

## Angle Seat Globe Valve, Metal

### Construction

The GEMÜ 554 pneumatically operated 2/2 way angle seat globe valve, which can also be used at relatively high temperatures, has a plastic pneumatic piston actuator and PTFE seat providing reliable operation.

The valve spindle is sealed by a self-adjusting gland packing providing low maintenance and reliable valve spindle sealing even after a long service life. The wiper ring fitted in front of the gland packing protects the seal against contamination and damage.

### Features

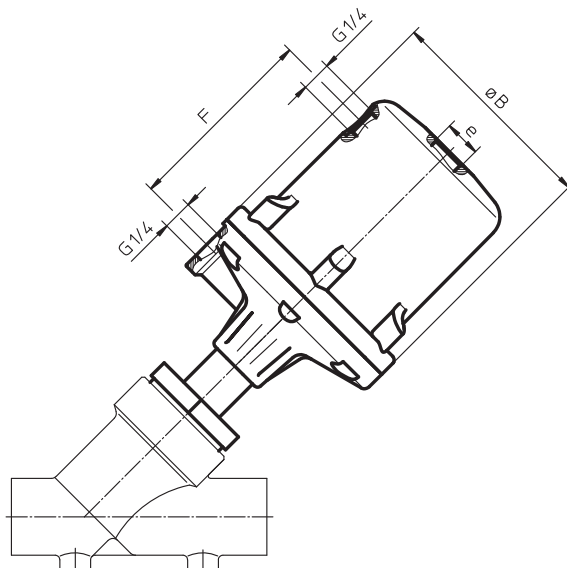
- Substantially reduced installation dimensions when using the body with male threads which can be installed using union nuts
- When using actuated valves in sizes 0 and 1 the gland packing is not subjected to line pressure as the pressure is sealed by the valve seat when closed
- Materials of all medium wetted parts can be selected to suit relevant applications
- Control valves with control cone available

### Advantages

- Various types of valve body connections: Threaded sockets, threaded spigots, butt weld spigots
- Good flow capability
- Extensive range of accessories
- Low weight

Actuator dimensions [mm]

Actuators	ø B	e	F
0 + 3	72	M 16x1	70
1 + 4	96	M 16x1	86
2	168	M 22x1.5	149



For installation dimensions see page 5



## Technical data

### Working medium

Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the body and seal materials.

Max. perm. pressure of working medium see table

Max. perm. temp. of working medium 180° C (standard)

Max. permissible viscosity 600 mm<sup>2</sup>/s (cSt)

Other versions for higher temperatures and viscosities on request

### Control medium

Inert gases

Max. perm. temperature of control medium: 60° C

Filling volume actuators 0 and 3: 0.05 NI  
actuators 1 and 4: 0.125 NI  
actuators 2: 0.625 NI

### Ambient conditions

Max. ambient temperature 60° C

Nom. size [mm]	Max. operating pressure[bar] control function 1*					Control pressure c.f. 1					K <sub>v</sub> value [m <sup>3</sup> /h]
	Actuator 0 piston ø 50 mm	Actuator 3 piston ø 50 mm	Actuator 1 piston ø 70 mm	Actuator 4 piston ø 70 mm	Actuator 2	Actuator 0	Actuator 3	Actuator 1	Actuator 4	Actuator 2	
15	12.0	10	25.0	10	-	4.8 - 7.0	min. control pressure see diagram max. control pressure 7 bar	5.5 - 7.0	min. control pressure see diagram max. control pressure 7 bar	-	5.4
20	6.0	10	20.0	10	25	4.8 - 7.0		5.5 - 7.0		4.0 - 7.0	10.0
25	2.5	10	10.0	10	25	4.8 - 7.0		5.5 - 7.0		4.0 - 7.0	15.2
32	-	-	7.0	10	20	-		5.5 - 7.0		4.0 - 7.0	23.0
40	-	-	4.5	10	12	-		5.5 - 7.0		4.0 - 7.0	41.0
50	-	-	3.0	10	10	-		5.5 - 7.0		5.0 - 7.0	71.0
65	-	-	-	-	7	-		-		5.0 - 7.0	108.0
80	-	-	-	-	5	-		-		5.0 - 7.0	160.0

