

- **Välja ventil!?**



Ventilval i processer:

Varje papper/massabruk har sin egen standard när det gäller typer av ventiler som skall användas
Utförande finns beskrivet i huvuddrag i bruks standards.

Uppdatering i ventilvals standarden påverkas av process
ändringar i exempelvis kortare
processtider, tryckklassförändringar, temperatur förändringar,
kemikalie påverkan etc.

Vad kan SOMAS hjälpa till med i dessa val ??

Press to view in optimal mode

 **SOMAS®**

The Application Handbook

– an interactive guide

The Application Handbook

– an interactive guide

Välj →



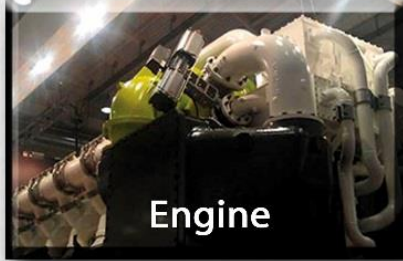
Pulp & Paper



Shipping



Power generation



Engine

Copyright Introduction Address list Valve guide



SOMAS Application Handbook Pulp and Paper

Välj

Chemical pulp

Mechanical pulp

Recovery system - Chemical pulp

Direct entry

Deinking system

Standard paper machine

Deinked recycled pulp

Tissue paper machine

Menu page

General info

Valve guide

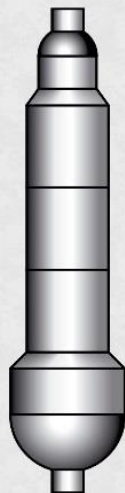


Application Handbook Pulp and Paper

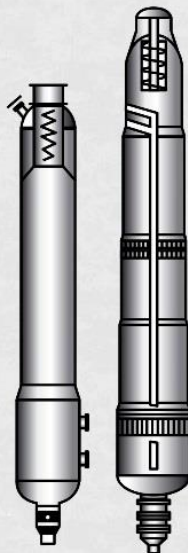
Chemical Pulp



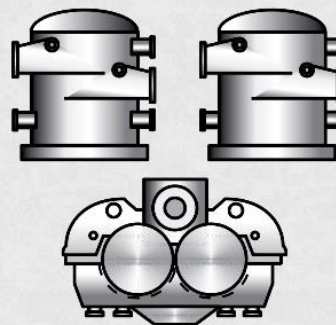
Digester
Single vessel



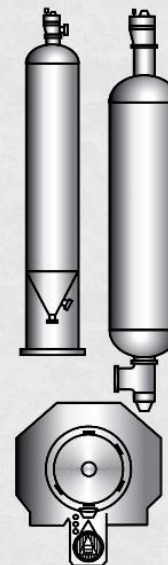
Digester
Two vessel



Pulp screening
and Washing



Oxygen Delignification
and Pulp Bleaching

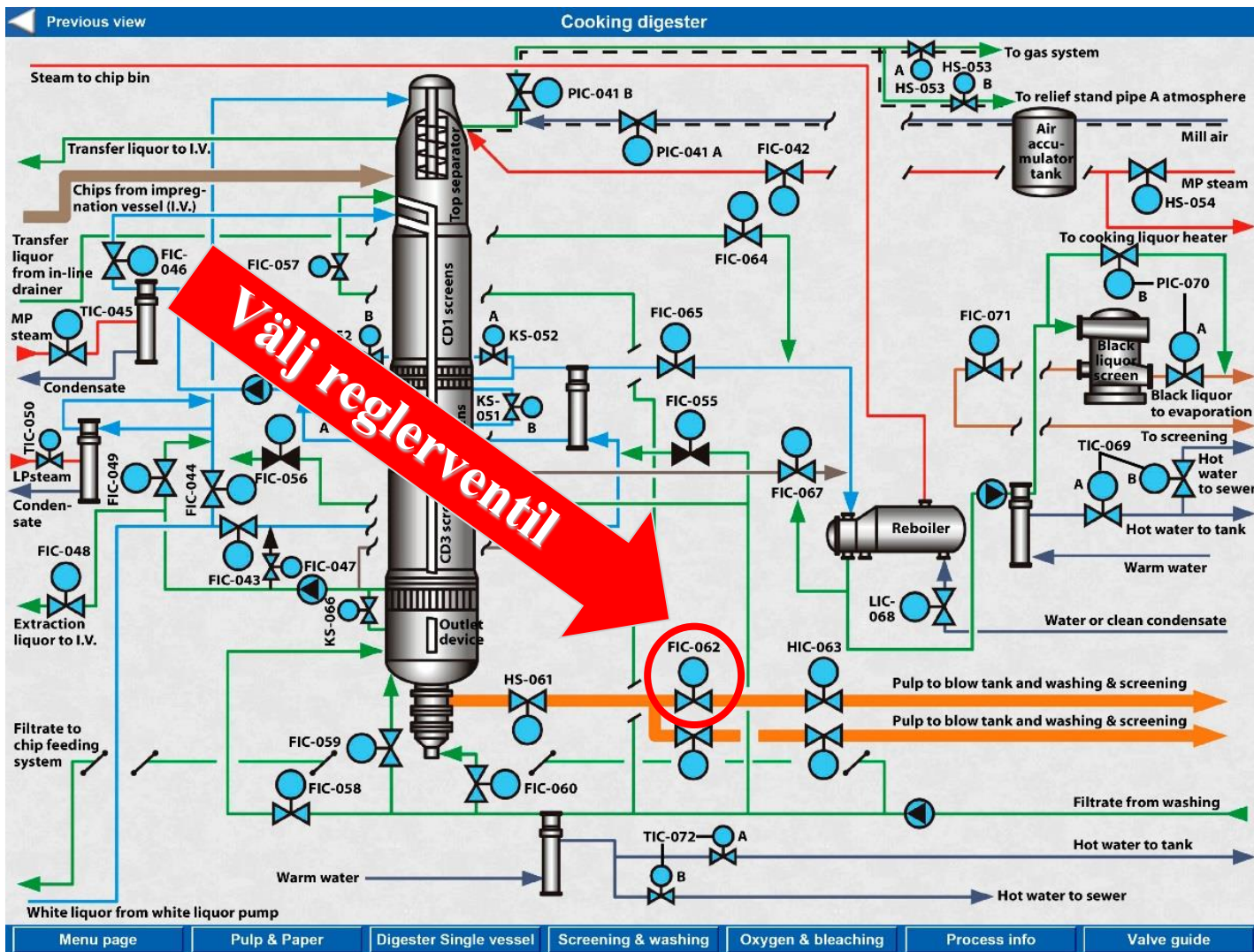


Menu page

Pulp & Paper

Valve guide

Fiberlinjeträff Gruvön





Continuous Digester

Tag. No. FIC-062

Process data

Fluid:	Pulp to blow tank or washer followed by blow tank
Pressure:	5-13 bar (e) (max 16 bar)
Temperature:	90-130 °C
Consistency:	10%
Typical dimensions:	150-200, 1000-2000 ADt/d
Pressure rating:	PN 25

Valve description:

Ball valve type SKV.

Seat in HiCo (*High cobalt alloy*) A HiCo-coated ball is preferable in order to increase time of operation.

Double acting type actuator.

For more information see data sheet [Si-706 EN](#).

Comments

Blow line flow control is one of the most difficult applications within the pulp- and paper industry.

Beside the pulp, there are different types of impurities in the fluid that create erosion.

High differential pressure also gives a contribution to increased erosion as well as vibrations.

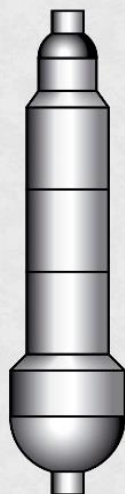
[See general recommendations.](#)



