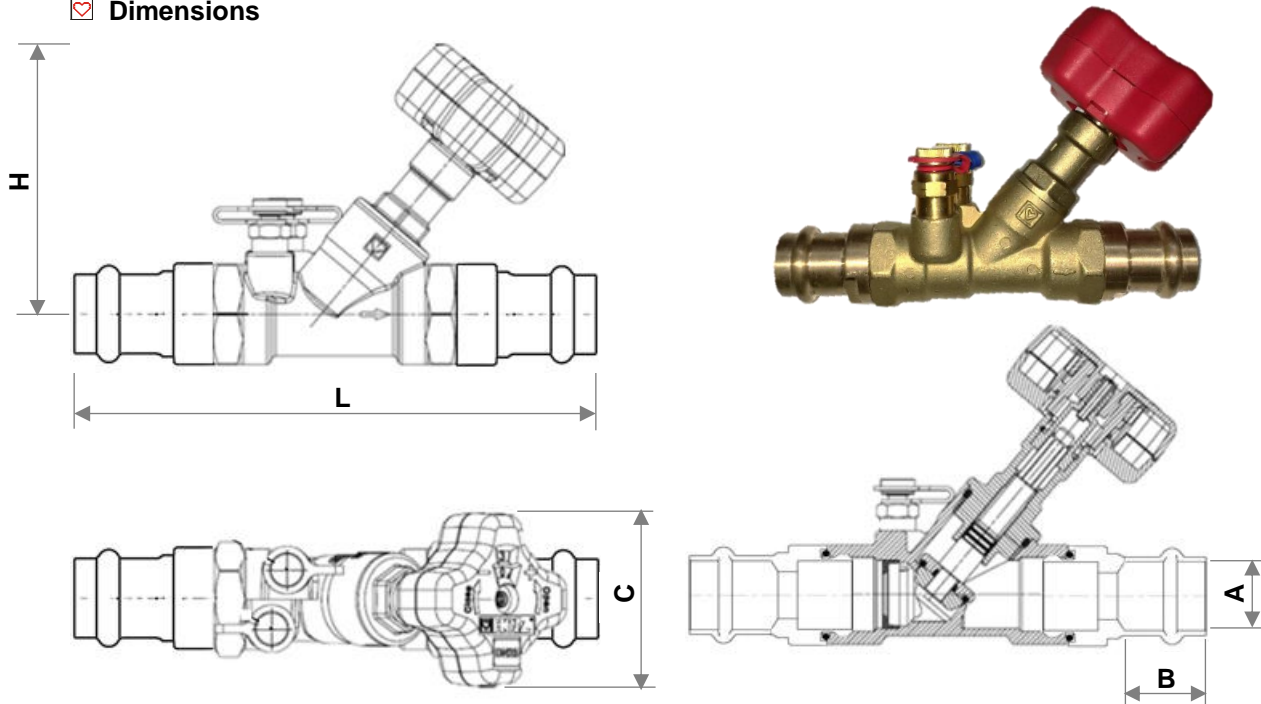


# HERZ STRÖMAX C4017M

## Fixed Orifice Commissioning Valve

Data sheet for C 4017 0x, Issue 0221

### ☑ Dimensions



Order Nr.	DN	A [mm]	B [mm]	C [mm]	L [mm]	H [mm]	Kv Valve	Kvs Orifice
C 4017 11	15 LF	15	24	70	157	96	0.46	0.48
C 4017 21	15 MF	15	24	70	157	96	0.88	0.97
C 4017 01	15	15	24	70	157	96	2.00	1.95
C 4017 02	20	22	24	70	165	99	3.60	3.95
C 4017 03	25	28	26	70	184	109	6.50	7.90
C 4017 04	32	35	26	70	198	117	13.30	15.75
C 4017 05	40	42	41	70	245	136	18.50	21.50
C 4017 06	50	54	43	70	282	140	33.00	46.70

### ☑ Material and construction

Body:	DZR brass CW602N
Stem & disk:	DZR brass CW602N
Fixed orifice:	DZR brass CW602N
Seals:	EPDM
Test points:	DZR brass CW602N / EPDM
Pressfit ends:	Conex >B< Press, red brass (gunmetal) acc. to EN 1982, CC 449K

### ☑ Operating data

Max. operating pressure:	16 bar
Min. operating temperature:	-10°C
Max. operating temperature:	110°C

Manufactured to BS7350

**Medium:**

Heating water quality according to ÖNORM H5195 or VDI-Standard 2035. The use of ethylene or propylene glycol in a mixing ratio 25- 50% is allowed. Please refer to manufacturers documentation when using ethylene glycol products for frost and corrosion protection. HERZ FODRV for heating and chilled water is not suitable for use with aggressive medium (such as: acids, alkalis, combustible and explosive gases) because it can destroy sealing components.

Pursuant to Article 33 of the REACH Regulation (EC No. 1907/2006), we are obliged to point out that the material lead is listed on the SVHC list and that all brass components manufactured in our products exceed 0.1% (w / w) lead (CAS: 7439-92-1 / EINECS: 231-100-4). Since lead is a component part of an alloy, actual exposure is not possible and therefore no additional information on safe use is necessary.

**☑ Pressfit connection**

Conex >B< Press connections fitted to Herz valves benefit from patented 'leak before press' O-ring technology which indicates if a joint has not been pressed. The O-ring contains two in-built water pathways that allow water to pass through and create a noticeable leak when the system is tested at low pressure (0.1 to 6.0 bar). Any un-pressed joints can easily be identified during the test phase and pressed, saving valuable time and money. There is no need to drain down as the pressing operation can be carried out while the water is still in the system.

>B< Press fittings are installed using a press tool with a compatible press jaw. Jaws are sized to match the fitting required. When force is exerted through the press tool the jaw closes to make a permanent joint.

The >B< Press design has the advantage of a 3-point press profile; comprising of two mechanical presses on either side of the bead, and one press on the O-ring bead. The EPDM O-ring compresses to form a permanent leakproof joint.

>B< Press red brass fittings maintain earth continuity without the need for additional continuity straps.

>B< Press red brass fittings can be used on hard, half-hard and soft copper tube to EN 1057, Stainless Steel tubes to EN10312 and Carbon Steel tubes to EN10305.

Please note that Carbon Steel is susceptible to Galvanic Corrosion due to the coating and the normal precautions need to be applied.

Red Brass on Carbon Steel is also more susceptible to Bi-Metallic corrosion.

It is recommended that all pipework jointing connections are made un-pressed within a contained section to avoid disturbing any valve connection joints during construction. Once a section is completed, all connection joints should be pressed together in one operation.

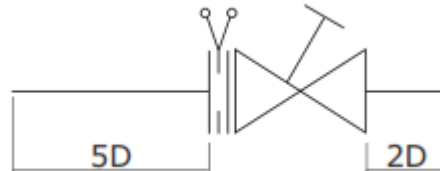
**☑ Valve Application**

The valve is designed to measure and regulate flowrate to aid the balancing and commissioning of a system water flowrates. The valve has an integral fixed orifice for measuring the differential pressure, to ascertain the flowrate by calculation or with reference to the valve flowcharts. The differential pressure is measured through two test points mounted on either side of the fixed orifice.

### ☑ Valve Installation

The valve can be installed in any orientation observing the flow direction arrow on the body.

CIBSE Commissioning code W: 2010 states that Fixed orifice double regulating valves must always be installed with a minimum of 5 pipe diameters of straight pipe, without intrusion, upstream of the orifice plate. Downstream of the valve a minimum of 2 pipe diameters of straight pipe are required.



### ☑ Valve setting

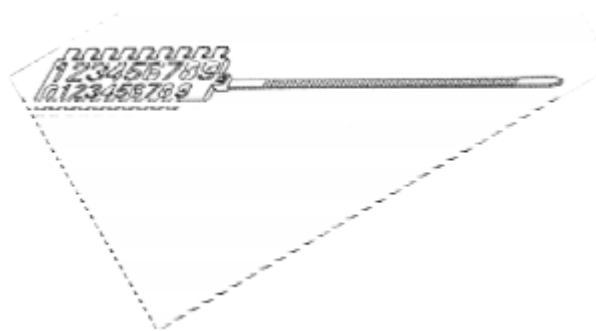
The hand wheel position is indicated in the digital display readout on the top of the hand wheel, the valve set position can be locked easily by means of a concealed memory stop. The valve can be isolated and returned to the preset position at any time. The pre-setting is obscured by the hand wheel and protected against unauthorised operation.

1. Set to the desired step observing the digital display on the hand wheel.
2. Remove the hand wheel locking screw, do not remove the hand wheel from the valve.
3. Screw the pre-setting spindle, which is now accessible, in up to the stop.
4. Screw in the hand wheel locking screw again.
5. Mark the step set at the pre-setting marker and attach the marker to the valve (this step is not essential for the function of the valve but is recommended).

### ☑ Accessories

#### Presetting Marker

The pre-setting marker (1 6517 05) is fastened as a tag above the valve or pipe. The setting of the respective valve is marked by cutting or breaking off the teeth at the figures for full and partial turns. This permits checking and/or restoration of the original pre-setting made on the occasion of the system set-up after servicing without having to rely on documentation.

