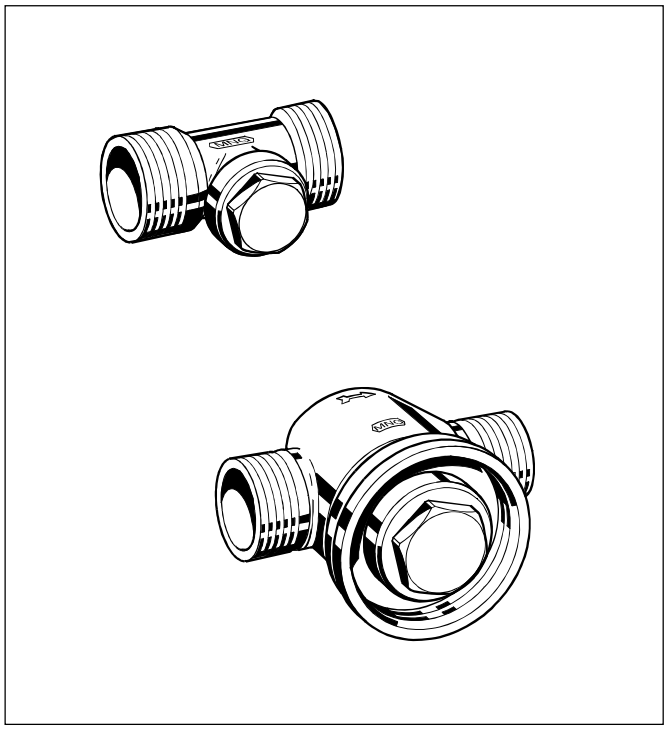
V94 Series Lockshield Valves

CONNECTIONS FOR HEAT EXCHANGERS, PN10, FLAT SEALING

PRODUCT DATA



Application

V94 Series Lockshield Valves are used in the supply and return of heat exchangers in hydronic cooling and heating systems. They have the following functions:

- Shut-off: by closing the valve the flow through the heat exchanger is shut-off.
- Pre-setting: the flow through the heat exchanger can be throttled to meet system requirements

V9400 in DN15 (k_{vs} 1,45) also supports draining over the valve when a draining adapter is used (accessory, not supplied with the valve).

The valves have flat sealing external threads on inlet and outlet. Refer to chapter 'Accessories' further below for suitable union nuts and tailpieces.

Features

- **Robust, noise and flow optimised valve housing made of corrosion resistant red bronze**
- **Available with various k_{vs}-values**
- **Optional flow direction**
- **Shut-off and pre-setting functions**
- **V9400 also with draining function**

Design

- Valve housing PN10, DN15 with 3/4" external threads, DN20 with 1" external threads or DN25 with 1 1/4" external threads, flat sealing
- Valve insert
- Protection cap

Materials

- Valve housing made of red bronze RG5 according to DIN 1705 (G-CuSn5ZnPb), V9400 additionally matt nickel-plated
- Valve insert made of brass with EPDM O-rings
- Protection cap made of brass with Teflon sealing, V9400 additionally nickel-plated

Specifications

Medium	Water or glycol-water mixture
pH-value	8...9,5
Operating temperature	2...130°C (36...266°F)
Operating pressure	max. 10 bar (156 P.S.I.)
k_{vs} (cv)-values	1,7...5,0 (1,98...5,81) see Table 2 on page 35
Leakage rate	0,02% of k_{vs}-value
Rangeability	50 : 1

