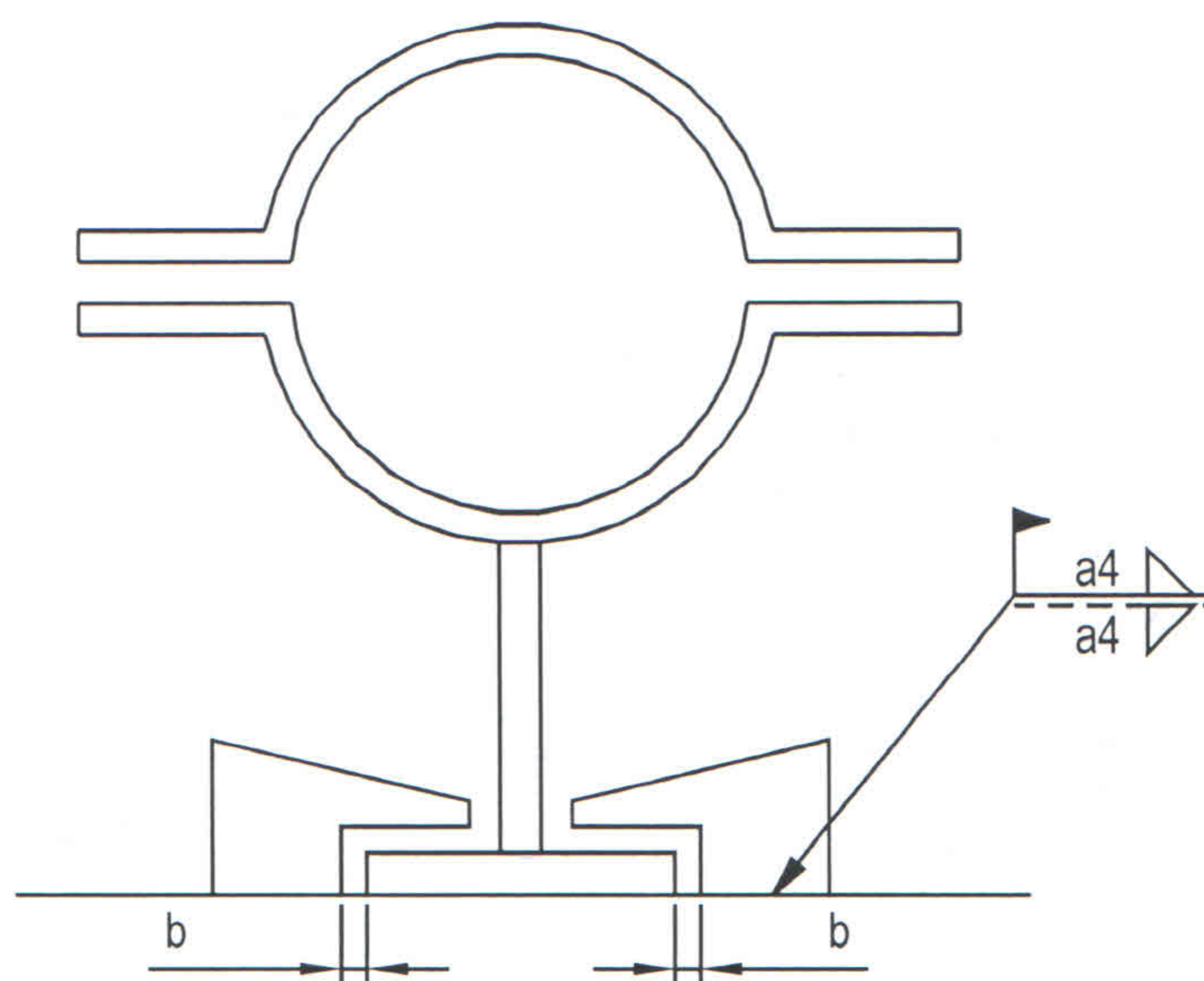
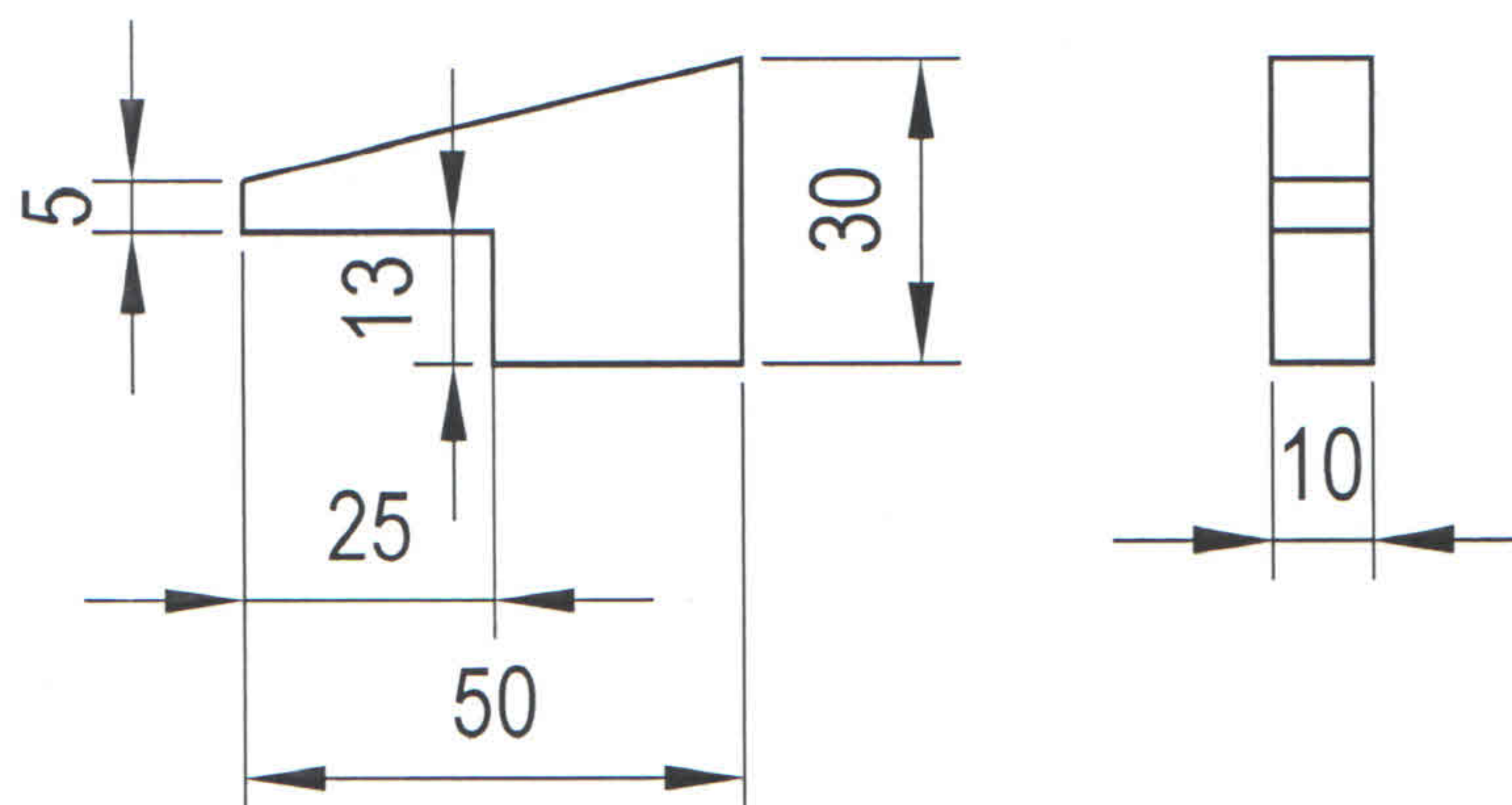


metso PROJECT STANDARD			
No. MPS3020		File: mps3020e.doc	
Piping supports		Page: 1/1	
LIGHT LUG		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.:

1. Structure and dimensions



Gap b is defined according to accuracy requirement of guiding.