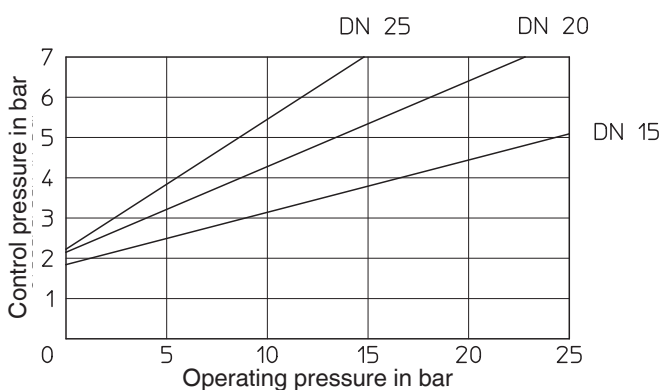
\*It should be noted that cast bronze valve bodies, when in pipe systems according to DIN, are only suitable up to PN 16 max., stainless steel bodies up to PN 25. All pressures are given as gauge pressures

Min. control pressure for c.f. 2 and 3 see diagram. Max. control pressure for c.f. 2 and 3: 7 bar. Kv-values: Tolerance ±10%.

## Operating pressure/Control pressure characteristics

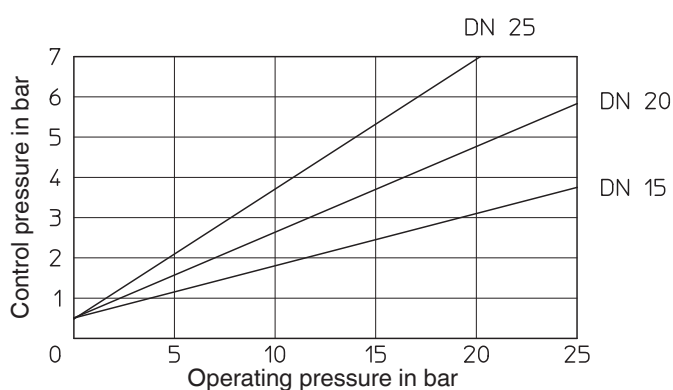
### Actuator 0 / Control function 2

Min. control pressure depending on operating pressure



### Actuator 0 / Control function 3

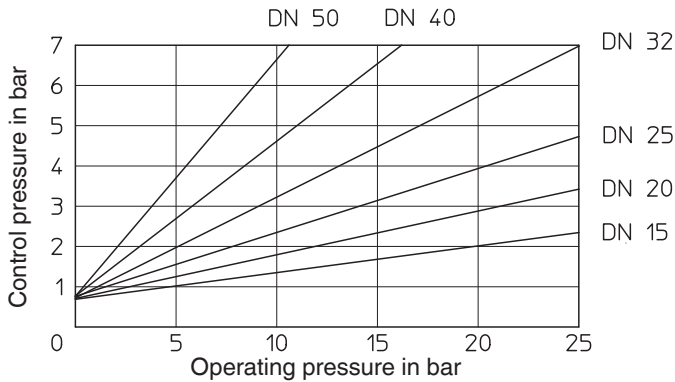
Min. control pressure depending on operating pressure