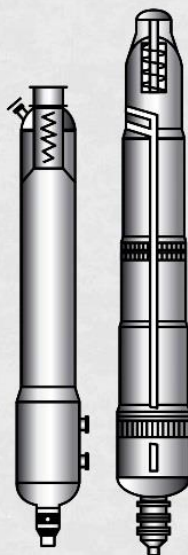
Application Handbook Pulp and Paper

Chemical Pulp

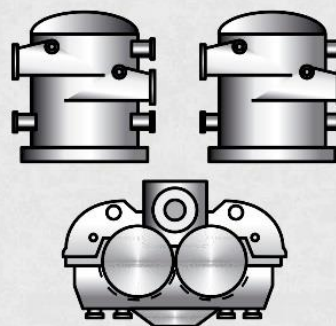
Digester
Single vessel



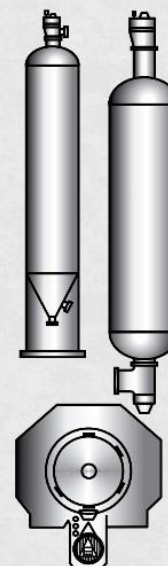
Digester
Two vessel



Pulp screening
and Washing



Oxygen Delignification
and Pulp Bleaching



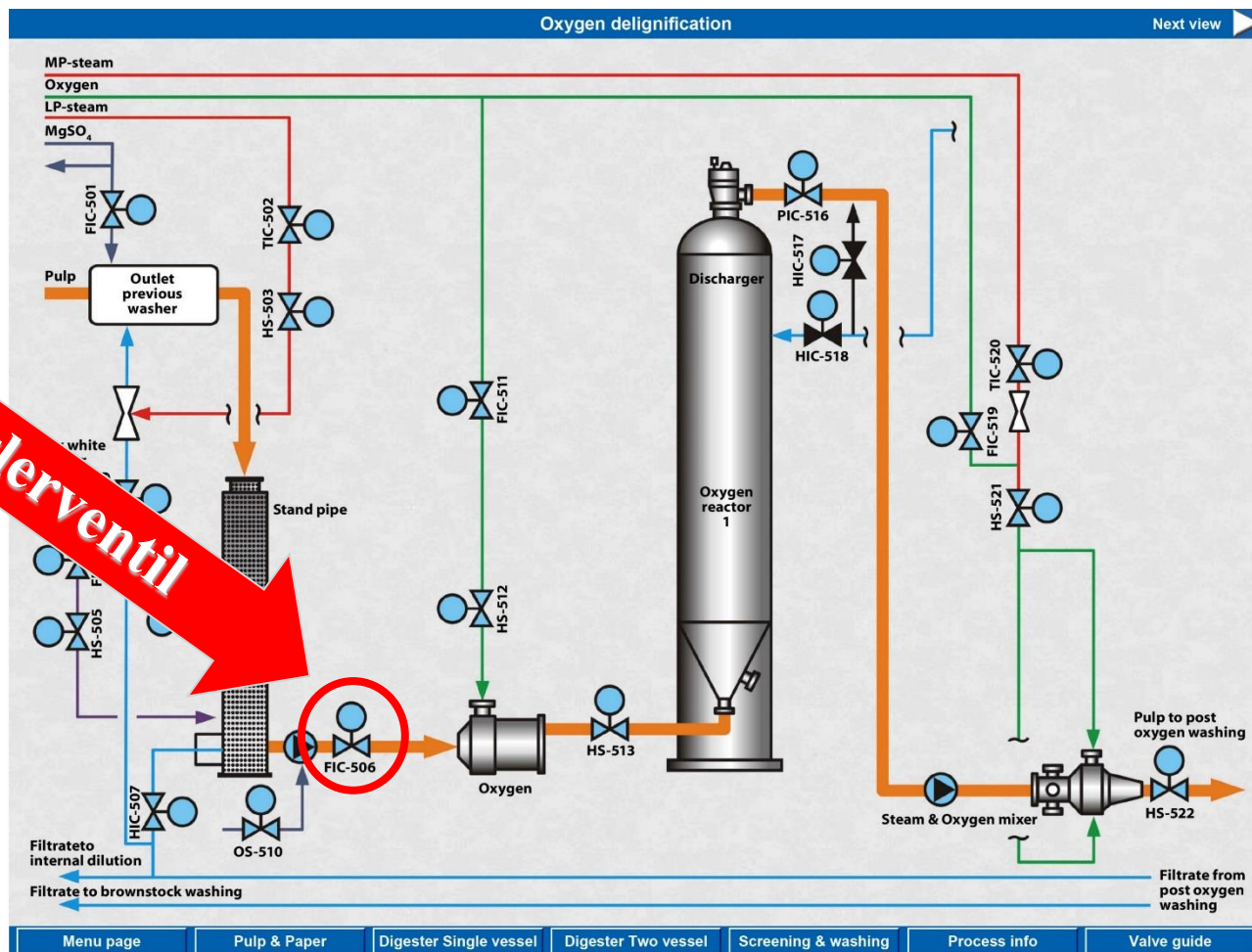
Menu page

Pulp & Paper

Valve guide

Fiberlinjeträff Gruvön

Välj reglerventil





Oxygen Delignification and Post Oxygen Washing

Tag. No. FIC-506

Process data

Fluid: Pulp
Pressure: 11-16 bar (e)
Temperature: 80-90 °C
Consistency: 10-12%
Typical dimensions: DN 150-300, 1000-2000 ADt/d
Pressure rating: PN 25

Comments

[See general recommendations.](#)

Valve description:

Ball segment valve type KVMF (*V-notch*).

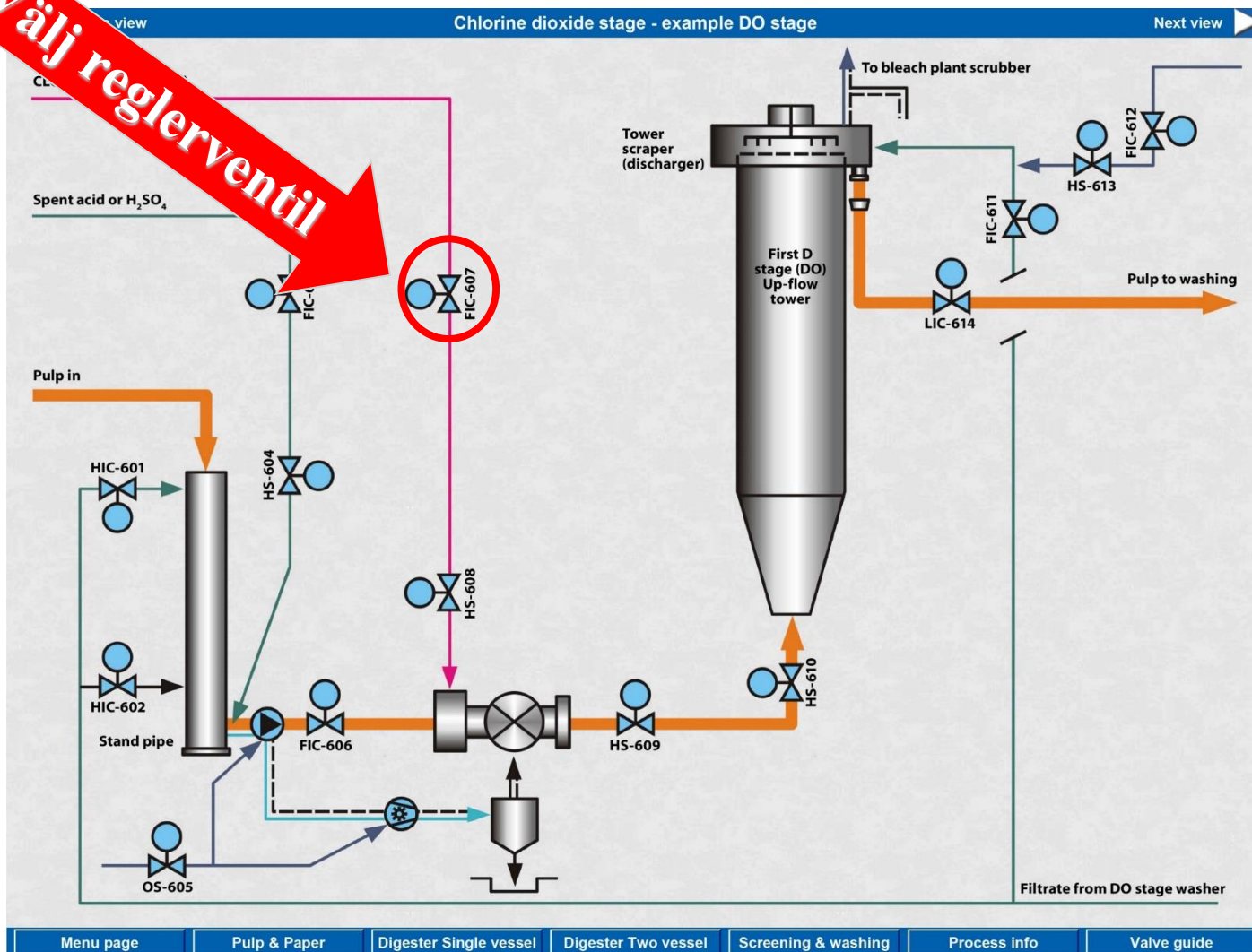
Seat in PTFE 53.

Double acting type actuator.

For more information see data sheet [Si-110 EN](#).

Fiberlinjeträff Gruvön

Välj reglerventil





Bleaching

Tag. No. FIC-607

Process data

Fluid: Chlorine dioxide water (ClO₂)
Pressure: 7-12 bar (e)
Temperature: normal 20-45 °C (design 10-50 °C)
Typical dimensions: DN 40-100, 1000-2000 ADt/d
Pressure rating: PN 10 or 16

Comments

[See general recommendations.](#)

Valve description

Ball segment valve type KVT/KVTW.

Material: Titanium

Seat in PTFE.

Double acting type actuator.

For more information see data sheet

[Si-101 EN](#) (DN 40-65) and [Si-110 EN](#) (DN 80-100).

Fiberlinjeträff Gruvön



Group L

Liquor (Page 1/3)

Liquor by-products.

Process : Sulphate

	Max. ΔP bar	Max. T °C	M	O-O	C	Valve type	Dimensions (DN)	Seat Material	Remarks
L01 White liquor	20	175	x	x	x	KVT/KVTW	25-100	PTFE PTFE53	Max 170 degr. C Max 200 degr. C
			x	x	x	MTV	>100	SS 2377	

Group L

Liquor (Page 1/3)

Liquor by-products.