2. Designation

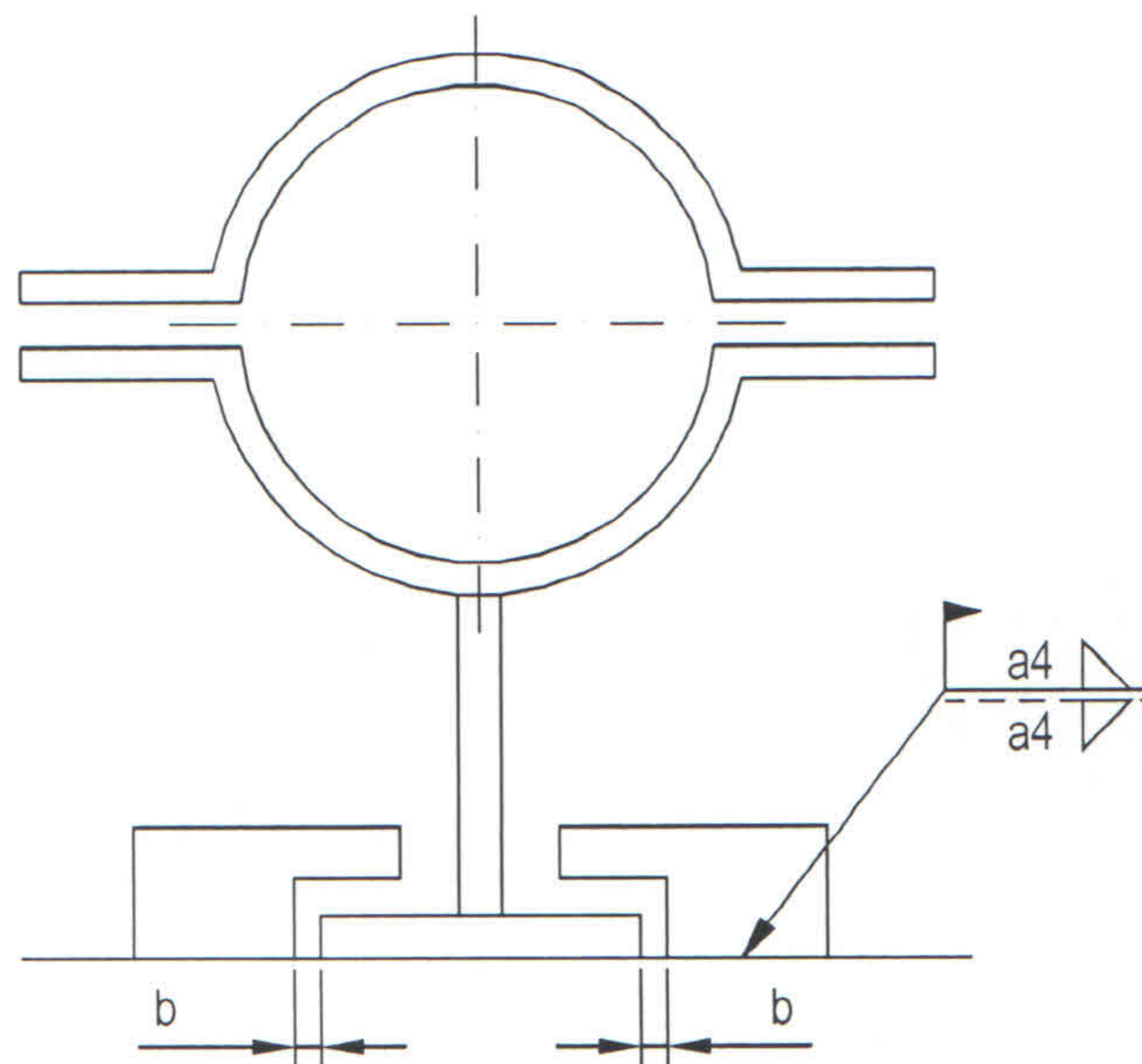
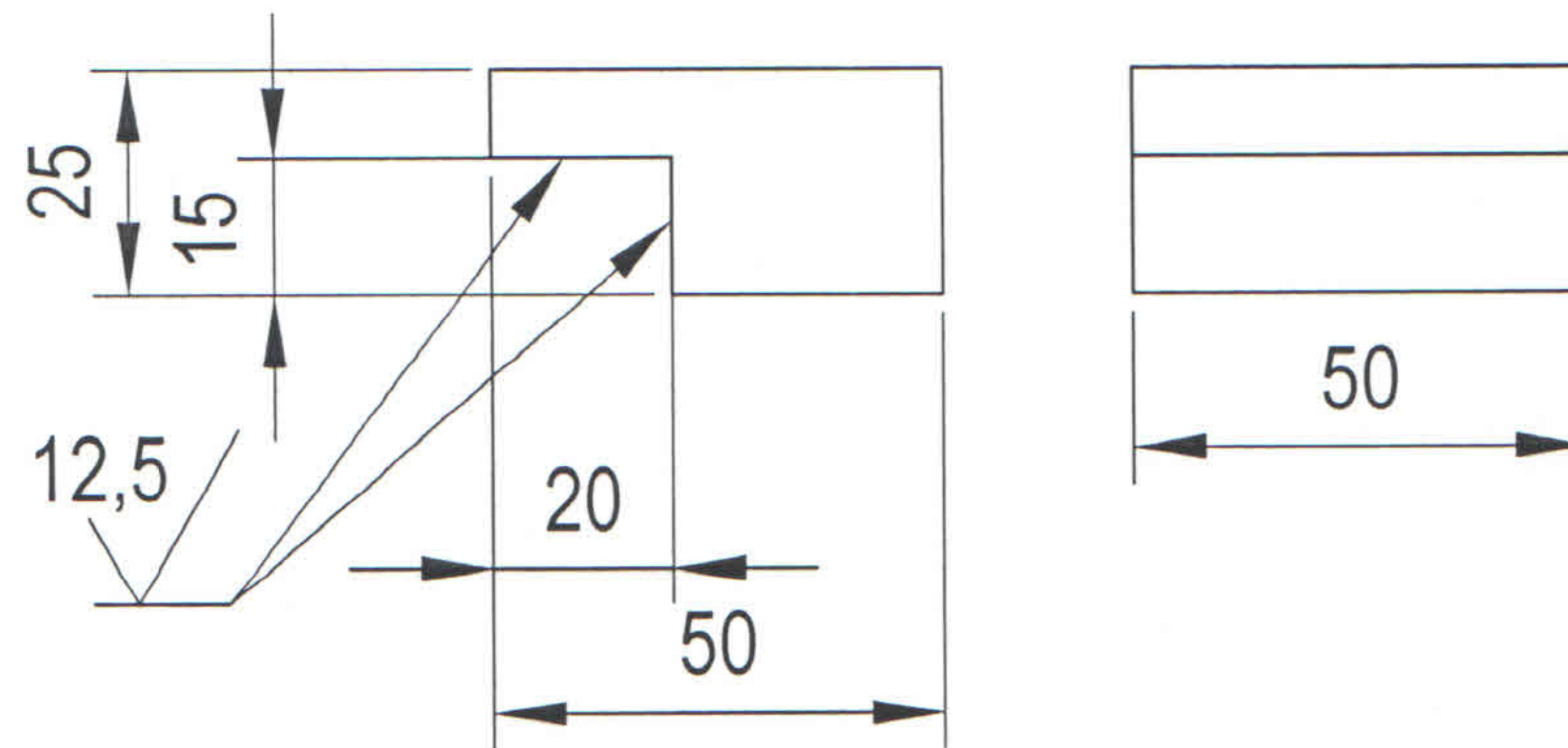
Name, Standard no.

Example

Light lug, MPS3020.

metso PROJECT STANDARD			
No. MPS3021		File: mps3021e.doc	
Piping supports		Page: 1/1	
HEAVY LUG		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.:

1. Structure and dimensions



Gap b is defined according to accuracy requirement of guiding.

2. Designation

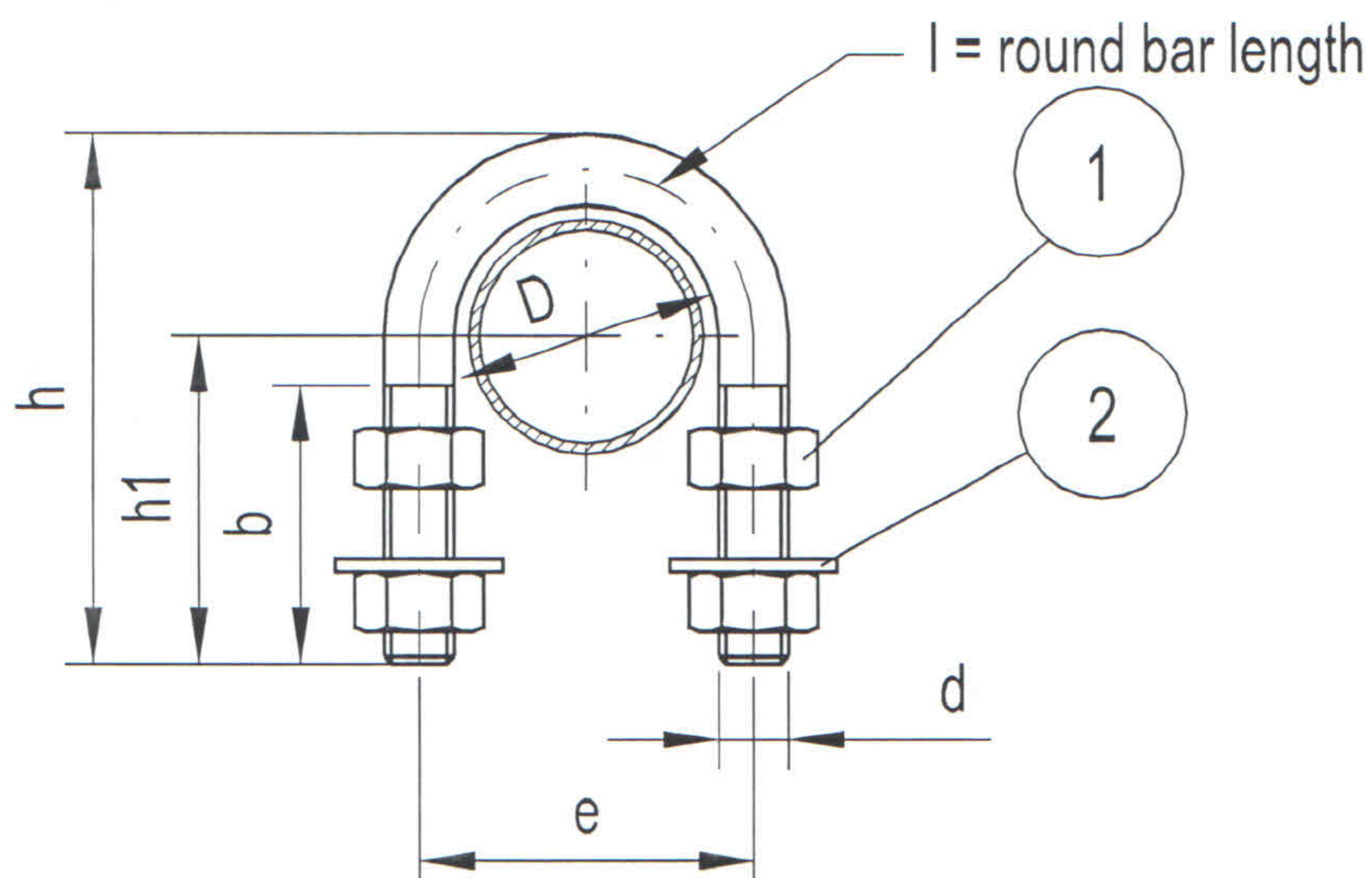
Name, Standard no.