## Working pressure/Control pressure characteristics

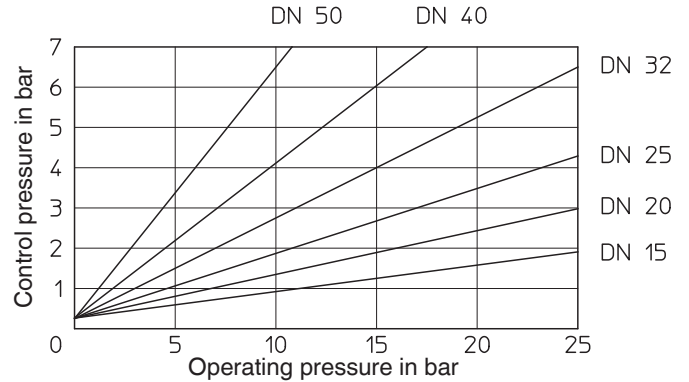
### Actuator 1 / Control function 2

Min. control pressure depending on operating pressure



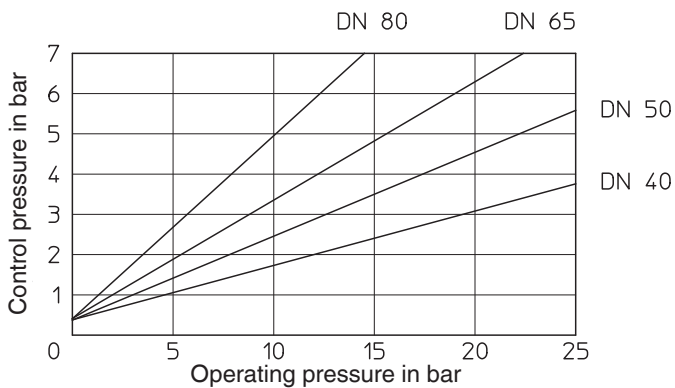
### Actuator 1 / Control function 3

Min. control pressure depending on operating pressure



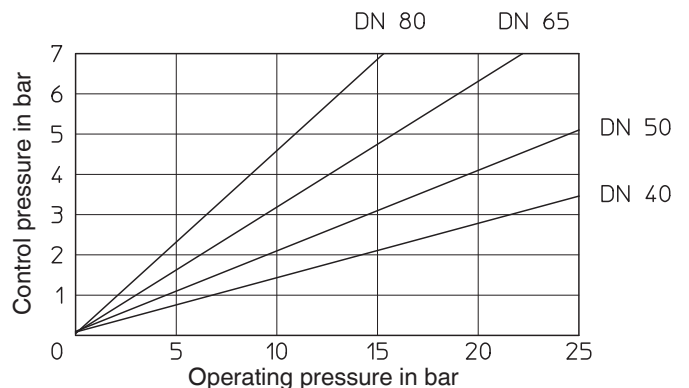
### Actuator 2 / Control function 2

Min. control pressure depending on operating pressure



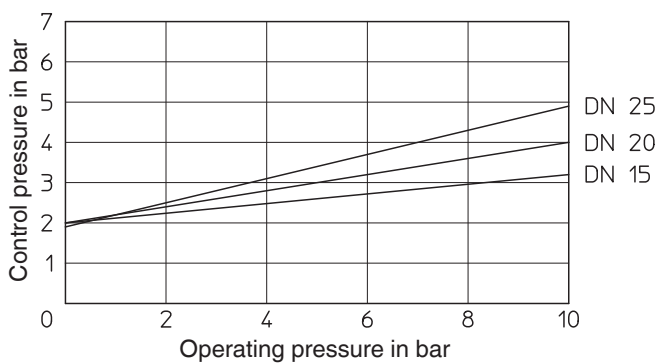
### Actuator 2 / Control function 3

Min. control pressure depending on operating pressure



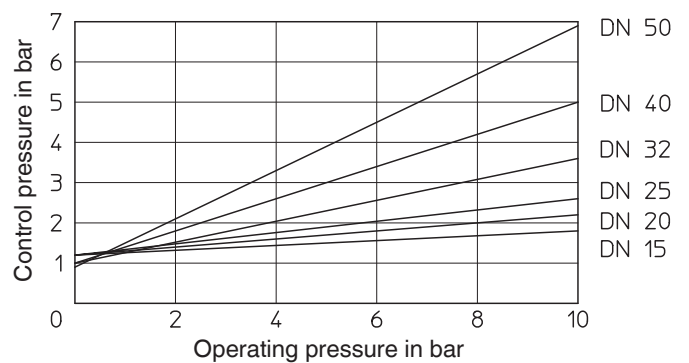
### Actuator 3 / Control function 1

Min. control pressure depending on operating pressure



### Actuator 4 / Control function 1

Min. control pressure depending on operating pressure



## Order data

Body configuration	Code
2/2 way	D

Seat seal	Code
PTFE	5

Connections	Code
<b>Butt weld spigots</b>	
Spigots DIN	0
Spigots DIN 11850, series 1	16
Spigots DIN 11850, series 2	17
Spigots DIN 11850, series 3	18
Spigots SMS 3008	37
Spigots ASME BPE	59
Spigots EN ISO 1127	60