Process : Sulphate

	Max. ΔP bar	Max. T °C	M	O-O	C	Valve type	Dimensions (DN)	Seat Material
L14 Black liquor, thick (Density max 1132 kg/m ³)	7	110	x	x		SKV	25-400	PTFE53
					x	KVT/KVTW/KVTF	25-400	PTFE53
L13 Black liquor, intermediate	5	110	x	x	x	KVT/KVTW	25-100	PTFE53
			x	x	x	MTV	>100	SS 2377
L14 Black liquor, thick (Density max 1132 kg/m ³)	7	110	x	x	x	SKV	25-400	PTFE53
						KVT/KVTW/KVTF	25-400	PTFE53
L15 Black liquor, intermediate thick	2	112	x	x	x	SKV	25-400	PTFE53
						KVT/KVTW/KVTF	25-400	PTFE53
L16 Green liquor, sulphate	5	102	x	x	x	SKV	25-400	Stellite
						KVT/KVTW/KVTF	25-400	Stellite
L17 Green liquor, sulphate weak	5	70	x	x	x	SKV	25-400	Stellite
						KVT/KVTW/KVTF	25-400	Stellite

SOMAS[®] SomSize[™] - Control Valve Sizing Program

The calculation methods used in this program are based on the following international standards:

Flow calculations: SS-EN 60534-2 and ANSI/ISA S75.01

Noise calculations: SS-EN 69534-8-3 (Gas service) and SS-EN 60534-8-4 (Liquid service), alternatively VDMA 24422, January 1989 edition

SOMAS Instrument AB assumes no responsibility for the use of this program and reserves the right, without notice, to alter or improve the design or specifications of the products and methods used in the program.

Users will be automatically logged out when inactive for 2 hours, not saved projects will however be remembered and kept until next login.

Address

SOMAS Instrument AB
 P.O. Box 107
 SE-661 23 Säffle
 Sweden



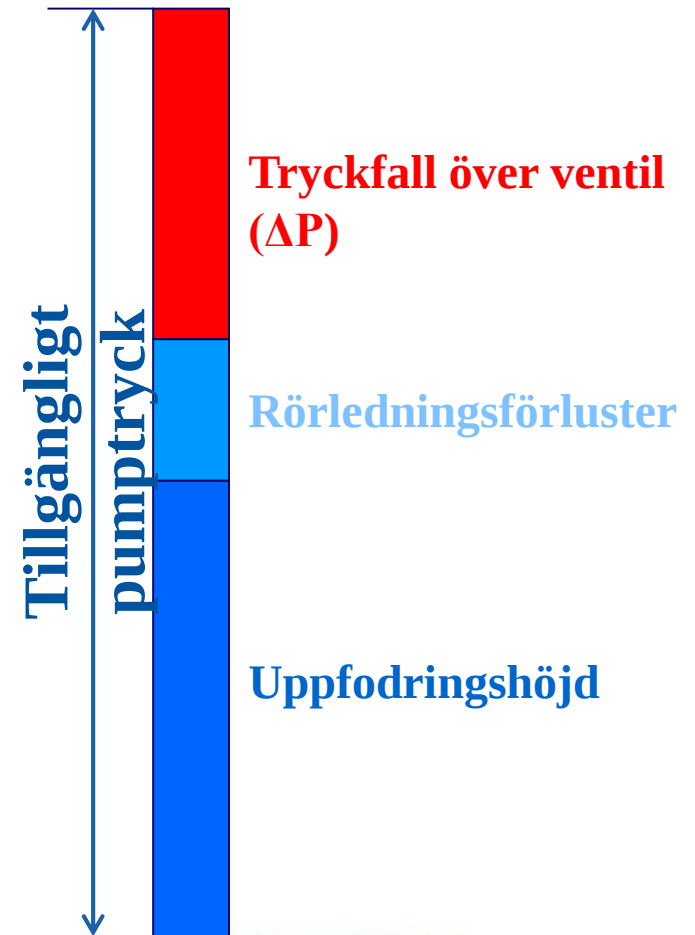
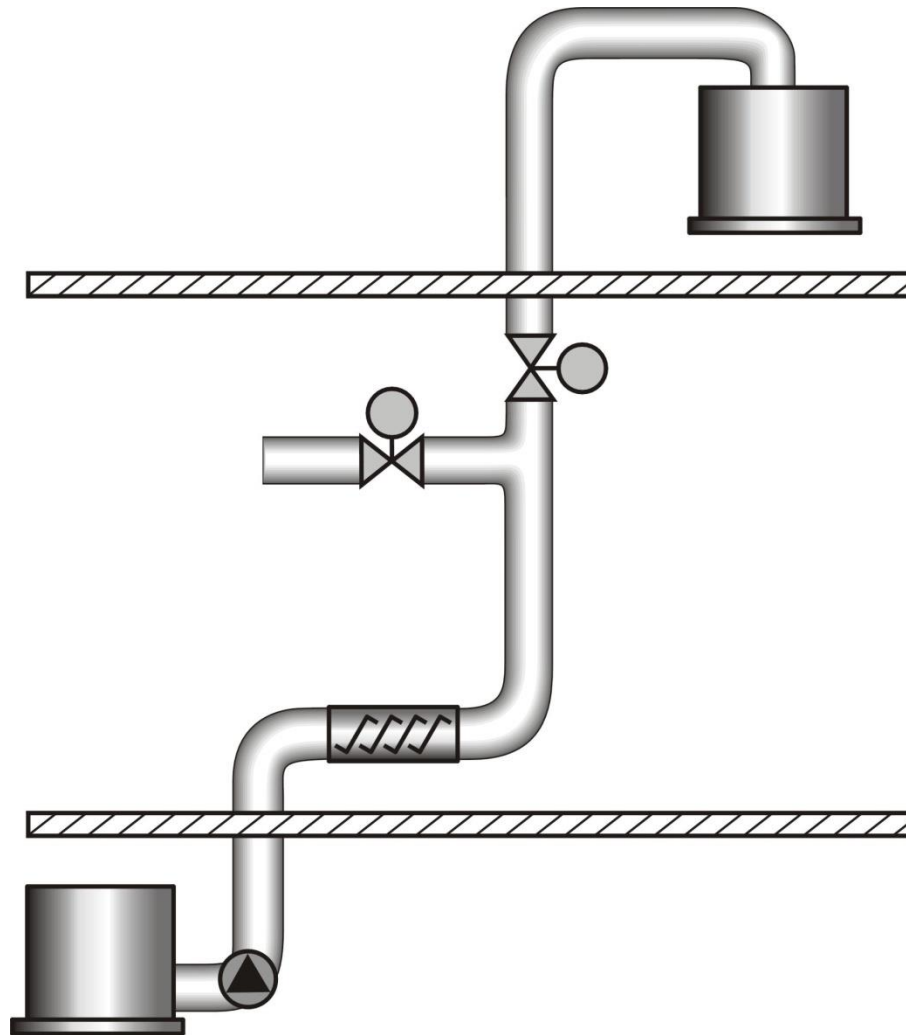
Contact

