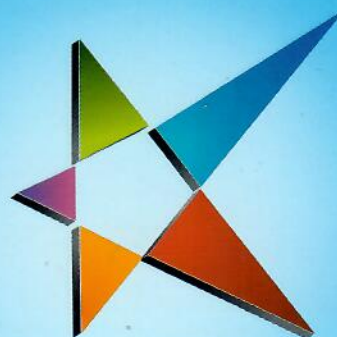




KaliStar

UPVC PRESSURE PIPE AND FITTINGS

PRODUCT PROFILE



Kalister UPVC Pipes and fittings are ideally suited for variety applications where high quality and durable pipework system required..

- ✦ Underground water distribution networks
- ✦ Under ground drainage networks
- ✦ Drainage installations between manholes
- ✦ Irrigations networks
- ✦ Aquaculture Networks
- ✦ Air coditioning drain systems
- ✦ Industrial Chemical Applications.

Product Profile

Kalister offers a complete range of imperial and metric size UPVC pipes and fittings to satisfy the requirements of installers and specifiers.

Standards and Approvals

Kalister UPVC high pressure pipes are manufactured as per the following standards.

Imperial Standard (Inch Size)

High Pressure pipes : BSEN 1452-2:2009 (This standard supercedes BS 3505:1986)
High Pressure Fittings : BSEN 1452-3:2010 (This standard supercedes BS 4346-3 :1882)
Threaded Joints are as per BS 21& ISO 7-1

Metric Standard (Millimeter Size)

High Pressure pipes : DIN 8061/8062
High Pressure Fittings : DIN 8063

Colour & Length

The colour of the pipe and fittings are grey and all pipes are manufactured in 4mtr,5.80mtr & 6.00mtr length.
All pipe sizes are supplied with plain ends and solvent socketed.

PROPERTIES

General Properties of UPVC

Sr No	Properties	
1	Composition	(CH ₂ - CH-C1) _n
2	Density	1.42 - 1.45
3	Thermal Conductivity	: 160W/m °C
4	Specific Heat	: 1100J/Kg/°C
5	Elastic Limit	: 35-52 Mpa
6	Tensile Strength	: 30-70 Mpa
7	Compressive Strength	: 55-60 Mpa
8	Poissons Ratio	: 0.38 - 0.43

Mechanical,Physical, Characteristics of UPVC Pipes

Sr No	Characteristics	Parameters	Test Method
1	Resistance to Internal Pressure	At 20°C , 42Mpa for 1 hr	ISO 1161-1
2	Impact Strength	True Impact Rate<10%	EN 744
3	Vicat Softening Temperature	>80°C	ISO 2507-1
4	Longitudinal Reversion	<5% at 150°C	ISO2505
5	Resistance to Dichloromethane	No attack at any part of test piece at 15°C	ISO 9852
6	Opacity	The wall of the pipe shall be opaque and shall not transmit more than 0.2 %	ISO 7686

Mechanical,Physical, Characteristics of UPVC Fittings

Sr No	Characteristics	Parameters	Test Method
1	Resistance to Internal Pressure	At 20°C , 3.36XPN for 1 hr	ISO 1161-1
2	Vicat Softening Temperature	>74°C	ISO 2507-1
3	Effect on heating	At 150°C 1 hr depth of crack ,delamination <30% of wall thickness	ISO2505 , Method B :Air
4	Opacity	shall not transmit more than 0.2 % of visible light	ISO 7686

QUALITY CONTROL

The Quality Assurance Laboratory of KALISTER is equipped with state-of-the-art equipment and staffed with trained quality control inspectors. The laboratory performs 'round the clock' testing on products manufactured at our factories to ensure that quality is guaranteed. A continuous rigorous type test program is carried out including process verification and long term pressure testing to ensure our fullest commitment to the highest industry quality standards.

We ensure the quality requirements of the client are met at every stage. This is typically by way of project-specific Inspection and Test Plan. We have a comprehensive Quality Control system that monitors every stage of production from receipt of raw materials to product delivery.



