



BLACKHALL - BROOKSBANK LTD

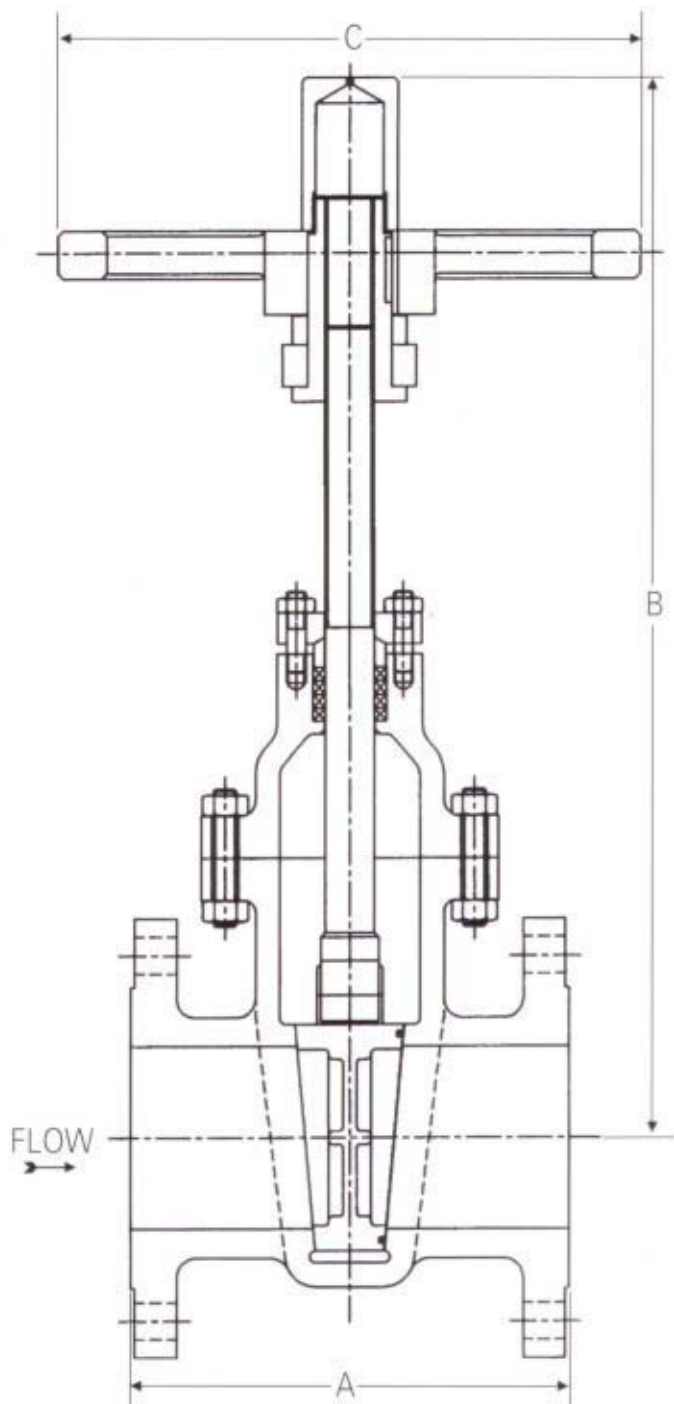
Energy Management Systems BV
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Titanium & Exotic Alloy Gate Valves

Series 4100

BLACKHALL - BROOKSBANK LTD. IS A JOINT VENTURE COMPANY BETWEEN BLACKHALL ENGINEERING LTD.
AND BROOKSBANK VALVES LTD. ALL VALVES MANUFACTURED IN THE UNITED KINGDOM.



PART NAME		MATERIAL OPTIONS
1	Body	Titanium
2	Wedge	Duplex
3	Cover	Super Duplex
4	Spindle	Monel 400 Monel K500 Hastelloy Inconel Alloy 20
5	Cover Gasket	P.T.F.E.
6	Gland Packing	Graphite
7	Body/Cover Nut	Stainless Steel or as
8	Body/Cover Stud	per Body
9	Gland Follower	Material
10	Revolving Nut	Aluminium Bronze or Stainless Steel
11	Bridge	Stainless Steel
12	Cap Nut	
13	Sunk Key	
14	Pillar Nut	Stainless Steel
15	Pillar	
16	Gland Stud	
17	Handwheel	Stainless Steel or Cast Iron
18	Renewable Soft Seat (Option)	Glass Filled P.T.F.E.