Control function	Code
Normally closed	1
Normally open	2
Double acting	3

Threaded connections	Code
Threaded sockets DIN ISO 228	1
Threaded sockets BS 21 Rc	3B
Threaded spigots DIN ISO 228	9
Threaded sockets NPT	31

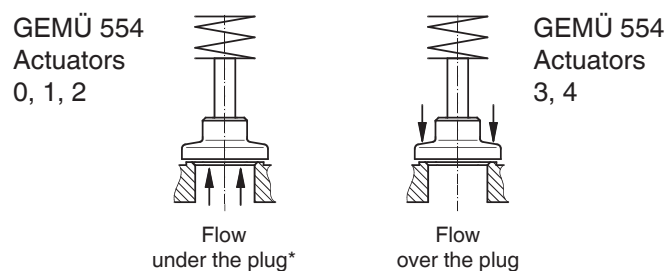
Actuator size	Flow	Code
Actuator 0 piston ø 50 mm	Flow under the plug*	0
Actuator 1 piston ø 70 mm	Flow under the plug*	1
Actuator 2 piston ø 120 mm	Flow under the plug*	2
Actuator 3 piston ø 50 mm	Flow over the plug	3
Actuator 4 piston ø 70 mm	Flow over the plug	4

Clamp connections	Code
Clamps following ASME BPE for pipe EN ISO 1127, length EN 558-1, series 1	82
Clamps DIN 32676 for pipe DIN 11850, length EN 558-1, series 1	86
Clamp ASME BPE for pipe ASME BPE, length EN 558-1, series 1	88

\* Preferred flow direction with incompressible liquid media to avoid "water hammer"

Valve body material	Code
Rg 5 Cast bronze	9
1.4435 (ASTM A 351 CF3M) Investment casting*	34
1.4408 Cast stainless steel	37
ASTM A 351 CF3M Investment casting*	C1

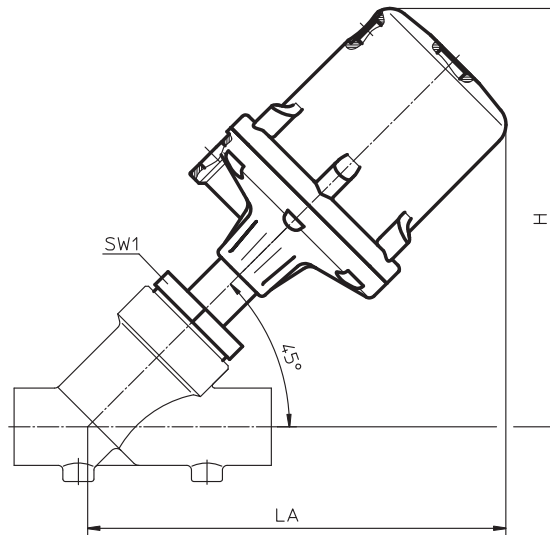
## Flow direction



\* Preferred flow direction with incompressible liquid media to avoid "water hammer"

Order example	554	15	D	1	9	5	1	1
Type	554							
Nominal size		15						
Body configuration (code)			D					
Connection (code)				1				
Valve body material (code)					9			
Seat seal (code)						5		
Control function (code)							1	
Actuator size (code)								1

## Installation dimensions [mm]



For actuator dimensions see page 1

Actuator size	Wrench size SW 1		Installation dimensions [mm]		
	SW1		0 and 3	1 and 4	2
Material code	9	34, 37, C1	H/LA	H/LA	H/LA
DN					
15	36	36	155	182	-
20	41	41	165	192	279
25	46	46	165	192	279
32	55	55	-	200	287
40	60	60	-	206	293
50	75	75	-	214	301
65	100	75	-	-	313
80	110	75	-	-	330

Nominal size [mm]	Weight [kg]		
	Actuators 0 + 3	Actuators 1 + 4	Actuator 2
15	0.9	1.4	-
20	1.1	1.6	-
25	1.3	1.8	-
32	-	2.4	5.1
40	-	2.7	6.0
50	-	3.4	6.9
65	-	-	8.5
80	-	-	10.1

