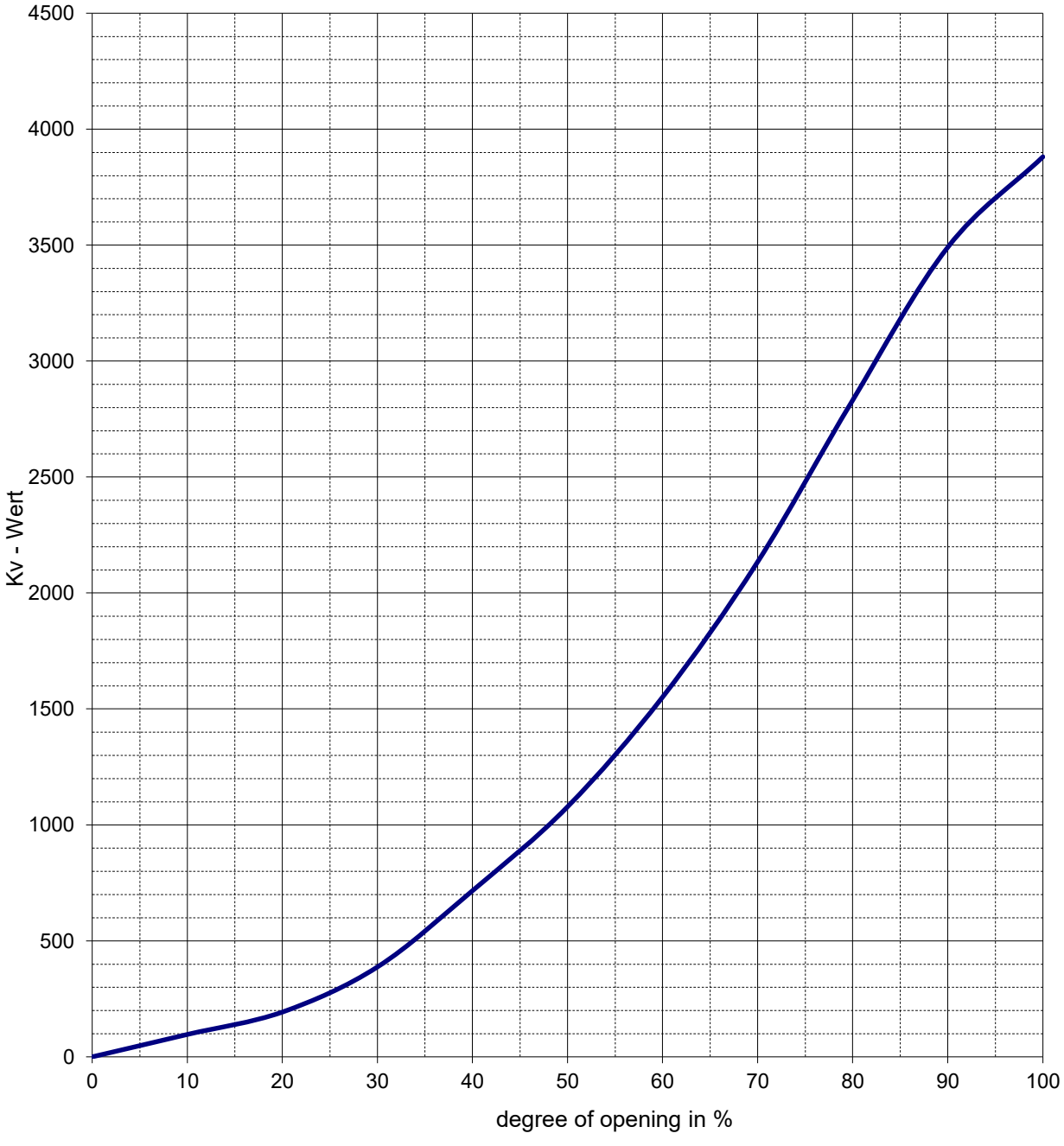
Flow resistance value VAG - plunger valve



Projekt:

		0		
VAG - RIKO Plunger Valve	nominal size	**700**	**[mm]**	29.11.2021
Pressure rate	pressure	**40**		Herold
Anti cavitation cylinder		SZ 30		
Static upstream pressure	H up	278	[mWS]	
Static downstream pressure	H down	37	[mWS]	
Pipe diameter upstream side	size pipe up	800	[mm]	
Zeta value pipe upstream side	Zeta pipe up	450	estimated	
Pipe diameter downstream side	size pipe down	800	[mm]	
Zeta value pipe downstream side	Zeta pipe down	8	estimated	
		0		
Max. performance VAG RIKO - Qmax	Qmax	1,54	[m³/h]	