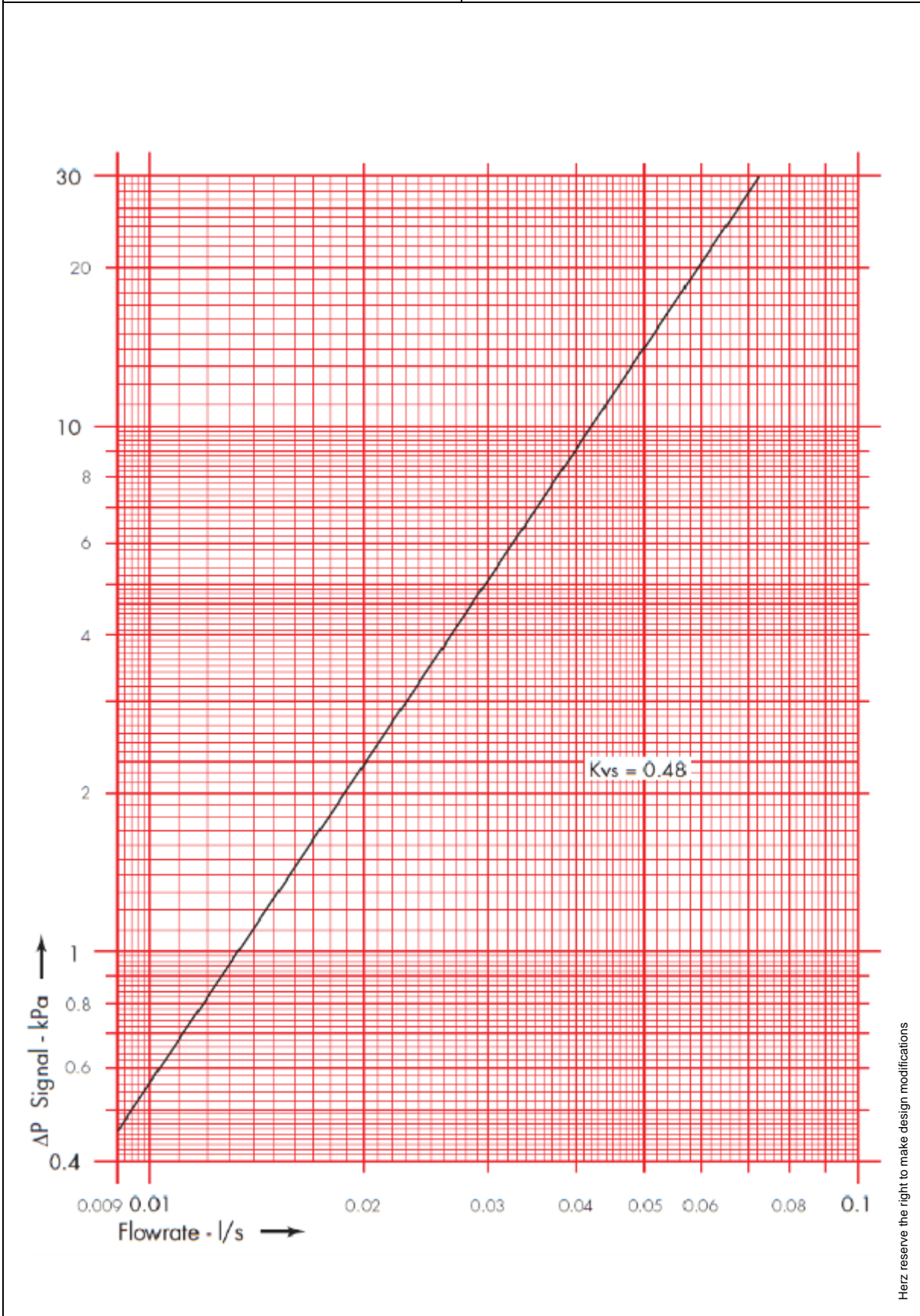


### ☑ Disposal instruction

The disposal of HERZ Pressfit FODRVs must not endanger the health or the environment. National legal regulations for proper disposal of the HERZ Pressfit FODRVs have to be followed.

All specifications and statements within this document are according to information available at the time of printing and meant for informational purpose only. Herz Armaturen reserves the right to modify and change products as well as its technical specifications and/or its functioning according to technological progress and requirements. It is understood that all images of Herz products are symbolic representations and therefore may visually differ from the actual product. Colours may differ due to printing technology used. In case of any further questions don't hesitate to contact your closest HERZ Branch-office.

HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 11	Dim. DN 15 LF



Herz reserve the right to make design modifications

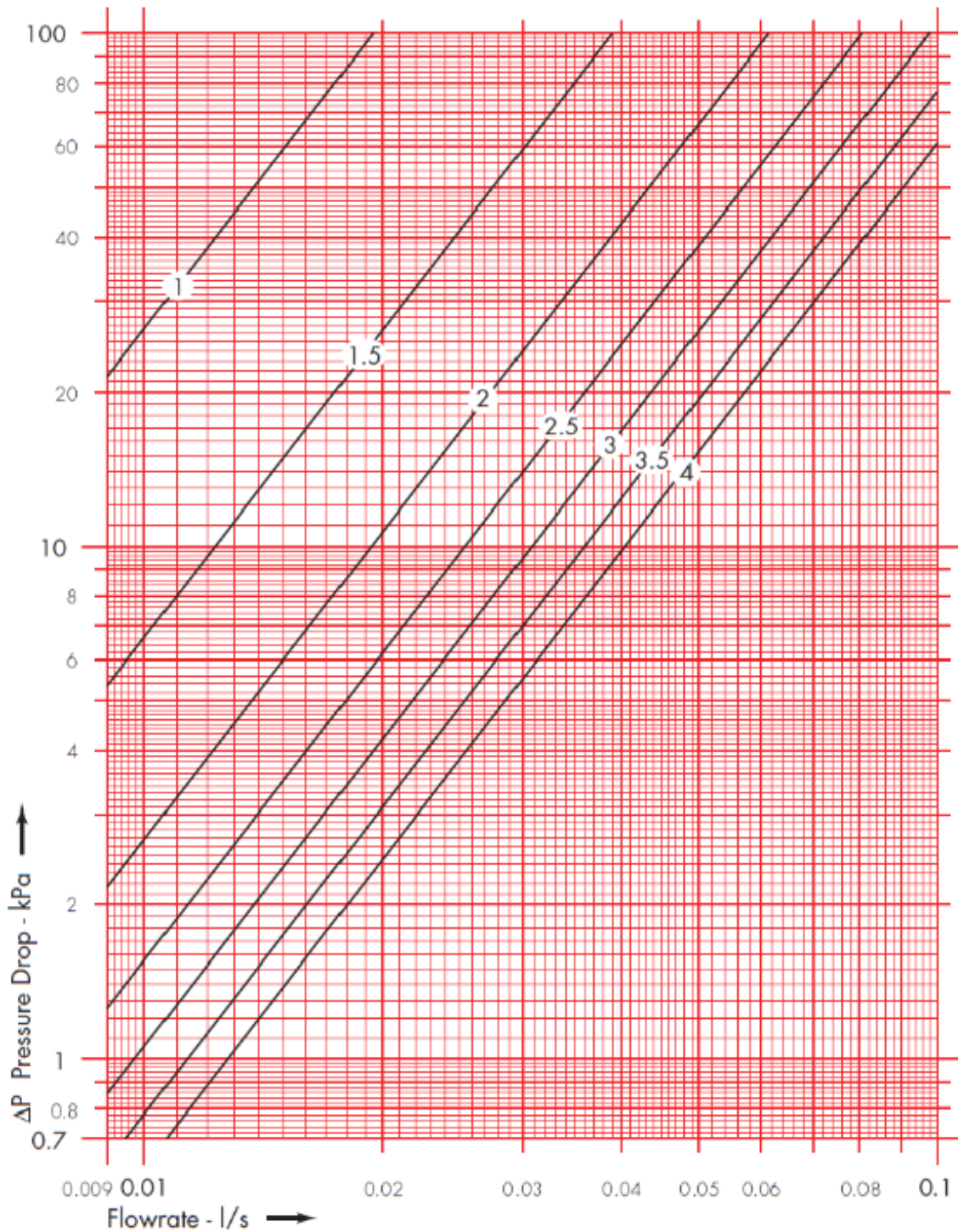
HERZ standard diagram

Commissioning Valve

Order Nr.: C 4017 11

Dim. DN 15 LF

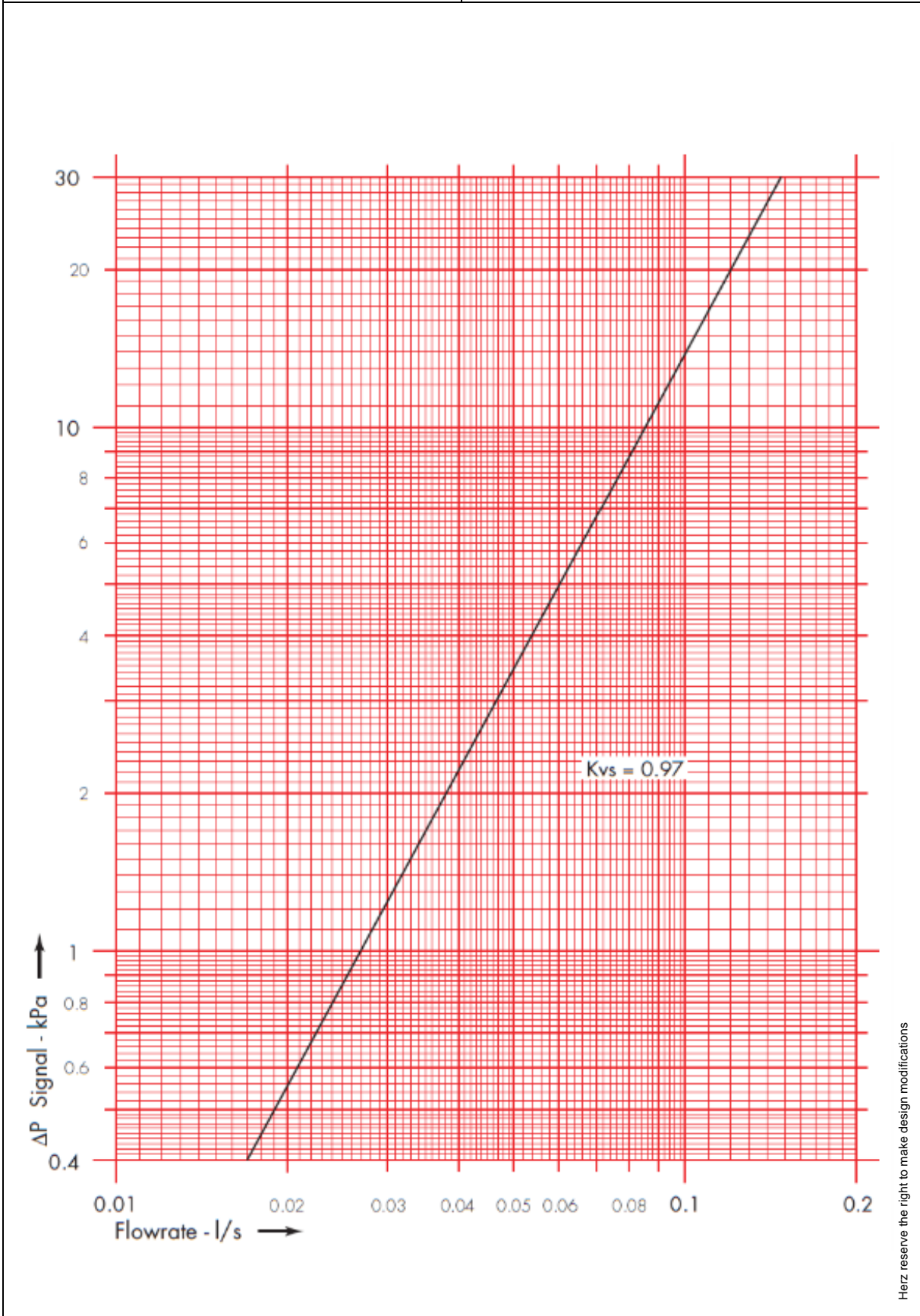
Position	1	1.5	2	2.5	3	3.5	4
Kv	0.07	0.14	0.22	0.29	0.35	0.41	0.46



