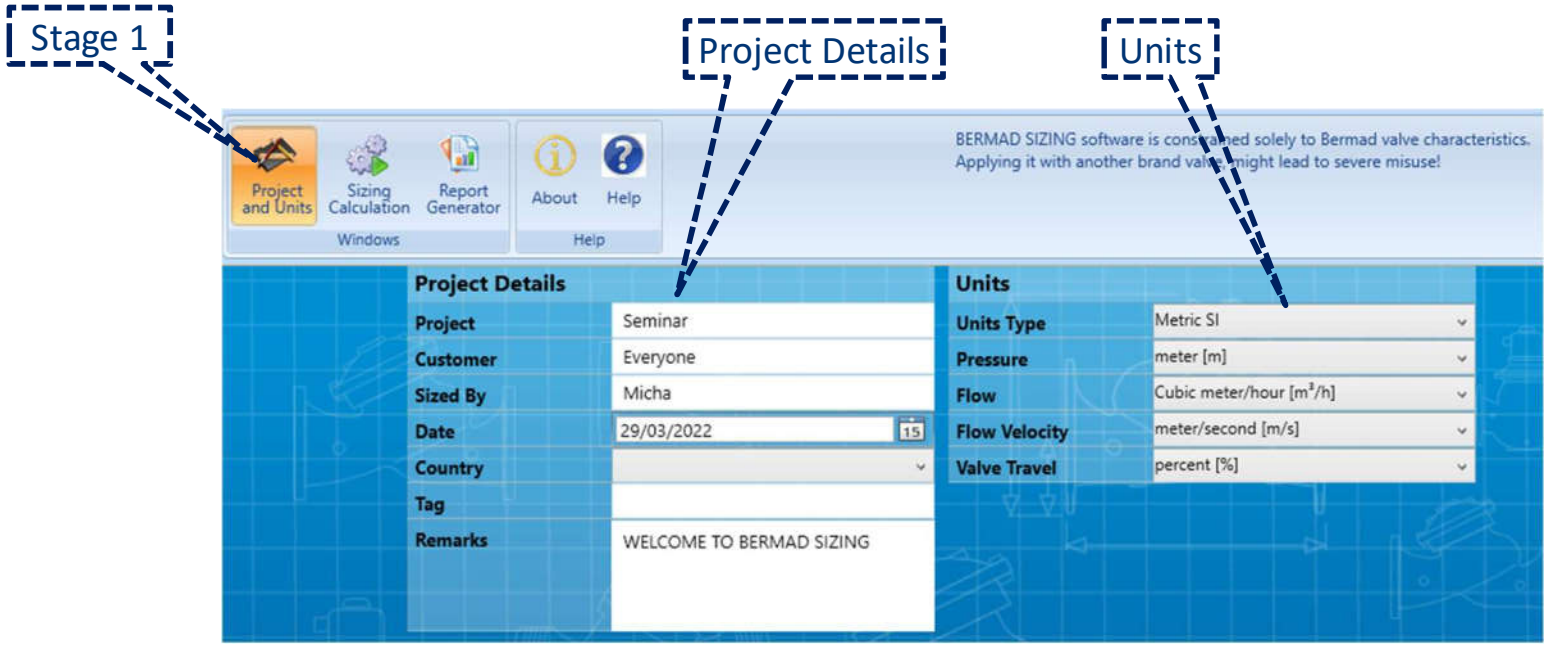
USING THE PROGRAM

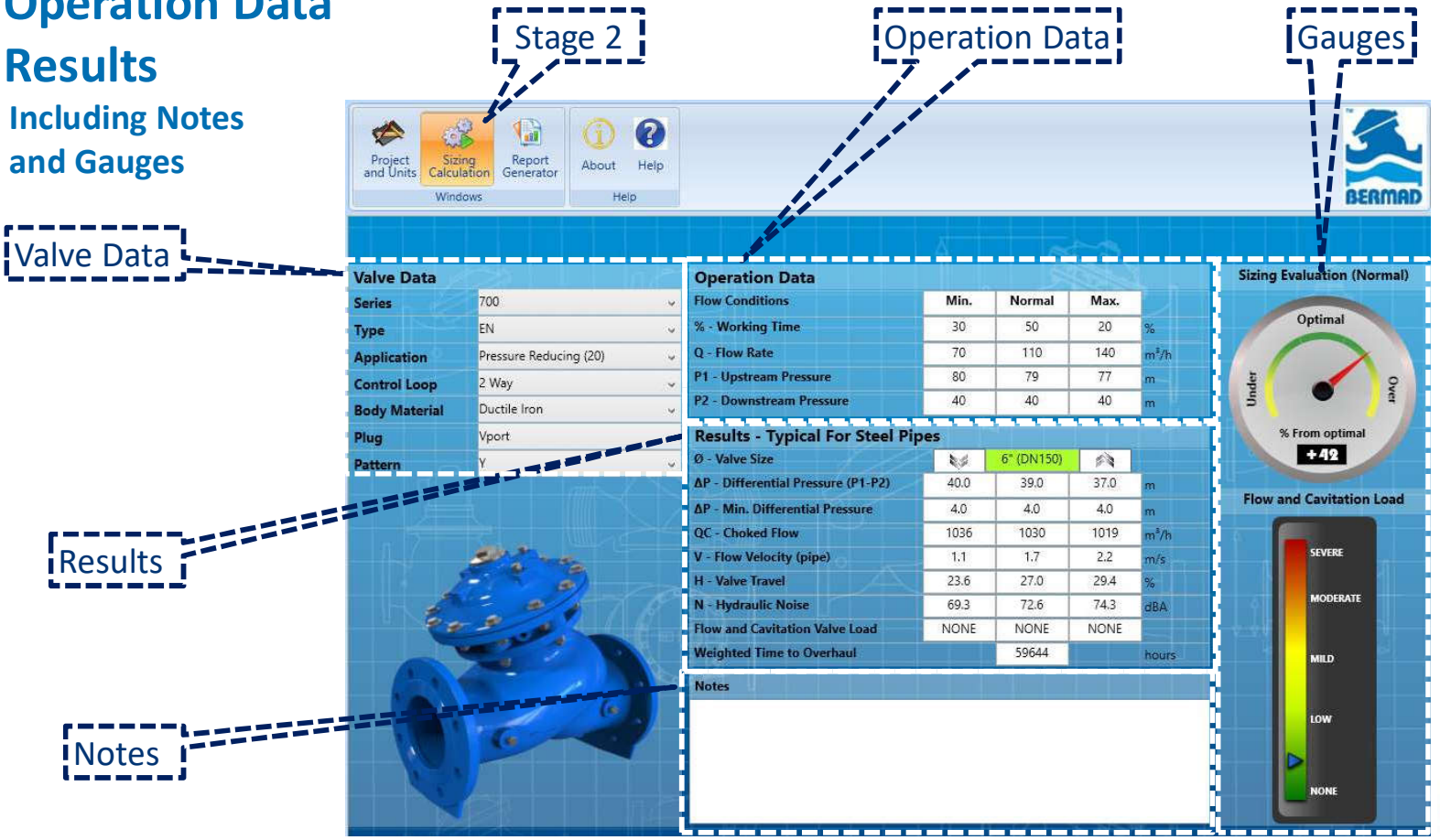
USING THE PROGRAM: STAGE 1 – PROJECT ; UNITS

- **Project Details:**
  - Project details for customer report and follow up