WORKING TEMPERATURE & PRESSURE

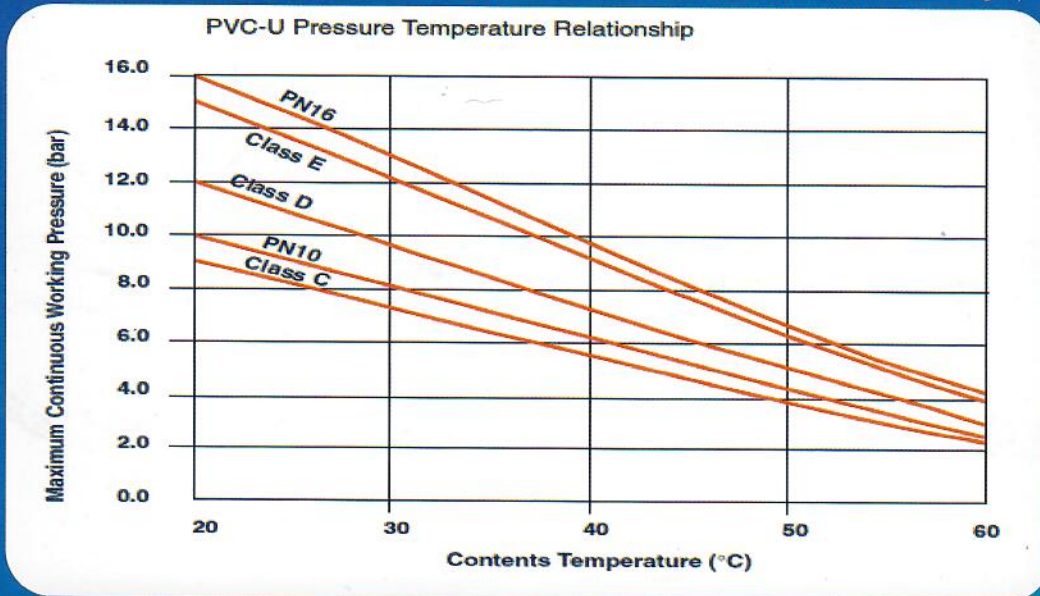
Working Temperature

Kalister UPVC pipes and fittings are recommended for applications where operating temperature is in between 5 to 60°C

Working Pressure

The working pressure of UPVC pipes and fittings is decided as per the manufacturing standard of the subjected pipe.

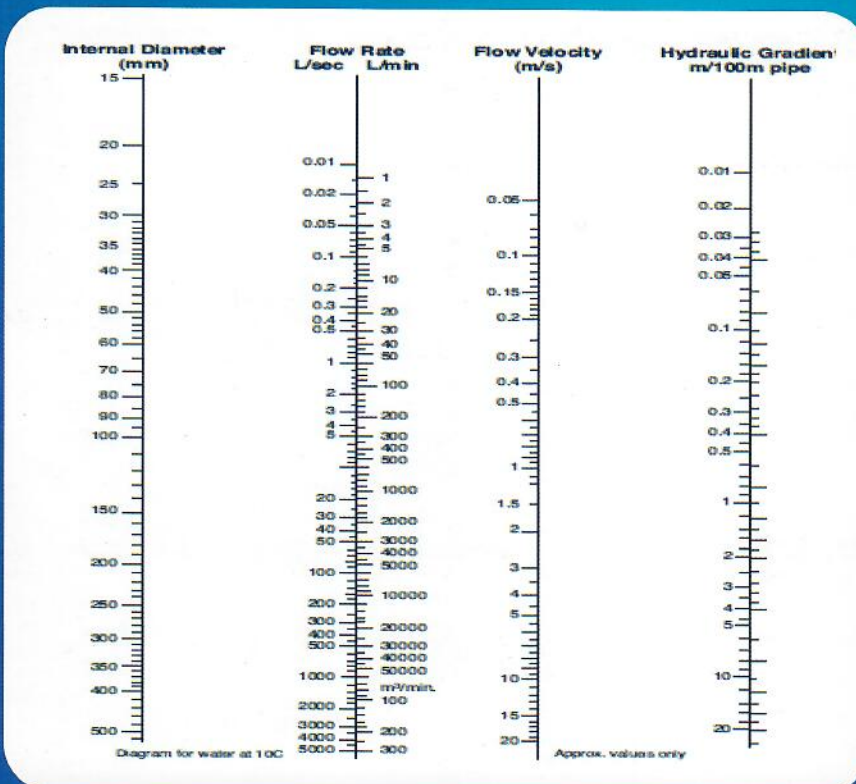
At temperature above 20°C the operating pressure is reduced as shown in the below graph.



FLOW CALCULATIONS

Pressure Drop in pipes

Pressure drop due to friction for practical purposes can be determined using the Flow Nomogram diagram.



PIPE SUPPORT CENTERS

Pipe supports and clips should provide lateral restraint and allow free,unrestricted ,axial pipe movement.The reccomended distance between supports for UPVC pipes filled with water is given in the following table.