Herz reserve the right to make design modifications



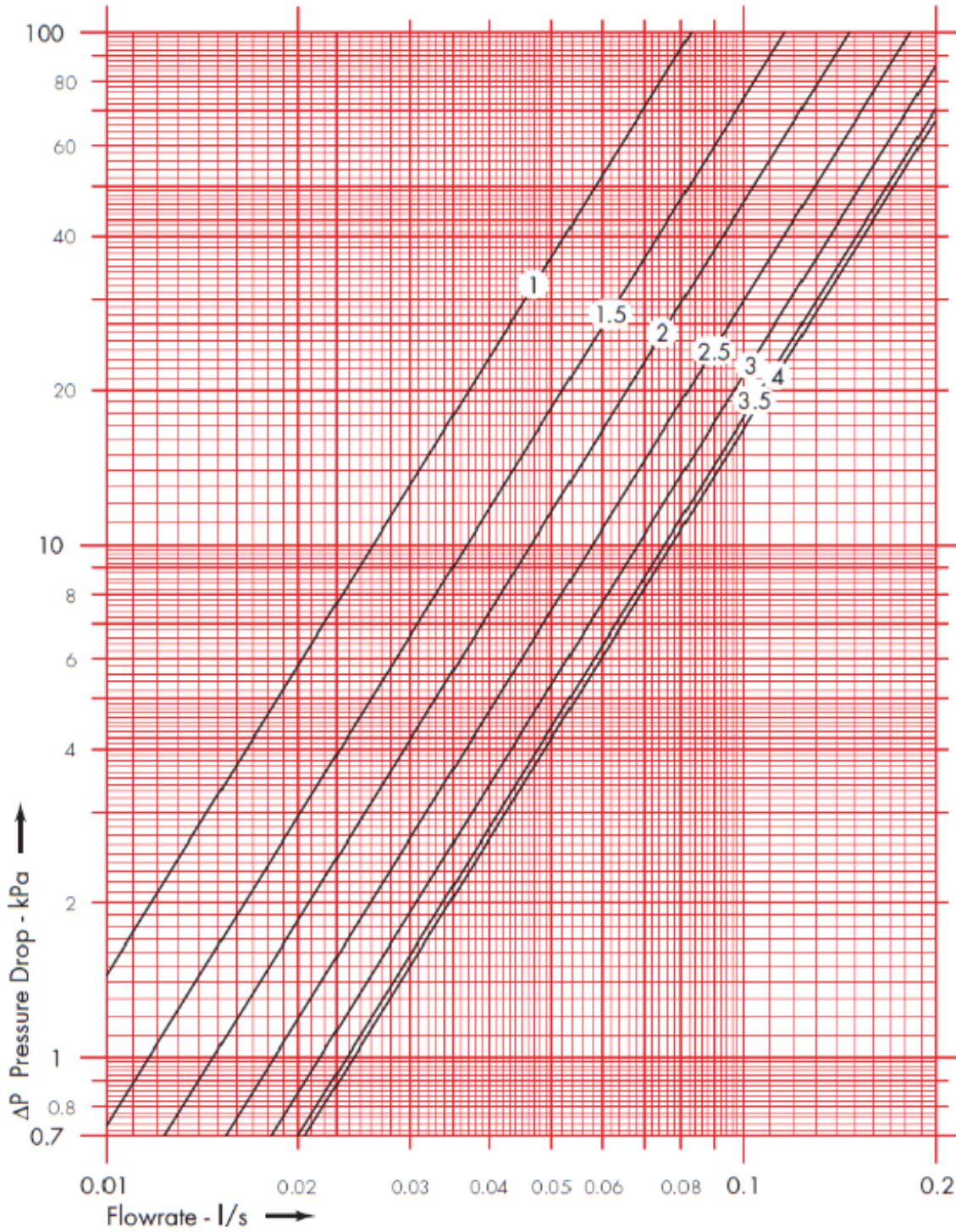
HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 21	Dim. DN 15 MF



Herz reserve the right to make design modifications

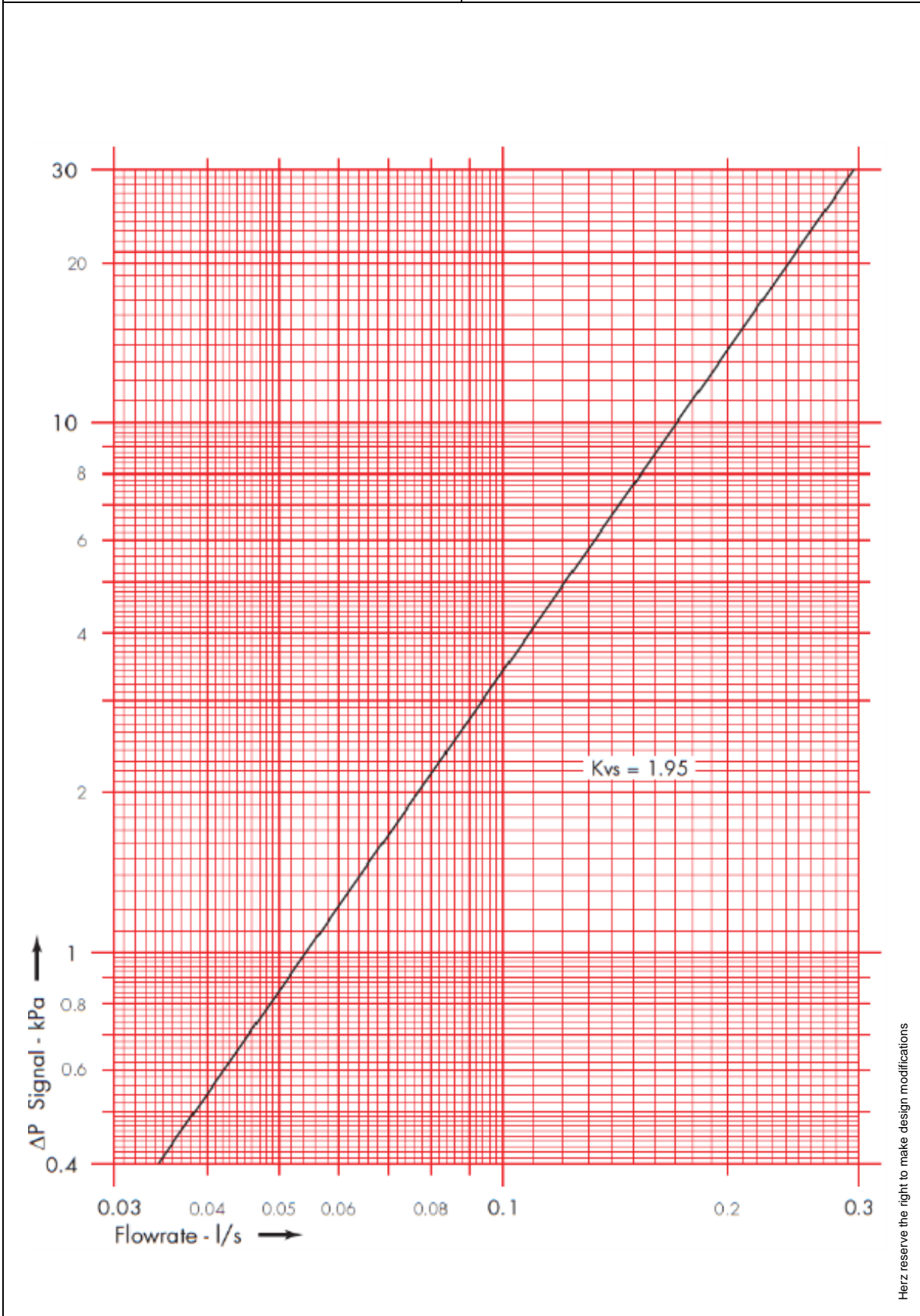
HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 21	Dim. DN 15 MF