OPTIONS

- Drain Plug
- Renewable Soft Seat
- Renewable Body Seats
- Gearbox Operation Recommended for valves 16" (DN 400 and above)
- Hydraulic, Electric and Pneumatic Actuator Options
- Live Loaded Glands
- Total Flexibility of Material Selection, to Customer Specification
- Other Flanges & End Connections Available ie. Butt Weld, Socket Weld or Screwed
- Larger Valves 24" (DN600) up to 56" (DN1400) available on application

Titanium & Exotic Alloy Gate Valves Series 4100

D I M E N S I O N S

Nominal Size	in	1/2	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	
	mm	15	25	40	50	65	80	100	150	200	250	300	350	400	450	500	600	
CLASS 150	A (Flanged RF)	in	4 1/2	5	6 1/2	7	7 1/2	8	9	10 1/2	11 1/2	13	14	15	16	17	18	20
		mm	108	127	165	178	191	203	229	267	292	330	356	381	406	432	457	508
	B	in	8	9 1/4	10 7/8	13 1/8	15 1/2	17 3/4	21 1/8	31 1/2	38 3/8	44 3/8	51 1/4	70	77	85	92	108
		mm	203	233	275	332	394	450	555	800	975	1125	1300	1778	1954	2160	2337	2743
	C	in	4	4	6	6	8	8	12	12	16	18 1/2	18 1/2	24	24	24	30	30
		mm	102	102	152	152	203	203	305	305	406	470	470	610	610	610	762	762
CLASS 300	A	in	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	11 1/8	12	15 1/8	16 1/2	18	19 3/4	30	33	36		
		mm	140	165	191	216	241	283	305	403	419	457	502	762	838	914		
	B	in	8	9 1/4	10 7/8	13 1/8	15 1/2	17 3/4	21 1/8	31 1/2	38 3/8	44 3/8	51 1/4	70	77	85		
		mm	203	233	275	332	394	450	555	800	975	1125	1300	1778	1954	2160		
	C	in	4	4	6	6	8	8	12	12	16	18 1/2	18 1/2	24	24	30		
		mm	102	102	152	152	203	203	305	305	406	470	470	610	610	762		
CLASS 600	F (Flanged RF)	in	-	A P P L I C A T I O N	-	11 1/2	13	14	17	22	26	31	33					
		mm	-		-	292	330	356	432	559	660	787	838					
	B	in	-		-	17 7/8	18 3/4	22	26 1/4	35 1/4	40	48 1/2	54					
		mm	-		-	454	475	558	666	895	1016	1231	1373					
	C	in	-		-	8	8	12	16	18 1/2	24	30	30					
		mm	-		-	203	203	305	406	470	610	762	762					
CLASS 900	A (Raised Face)	in	-	A P P L I C A T I O N	-	U S E C L 1 5 0 0 V a l v e s	U S E C L 1 5 0 0 V a l v e s	15	18	24								
		mm	-		-			381	457	610								
	A (RJF)	in	-		-	-	-	-	15 1/8	18 1/8	24 1/8							
		mm	-		-	-	-	-	384	460	613							
	B	in	-		-	-	-	-	22 7/8	27 1/2	38 7/8							
		mm	-		-	-	-	-	580	698	988							
C	in	-		-	-	-	-	12	16	18 1/2								
	mm	-		-	-	-	-	305	406	470								
CLASS 1500	A (Raised Face)	in	-	D E T A I L S	-	14 1/2	16 1/2	18 1/2	21 1/2	27 1/4								
		mm	-		-	368	419	470	546	705								
	A (RJF)	in	-		-	14 5/8	16 5/8	18 5/8	21 5/8	28								
		mm	-		-	371	422	473	549	711								
	B	in	-		-	18 5/8	19 1/2	23 1/2	28 1/4	40 5/8								
		mm	-		-	472	495	597	717	1033								
C	in	-		-	12	12	16	18 1/2	18 1/2									
	mm	-		-	305	305	406	470	470									