- **Units:**
  - Select from dropdown menus – metric or US unit sets, or customize



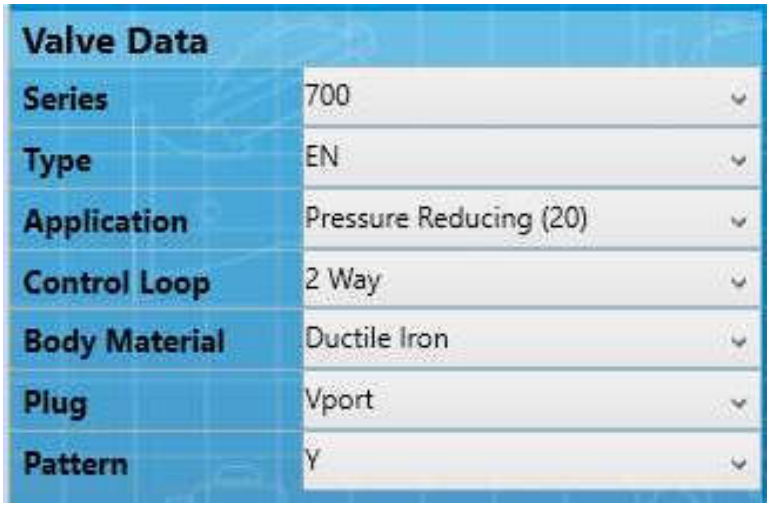
USING THE PROGRAM: STAGE 2 – DATA ; RESULTS