Example

Heavy lug, MPS 3021.

 metso	PROJECT STANDARD	KIPASPM1	
No. MPS3031			File: mps3031e.doc
Piping supports			Page: 1/2
U-BOLT			Date: 13.06.2005
Drawn by:	Checked by:	Approved by:	Rev.: 23.02.2012

1. Structure and dimensions

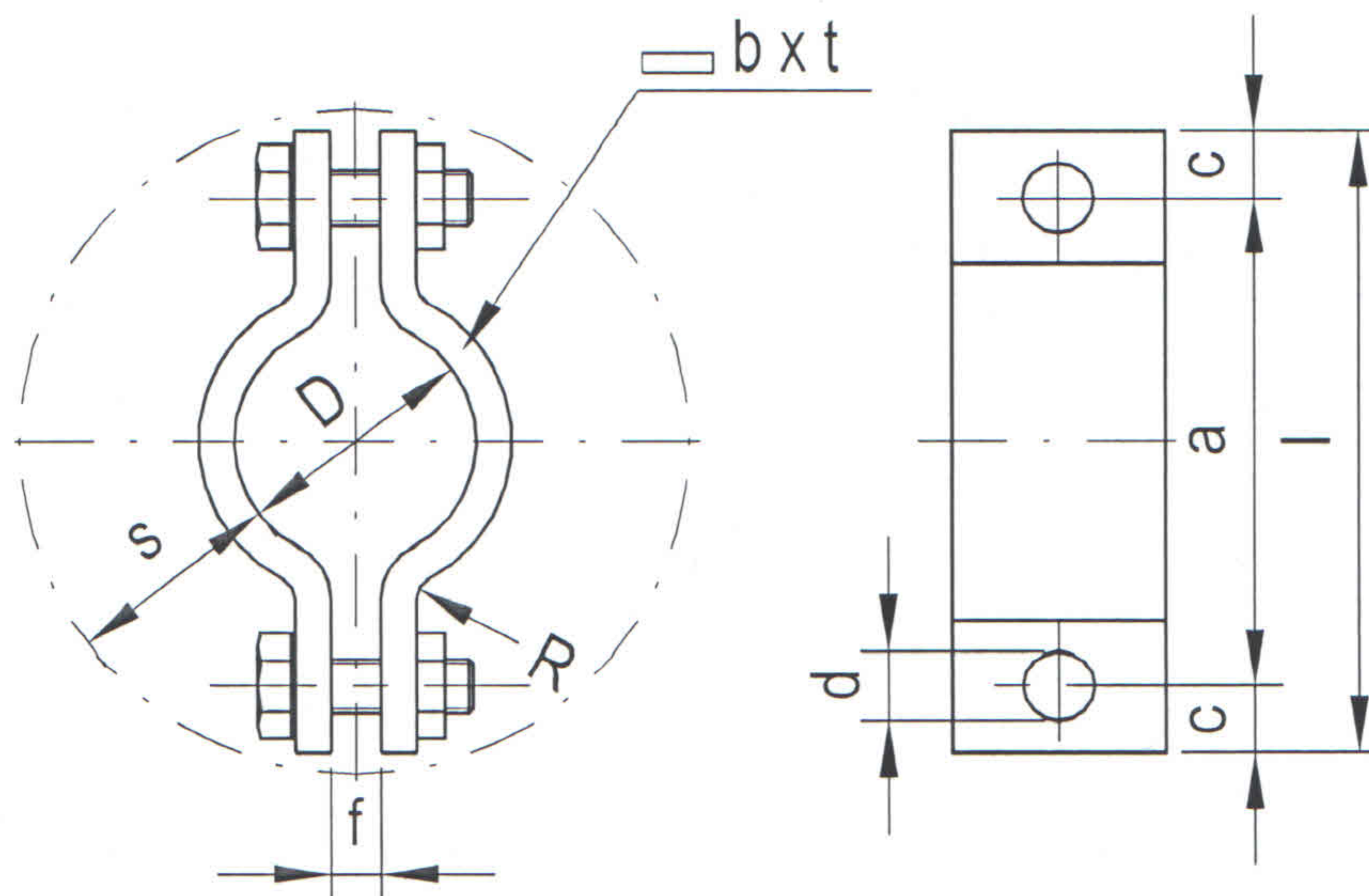


2	Washer	
1	Hexagon nut	
Part	Name	Standard

Pipe		Dimensions of U-bolt							Weight
DN	de, mm	D	d	b	e	h	h1	l	Kg
10	17,2	19	M8	25	27	45	28	98	0,05
15	21,3	23			31	50	31	110	0,05
20	26,9	29			37	55	32	122	0,05
25	33,7	38	M10	40	48	76	47	169	0,12
32	42,4	46		50	56	86	53	195	0,14
40	48,3	52			62	92	56	209	0,15
50	60,3	64	M12	50	76	109	65	250	0,25
65	76,1	82			94	125	72	292	0,29
80	88,9	94			106	138	79	325	0,32
100	114,3	120	M16	60	136	171	95	405	0,70
125	139,7	148			164	191	101	460	0,80
150	168,3	176			192	217	113	528	0,91
200	219,1	228	M20	70	248	283	149	688	1,7
250	273	282			302	334	173	820	2,1
300	323,9	332			352	385	199	951	2,5
350	355,6	378	M24	70	402	435	222	1075	4,1
400	406,4	428			452	487	249	1208	4,6
500	508	530			554	589	300	1470	5,5

 metso	PROJECT STANDARD	KIPASPM1	
No. MPS3032			File: mps3032e.doc
Piping supports			Page: 1/3
PIPE CLAMP A.			Date: 13.06.2005
Drawn by:	Checked by:	Approved by:	Rev.: 19.03.2012

1. Structure and dimensions



Pipe		Pipe clamp, dimensions mm								Weight	Insulation	Bolt
DN	de, mm	D	a	l	c	R	f	d	b x t	Kg	s, mm	
10	17,2	18	42	57	7,5	5	4	7	20 x 3	0,07	30	M 6 x 20
15	21,3	21	56	75	9,5	8	5	10	25 x 5	0,18		M 8 x 25
20	26,9	27	62	81			7			0,20		
25	33,7	34	69	88	9,5	8	7	10	30 x 5	0,26	30	M 8 x 25
32	42,4	43	85	115	15			12		0,37	40	M 10 x 30
40	48,3	49	89	119						0,39		
50	60,3	61	101	131	15	8	7	12	30 x 5	0,44	40	M 10 x 40
65	76,1	77	126	158	16	10		14	30 x 6	0,64		M 10 x 35
80	88,9	89	139	171						0,69		
100	114,3	115	174	218	22	16	8	18	40 x 8	1,6	60	M 16 x 50
125	139,7	140	200	244						1,8		
150	168,3	169	229	273						2,0		
200	219,1	220	283	327	22	16	8	18	50 x 8	3,0	60	M 16 x 50
250	273	273	348	396	24		14	23	60 x 8	4,4	70	M 20 x 60
300	323,9	324	398	458	30					5,1		
350	355,6	356	432	492	30	16	14	23	60 x 8	5,5	70	M 20 x 60
400	406,4	407	498	570	36	20	18	27	70 x 10	9,3	90	M 24 x 70
450	457,2	458	548	610						10,3		
500	508	508	600	672						11		