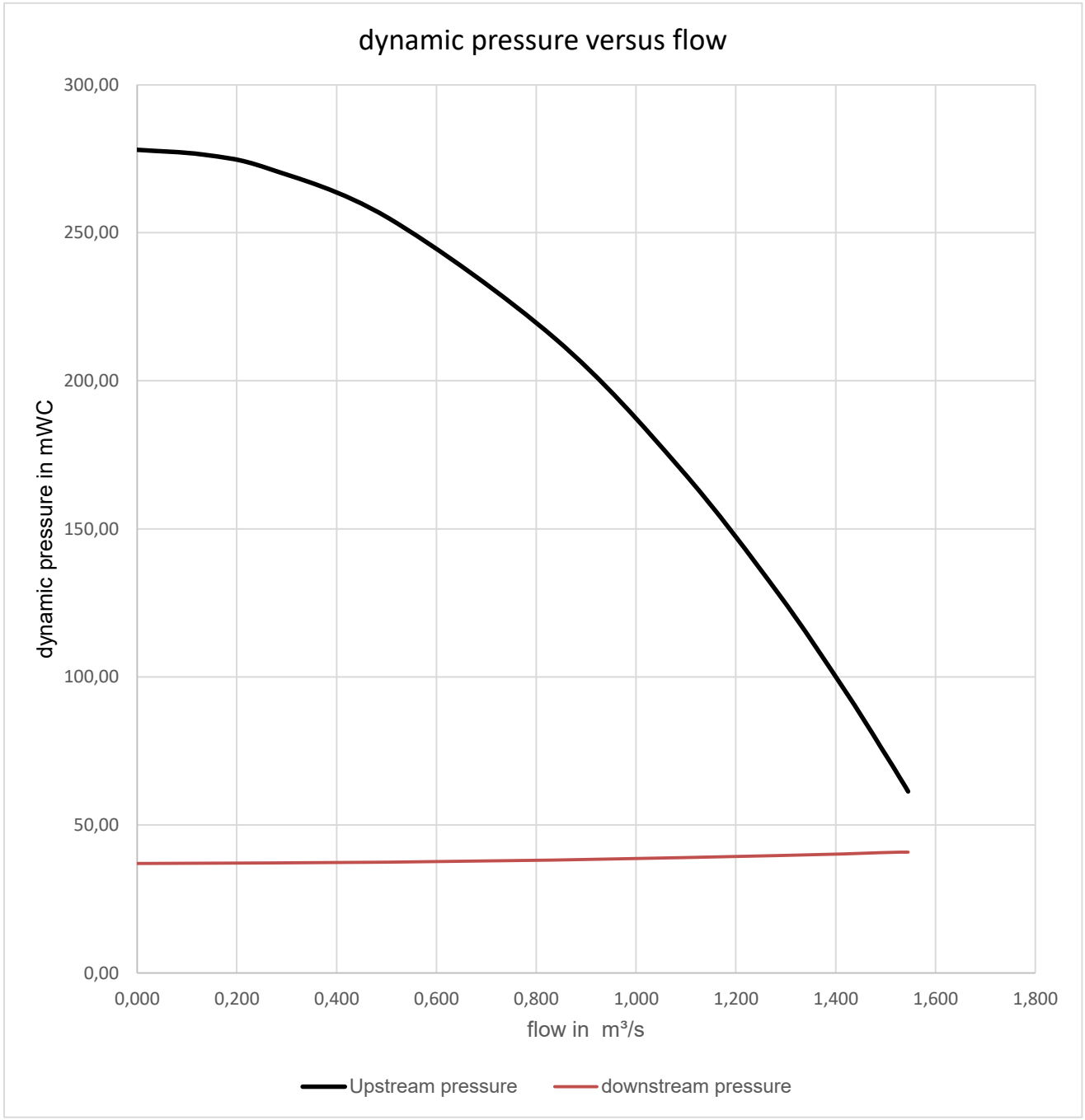
Kv - value VAG - Plunger Valve



Project:

		0		
nominal size VAG - Ringkolbenventil	nominal size	700	[mm]	29.11.2021
Pressure rate	pressure	40	bar	Herold
Anti cavitation cylinder		SZ 30		
Static upstream pressure	H up	278,0	[mWS]	
Static downstream pressure	H down	37,0	[mWS]	
Pipe diameter upstream side	size pipe up	800	[mm]	
Zeta value pipe upstream side	Zeta pipe up	450	estimated	
Pipe diameter downstream side	size pipe down	800	[mm]	
Zeta value pipe downstream side	Zeta pipe down	8	estimated	
		0		
Zeta value VAG plunger valve		25,0		
Max. performance VAG RIKO - Qmax	Qmax	1,54	[m³/s]	

Comment: The upstream and downstream pipe Zeta Values are recalculated from Table 3-2