- **Valve Data**
- **Operation Data**
- **Results**
  Including Notes and Gauges



USING THE PROGRAM: STAGE 2 – VALVE DATA

- **Series:** 100, 400, 700, etc.
- **Type:** 00, ES, PA, etc.
- **Application:** Four types/modules
  - **Modulating valves** (reducing, sustaining, flow control, electric control, level)
  - **On-Off valves** (pump, solenoid, Bi-Level, burst , deluge)
  - **Relief valves** (relief, anticipating)
  - **Proportional**
- **Control Loop:** 2-way or 3-way
- **Body Material:** Ductile Iron, NAB, etc.
- **Plug:** Flat, V-port, Single Cage, Double Cage
- **Pattern:** Angle, Y, Globe



Note: Options of each field depend on previous selections

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USING THE PROGRAM: STAGE 2 – OPERATION DATA

- **Flow Conditions:** Enter data for one, two or all three sets of operating conditions
- **Working Time:**
  - Must total 100%
  - "Normal" Working Time must be at least 50%
- **Flow Rate**
- **Upstream Pressure:** Not higher than series rating
- **Downstream Pressure:** Not higher than upstream pressure

Operation Data				
Flow Conditions	Min.	Normal	Max.	
% - Working Time	30	50	20	%
Q - Flow Rate	70	110	140	m^3/h
P1 - Upstream Pressure	80	79	77	m
P2 - Downstream Pressure	40	40	40	m

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USING THE PROGRAM: STAGE 2 – RESULTS

- **Valve Size:**
  - Is an initial result of calculations, it is NOT final recommendation
  - Change Valve Size by Up / Down arrows, to check affect on ALL parameters
    Alternatively – change Valve Data (type, plug, material, etc.)
- **Min. Differential Pressure:**
  - 3-way Control Loop ➔ by KV/CV formula
  - 2-way Control Loop ➔ ≥ 0.4 bar (6 psi)
- **Valve Travel:** Percentage of a fully open valve, or distance from the closed position
- **Weighted Time to Overhaul (1):** Recommended hours to open and inspect the valve

Results - Typical For Steel Pipes				
Ø - Valve Size		6" (DN150)		
ΔP - Differential Pressure (P1-P2)	40.0	39.0	37.0	m
ΔP - Min. Differential Pressure	4.0	4.0	4.0	m
QC - Choked Flow	1036	1030	1019	m^3/h
V - Flow Velocity (pipe)	1.1	1.7	2.2	m/s
H - Valve Travel	23.6	27.0	29.4	%
N - Hydraulic Noise	69.3	72.6	74.3	dBA
Flow and Cavitation Valve Load	NONE	NONE	NONE	
Weighted Time to Overhaul		59644		hours

(1) Calculation refers to:
Series, plug, material, thickness, flow velocity, cavitation and experience

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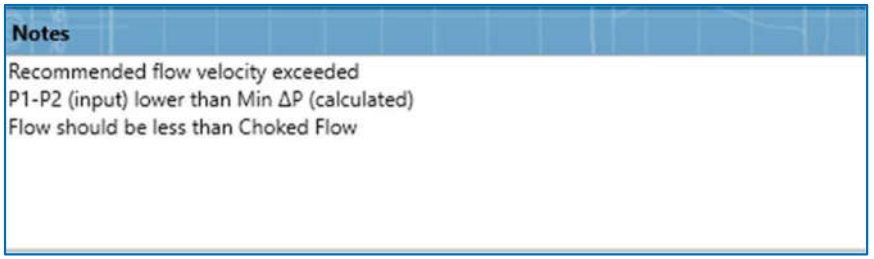
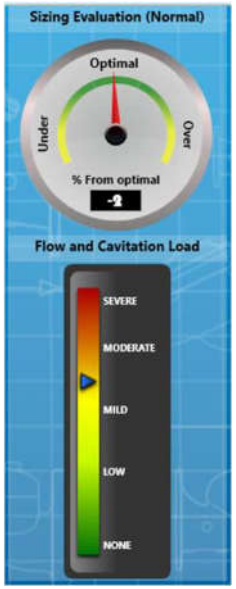
USING THE PROGRAM: STAGE 2 – NOTES + GAUGES

Notes:

- Pay careful attention to the various notes, remarks and warnings
- These help with proper valve selection, so change data (valve and/or operation), if needed