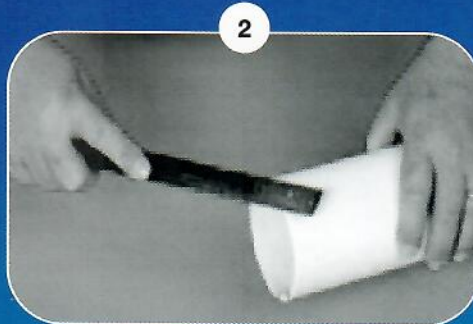
Pipe Size	Support Distance at 20°C (In m)	Support Distance at 50°C (In m)
20mm/1/2"	0.9	0.6
25mm/ 3/4"	1.0	0.7
32mm/ 1"	1.1	0.8
40mm/ 1 1/4"	1.2	0.9
50mm /1 1/2"	1.3	1.0
63mm/ 2"	1.4	1.1
75mm/ 2 1/2"	1.5	1.2
90mm/ 3"	1.6	1.3
110mm/ 4"	1.9	1.3
160mm/ 6"	2.3	1.6

* We Recommend  approved **Kaliter** Pipe Hangers and Supports

ASSEMBLY INSTRUCTIONS FOR SOLVENT CEMENT JOINING



1
Cut the pipe at 90° angle to the pipe axis using suitable sharp pipe cutter.



2
Remove the burrs from the outside and inside of the pipe.



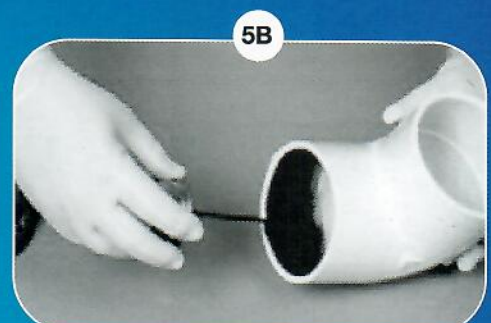
3
Clean the pipe with dry cloth, in order to avoid any dust or sand that might affect the quality of the joint.



4
Do not allow the primer to run down inside of the fitting and pipe.



5A
Apply even layer of solvent cement to the pipe equal to fitting socket depth and fitting upto to the socket length.



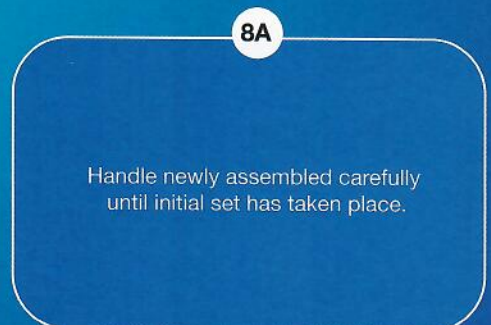
5B
Do not allow the solvent cement to run down inside of the fitting and pipe.



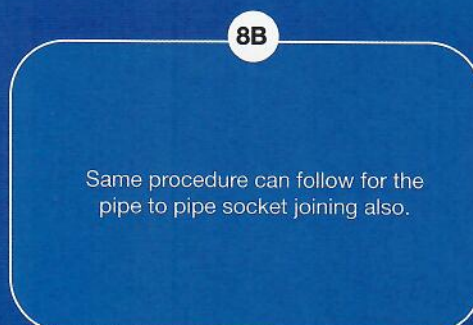
6A
Immediately while cement is still wet assemble the pipe and fitting.



7
Remove the excess cement from the pipe and fitting.



8A
Handle newly assembled carefully until initial set has taken place.



8B
Same procedure can follow for the pipe to pipe socket joining also.

* We Recommend NSF Certified *Kalister* Solvent Cements For Optimum Results

HIGH PRESSURE PIPE DIMENSIONS

HIGH PRESSURE PIPE DIMENSIONS								
Imperial Size Pressure Pipes : BS EN 1452-2 : 2009 (Supersedes BS 3505)								
Size	Outer Diameter (mm)		Wall Thickness (mm)					
	Min	Max	Class-E / PN-15		Class-D / PN-12		Class-C / PN-9	
			Min	Max	Min	Max	Min	Max
1/2"	21.20	21.50	1.70	2.10	-	-	-	-
3/4"	26.60	26.90	1.90	2.50	-	-	-	-
1"	33.40	33.70	2.20	2.80	-	-	-	-
1 1/4"	42.10	42.40	2.70	3.30	2.20	2.70	-	-
1 1/2"	48.10	48.40	3.10	3.70	2.50	3.00	-	-
2"	60.20	60.50	3.90	4.50	3.10	3.70	2.50	3.00
3"	88.70	89.10	5.70	6.60	4.60	5.40	3.50	4.10
4"	114.10	114.50	7.30	8.40	6.00	6.90	4.50	5.20
6"	168.00	168.50	10.80	12.50	8.80	10.20	6.60	7.60
8"	218.80	219.40	12.60	14.50	10.30	11.90	7.80	9.00
10"	272.60	273.40	15.70	18.10	12.80	14.80	9.70	11.20
12"	323.40	324.40	18.70	21.60	15.20	17.50	11.50	13.30