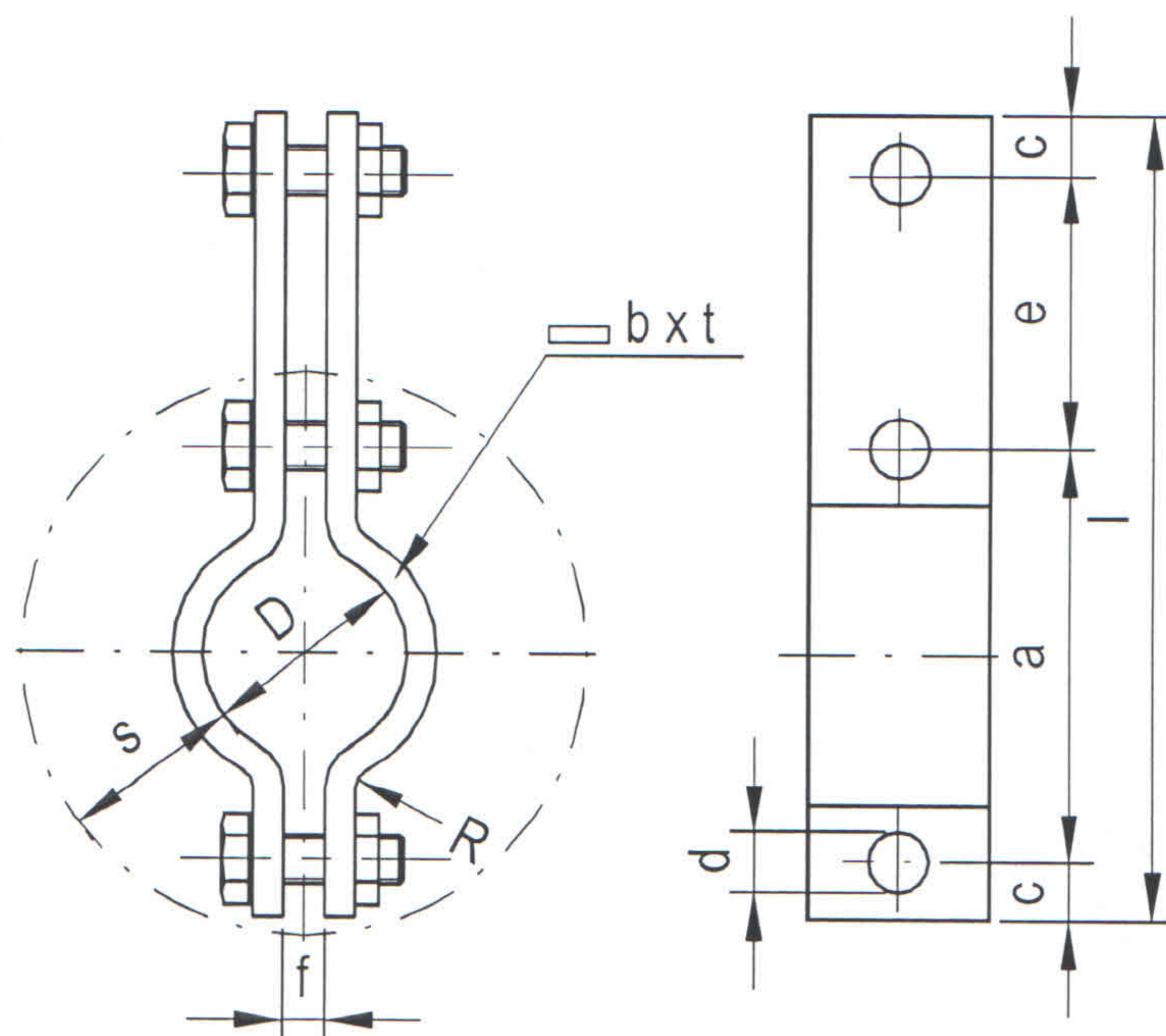
2. Designation

Name, Standard no., Nominal size of pipe.

Example

metso PROJECT STANDARD			
No. MPS3033		File: mps3033e.doc	
Piping supports		Page: 1/2	
PIPE CLAMP B.		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.: 10.10.2006

1. Structure and dimensions



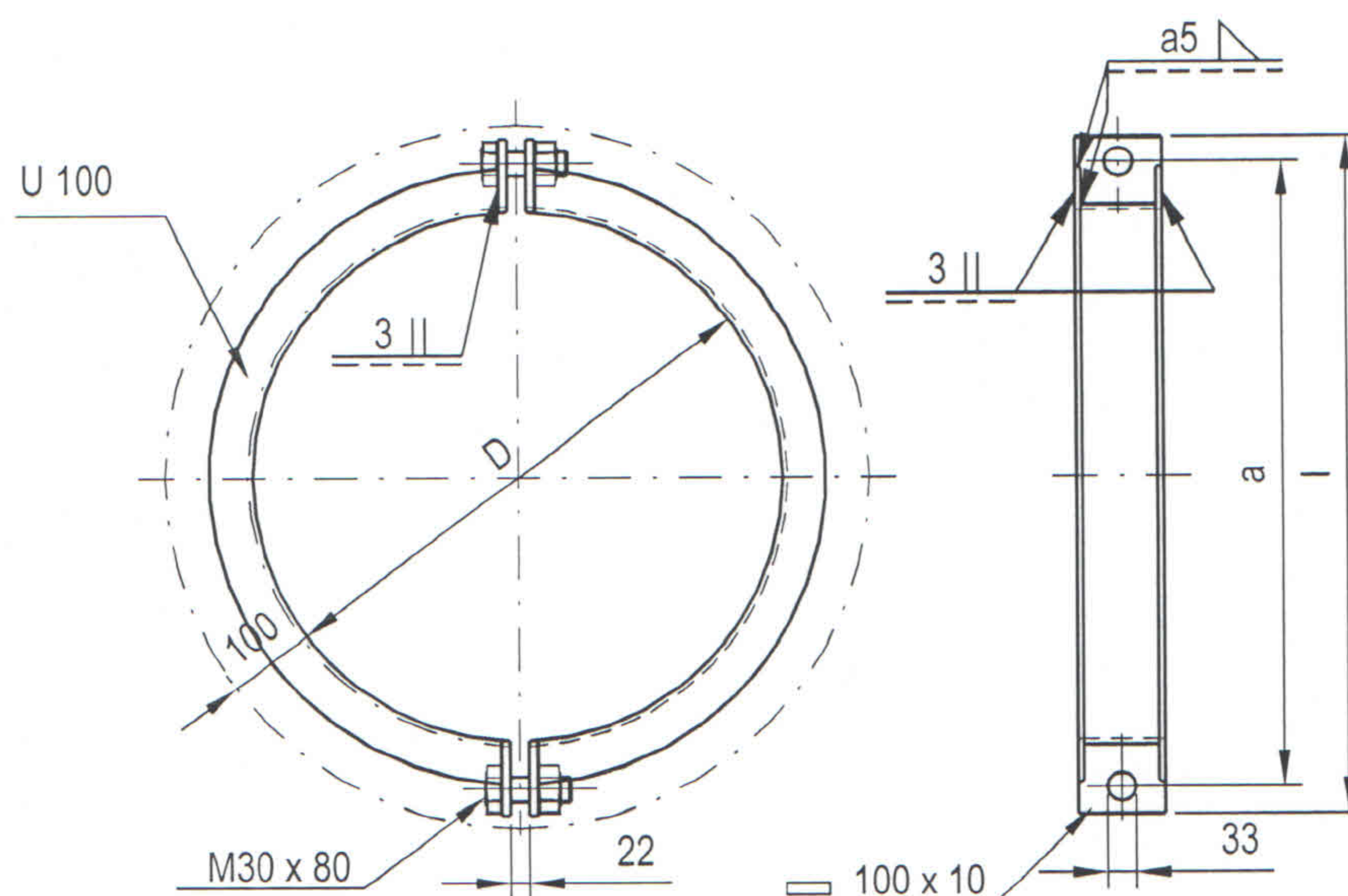
Pipe		Pipe clamp, dimensions, mm									Weight	Insulation	Bolt
DN	de, mm	D	a	l	c	e	R	f	d	b x t	Kg	s, mm	
10	17,2	18	42	103	7,5	46	5	4	7	20 x 3	0,12	30	M 6 x 20
15	21,3	21	56	121	9,5		8	5	10	25 x 5	0,28		M 8 x 25
20	26,9	27	62	127				7			0,30		
25	33,7	34	69	134	9,5	46	8	7	10	30 x 5	0,38	30	M 8 x 25
32	42,4	43	85	161	15				12		0,51	40	M 10 x 30
40	48,3	49	89	165							0,53		
50	60,3	61	101	185	15	54	8	7	12	30 x 5	0,61	40	M 10 x 40
65	76,1	77	126	212	16		10		14	30 x 6	0,83		M 10 x 35
80	88,9	89	139	225							0,89		
100	114,3	115	174	288	22	70	16	8	18	40 x 8	2,0	60	M 16 x 50
125	139,7	140	200	314							2,2		
150	168,3	169	229	343							2,5		
200	219,1	220	283	397	22	70	16	8	18	50 x 8	3,5	60	M 16 x 50
250	273	273	348	466	24			14	23	60 x 8	5,2	70	M 20 x 60
300	323,9	324	398	544	30	86					6,0		
350	355,6	356	432	578	30	86	16	14	23	60 x 8	6,4	70	M 20 x 60
400	406,4	407	498	656	36		20	18	27	70 x 10	11	90	M 24 x 70
450	457,2	458	548			104		18	27	70 x 10	10,45		M 24 x 65
500	508	508	600	776		104					12		