Phone: +46-533-16700
 Fax: +46-533-14136
 E-mail: sales@somas.se
 Internet: www.somas.se

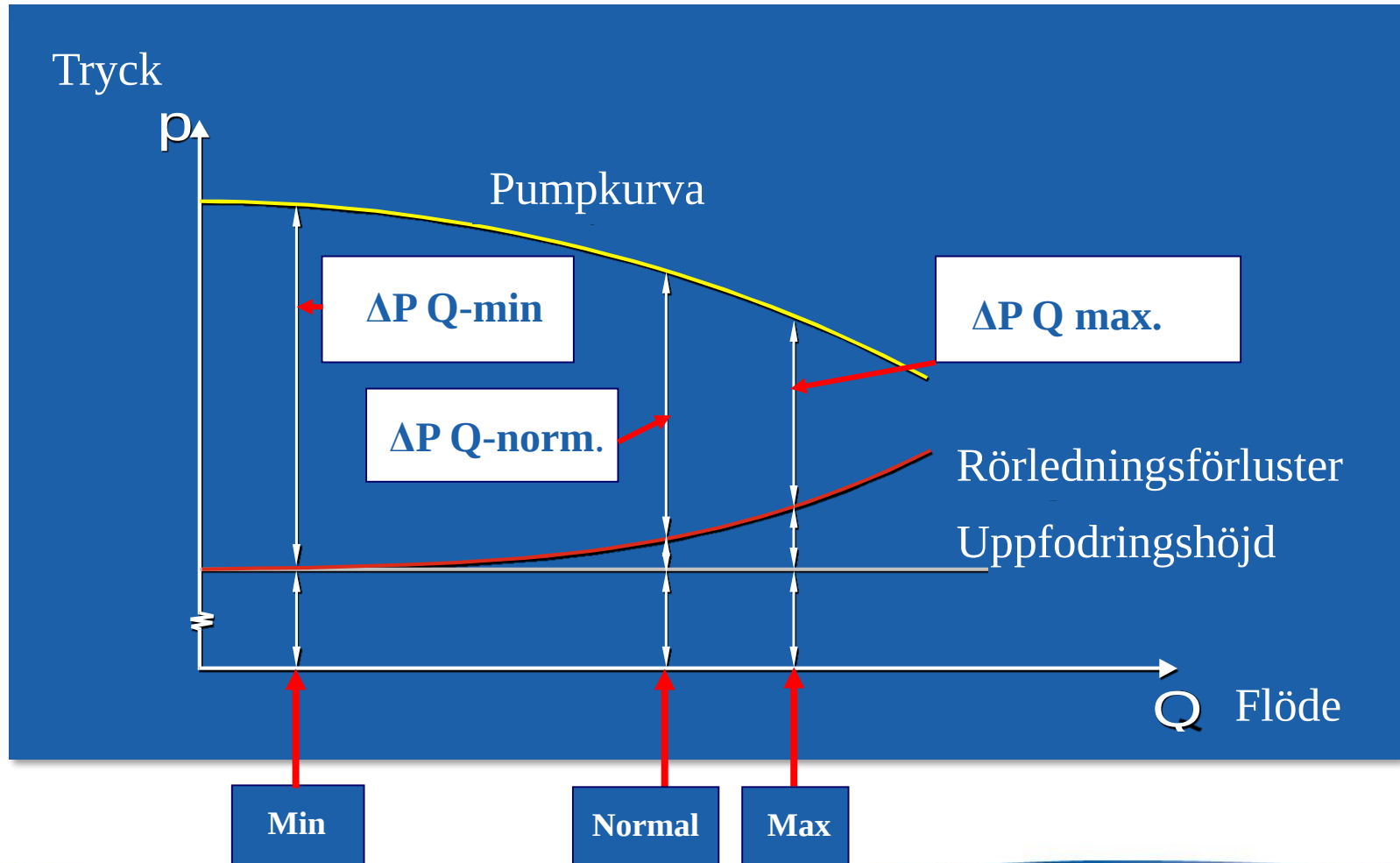


Support

For help and questions, please contact the SomSize support using the e-mail address somsize@somas.se.



Dynamisk tryckfördelning



SOMAS[®] SomSize[™] Version #0029

Robert Logout&Keep Logout&Clear

Usr\Robert\Utb_2013_A.som Save New Open

Start Setup Project Items **Service** Valve View Report Files Fluids Documents News

Service - Utb_2013_A

Item: 1 HV-11 Spädning When selecting another item, any changes made will be remembered (updated).

Group: Ball segment valve, concentric (SEG)

Design: Wafer type, 1-piece body (KVTW)

Size: DN80 | 3"

Capacity: KV340 | CV393

Function: Control

Valve: KVTW-A5-AKA-B11-DN80-PN10/A21-DA/TZID-C

Data sheets:
[Si-110de.pdf](#)
[Si-110en.pdf](#)
[Si-110fr.pdf](#)
[Si-110se.pdf](#)

Settings: Units: ☒ SI-units ☐ US-units Noise calc.: ☒ VDMA ☐ IEC

Pipe: Standard: ISO/SSG stainl. steel → Inlet: 100 → Outlet: 100 → Thickness: 1,5 mm

Service: ☒ Liquid Only ☐ Gas Only ☐ Liquid & Gas ☐ Liquid & Solid Different services will enable different input fields and result fields below.