Dimensions

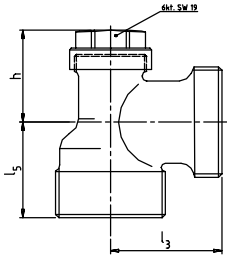


Fig. 1. V9400 angle

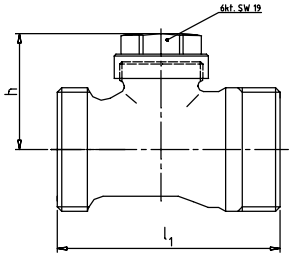


Fig. 2. V9400 straight

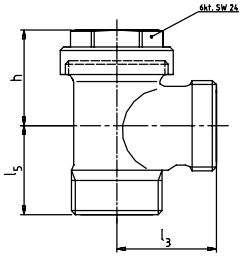


Fig. 3. V9441 angle

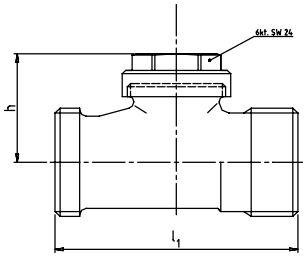


Fig. 4. V9441 straight

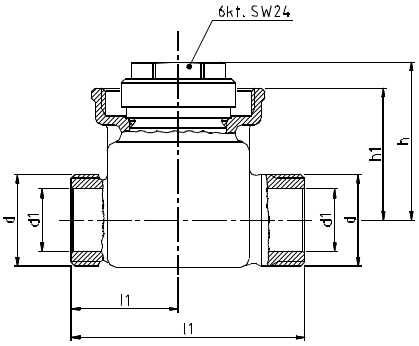


Fig. 5. V9440 straight

Table 1: Dimensions

Item	DN	Connection	l_1	l_3	l_5	h	Spanner size cap
V9400 angle	15	1/2”	—	29	26	25	19
	20	3/4”	—	34	29	29	19
V9400 straight	15	1/2”	51	—	—	32	19
	20	3/4”	59	—	—	32	19
V9441 angle	15	1/2”	—	29	26	28	24
V9441 straight	15	1/2”	66	—	—	33	24
V9440 straight	20	1”	75	—	—	45	24

NOTE: All dimensions in mm unless otherwise stated.

Ordering Information

Type	Version	DN	k_{vs}-value	cv-value	OS-No.
V9400	angle	15	1,70	1,98	V9400EX015
	angle	20	1,70	1,98	V9400EX020
	straight	15	1,45	1,69	V9400DX015
	straight	20	1,50	1,74	V9400DX020
V9441	angle	15	4,00	4,65	V9441EX015
	straight	15	2,20	2,56	V9441DX015
V9440	straight	20	5,00	5,81	V9440DX020

Accessories

Connections

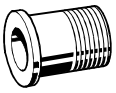
Nickel-plated brass union nut

for valves DN10	VA5000B010
for valves DN15	VA5000B015
for valves DN20	VA5000B020

PTFE sealing ring

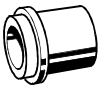
for valves DN10	VA5090A010
for valves DN15	VA5090A015
for valves DN20	VA5090A020

Externally threaded brass tailpiece, flat sealing



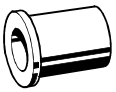
3/8”, for valves DN10	VA5500A010
1/2”, for valves DN15	VA5500A015
3/4”, for valves DN20	VA5500A020

Brass soldering tailpiece, flat sealing



12 mm, for valves DN10	VA5930A012
15 mm, for valves DN15	VA5930A015
22 mm, for valves DN20	VA5930A020

Steel welding tailpiece, flat sealing



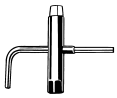
DN10	VA5940A010
DN15	VA5940A015
DN20	VA5940A020