T E C H N I C A L D A T A

- Outside Screw Rising Stem
- Non Rising Handwheel
- Bolted Bonnet
- Bolted Gland
- Solid Wedge
- Flanges to ANSI B.16.5 and B.S.1560 Raised Face
- Valve Design and Shell Wall Thickness in Accordance with ANSI B16.34
- Face to Face in Accordance with ANSI B16.10





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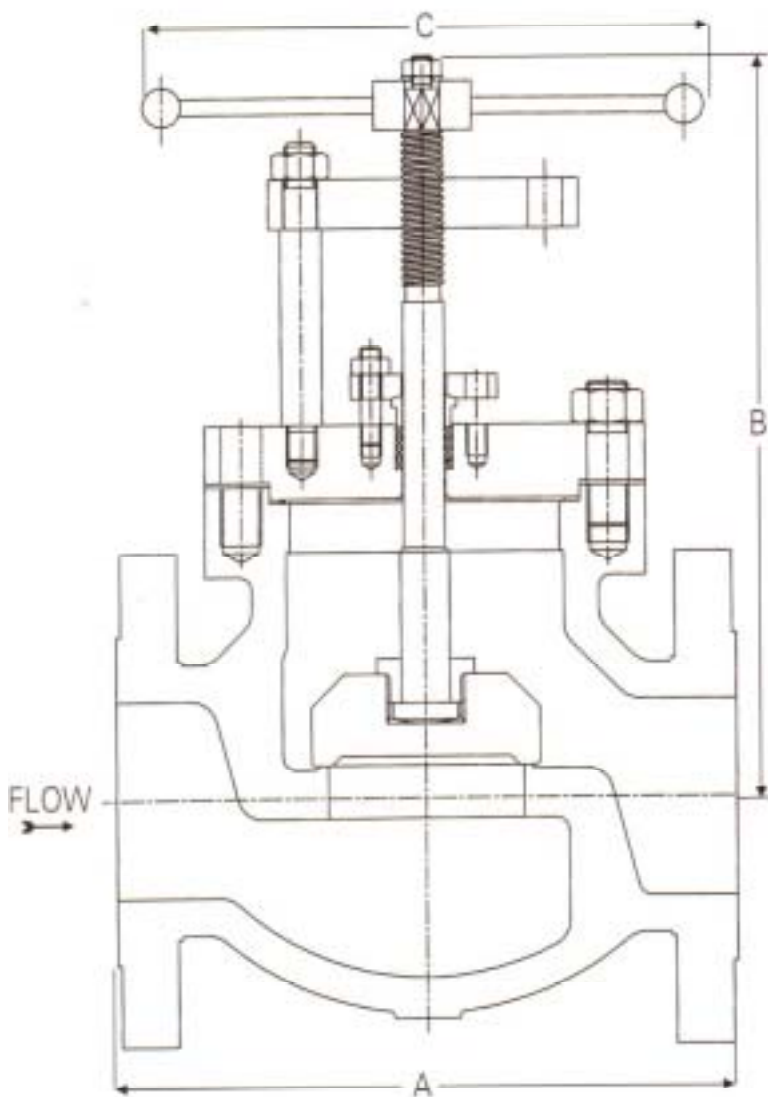
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Titanium & Exotic Alloy Globe Valves

Series 4200

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PART NAME		MATERIAL OPTIONS
1	Body	Titanium
2	Plug	Duplex
3	Cover	Super Duplex
4	Spindle	Monel 400
		Monel K500
		Hastelloy
		Inconel
		Alloy 20
5	Cover Gasket	P.T.F.E
6	Gland Packing	Graphite
7	Body/Cover Nuts	Stainless Steel or as
8	Body/Cover Stud	per Body
9	Gland Follower	Material
10	Bridge	Aluminium Bronze or
		Stainless Steel
11	Pillar Nut	Stainless Steel
12	Pillar	
13	Gland Stud	
14	Handwheel	Stainless Steel
		or Cast Iron
15	Renewable Soft Seat (Option)	Glass Filled P.T.F.E.