Metric Size Pressure Pipes : BS EN 1452-2 : 2009								
Size	Outer Diameter (mm)		Wall Thickness (mm)					
	Min	Max	PN-16		PN-10		PN-6	
			Min	Max	Min	Max	Min	Max
20mm	20.00	20.20	1.50	1.90	-	-	-	-
25mm	25.00	25.20	1.90	2.30	-	-	-	-
32mm	32.00	32.20	2.40	2.90	1.60	2.00	-	-
40mm	40.00	40.20	3.00	3.50	1.90	2.30	1.50	1.90
50mm	50.00	50.20	3.70	4.30	2.40	2.90	1.60	2.00
63mm	63.00	63.20	4.70	5.40	3.00	3.50	2.30	2.80
75mm	75.00	75.30	5.60	6.40	3.60	4.20	2.30	2.80
90mm	90.00	90.30	6.70	7.60	4.30	5.00	2.80	3.30
110mm	110.00	110.30	6.60	7.50	4.20	5.00	2.70	3.30
160mm	160.00	160.40	9.50	10.70	6.20	7.10	4.00	4.60
200mm	200.00	200.40	11.90	13.30	7.70	8.70	4.90	5.60
250mm	250.00	250.50	14.80	16.50	9.60	10.80	6.20	7.10
315mm	315.00	315.60	18.70	20.80	12.10	13.60	7.70	8.70
400mm	400.00	400.70	23.70	26.30	15.30	17.10	9.80	11.00

20 to 90mm PN Based on design coefficient C= 2.50

110 to 400mm PN Based on design coefficient C= 2.00

HIGH PRESSURE PIPE DIMENSIONS

Metric Size Pressure Pipes : DIN 8061/ 8062

Size	Outer Diameter (mm)		Wall Thickness (mm)					
	Min	Max	PN-16		PN-10		PN-6	
			Min	Max	Min	Max	Min	Max
20mm	20.00	20.20	1.50	1.90	-	-	-	-
25mm	25.00	25.20	1.90	2.30	-	-	-	-
32mm	32.00	32.20	2.40	2.90	1.60	2.00	-	-
40mm	40.00	40.20	3.00	3.50	1.90	2.30	1.80	2.20
50mm	50.00	50.20	3.70	4.30	2.40	2.90	1.80	2.20
63mm	63.00	63.20	4.70	5.40	3.00	3.50	1.90	2.30
75mm	75.00	75.30	5.60	6.40	3.60	4.20	2.20	2.70
90mm	90.00	90.30	6.70	7.60	4.30	5.00	2.70	3.20
110mm	110.00	110.30	8.20	9.30	5.30	6.10	3.20	3.80
160mm	160.00	160.40	11.90	13.30	7.70	8.70	4.70	5.40
200mm	200.00	200.40	14.90	16.60	9.60	10.80	5.90	6.70
225mm	225.00	225.50	16.70	18.60	10.80	12.10	6.60	7.50
250mm	250.00	250.50	18.60	20.70	11.90	13.30	7.30	8.30
280mm	280.00	280.60	20.80	23.10	13.40	15.00	8.20	9.30
315mm	315.00	315.60	23.40	26.00	15.00	16.70	9.20	10.40
355mm	355.00	355.70	26.30	29.90	16.90	18.80	10.40	11.70
400mm	400.00	400.70	29.70	32.90	19.10	21.30	11.70	13.10