Position	1	1.5	2	2.5	3	3.5	4
Kv	0.30	0.42	0.53	0.66	0.78	0.86	0.88



Herz reserve the right to make design modifications

HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 01	Dim. DN 15

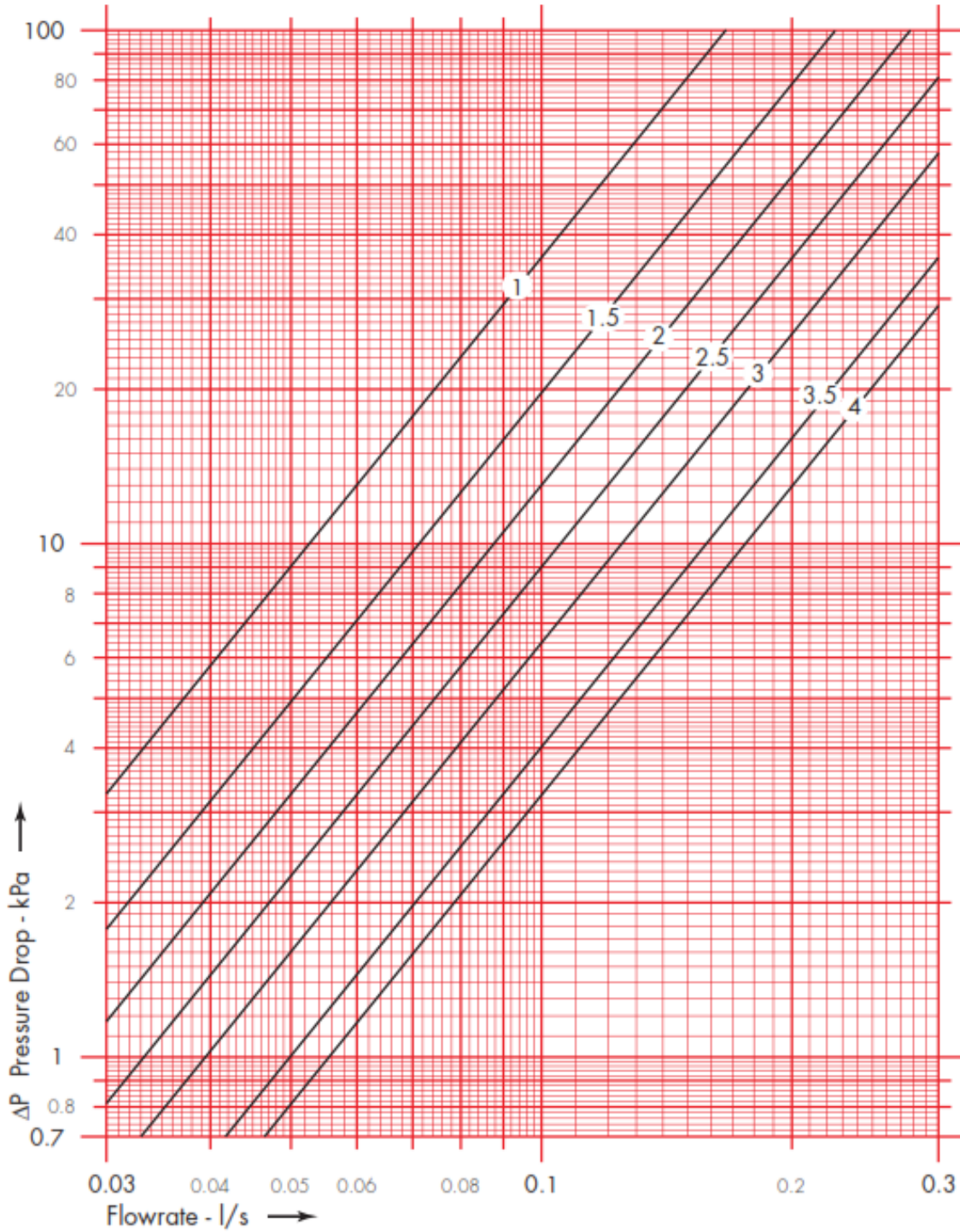


Herz reserve the right to make design modifications



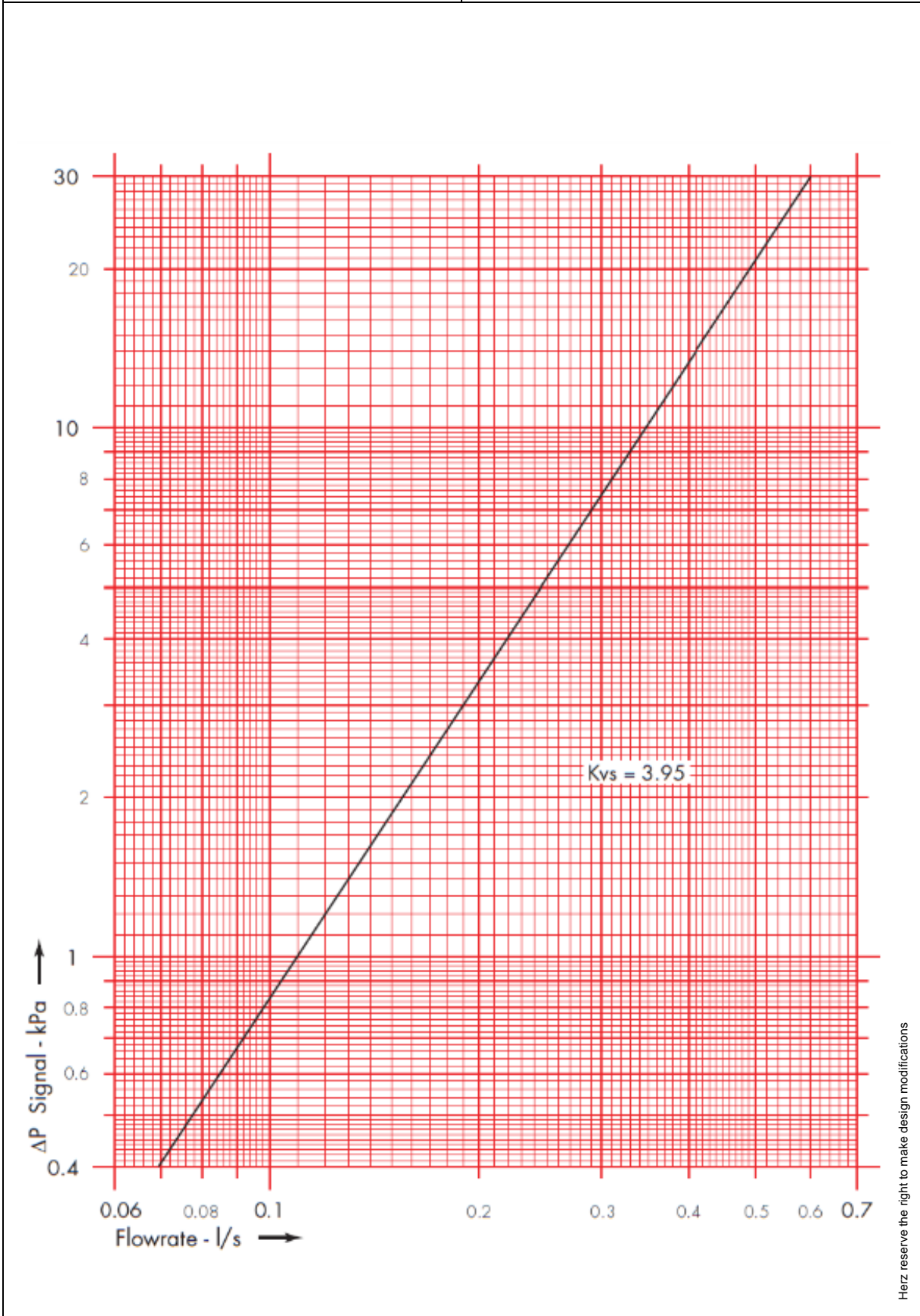
HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 01	Dim. DN 15

Position	1	1.5	2	2.5	3	3.5	4
Kv	0.60	0.81	1.0	1.2	1.42	1.8	2.0



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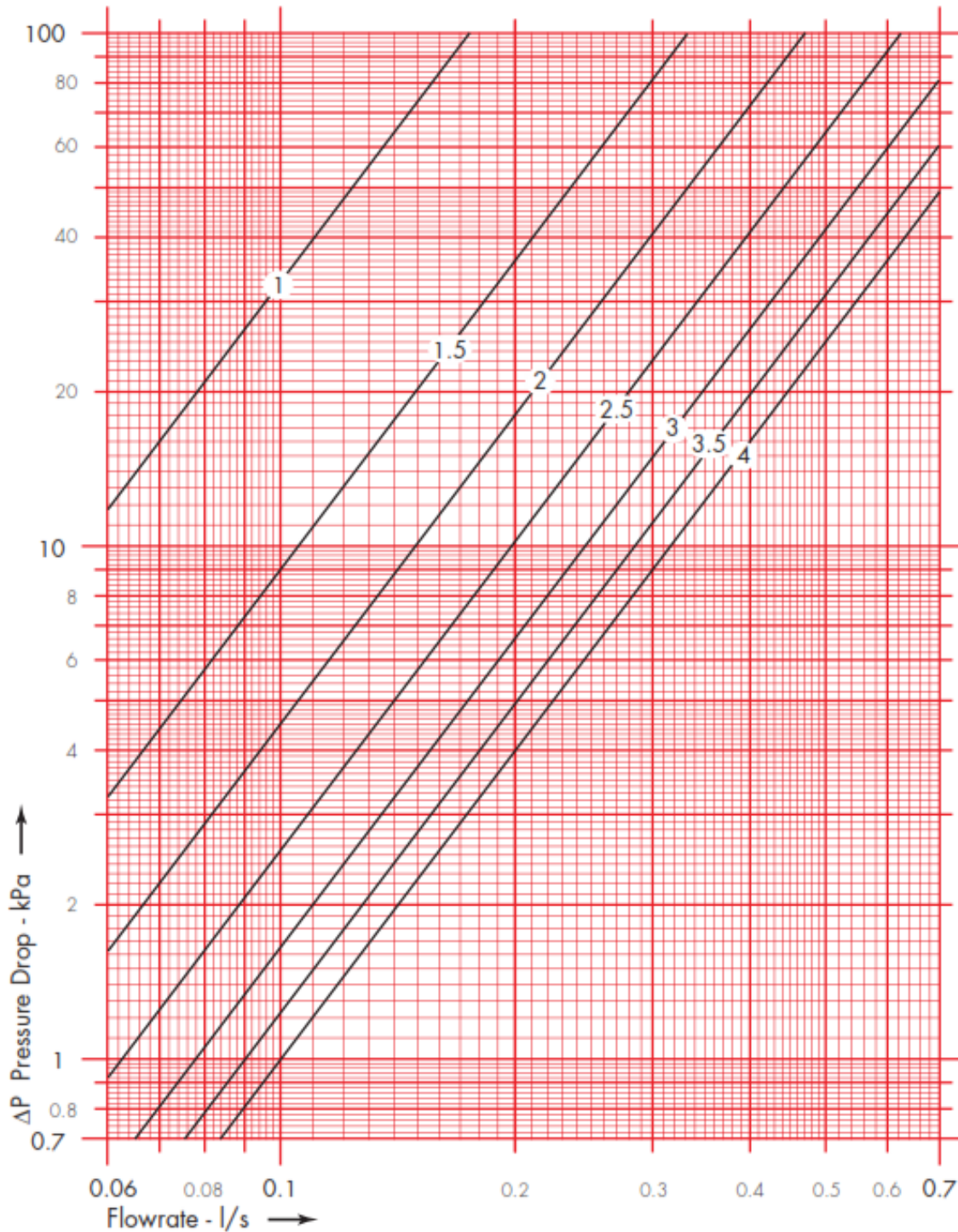
HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 02	Dim. DN 20