Accessories

Draining adapter

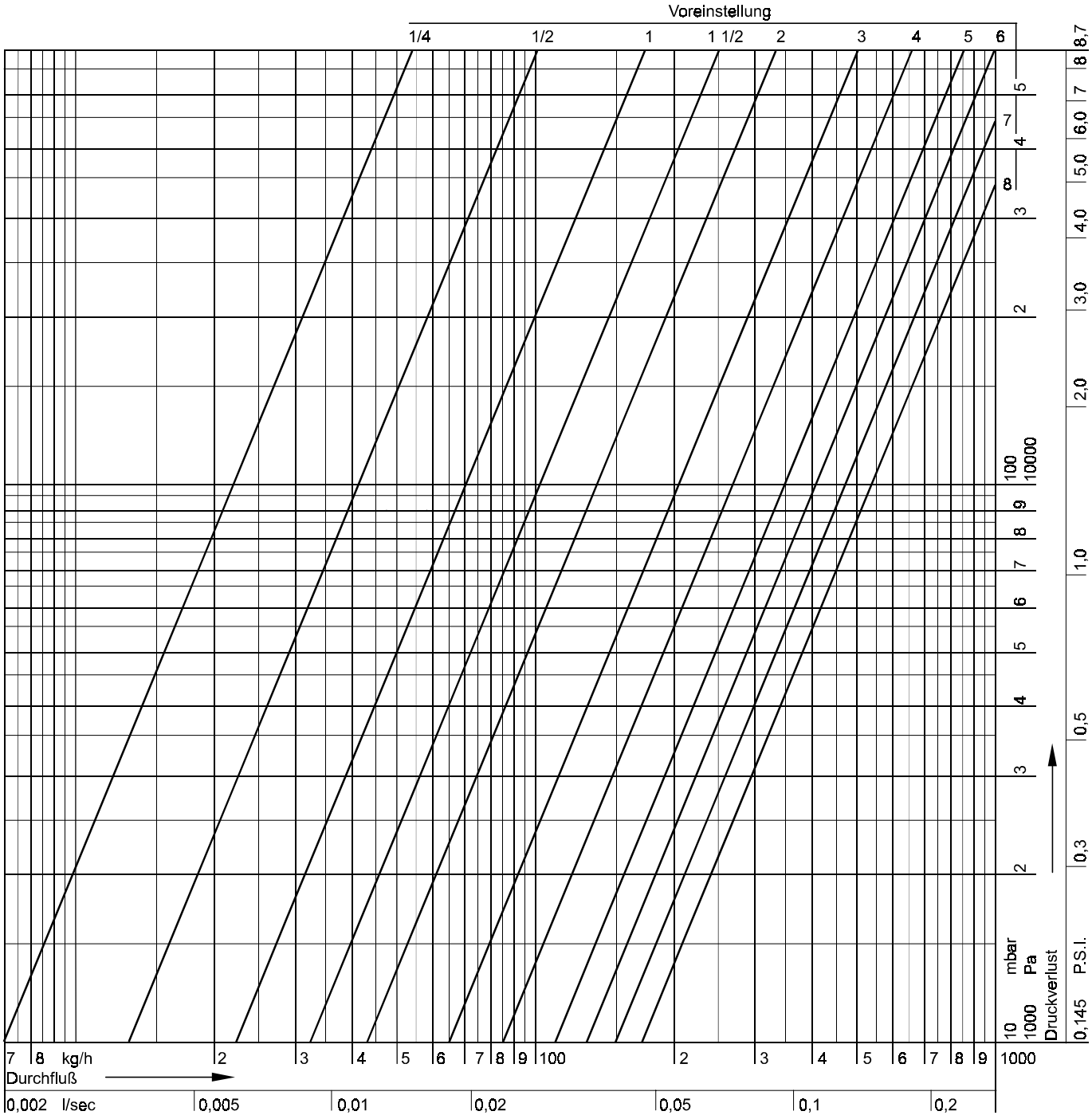
for V9400	VA3300A001

Special tool



for V9400	VA8300A001

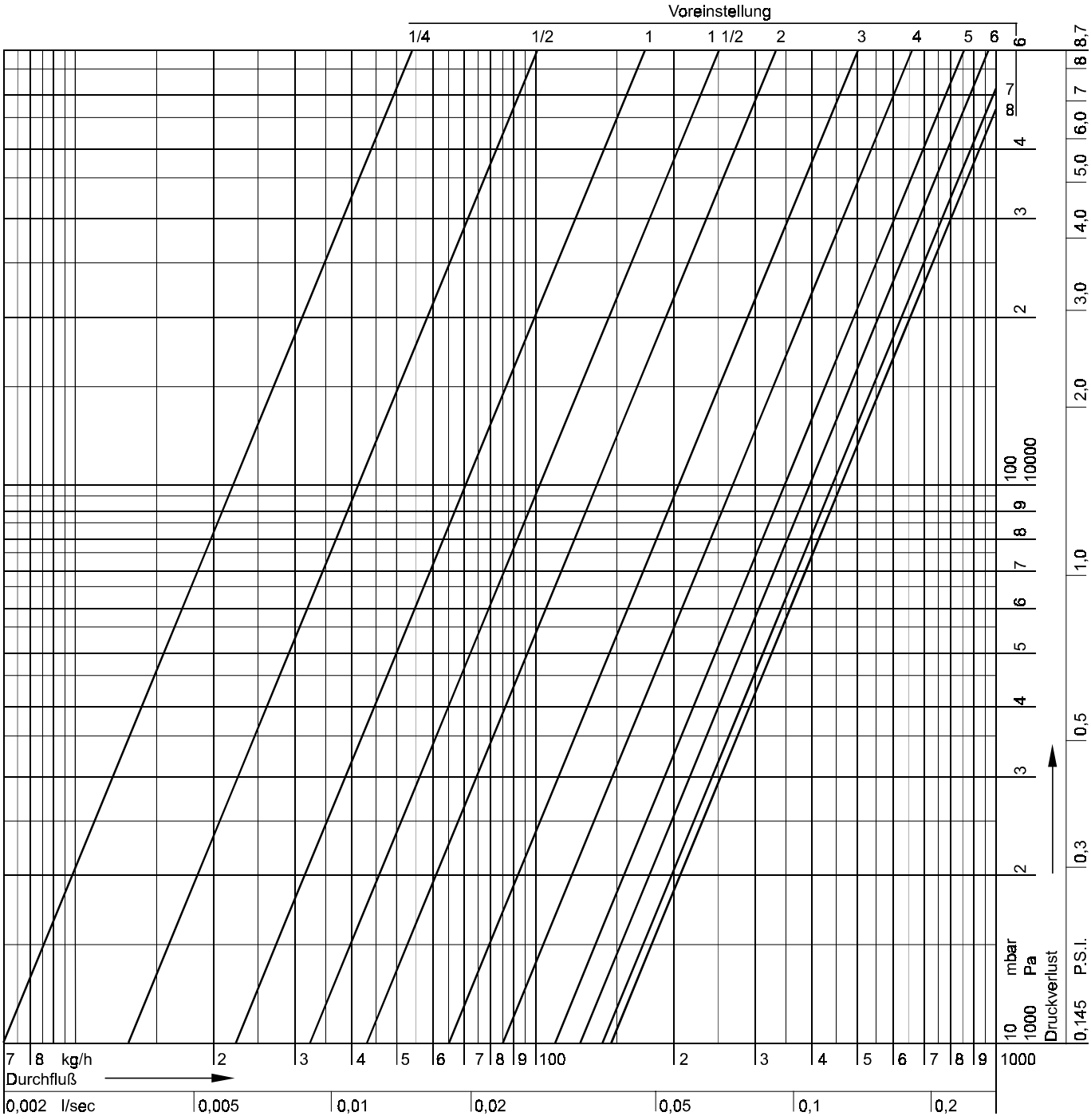
Flow diagram V9400 angle, DN15 and DN20



Pre-setting	1/4	1/2	1	1 1/2	2	3	4	5	6	7	8
k_V-value	0,07	0,13	0,22	0,32	0,43	0,65	0,85	1,10	1,30	1,50	1,70
cv-value	0,08	0,15	0,26	0,37	0,50	0,76	0,99	1,28	1,51	1,74	1,98

NOTE: Flow data is only valid for water with a temperature of 5...30°C (41...86°F). When other temperatures or liquids are used the data may vary – see Reference Sheet 'Calculation of Flow Data' (EN0H-0221GE25).