OPTIONS

- Drain Plug
- Renewable Soft Seat
- Renewable Body Seats
- Gearbox Operation Recommended for Valves 8" CL150 (DN 200 and above)
- Hydraulic, Electric and Pneumatic Actuator Options
- Live Loaded Glands
- Total Flexibility of Material Selection, to Customer Specification
- Other Flanges & End Connection Available i.e. Butt Weld, Socket Weld or Screwed
- Regulating Trim Option for Throttling Service
- Globe/Check Type Valves (screw-down non-return) available
- "Y" Type and Angle Pattern Valves on application
- Larger size on request

Titanium & Exotic Alloy Globe Valves Series 4200

DIMENSIONS

Nominal Size		in	1/2	1	1 1/2	2	3	4	6	8	10	12
		mm	15	25	40	50	80	100	150	200	250	300
CLASS 150	A (Flanged RF)	in	4 1/4	5	6 1/2	8	9 1/2	11 1/2	16	19 1/2	24 1/2	27 1/2
		mm	108	127	165	203	241	292	406	495	622	699
	B (Closed)	in	7	8	8 7/8	10 1/2	14 1/8	16 5/8	19 1/2	25	30	36
		mm	178	203	225	227	359	422	495	635	762	914
	C	in	4	4	6	6	8	12	16	16	18 1/2	24
		mm	102	102	152	152	203	305	406	406	470	610
CLASS 300	A (Flanged RF)	in	5 1/2	8 1/2	9 1/2	10 1/2	12 1/2	14	17 1/2	22	24 1/2	28
		mm	140	216	241	267	318	356	444	559	622	711
	B (Closed)	in	7	8	8 7/8	10 1/2	14 1/8	16 3/8	19 1/2	25	30	36
		mm	178	203	225	227	359	422	495	635	762	914
	C	in	4	6	6	8	12	16	18 1/2	24	24	30
		mm	102	152	152	203	305	406	470	610	610	762
CLASS 600	A (Flanged RF)	in	-	-	-	11 1/2	14	17	22	26		
		mm	-	-	-	292	356	432	559	660		
	A (RJF)	in	-	-	-	11 1/8	14 1/8	17 1/8	22 1/8	26 1/8		
		mm	-	-	-	295	359	435	562	663		
	B (Closed)	in	-	-	-	14 3/4	17 3/8	20 7/8	26 1/4	35		
		mm	-	-	-	375	448	530	667	889		
C	in	-	-	-	12	16	18 1/2	24	24			
	mm	-	-	-	305	406	470	610	610			
CLASS 900	A (RF)	in	-	-	-	15	18	24				
		mm	-	-	-	381	457	610				
	A (RJF)	in	-	-	-	15 1/8	18 1/8	24 1/8				
		mm	-	-	-	384	460	613				
	B (Closed)	in	-	-	-	28 1/2	34 1/4	39 3/4				
		mm	-	-	-	724	870	1010				
C	in	-	-	-	18 1/2	24	30					
	mm	-	-	-	470	610	762					
CLASS 1500	A (Raised Face)	in	-	-	-	14 1/2	18 1/2	21 1/2	27 3/4			
		mm	-	-	-	368	470	546	705			
	A (RJF)	in	-	-	-	14 5/8	18 5/8	21 5/8	28			
		mm	-	-	-	371	473	549	711			
	B (Closed)	in	-	-	-	23	28 3/4	34 1/2	40			
		mm	-	-	-	584	730	876	1016			
C	in	-	-	-	18 1/2	18 1/2	24	30				
	mm	-	-	-	470	470	610	762				

C A T I O N

O N A P P L

D E T A I L S

Use CL1500 Valve

TECHNICAL DATA

- Outside Screw Rising Stem
- Rising Handwheel
- Bolted Bonnet
- Bolted Gland
- Flanges to ANSI B.16.5 and B.S.1560 Raised Face
- Valve Design and Shell Wall Thickness in Accordance with ANSI B. 16.34
- Face to Face in Accordance with ANSI B. 16.10