Herz reserve the right to make design modifications

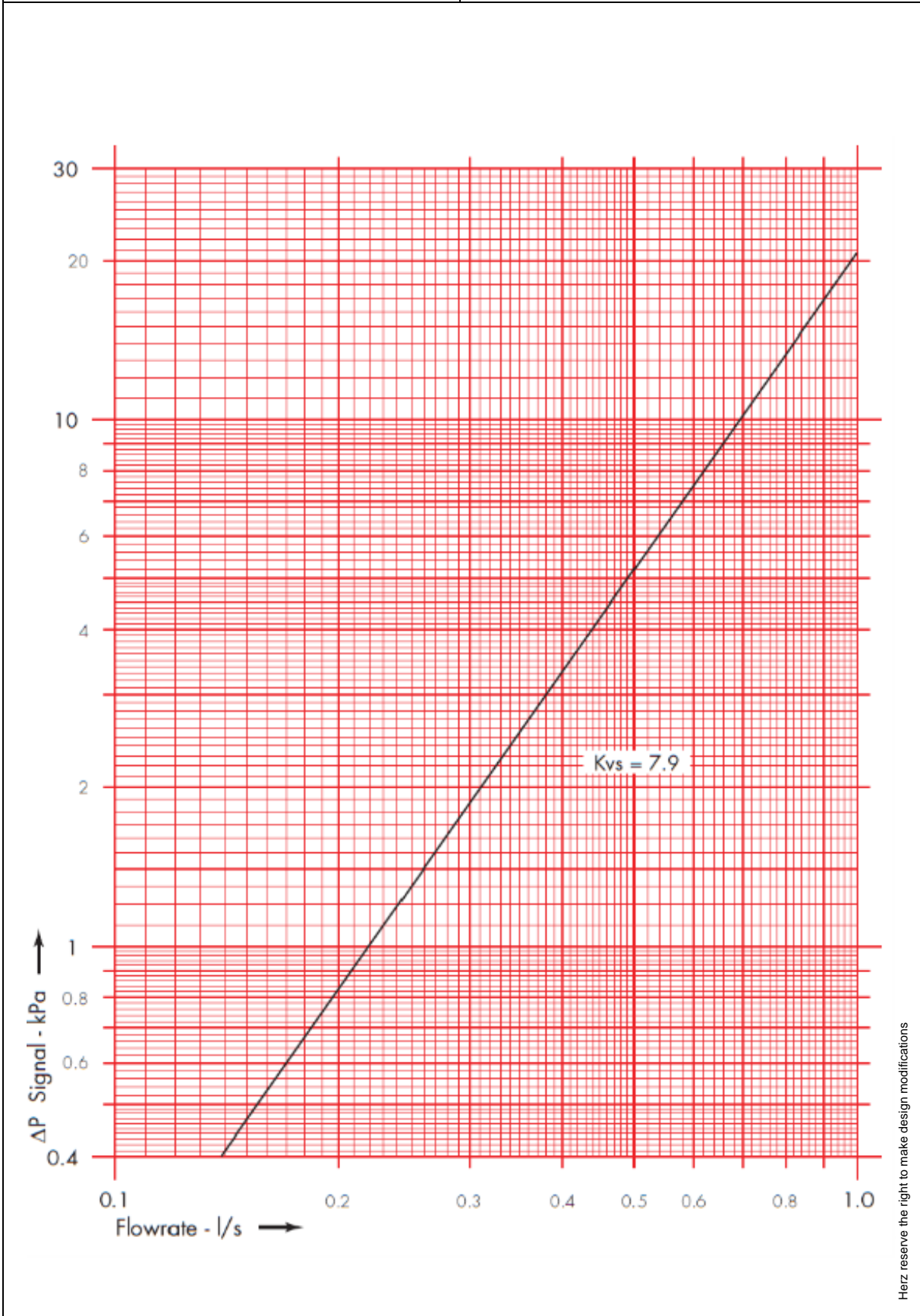
HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 02	Dim. DN 20

Position	1	1.5	2	2.5	3	3.5	4
Kv	0.63	1.2	1.7	2.25	2.8	3.25	3.6



Herz reserve the right to make design modifications

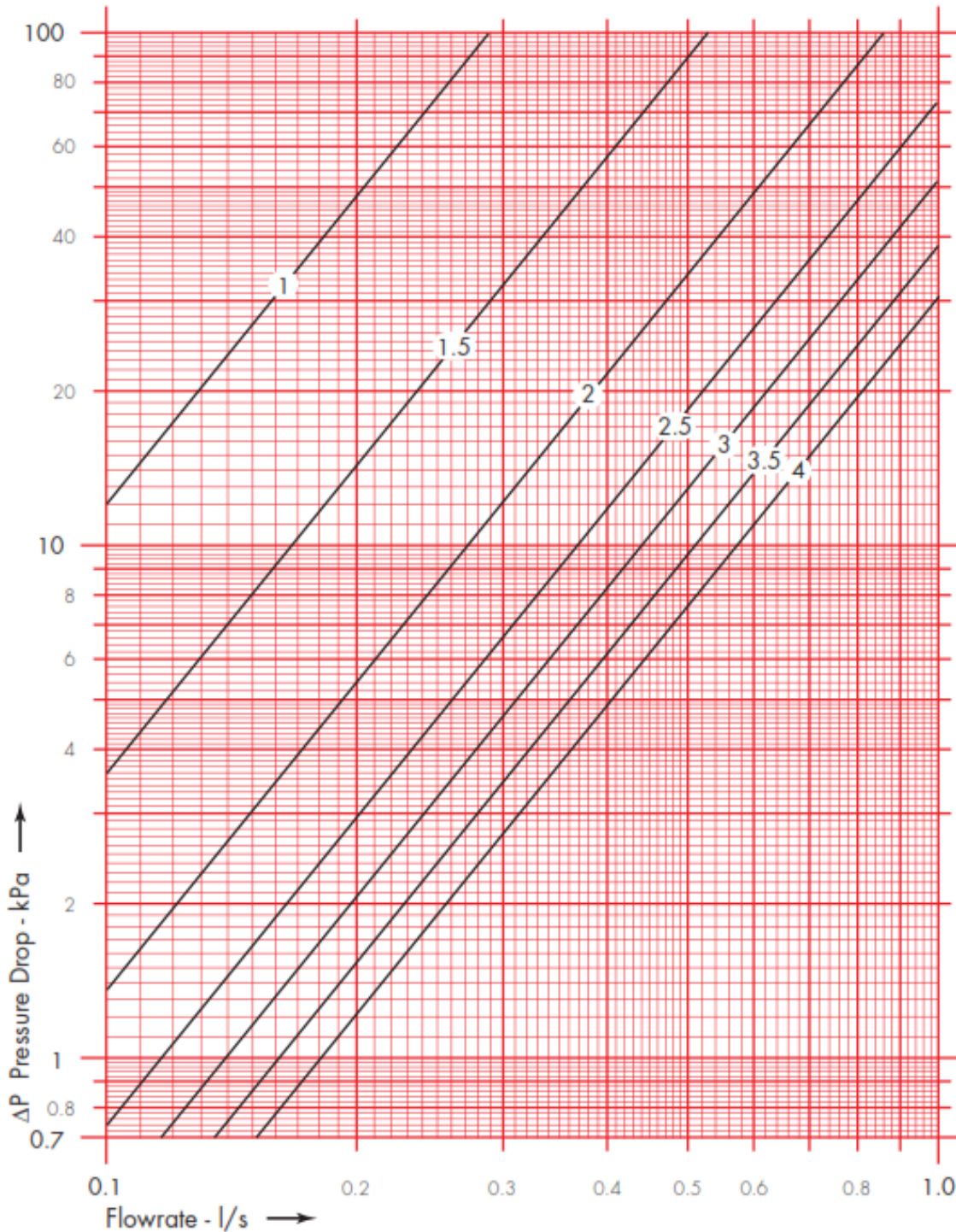
HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 03	Dim. DN 25





HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 03	Dim. DN 25

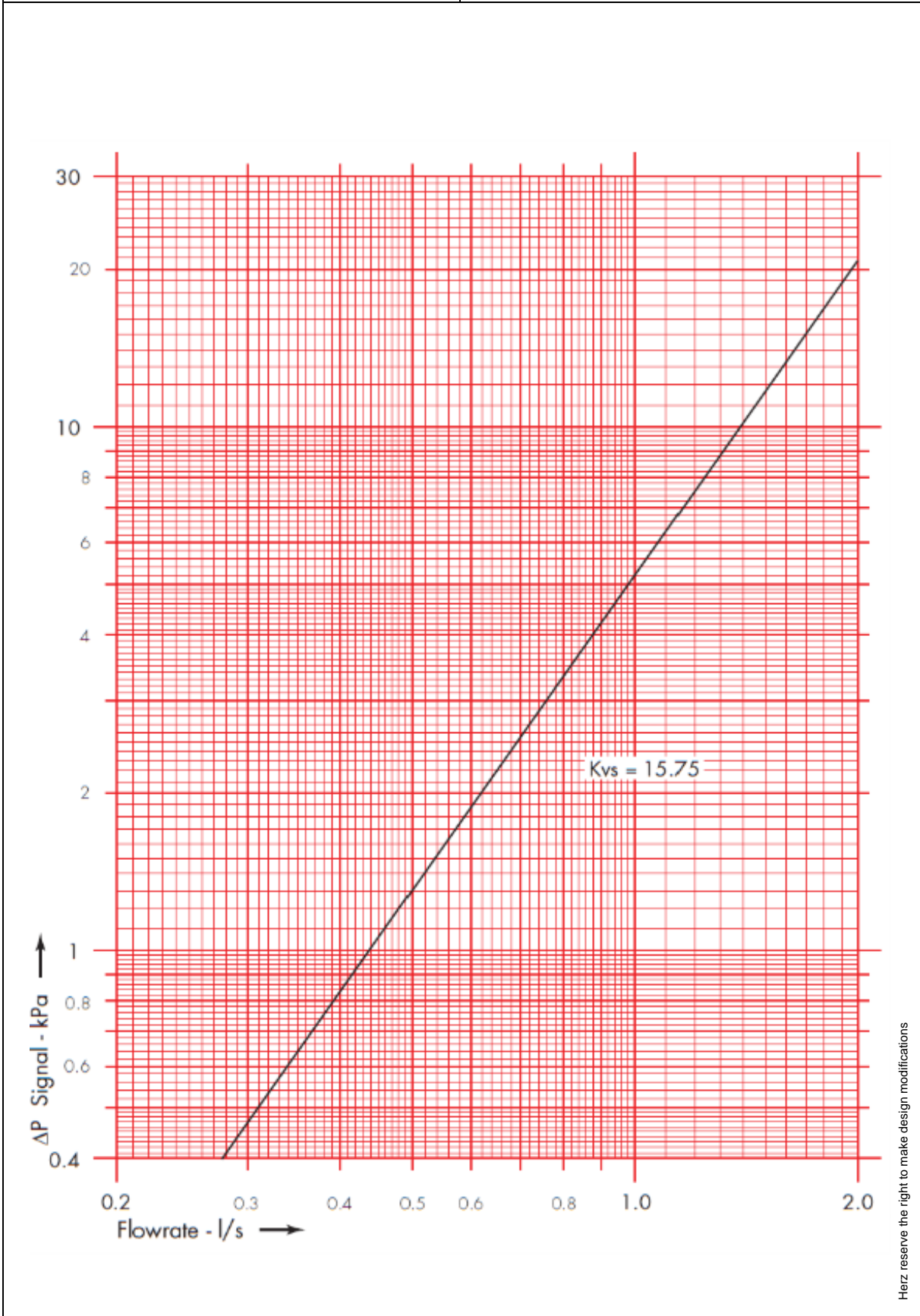
Position	1	1.5	2	2.5	3	3.5	4
Kv	1.04	1.9	3.1	4.2	5.0	5.8	6.5



Herz reserve the right to make design modifications



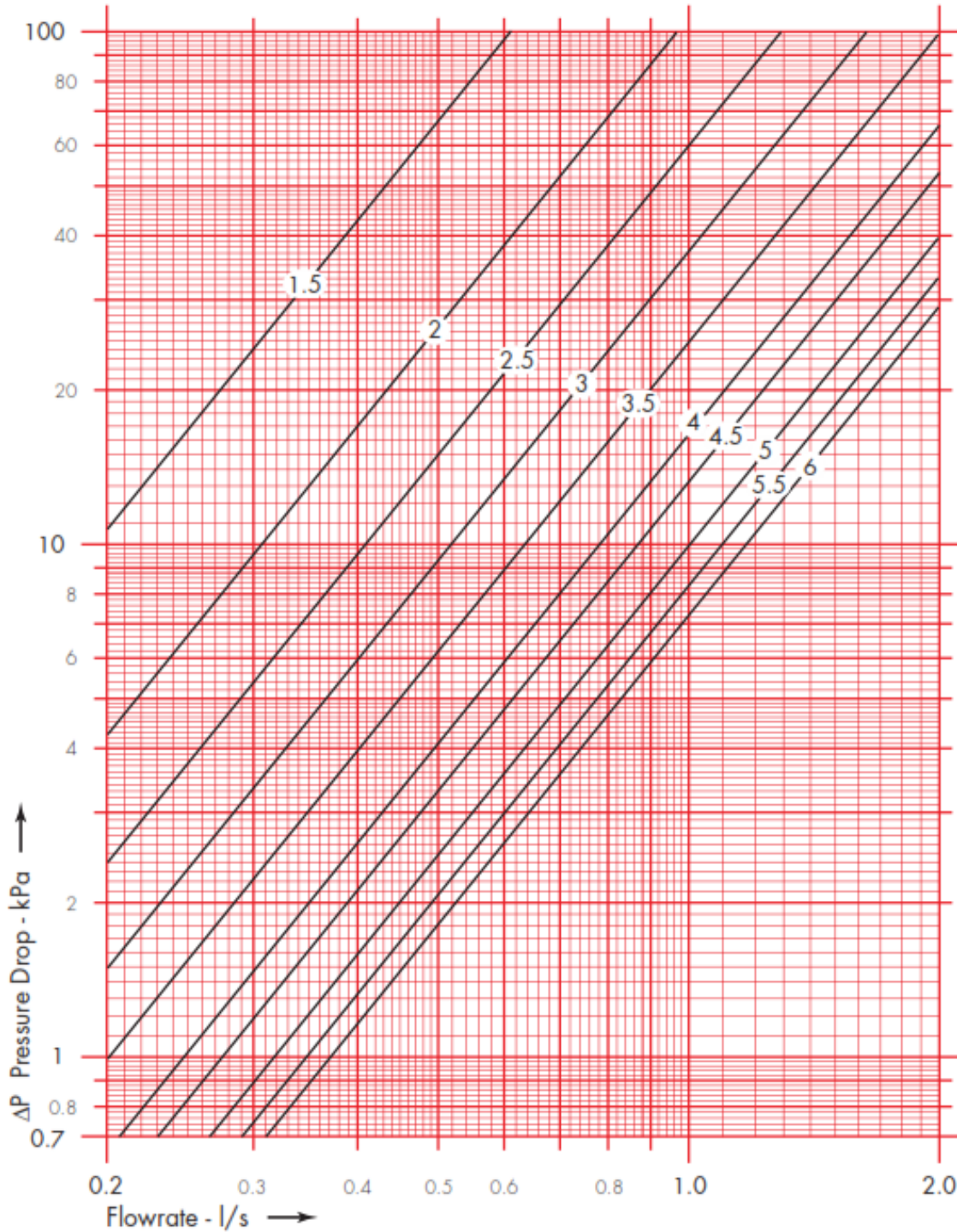
HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 04	Dim. DN 32



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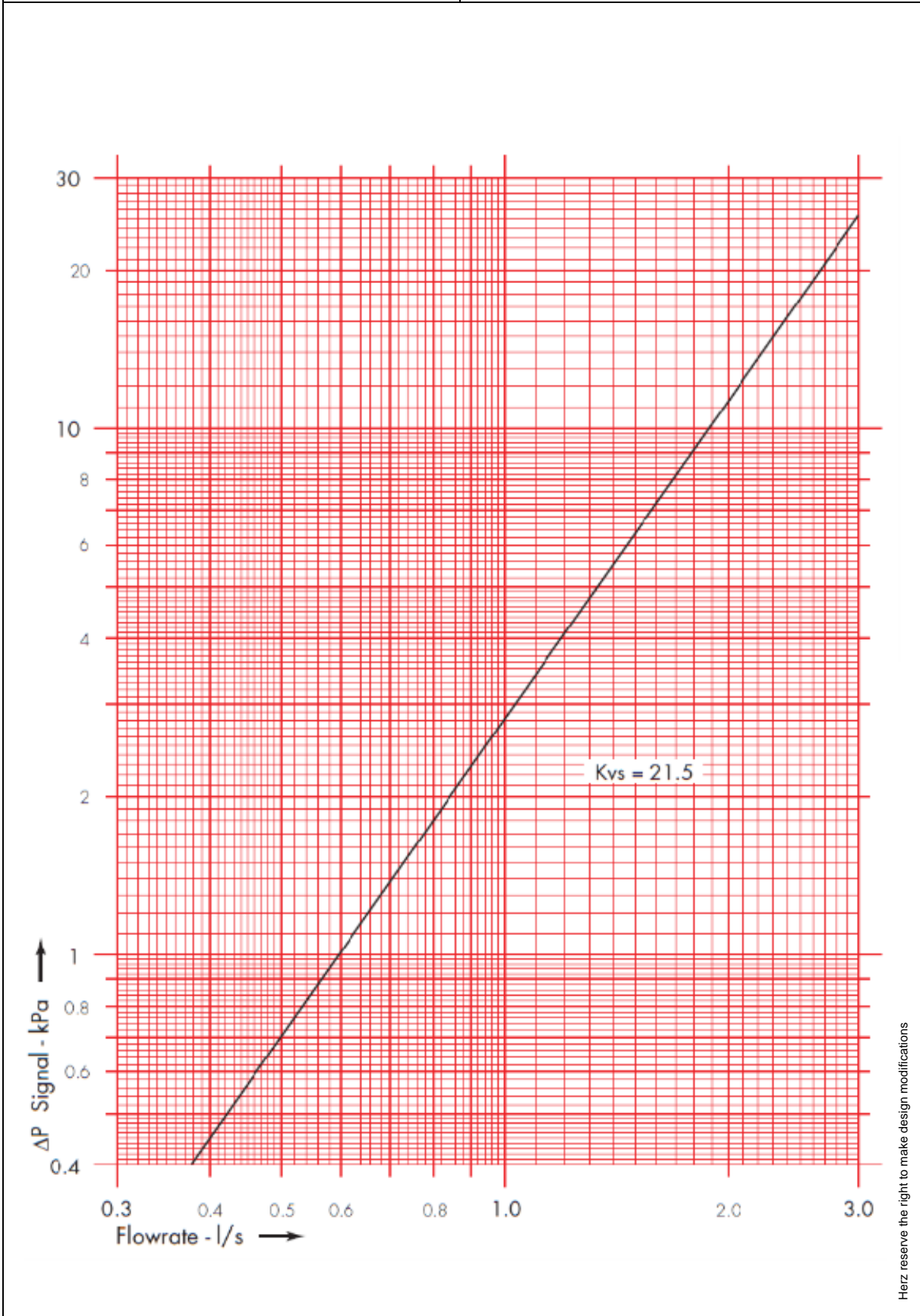
HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 04	Dim. DN 32

Position	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Kv	2.2	3.5	4.65	5.9	7.25	8.85	9.9	11.4	12.5	13.3