Fluids: Liquid: Water * Gas: Steam * Solid: Chalk ☐ Verbose fluids

Liquid Only

	Case 1	Case 2	Case 3	Case 4		
Liquid flow:	28	80	105		m ³ /h	Values required.
Inlet pressure:	4	3,8	3,5		bar a	Values required.
Differential pressure:	0,32	0,3	0,25		bar	Values required.
Temperature:	40	40	40		°C	Values required.
Liquid critical pressure:	221,3	221,3	221,3		bar a	Empty fields and green values will be calculated.
Liquid density:	991	991	991		kg/m ³	Empty fields and green values will be calculated.
Liquid vapour pressure:	0,0738	0,0738	0,0738		bar a	Empty fields and green values will be calculated.
Liquid comp. viscosity:	0,6551	0,6551	0,6551		cSt	Empty fields and green values will be calculated.
Calculate Clear Calc Clear All Undo/Restore ☐ Verbose calc						
Calculated capacity:	49,478	150,266	224,21		KV	Always calculated.
Valve opening:	23,74	52,67	68,56		°	Always calculated.
Flow velocity:	1,55	4,42	5,8		m/s	Always calculated.
Critical pressure drop:	2,6006	2,0584	1,685		bar	Always calculated.
Noise level (VDMA):	45,3	53	56,1		dB(A)	Always calculated.

Result: Result of calculation.

Case 1: OK
Case 2: OK
Case 3: OK
Case 4: Not used.

Dimensioneringsverktyg, Somsiz

Rördimensioner, material
och storlek
Media

Flöde
P1, primärtryck (absolut)
P2-P1, primär-sekundärtryck
Temperatur

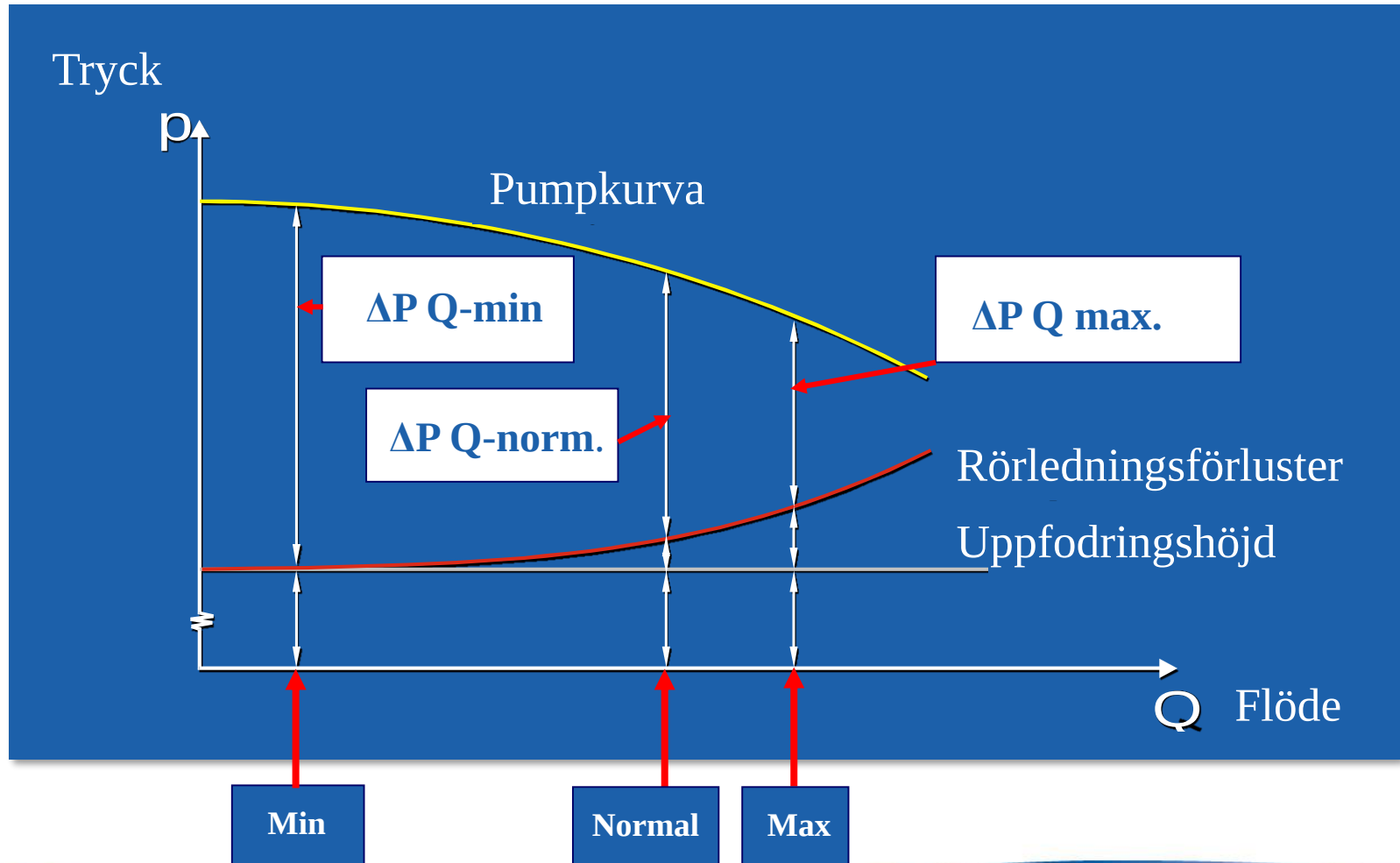
Differenstryck (Δp)=primärtryck-sekundärtryck

Fall 1

Fall 2

Fall 3

Dynamisk tryckfördelning



SOMAS[®] SomSize[™] Version #0029

Robert Logout&Keep Logout&Clear

Usr\Robert\Utb_2013_A.som Save New Open

Start Setup Project Items Service Valve View Report Files Fluids Documents News

Service - Utb_2013_A

Item: 1 HV-11 Spädning When selecting another item, any changes made will be remembered (updated).