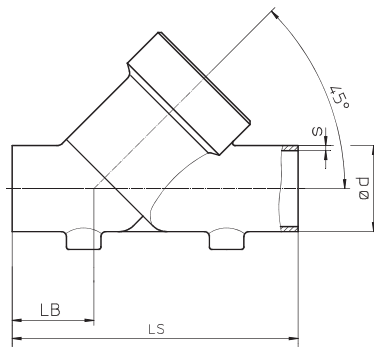
## Body dimensions

### Butt weld spigots [mm]

Valve body material: 1.4435 (code 34), 1.4408 (code 37)

					Connection code															
Material code 34		Material code 37			0		16		17		18		37		59		60			
DN	LS	LB	LS	LB	d	s	d	s	d	s	d	s	d	s	d	s	d	s		
10	105	35.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.2	1.6
15	105	35.5	100	33	18	1.5	18	1.0	19	1.5	20	2.0	-	-	12.70	1.65	21.3	1.6		
20	120	39.0	108	33	22	1.5	22	1.0	23	1.5	24	2.0	-	-	19.05	1.65	26.9	1.6		
25	125	38.5	112	32	28	1.5	28	1.0	29	1.5	30	2.0	25.0	1.2	25.40	1.65	33.7	2.0		
32	155	48.0	137	39	-	-	34	1.0	35	1.5	36	2.0	-	-	-	-	42.4	2.0		
40	160	47.0	146	40	40	1.5	40	1.0	41	1.5	42	2.0	38.0	1.2	38.10	1.65	48.3	2.0		
50	180	48.0	160	38	52	1.5	52	1.0	53	1.5	54	2.0	51.0	1.2	50.80	1.65	60.3	2.0		
65	-	-	290	96	-	-	-	-	70	2.0	-	-	63.5	1.6	63.50	1.65	76.1	2.0		
80	-	-	310	95	-	-	-	-	85	2.0	-	-	76.1	1.6	76.20	1.65	88.9	2.3		

For materials see overview on last page

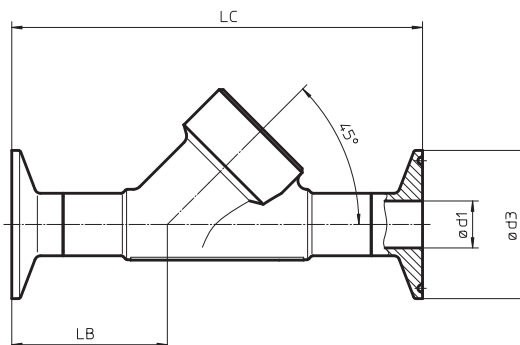


### Clamp connections, connection code 82, 86, 88 [mm]

Valve body material: 1.4435 (code 34), 1.4408 (code 37)

				Connection code					
				82		86		88	
DN	NPS	LB	LC	d1	d3	d1	d3	d1	d3
15	1/2"	48.0	130	18.1	50.5	16	34.0	9.4	25.0
20	3/4"	54.0	150	23.7	50.5	20	34.0	15.75	25.0
25	1"	56.0	160	29.7	50.5	26	50.5	22.1	50.5
32	1 1/4"	60.5	180	38.4	64.0	32	50.5	-	-
40	1 1/2"	67.0	200	44.3	64.0	38	50.5	34.8	50.5
50	2"	73.0	230	56.3	77.5	50	64.0	47.5	64.0
65	2 1/2"	96.0	290	72.1	91.0	66	91.0	60.2	77.5
80	3"	95.0	310	84.3	106.0	81	106.0	72.9	91.0

For materials see overview on last page.