2. Designation

Name, Standard no., Nominal size of pipe.

metso PROJECT STANDARD			
No. MPS3034		File: mps3034e.docc	
Piping supports		Page: 1/1	
PIPE CLAMP DN 600...1200		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.:

1. Structure and dimensions



Pipe		Pipe clamp, dimensions, mm			Weight Kg
DN	de, mm	D	a	l	
900	914	915	1030	1085	35

2. Designation

Name, Standard, Nominal size of pipe.

Example

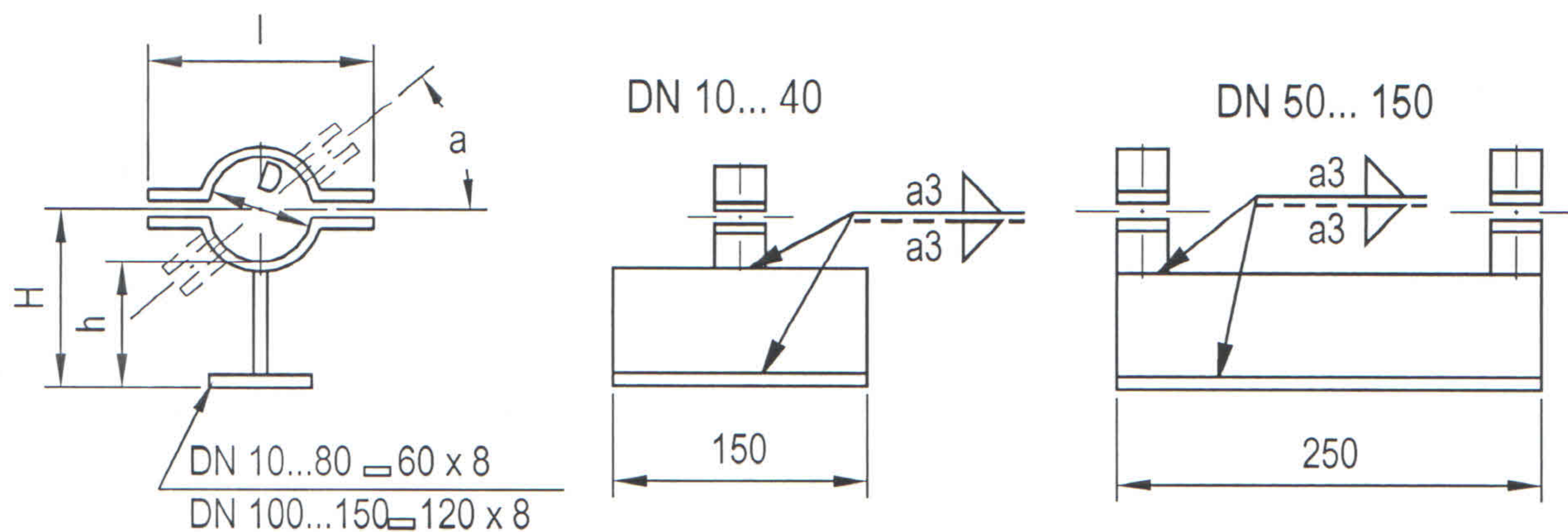
Pipe clamp, MPS 3034, DN 600.

3. Material

P235 + surface treatment according to standard MPS3005
or X 5 CrNiMo 17 13 3.

metso PROJECT STANDARD			
No. MPS3035		File: mps3035e.doc	
Piping supports		Page: 1/1	
PIPE SLIDE, LOW DN 10...150		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.:

1. Structure and dimensions



Pipe		Pipe slide, dimensions					Allowed axial load N
DN	de, mm	D, mm	l, mm	H, mm	h, mm	Weight, kg	
10	17,2	18	57	80	71	1,2	14600
15	21,3	22	75	84	73	1,3	
20	26,9	27	81	87	73	1,3	
25	33,7	34	88	90	73	1,4	
32	42,4	43	115	95	73	1,5	14600
40	48,3	49	119	98	73	1,5	
50	60,3	61	131	104	73	2,8	
65	76,1	77	158	113	74	3,2	
80	88,9	89	171	119	74	3,3	20000
100	114,3	115	218	134	76	6,0	
125	139,7	140	244	146	76	6,4	
150	168,3	169	273	161	76	6,8	

2. Note

Pipe clamps are fixed to angle a in respect to the horizontal plane.
The angle $a=40^\circ$.

3. Designation

Name, Standard no., Nominal size of pipe.

Example

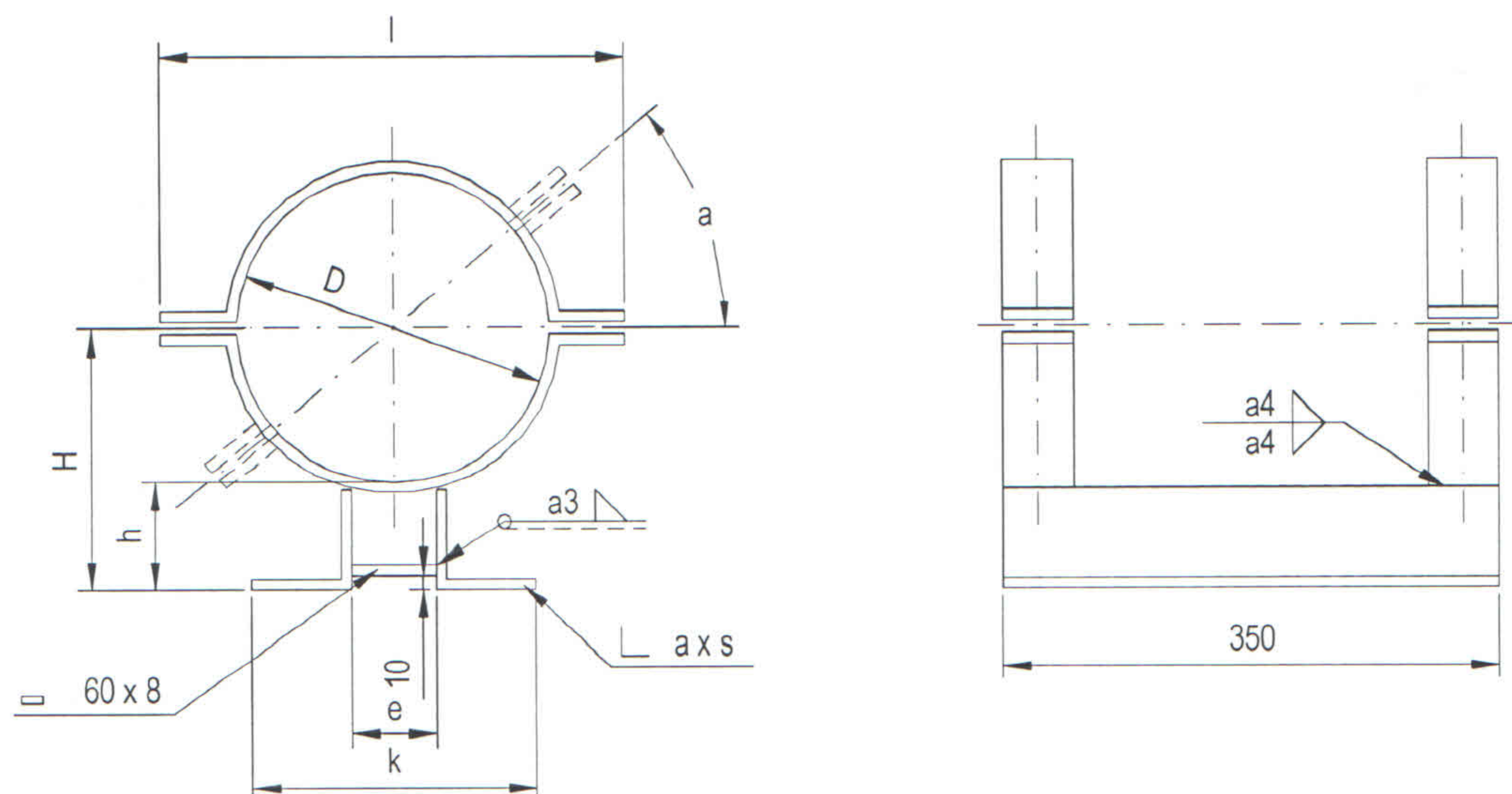
Pipe slide, MPS 3035, DN 50.