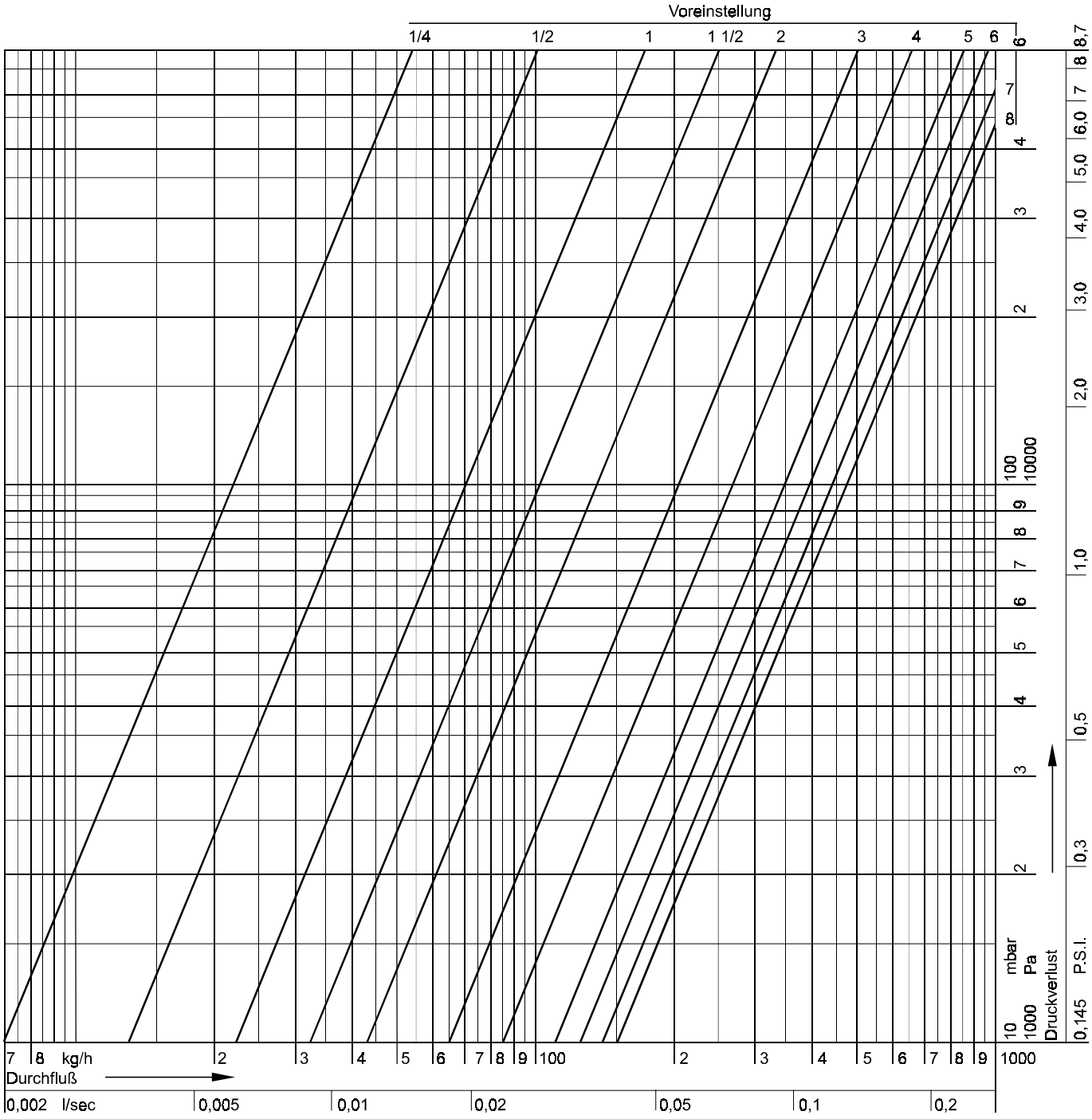
Flow diagram V9400 straight, DN15



Pre-setting	1/4	1/2	1	1 1/2	2	3	4	5	6	7	8
k_v-value	0,07	0,13	0,22	0,32	0,43	0,65	0,85	1,10	1,25	1,40	1,45
cv-value	0,08	0,15	0,26	0,37	0,50	0,76	0,99	1,28	1,45	1,63	1,69

NOTE: Flow data is only valid for water with a temperature of 5...30°C (41...86°F). When other temperatures or liquids are used the data may vary – see Reference Sheet 'Calculation of Flow Data' (EN0H-0221GE25).