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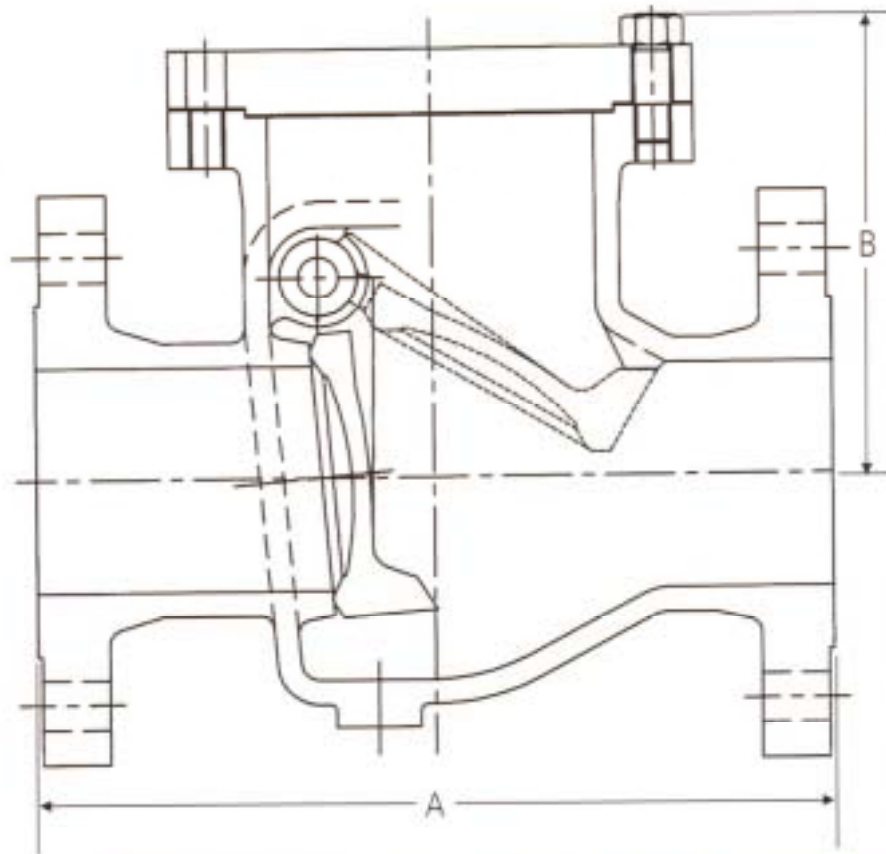
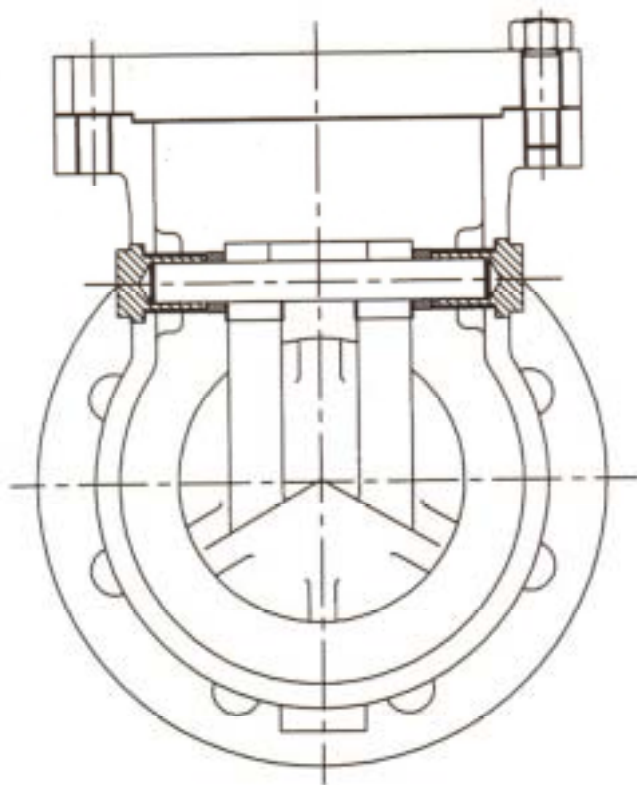
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Titanium & Exotic Alloy Check Valves