4. Material

S235 + surface treatment according to standard MPS3005
or X 5 CrNiMo 17 13 3.

metso PROJECT STANDARD			
No. MPS3036		File: mps3036e.doc	
Piping supports		Page: 1/1	
PIPE SLIDE, LOW DN 200...500		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.: 12.01.2007

1. Structure and dimensions



Pipe		Pipe slide, dimensions								Allowed axial load N
DN	de, mm	D, mm	l, mm	H, mm	h, mm	k, mm	e, mm	a x s, mm	Weight, kg	
200	219,1	220	327	186	76	200	60	70 x 7	11	33000
250	273	273	396	213		210	70		15	39000
300	323,9	324	458	238		290	130	80 x 8	18	
350	355,6	356	492	254	76	300	140	80 x 8	19	39000
400	406,4	407	570	280		310	150		26	
450	457	457	620	305	76	320	160	80 x 8	28	39000
500	508	508	672	330		330	170		30	45000

2. Note

Pipe clamps are fixed to angle a in respect to the horizontal plane.
The angle $a=40^\circ$.

3. Designation

Name, Standard no., Nominal size of pipe.

Example

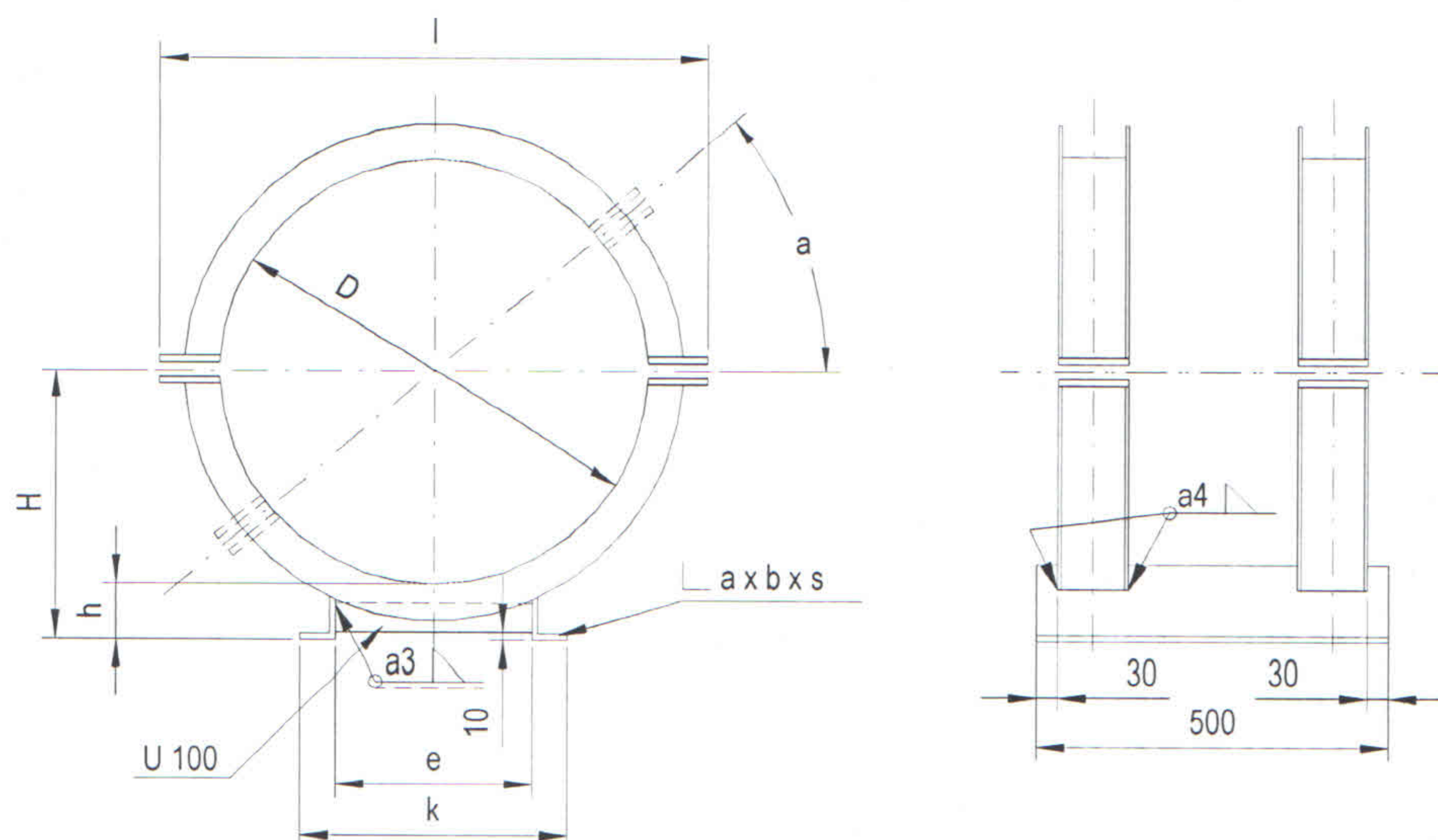
Pipe slide, MPS 3036, DN 200.

4. Material

P235 + surface treatment according to standard MPS3005
or X 5 CrNiMo 17 13 3.

metso PROJECT STANDARD			
No. MPS3037		File: mps3037e.doc	
Piping supports		Page: 1/1	
PIPE SLIDE, LOW DN 600...1200		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.:

1. Structure and dimensions



Pipe		Pipe slide, dimensions								Allowed axial load N
DN	de, mm	D, mm	l, mm	H, mm	h, mm	k, mm	e, mm	a x b x s, mm	Weight, kg	
600	610	610	780	381	76	380	280	100 x 50 x 8	61	110000
700	711	712	880	432		530	400	130 x 65 x 10	75	
800	813	813	980	483		570	440		82	
900	914	915	1085	534	76	690	540	150 x 75 x 11	94	
1000	1016	1016	1185	584		710	560		100	110000
1200	1220	1220	1390	686		770	620		104	

2. Note

Pipe clamps are fixed to angle a in respect to the horizontal plane.
The angle $a = 40^\circ$.

3. Designation

Name, Standard no., Nominal size of pipe.

Example

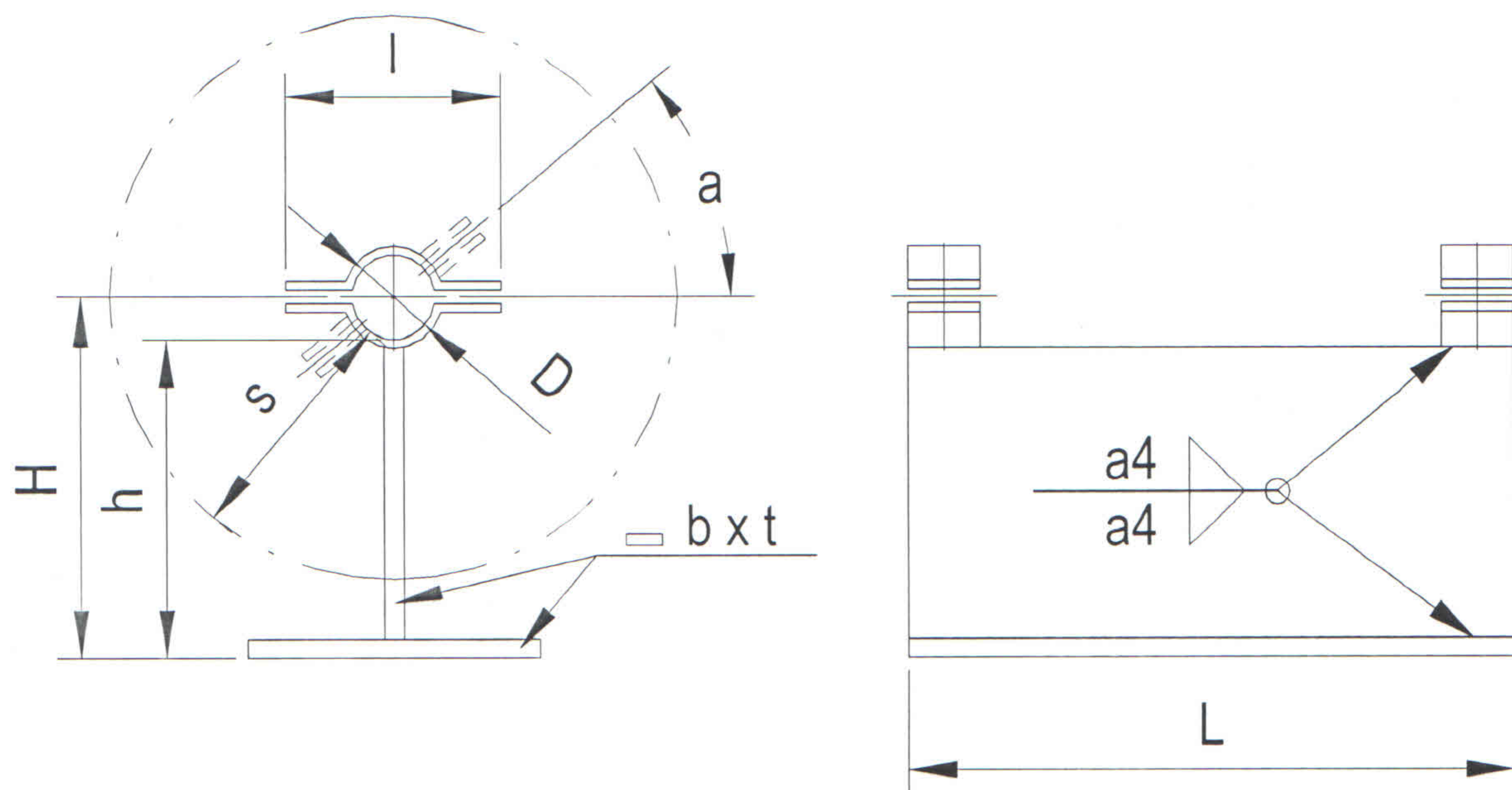
Pipe slide, MPS 3037, DN 600.