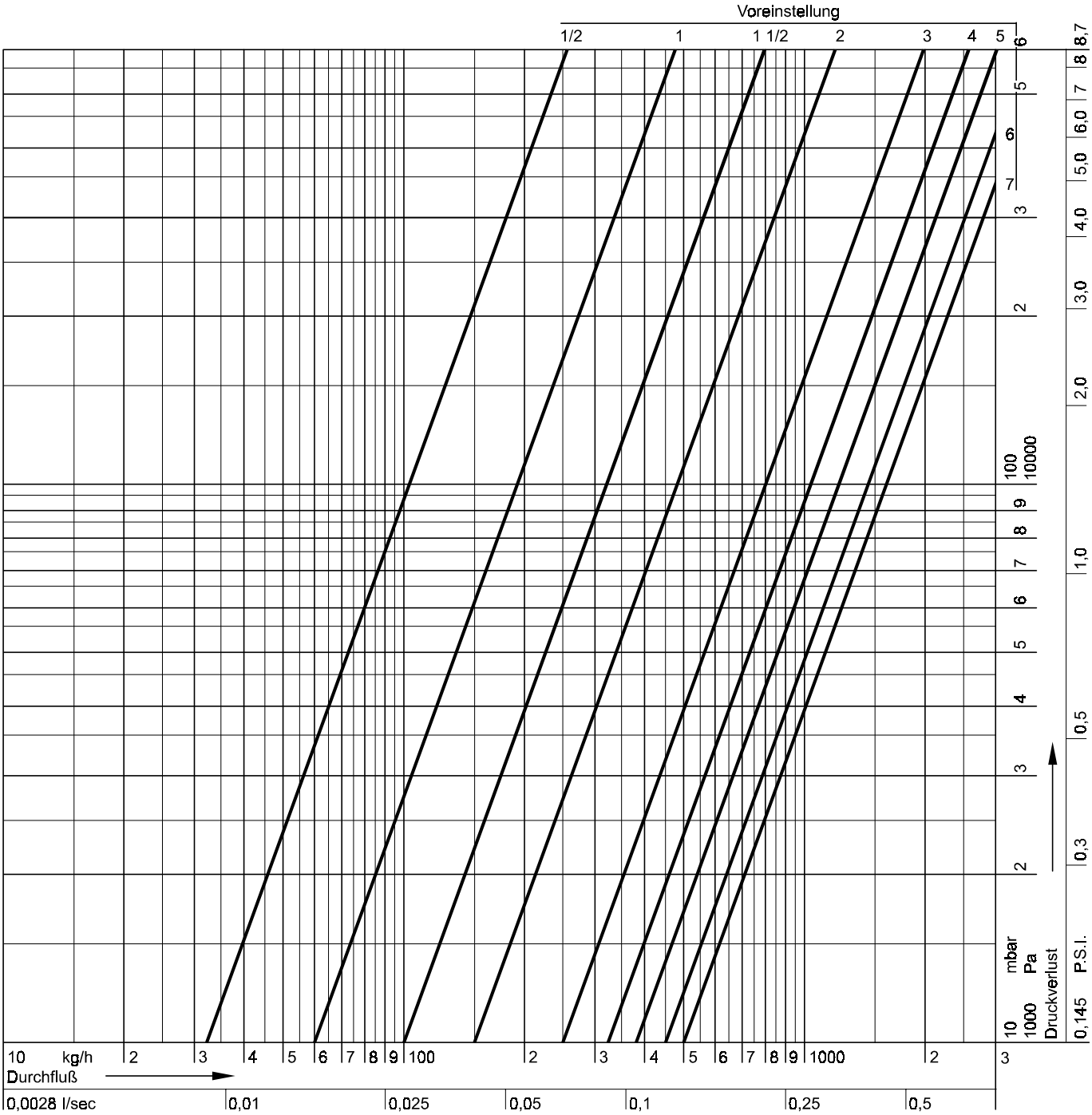
Flow diagram V9400 straight, DN20



Pre-setting	1/4	1/2	1	1 1/2	2	3	4	5	6	7	8
k_V-value	0,07	0,13	0,22	0,32	0,43	0,65	0,85	1,10	1,25	1,40	1,50
cv-value	0,08	0,15	0,26	0,37	0,50	0,76	0,99	1,28	1,45	1,63	1,74

NOTE: Flow data is only valid for water with a temperature of 5...30°C (41...86°F). When other temperatures or liquids are used the data may vary – see Reference Sheet 'Calculation of Flow Data' (EN0H-0221GE25).