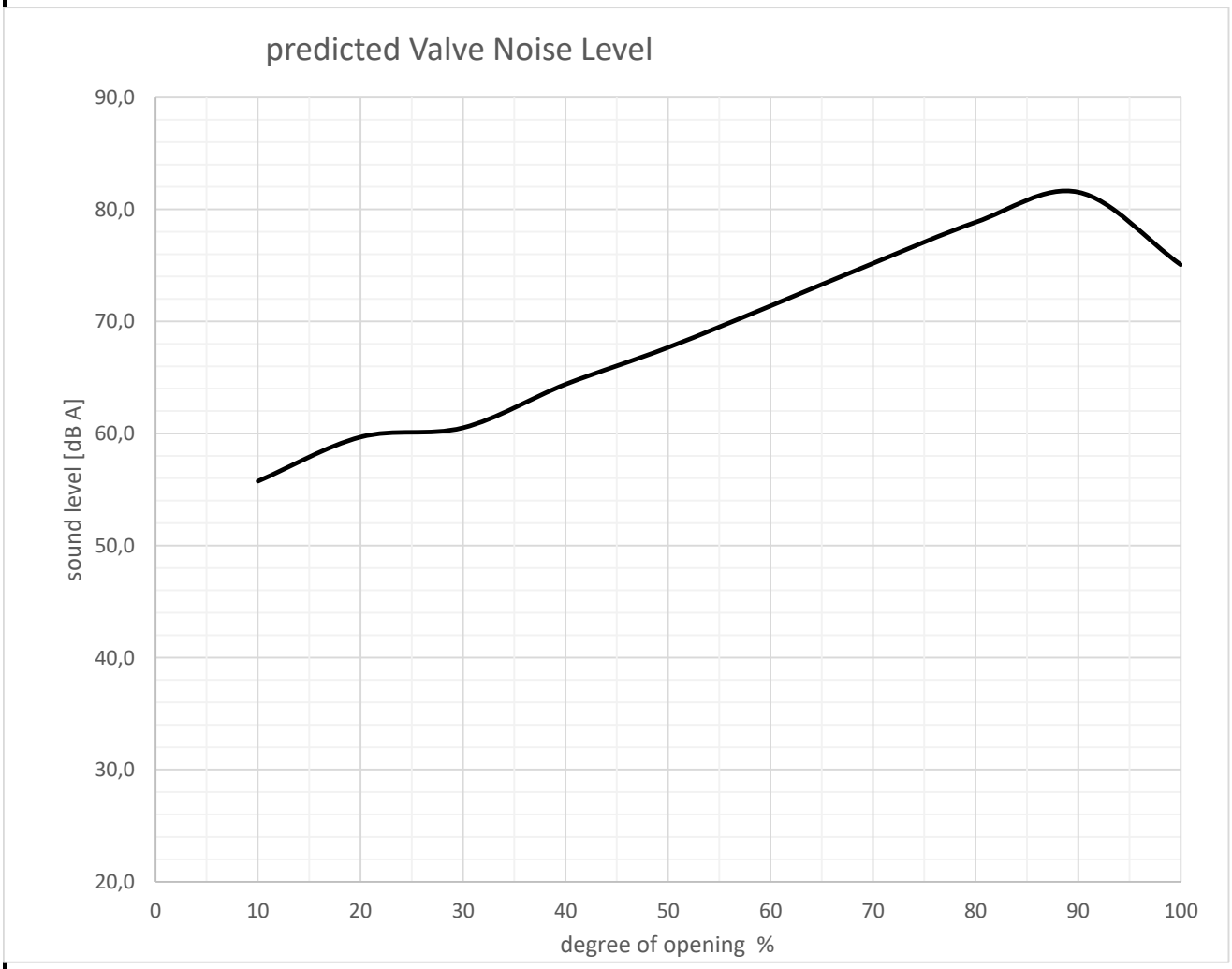


Projekt:

	0			
Pressure rate	nominal size	700	[mm]	
Anti cavitation cylinder	pressure class	40		
Static upstream pressure		SZ 30		
Static downstream pressure	H up	278,0	[mWC]	
Pipe diameter upstream side	H down	37,0	[mWC]	
Zeta value pipe upstream side	size pipe up	800	[mm]	
Pipe diameter downstream side	Zeta pipe up	450		estimated
Zeta value pipe downstream side	size pipe down	800	[mm]	
Zeta value VAG plunger valve	Zeta pipe down	8		estimated
Diameter downstream pipe	Di	686,0	[mm]	estimated
thickness downstream pipe	ts	12,50	[mm]	estimated
material downstream pipe		Steel		

29.11.2021

Herold



The acoustical environment refers to the type of “field” in which the control valve is installed. It is a measure of the sound build-up expected due to acoustic reflections from boundaries and concrete walls and other equipment’s inside the plant, as well as the total size (volume) of the installed environment. The sound level is depending on the energy which will be reduced over the control valve. The predicted noise level according IEC 60534-8-4 (2015) is for a control valve without insulation in a non-reflective environment. As reflective surfaces can increase the noise level inside the plant, the valve manufacturer cannot be held responsible for this circumstance. If necessary special sound jackets need to be installed on site, to reduce the noise level.