4. Material

P235 + surface treatment according to standard MPS3005
or X 5 CrNiMo 17 13 3.

metso PROJECT STANDARD			
No. MPS3038		File: mps3038e.doc	
Piping supports		Page: 1/2	
PIPE SLIDE, HIGH DN 10...150		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.:

1. Structure and dimensions



Pipe		Pipe slide, dimensions							Insulation s, mm	Allowed axial load N
DN	de, mm	D, mm	I, mm	H, mm	h, mm	b x t, mm	L, mm	Weight, kg		
10	17,2	18	57	119	110	100 x 6	250	2,5	80	16200
15	21,3	22	75	121				2,7		
20	26,9	27	81	124				2,8		
25	33,7	34	88	150	133	120 x 8	250	4,3		
32	42,4	43	115	155				4,5	100	16200
40	48,3	49	119	158				4,6		
50	60,3	61	131	164	133	120 x 8	250	4,7		
65	76,1	77	158	172				5,1		
80	88,9	89	171	178			300	5,9	140	33000
100	114,3	115	218	226	168	150 x 10	300	10		
125	139,7	140	244	238				11		
150	168,3	169	273	253				11		

2. Note

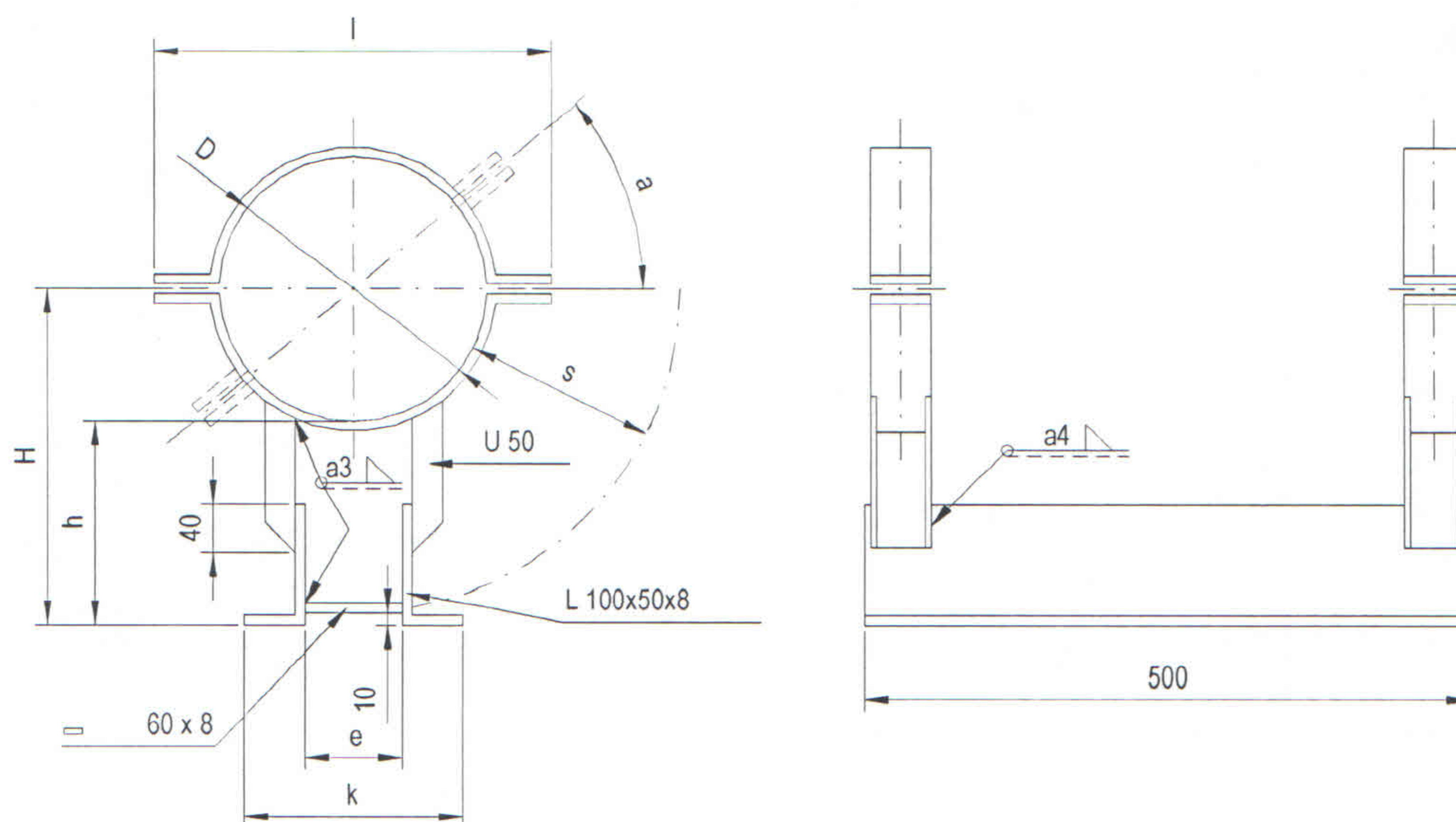
Pipe clamps are fixed to angle a in respect to the horizontal plane.
The angle $a = 40^\circ$.

3. Designation

Name, Standard no., Nominal size of pipe.

metso PROJECT STANDARD			
No. MPS3039		File: mps3039e.doc	
Piping supports		Page: 1/1	
PIPE SLIDE, HIGH DN 200...500		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.:

1. Structure and dimensions



Pipe		Pipe slide, dimensions							Insulation	Allowed axial
DN	de, mm	D, mm	l, mm	H, mm	h, mm	k, mm	e, mm	Weight, Kg	s, mm	load N
200	219,1	220	327	280	170	180	80	18	160	33000
250	273	273	396	307		210	110	22		
300	323,9	324	458	382	220	250	150	24	200	
350	355,6	356	492	398	220	270	170	25	200	33000
400	406,4	407	570	424		300	200	33		42000
500	508	508	672	474		380	280	38		

2. Note

Pipe clamps are fixed to angle a in respect to the horizontal plane.
The angle $a = 40^\circ$.

3. Designation

Name, Standard, Nominal size of pipe.