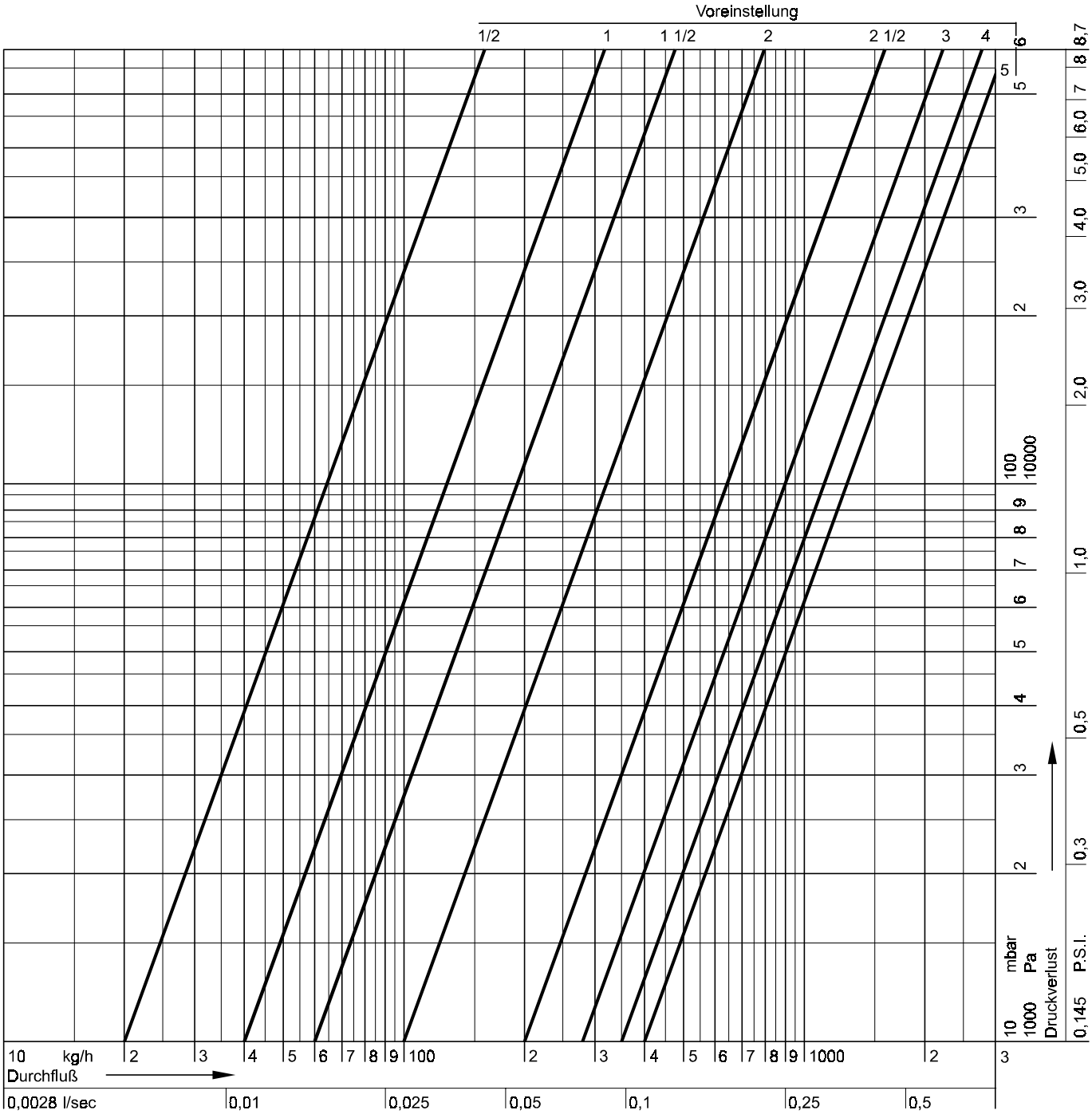
Flow diagram V9440 and V9441 angle



Pre-setting	1/2	1	1 1/2	2	3	4	5	6	7
k_v-value	0,32	0,60	1,00	1,50	2,50	3,20	3,80	4,50	5,00
cv-value	0,37	0,70	1,16	1,74	2,91	3,72	4,42	5,23	5,81

NOTE: Flow data is only valid for water with a temperature of 5...30°C (41...86°F). When other temperatures or liquids are used the data may vary – see Reference Sheet 'Calculation of Flow Data' (EN0H-0221GE25).