Gauges: Graphical indication for some of the results



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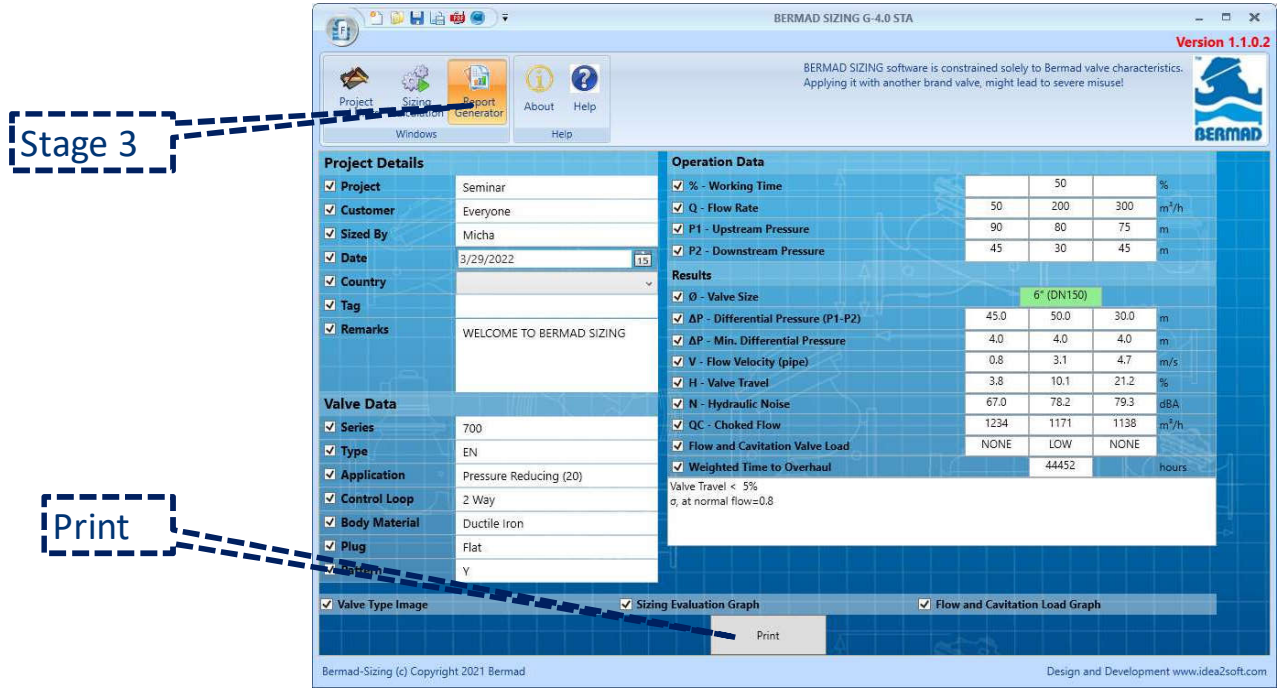
USING THE PROGRAM: STAGE 3 – REPORT

- **Editing:** According to authorization level

- **Print:** Create PDF file



USING THE PROGRAM: STAGE 3 – REPORT

- **Example:**

BERMAD Sizing Report

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Project Details	
Project:	Seminar
Customer:	Everyone
Sized By:	Micha
Date:	3/29/2022
Country:	
Tag:	
Remarks:	WELCOME TO BERMAD SIZING

Valve Data	
Series:	700
Type:	EN
Application:	Pressure Reducing (20)
Control Loop:	2 Way
Body Material:	Ductile Iron
Plug:	Flat
Pattern:	Y

Operation Data	Min. Flow	Normal Flow	Max. Flow	Units
% - Working Time:		50		%
Q - Flow Rate:	50	200	300	m³/h
P1 - Upstream Pressure:	90	60	75	m
P2 - Downstream Pressure:	45	30	45	m

Results	Min. Flow	Normal Flow	Max. Flow	Units
Ø - Valve Size:		6" (DN150)		
ΔP - Differential Pressure (P1-P2):	45.0	50.0	30.0	m
ΔP - Min. Differential Pressure:	4.0	4.0	4.0	m
V - Flow Velocity (pipe):	0.8	3.1	4.7	m/s
QC - Choked Flow:	1234	1171	1138	m³/h
H - Valve Travel:	3.8	10.1	21.2	%
N - Hydraulic Noise:	67.0	78.2	79.3	dBA
Flow and Cavitation Valve Load:	NONE	LOW	NONE	
Weighted Time to Overhaul:		44452		hours
Notes	Valve Travel < 5% σ, at normal flow=0.8			

Valve Type

Sizing Evaluation (Normal)

Flow and Cavitation Load

Attention:
BERMAD SIZING software is constrained solely to Bermad valve characteristics.
Applying it with another brand valve, might lead to severe misuse!

USING THE PROGRAM: QUICK ACCESS TOOLBAR

Send Project

Print to PDF

Save As

Save

Open Bermad Sizing File

Clear Fields

THANK YOU!

BERMAD Water Control Solutions