**Threaded sockets DIN, connection code 1 [mm]**  
 Valve body material: Cast bronze (code 9), 1.4408 (code 37)

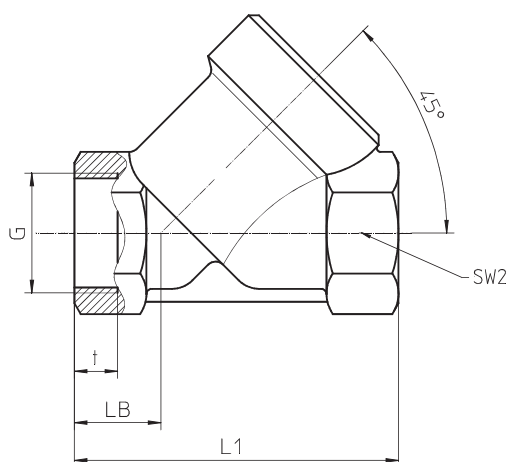
Material code				9			37		
DN	L1	LB	G	t	SW2		t	SW2	
10	65	16,5	G 3/8	-	-	-	9	27	hexagonal
15	65	17,0	G 1/2	15,0	27	hexagonal	9	25	hexagonal
20	75	18,0	G 3/4	16,3	32	hexagonal	11	31	hexagonal
25	90	24,0	G 1	19,0	41	hexagonal	12	39	hexagonal
32	110	33,0	G 1 1/4	21,4	50	octagonal	14	48	octagonal
40	120	30,0	G 1 1/2	21,4	55	octagonal	14	55	octagonal
50	150	40,0	G 2	25,7	70	octagonal	15	66	octagonal
65	190	46,0	G 2 1/2	24,0	85	octagonal	22	85	octagonal
80	220	50,0	G 3	27,0	100	octagonal	25	100	octagonal

For materials see overview on last page.

**Threaded sockets NPT, BS 21 Rc, connection code 31, 3B [mm]**  
 Valve body material: Cast bronze (code 9), 316L (code C1)

					Connection code			
					31		3B	
DN	L1	LB	SW2		G	t	G	t
15	81	24.5	27	6	1/2" NPT	13.6	Rc 1/2	15.0
20	87	24.0	32	6	3/4" NPT	14.0	Rc 3/4	16.3
25	104	31.0	41	6	1" NPT	16.8	Rc 1	19.0
32	122	39.0	50	8	1 1/4" NPT	17.3	Rc 1 1/4	21.4
40	136	38.0	55	8	1 1/2" NPT	17.3	Rc 1 1/2	21.4
50	165	47.5	70	8	2" NPT	17.7	Rc 2	25.7
65	212	57.0	85	8	2 1/2" NPT	23.7	Rc 2 1/2	30.2
80	242	61.0	100	8	3" NPT	25.9	Rc 3	33.3

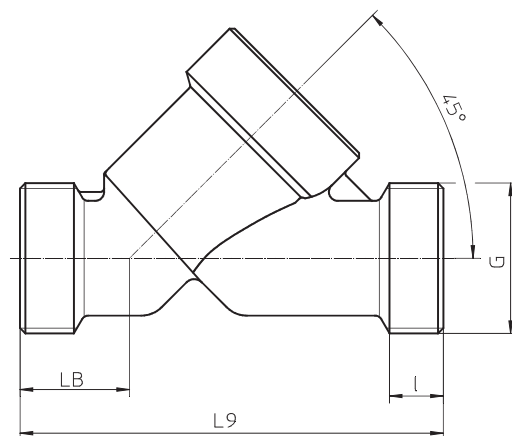
For materials see overview on last page.



**Threaded spigots, connection code 9 [mm]**  
 Valve body material: Cast bronze (code 9), 1.4408 (code 37)

DN	L9	LB	l	G
15	90	25	12	G 3/4
20	110	30	15	G 1
25	118	30	15	G 1 1/4
32	130	38	13	G 1 1/2
40	140	35	13	G 1 3/4
50	175	50	15	G 2 3/8
65	216	52	15	G 3
80	254	64	18	G 3 1/2

For materials see overview below.



**Overview of metal bodies for GEMÜ 554**

Material code	Cast bronze (code 9)				1.4408 (code 37)						1.4435 (code 34)								C1				
	1	9	31	3B	1	9	17	37	59	60	0	16	17	18	37	59	60	82	86	88	31	3B	
DN 10	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
DN 15	X	X	X	X	X	X	X	-	-	X	X	X	X	X	-	X	X	X	X	X	X	X	X
DN 20	X	X	X	X	X	X	X	-	-	X	X	X	X	X	-	X	X	X	X	X	X	X	X
DN 25	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DN 32	X	-	X	X	X	X	-	-	-	X	-	X	X	X	-	-	X	X	X	-	-	-	-
DN 40	X	X	X	X	X	X	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DN 50	X	X	X	X	X	X	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DN 65	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
DN 80	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-

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