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Size: DN80 | 3"

Capacity: KV340 | CV393

Function: Control

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Data sheets:
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[Si-110en.pdf](#)
[Si-110fr.pdf](#)
[Si-110se.pdf](#)

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	Case 1	Case 2	Case 3	Case 4		
Liquid flow:	28	80	105		m ³ /h	Values required.
Inlet pressure:	4	3,8	3,5		bar a	Values required.
Differential pressure:	0,32	0,3	0,25		bar	Values required.
Temperature:	40	40	40		°C	Values required.
Liquid critical pressure:	221,3	221,3	221,3		bar a	Empty fields and green values will be calculated.
Liquid density:	991	991	991		kg/m ³	Empty fields and green values will be calculated.
Liquid vapour pressure:	0,0738	0,0738	0,0738		bar a	Empty fields and green values will be calculated.
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Calculate Clear Calc Clear All Undo/Restore ☐ Verbose calc						
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Dimensioneringsverktyg, Somsiz

Rördimensioner, material
och storlek
Media

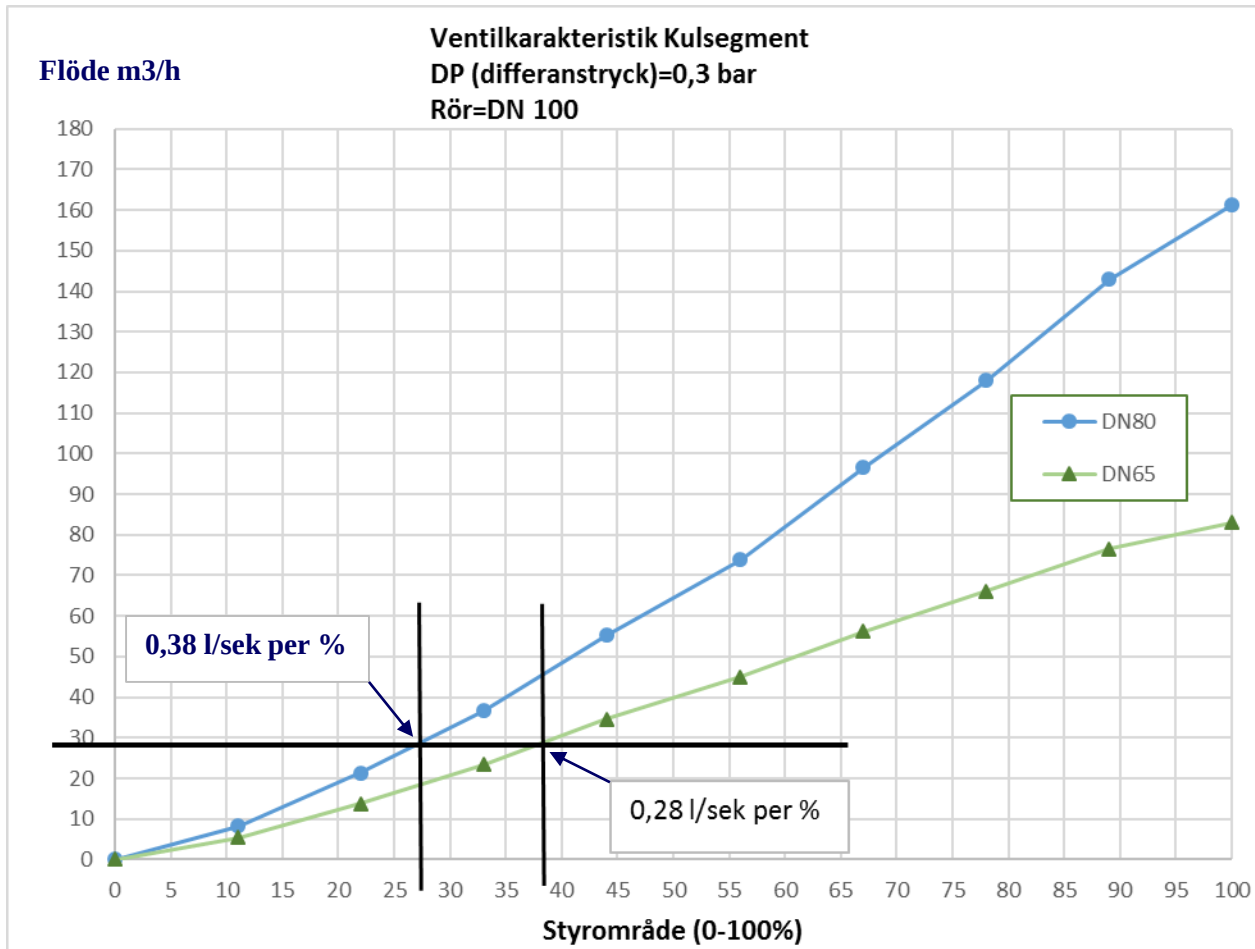
Flöde
P1, primärtryck (absolut)
P2-P1, primär-sekundärtryck
Temperatur

Differenstryck (Δp)=primärtryck-sekundärtryck

Fall 1

Fall 2

Fall 3



Pos. nr.: **1 (empty)**

Produktkod: KVTW-A5-AKA-B11-DN80-PN10/A21-DA/TZID-C
 Datablad: Si-113
 Ventiltyp: Ball segment valve, concentric (SEG), Wafer type (KVTW)
 Version: Centrally mounted segment - 1 pc body (KVTW)
 Anslutningsform: Wafer type (A)
 Tryckklass: PN25 (5)
 Material - hus: Stainless steel CF8M (A)
 Material - innerdelar: Stainless steel EN 1.4460, hard Chromium plated (K)
 Material - säte: PTFE (A)
 Material - spindel: Stainless steel SS2324, hard Chromium plated (B)
 Material - lagringar: Without bearings (1)
 Material - packbox: Graphite (1)
 Ventildimension: DN80 | 3"
 Motflänsar: PN10 (PN10)
 Manöverdon: Pneum. double acting actuator type A21-DA (A21-DA)
 Matningstryck: 5.5 bar/80 psi Rör: Plastslang
 Positioner type TZID-C (TZID-C)