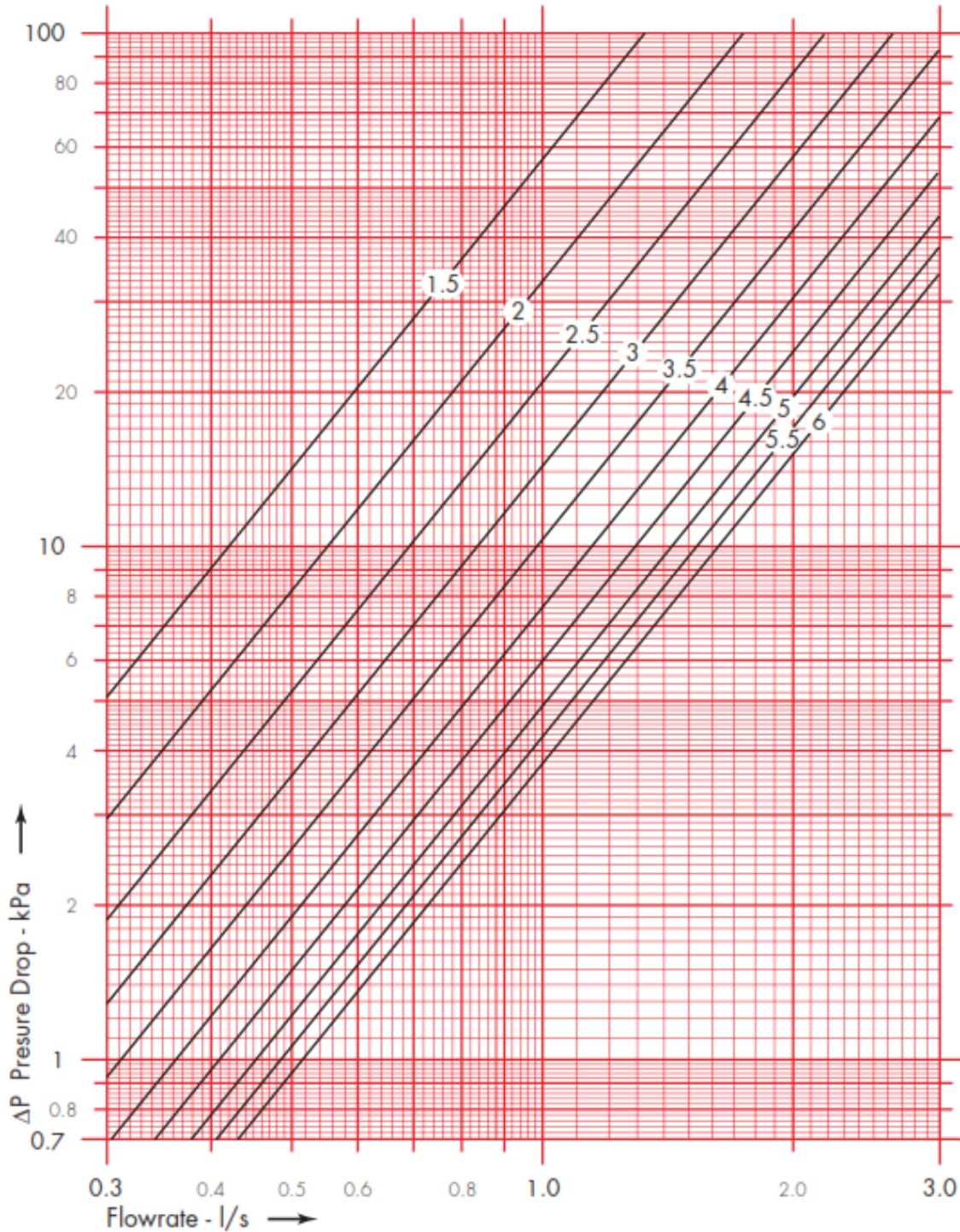
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HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 05	Dim. DN 40



HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 05	Dim. DN 40

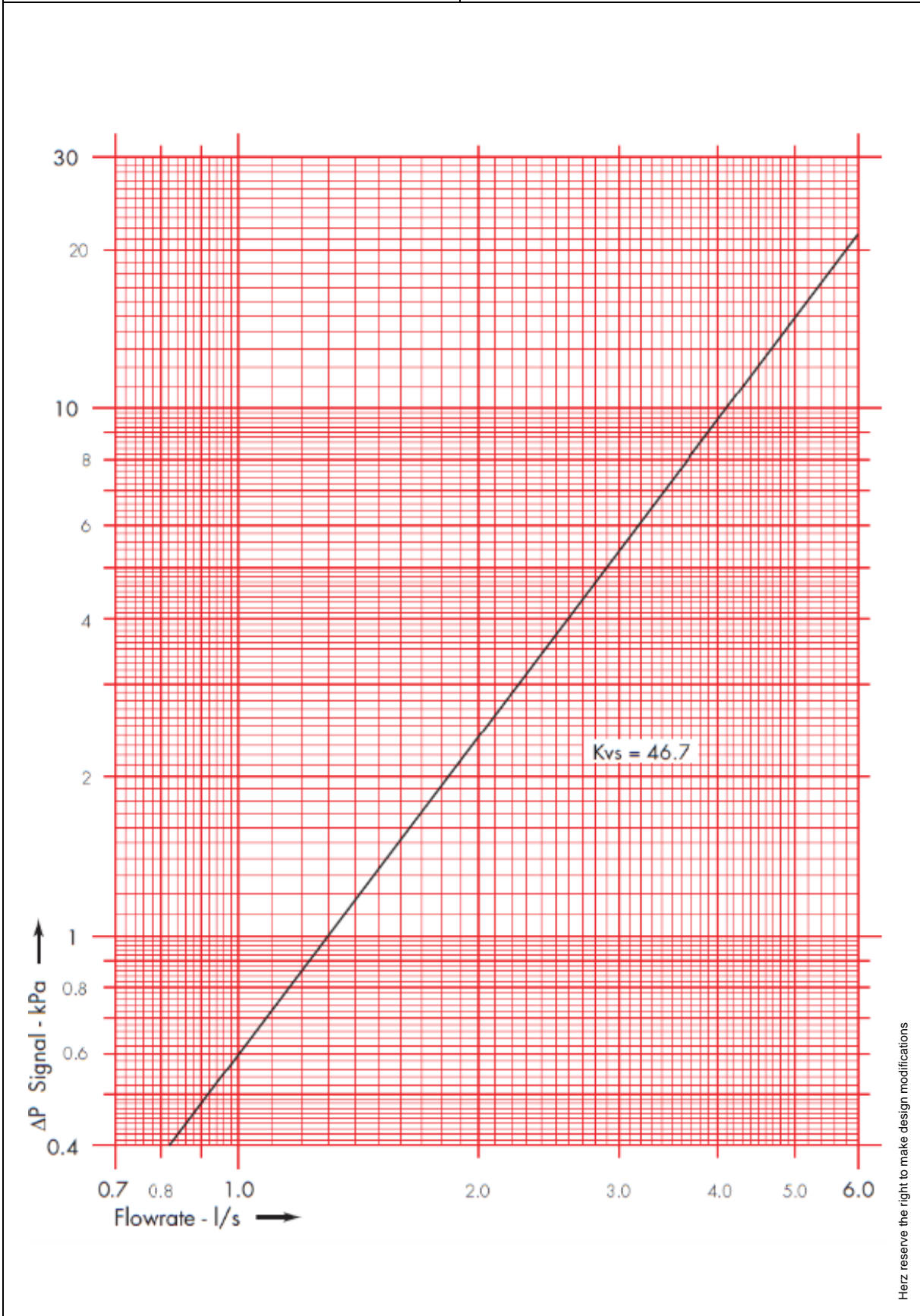
Position	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Kv	4.8	6.3	7.9	9.5	11.2	13.0	14.7	16.3	17.4	18.5



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HERZ standard diagram	Commissioning Valve
Order Nr.: C 4017 06	Dim. DN 50



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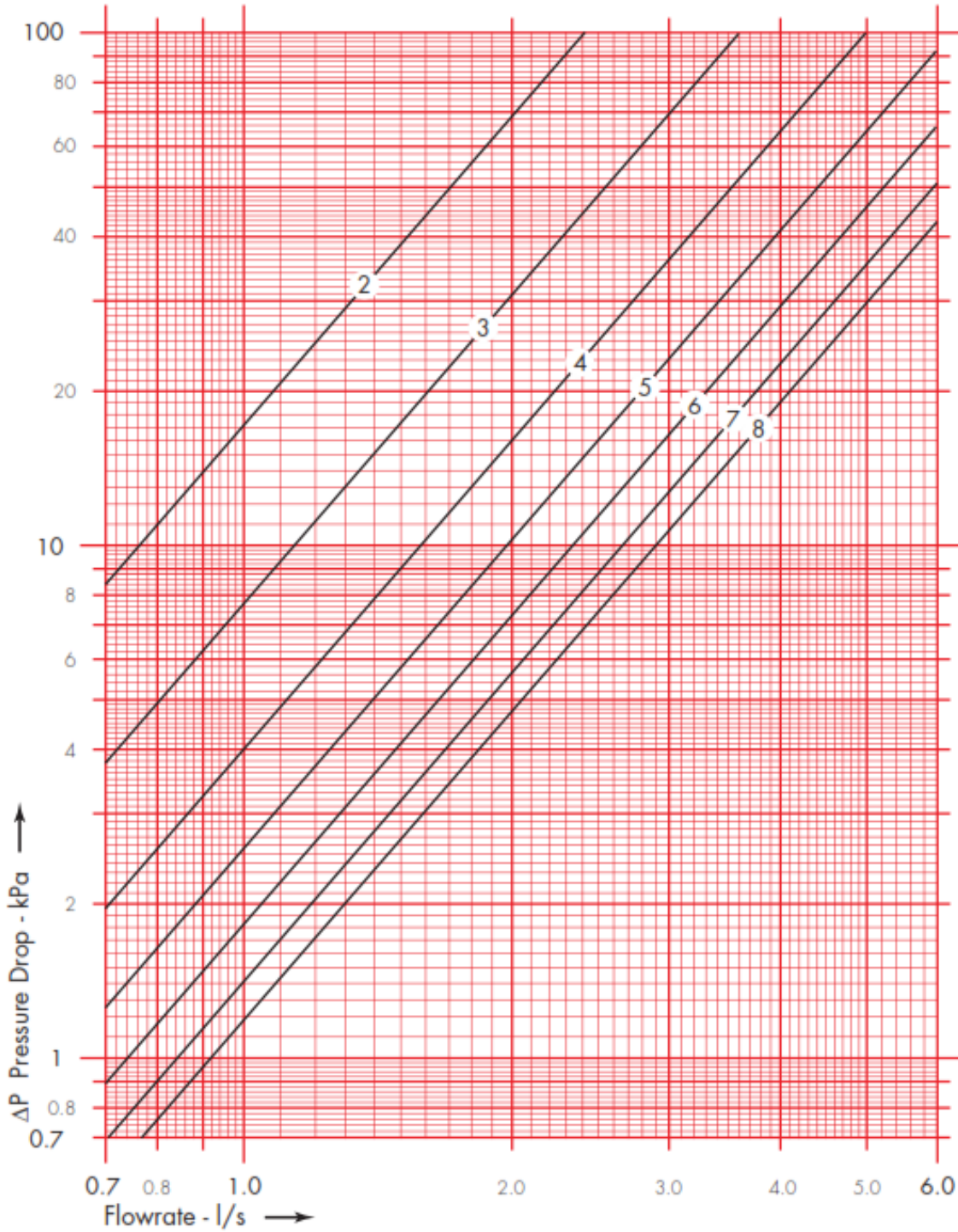
HERZ standard diagram