Example

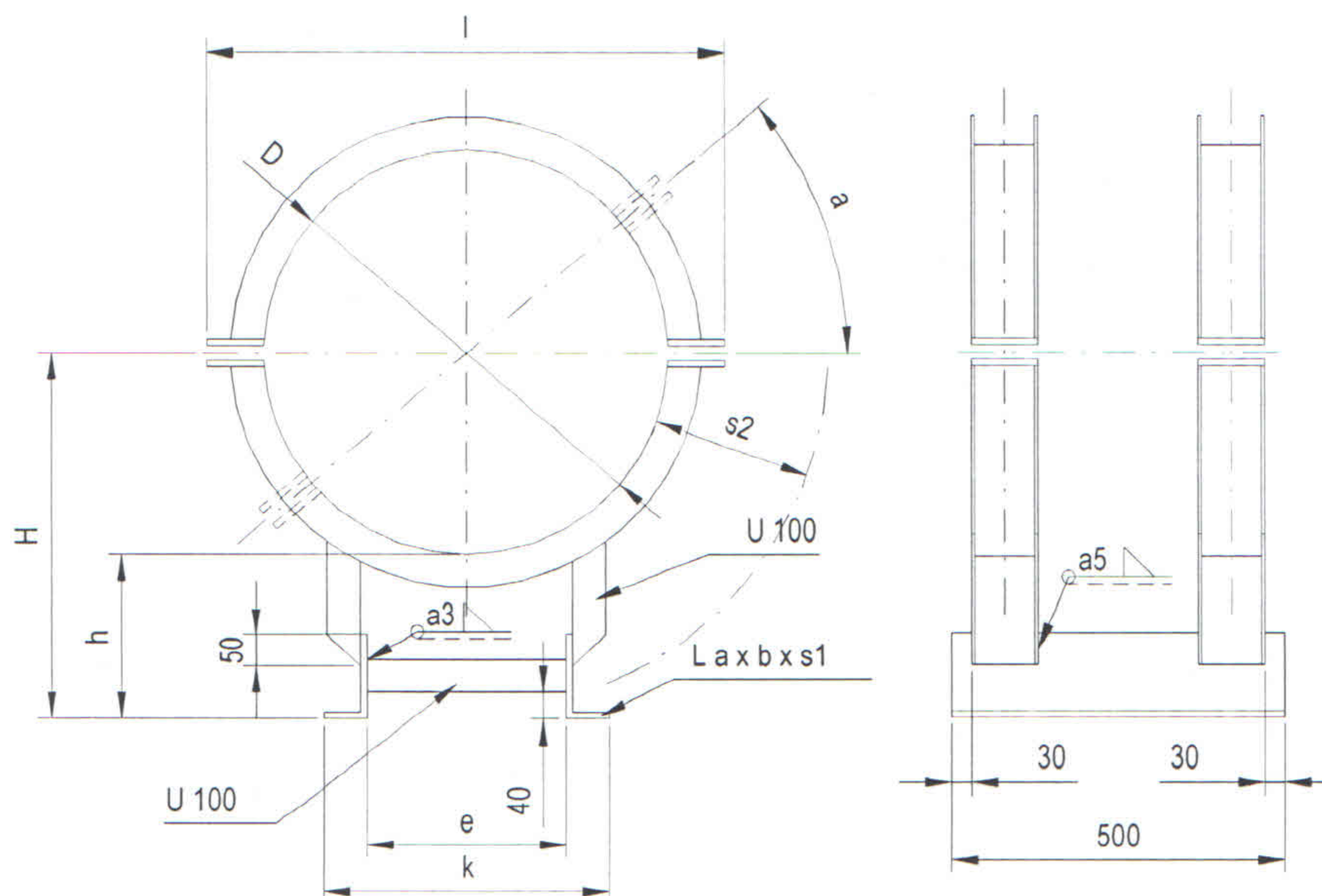
Pipe slide, MPS 3039, DN 200.

4. Material

P235 + surface treatment according to standard MPS3005
or X 5 CrNiMo 17 13 3.

metso PROJECT STANDARD			
No. MPS3040		File: mps3040e.doc	
Piping supports		Page: 1/1	
PIPE SLIDE, HIGH DN 600...1200		Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.:

1. Structure and dimensions



Pipe		Pipe clamp, dimensions								Insulation s2, mm	Allowed axial load N
DN	de, mm	D, mm	l, mm	H, mm	h, mm	k, mm	e, mm	L a x b x s1, mm	Weight, Kg		
600	610	610	780	555	250	430	300	130 x 65 x 10	76	240	80000
700	711	712	880	606		520	390		86		
800	813	813	980	657		570	420	150 x 75 x 11	97		
900	914	915	1085	748	290	650	500	150 x 75 x 11	108	280	80000
1000	1016	1016	1185	798		710	560		116		
1200	1220	1220	1390	900		770	620		131		

2. Note

Pipe clamps are fixed to angle a in respect to the horizontal plane.
The angle $a = 40^\circ$.

3. Designation

Name, Standard no., Nominal size of pipe.

Example

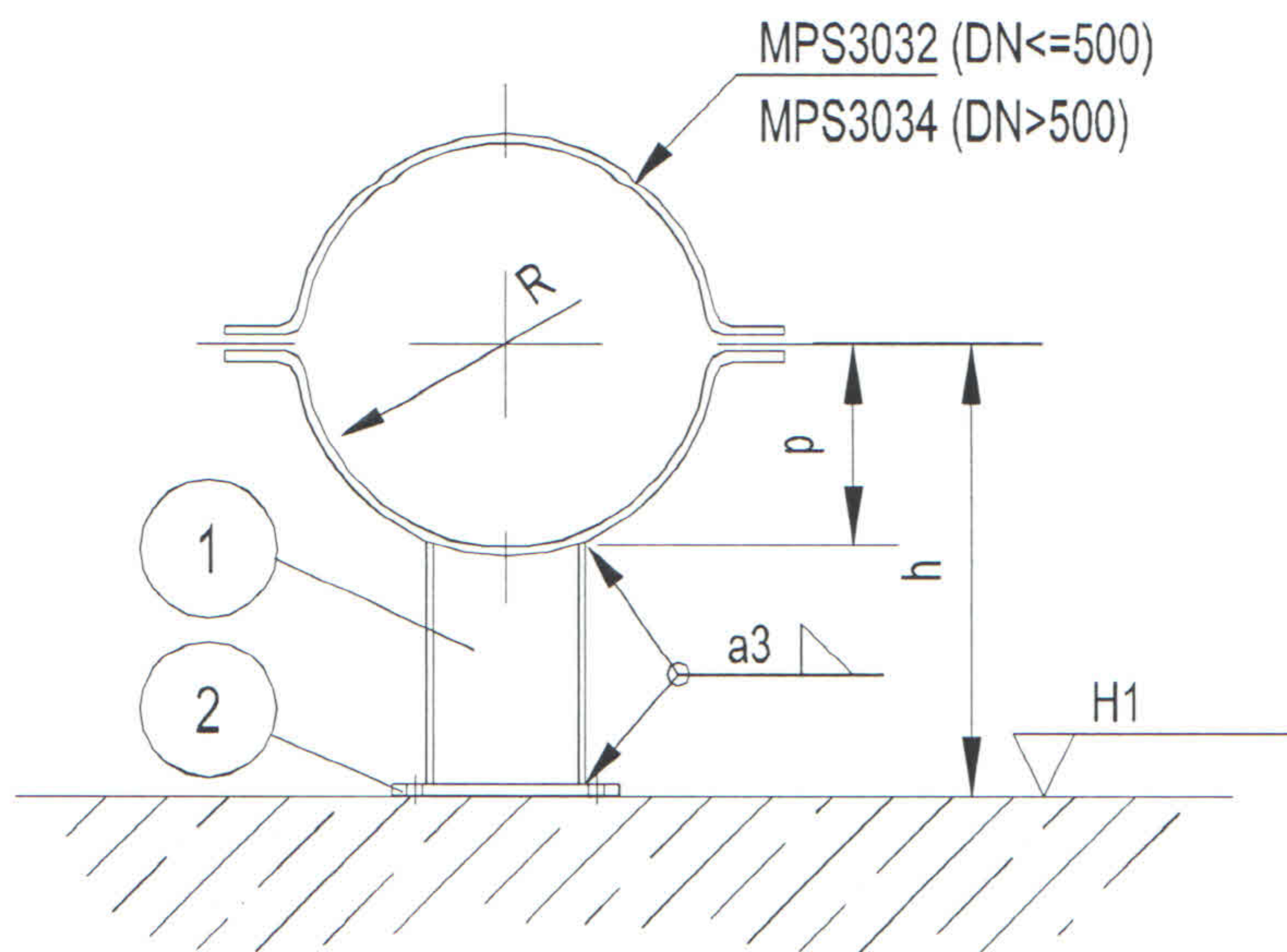
Pipe slide, MPS 3040, DN 600.

4. Material

P235 + surface treatment according to standard MPS3005
or X 5 CrNiMo 17 13 3.

PROJECT STANDARD			
No. MPS3051A Piping supports FOOT, TYPE A		File: mps3051Ae.doc Page: 1/2 Date: 13.06.2005	
Drawn by:	Checked by:	Approved by:	Rev.: 20.11.2006

1. Dimensioning



Pipe		R	p	Part 1	Part 2
DN	d, mm			U-beam Size	
50	60,3	30,5	17	U 65	mps3055/1
65	76,1	38,5	31		
80	88,9	44,5	39		
100	114,3	57,5	43		
125	139,7	70	59	U 100	mps3055/1
150	168,3	84,5	78		
200	219,1	110	106	U 100	mps3055/1
250	273	136,5	123	U 140	mps3055/1
300	323,9	162	155	U 140	mps3055/1
350	355,6	178	173		
400	406,4	203,5	190	U 200	mps3055/2
500	508	254	245	U 200	mps3055/2
600	610	305	306		

Part	Name	Standard	Material	Dimensions mm	Pcs.	Weight kg each
1	U-beam				1	
2	Plate	mps3055		-	1	-

H1 =	h = mm
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2. Fastening

According to standard of part 2.

3. Remark

Use welding, if plate fastening (part 2) is not used.

4. Painting system:

Color code:

E240/3-FeSa2½