Tillbehör 1:

Tillbehör 2:

Tillbehör 3:

Anmärkning:

Vikt:

18,000 kg

Mått i mm

A = 111,000

H = 255,000

K = ---

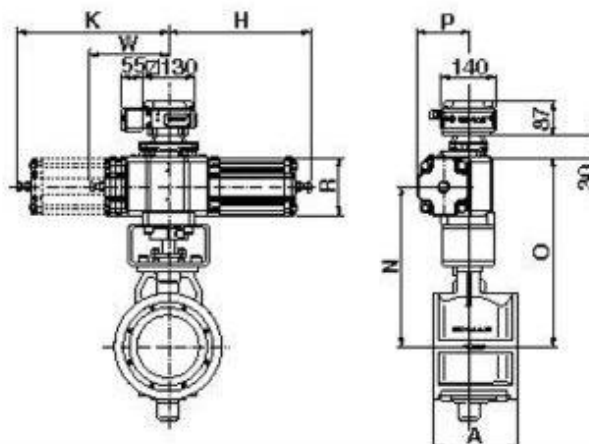
N = 260,000

O = 340,000

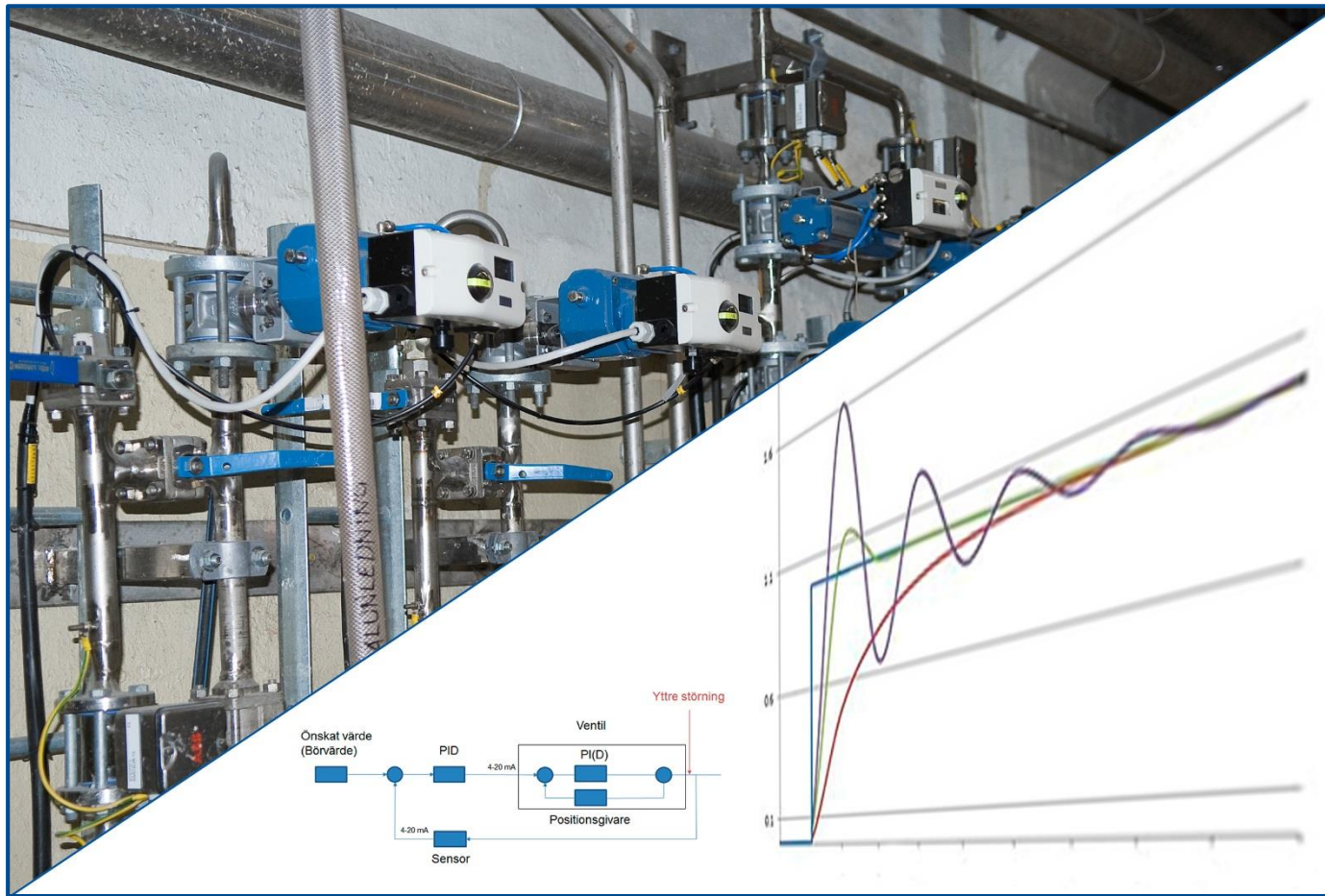
P = 94,000

R = 106,000

W = 140,000



Styrning av ventiler analoga till digitala lägesställare



Utveckling lägesställare



Pneumatisk – (Analog)



Somas SP405



PMV P5

- Lätt att kalibrera
- Enkelt underhåll
- Låg kostnad
- Väl beprövad

Elektropneumatisk – (Analog)



Somas SPE405

- **Lätt att kalibrera**
- **Enkelt underhåll**
- **Låg kostnad**
- **Väl beprövad**

Digitala



ABB TZID-C



Siemens PS2

- **Microprocessor styrd**
- **Låg luftförbrukning**
- **Kommunikation - Hart, Profibus PA, Foundation fieldbus**

Smarta – Avancerad diagnostik



ABB EDP300



Fisher DVC



PMV D3

- Del av ett integrerat kommunikationssystem
- Förebyggande underhåll – avancerad diagnostik