Series 4300

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OPTIONS

- Drain Plug
- Counter Balanced/Loaded Lever & Weight Option
- Emergency Assisted - Closing Type (power check)
- Other Flanges and End Connections Available i.e. Butt Weld, Socket Weld & Screwed
- Total Flexibility of Material Selection, to Customer Specification
- Larger Valves 20" (DN500) up to 80" (DN2000) on application
- Blackhall - Brooksbank also manufacture piston check valves

PART NAME		MATERIAL OPTIONS
1	Body	Titanium
2	Disc	Duplex
3	Cover	Super Duplex
4	Shaft	Monel 400
5	Shaft Bearing	Monel K500
		Hastelloy
		Inconel
		Alloy 20
6	Cover Gasket	P.T.F.E
7	Shaft Bush	Graphite
8	Body/Cover Nuts	Stainless Steel or as per Body Material
9	Body/Cover Studs	

Titanium & Exotic Alloy Check Valves Series 4300

DIMENSIONS

Nominal Size		in	1/2	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18
		mm	15	25	40	50	65	80	100	150	200	250	300	350	400	450
CLASS 150	A (Flanged RF)	in	4 1/4	5	6 1/2	8	8 1/2	9 1/2	11 1/2	14	19 1/2	24 1/2	27 1/2	31	34	38 1/2
		mm	108	127	165	203	216	241	292	356	495	622	698	787	864	978
	B	in	2 1/4	3 1/4	4 1/2	5 1/4	7	7	8	10 1/2	13 1/8	14	17	18	20	21 3/4
		mm	57	83	114	145	180	180	205	265	333	356	432	457	508	552
CLASS 300	A (Flanged RF)	in	5 1/2	8 1/2	9 1/2	10 1/2	12 1/2	12 1/2	14	17 1/2	21	24 1/2	28	33	34	
		mm	140	216	241	267	318	318	356	444	533	622	711	838	864	
	B	in	2 1/4	3 1/4	4 1/2	5 1/4	7	7	8	10 1/2	13 1/8	14	17	18	20	
		mm	57	83	114	145	180	180	205	265	333	356	432	457	508	
CLASS 600	A (RF)	in	-	-	-	11 1/2	14	14	17	22	26	31				
		mm	-	-	-	292	356	356	432	559	660	787				
	A (RJF)	in	-	-	-	11 5/8	14 1/8	14 1/8	17 1/8	22 1/8	26 1/8	31 1/8				
		mm	-	-	-	295	359	359	435	562	664	791				
	B	in	-	-	-	7 1/2	9 1/4	9 1/4	11 1/8	13 5/8	17 1/4	20 1/2				
		mm	-	-	-	194	248	248	302	346	438	521				
CLASS 900	A (RF)	in	-	-	-	14 1/2	15	15	18	24						
		mm	-	-	-	368	381	381	457	610						
	A (RJF)	in	-	-	-	14 5/8	15 1/8	15 1/8	18 1/8	24 1/8						
		mm	-	-	-	371	384	384	460	613						
	B	in	-	-	-	9 1/4	11 1/4	11 1/4	13 1/4	16 3/8						
		mm	-	-	-	235	286	286	337	416						
CLASS 1500	A (RF)	in	-	-	-	14 1/2	18 1/2	18 1/2	21 1/2	27 1/4						
		mm	-	-	-	368	470	470	546	704						
	A (RJF)	in	-	-	-	14 5/8	18 5/8	18 5/8	21 5/8	28						
		mm	-	-	-	371	473	473	549	711						
	B	in	-	-	-	9 1/4	12	12	13 1/2	20						
		mm	-	-	-	235	305	305	343	508						

APPLICATION DETAILS

TECHNICAL DATA

- Bolted Bonnet
- Disk Angle for Low Pressure Drop and Quick Closing
- Tight Sealing
- For DN500 (20") and Larger Double and Multi-Door Configurations Reducing Noise and Size
- Horizontal and Vertical Installation
- Flanges to ANSI B.16.5 and B.S. 1560 Raised Face
- Valve Design and Shell Wall Thickness in Accordance with ANSI B. 16.34
- Face to Face in Accordance with ANSI B.16.10