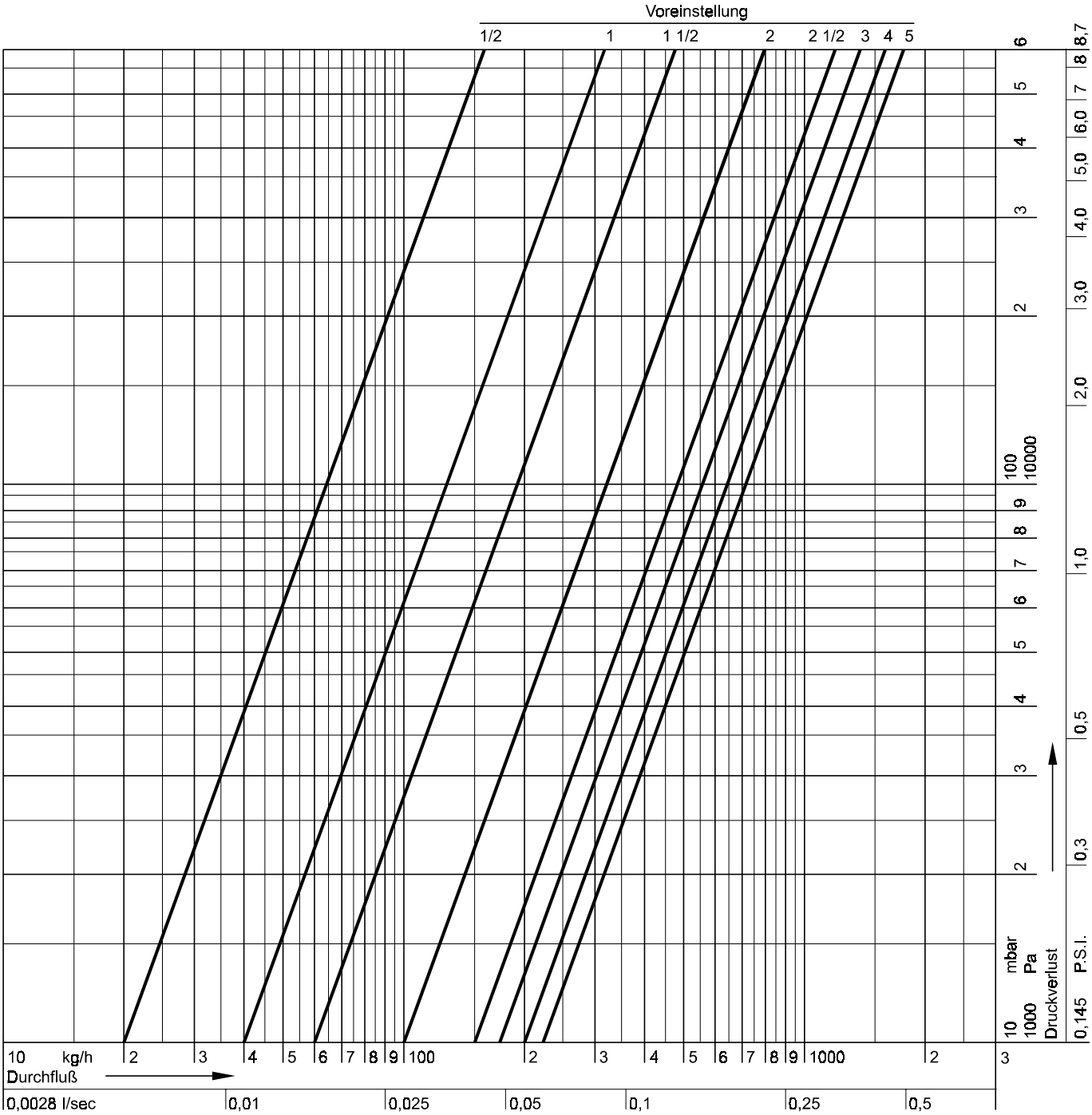
Flow diagram V9441 angle



Pre-setting	1/2	1	1 1/2	2	2 1/2	3	4	5
k_v-value	0,20	0,40	0,60	1,00	2,00	2,80	3,50	4,00
cv-value	0,23	0,47	0,70	1,16	2,33	3,26	4,07	4,65

NOTE: Flow data is only valid for water with a temperature of 5...30°C (41...86°F). When other temperatures or liquids are used the data may vary – see Reference Sheet 'Calculation of Flow Data' (EN0H-0221GE25).

Flow diagram V9441 straight



Pre-setting	1/2	1	1 1/2	2	2 1/2	3	4	5
k_v-value	0,20	0,40	0,60	1,00	1,50	1,70	2,00	2,20
cv-value	0,23	0,47	0,70	1,16	1,74	1,98	2,33	2,56

NOTE: Flow data is only valid for water with a temperature of 5...30°C (41...86°F). When other temperatures or liquids are used the data may vary – see Reference Sheet 'Calculation of Flow Data' (EN0H-0221GE25).

Honeywell

Home and Building Control
Honeywell AG
Zu den Ruhrwiesen 3
D-59755 Arnsberg-Neheim

Phone: (49) 2932 9880
Fax: (49) 2932 988259
mng@honeywell.com

http://europe.hbc.honeywell.com