Commissioning Valve

Order Nr.: C 4017 06

Dim. DN 50

Position	2	3	4	5	6	7	8
Kv	8.7	13.0	18.0	22.5	26.7	30.3	33.0



Herz reserve the right to make design modifications

## >B< Press fittings Installation instructions

### Compatible Press Tools

12 to 35mm Compact machines			
Manufacturer	Press machine	Press jaws	Jaw profile
Rothenberger	Romax compact	Rothenberger - Compact	SV
	Romax compact TT	Rothenberger - Compact	SV
Rems	Mini Press ACC	Rems - Mini	V
Klauke	MAP1/MAP2L/MAP215	Klauke - SBM	KSP4
	MAP219/MAP2L19	Klauke - SBMX	KSP4
Novopress	ACO102/ACO103	NovoPress - V-PB1	V
Milwaukee	M12	Milwaukee - J12	V
Hilti	NPR 019 IE-A22	Hilti - NPR PM V	V
Ridgid	RP 200/210/240/241	Ridgid - Compact Series	V
Conel	PM 1	Conel - V-PB1	V
Viega	Pico	Viega Pico	PT2

12 to 54mm Standard 32kN machines			
Manufacturer	Press machine	Press jaws	Jaw profile
Rothenberger	Romax 3000/4000	Rothenberger - Standard*	SV
Rems	Power-Press/ Akku-Press	Rems - Standard*	V
Novopress	ECO/ACO202/203	NovoPress - V-PB2*	V**
Conel	PM 2	Conel - V-PB2*	V
Klauke	UAP2/UAP3L/UAP332	Klauke - Standard SB**	KSP4
Ridgid	RP 320/330/340	Ridgid - Standard Series	V
Hilti	NPR 019 IE-A22	Hilti - NPR PS V*	V
Milwaukee	M18	Milwaukee - J18*	V**
Viega	Pressgun 5/6	Viega Standard*	PT2

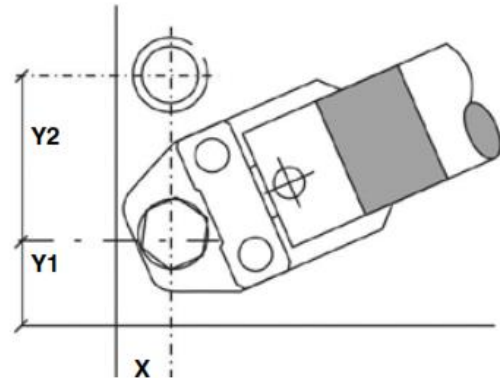
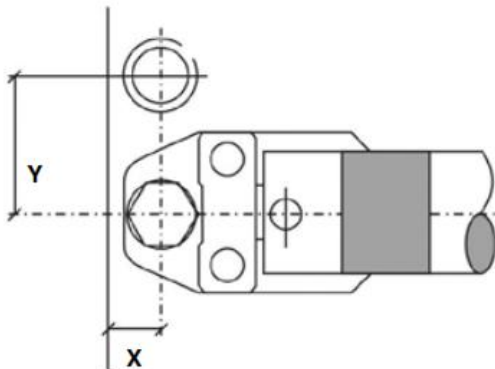
\* Press Jaw only – not press slings, collars, chains or rings

\*\* Novopress & Milwaukee jaws with the  marking only

For inter tool compatibility please refer back to the manufacturer

**☑ Space required for the pressing process**

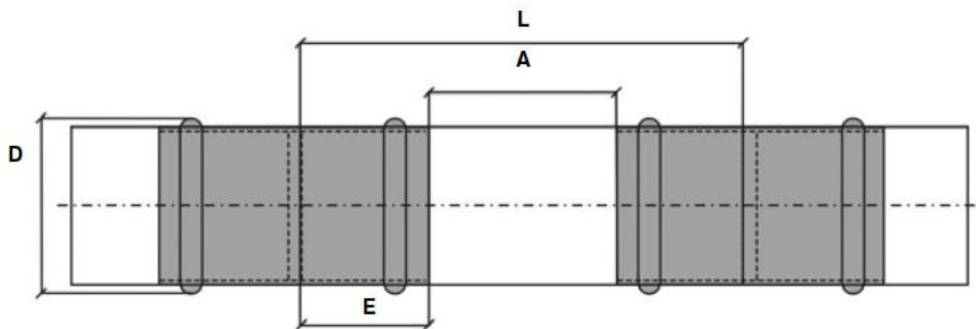
The following minimum clearances are required from structural components to allow operation of tool for press fitting.



Space required for the pressing process between fittings		
External tube	X	Y
Size mm	mm	mm
15	26	53
22	26	54
28	33	69
35	33	73
42	75	115
54	85	120

Space required for the pressing process between fittings			
External tube	X	Y1	Y2
Size mm	mm	mm	mm
15	31	45	73
22	31	45	76
28	38	55	80
35	38	55	85
42	75	75	115
54	85	85	140

**☑ Insertion depth and minimum distances between pressings**



Size	External – Ø pressing bead	Min distance	Min tube length	Insertion depth
Size mm	D - mm	A - mm	L - mm	E - mm
15	22.6	10	54	22
22	31	20	66	23
28	37	20	68	24
35	44	25	77	26
42	53.4	30	102	36
54	65.4	35	115	40

Due to reforming of the tube profile when pressed, it is advised that a minimum distance is allowed between each fitting.

**Minimum distance for press fittings from an existing brazed joint**

To ensure proper sealing of both the brazed and pressed joints, the following minimum distances must be maintained between the joints.

Minimum distance from a brazed joint	
Tube size	mm
15	5
22	5
28	5
35	10
42	15
54	20

**Minimum brazing distance to an existing pressed fitting**

Caution: Brazing or soldering near to >B< Press joints should be avoided as this may cause the seal to degrade due to heat transfer. The table below states the minimum distance away from the press joint which is acceptable to braze. If this distance cannot be maintained then adequate precautions must be taken such as fabricating the brazed section prior to assembly with the press fittings, wrapping in a wet rag or applying a hot block, to prevent heat transfer to the press fitting during brazing.

Minimum distance brazing	
Tube size	mm
15	450
22	600
28	700
35	900
42	1200
54	1500

**Minimum brazing distance to an existing pressed fitting**

>B< Press fittings can be used on hard, half-hard and soft copper tube to EN 1057 with the wall thicknesses stated below.

Tube O/D	Tube wall thickness (mm)					
	Copper - R220		Copper - R250		Copper - R290	
15	1.0	–	0.7	1.0	1.0	–
22	1.0	1.2	0.9	1.1	1.0	1.5
28	–	–	0.9	1.2	1.0	1.5
35	–	–	1.2	–	1.0	1.5
42	–	–	1.2	–	1.0	1.5
54	–	–	1.2	–	1.2	2.0

>B< Press red brass fittings can also be used to connect stainless steel tube in accordance with EN 10312 parts 1 and 2 and Carbon Steel tubes to EN10305.

☑ >B< Press installation process



1. Cut tube to length

- Use a rotary tube cutter
- Ensure that the tube is cut square
- Check that the tube has retained its shape and is damage free



2. Deburr

- Deburr the tube both internally and externally.
- Where possible angle the tube downwards to prevent filings entering the tube.
- Make sure the internal and external surfaces of the tube ends are smooth and free from burrs or sharp edges.

Caution: Please ensure that the tube surface is free from any deep scores or scratches



3. Check the fittings

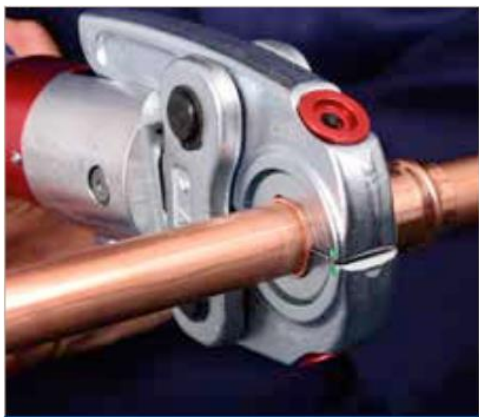
- Check the fitting is the correct size for the tube.
- Check the O-rings are present and correctly seated.
- Additional >B< Press lubricant (silicon oil) may be used to aid tube insertion.





4. Assemble and mark the insertion depth

- The tube must be fully inserted into the fitting until it reaches the tube stop.
- To reduce the risk of dislodging the O-ring, rotate the tube (if possible) while slipping it into the fitting.
- Mark the insertion depth on the tube.
- Prior to pressing ensure the tube has not moved out from the fitting socket.



5. Complete the joint with the press tool

- Ensure pipework is correctly aligned prior to pressing.
- Ensure the correct size jaw is inserted into the tool.
- The jaws must be placed squarely on the fitting, locating the groove on the bead.
- The bead on the fitting should fit centrally in the groove of the jaw.
- Depress and hold the start button on the press tool to complete the pressing cycle.
- Pressing is complete when the jaws are fully closed.
- Complete the press cycle once only – do not re-press.



6. Mark the completed joint

- Mark the completed joint after pressing.
- This enables joints to be inspected easily before testing.