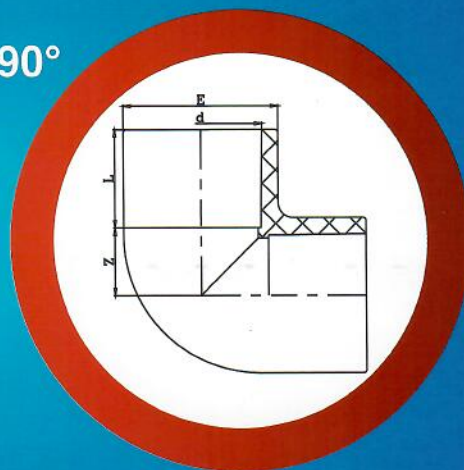
Metric Size Pressure Pipes : ISO-161-1

Size	Outer Diameter (mm)		Wall Thickness (mm)					
	Min	Max	PN-16		PN-10		PN-6	
			Min	Max	Min	Max	Min	Max
20mm	20.00	20.20	1.20	1.60	-	-	-	-
25mm	25.00	25.20	1.50	1.90	-	-	-	-
32mm	32.00	32.20	1.90	2.30	-	-	-	-
40mm	40.00	40.20	2.40	2.90	1.60	2.00	-	-
50mm	50.00	50.20	3.00	3.60	2.00	2.50	1.30	1.70
63mm	63.00	63.20	3.80	4.40	2.50	3.00	1.60	2.20
75mm	75.00	75.30	4.50	5.20	2.90	3.40	1.90	2.30
90mm	90.00	90.30	5.40	6.20	3.50	4.10	2.20	2.70
110mm	110.00	110.30	6.60	7.50	4.20	4.90	2.70	3.20
160mm	160.00	160.40	9.50	10.70	6.20	7.10	4.00	4.70
200mm	200.00	200.40	11.90	13.30	7.70	8.70	4.90	5.60
250mm	250.00	250.50	14.80	16.50	9.60	10.80	6.20	7.10
315mm	315.00	315.60	18.70	20.80	12.10	13.60	7.70	8.70
400mm	400.00	400.70	23.70	26.30	15.30	17.10	9.80	11.00

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL(INCH) SIZE CLASS-E/PN-15 As per BSEN 1452-3						
SIZE	d	L	Z	E	CODE	PACKING
1/2"	21.3	17	11	26	KHPF90E0.5IG	650
3/4"	26.7	20	14	32	KHPF90E0.75IG	350
1"	33.5	23	17	39	KHPF90E1IG	200
1 1/4"	42.2	27	23	50	KHPF90E1.25IG	200
1 1/2"	48.2	32	26	58	KHPF90E1.5IG	125
2"	60.3	39	33	73	KHPF90E2IG	60
2 1/2"	75.1	44	39	90	KHPF90E75MG	45
3"	88.8	51	47	106	KHPF90E3IG	20
4"	114.2	65	57	130	KHPF90E4IG	10
6"	168.2	90	82	198	KHPF90E6IG	3

Elbow 90°



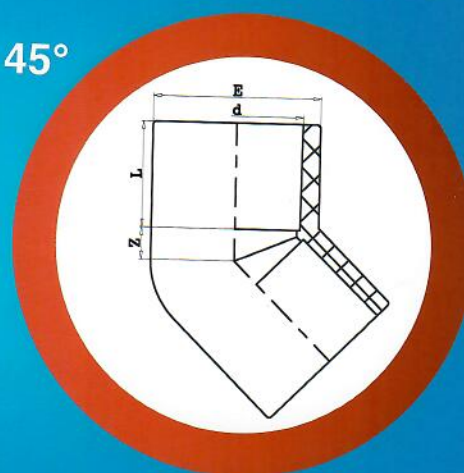
METRIC SIZE PN-16 As per DIN 8063						
SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	11	26	KHPF90E20MG	650
25mm	25.1	20	14	32	KHPF90E25MG	350
32mm	32.1	23	17	39	KHPF90E32MG	200
40mm	40.1	27	23	50	KHPF90E40MG	200
50mm	50.1	32	26	58	KHPF90E50MG	125
63mm	63.1	39	33	73	KHPF90E63MG	60
75mm	75.1	44	39	90	KHPF90E75MG	45
90mm	90.1	51	47	106	KHPF90E90MG	20
110mm	110.1	65	57	130	KHPF90E110MG	10
160mm	160.2	90	82	185	KHPF90E160MG	3

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL(INCH) SIZE CLASS-E/PN-15 As per BSEN 1452-3						
SIZE	d	L	Z	E	CODE	PACKING
1/2"	21.3	17	5	26	KHPF45E0.5IG	700
3/4"	26.7	20	6	32	KHPF45E0.75IG	400
1"	33.5	23	8	39	KHPF45E1IG	250
1 1/4"	42.2	27	10	50	KHPF45E1.25IG	250
1 1/2"	48.2	32	12	58	KHPF45E1.5IG	160
2"	60.3	39	14	73	KHPF45E2IG	75
2 1/2"	75.1	44	17	90	KHPF45E75MG	45
3"	88.8	51	20	106	KHPF45E3IG	25
4"	114.2	65	24	130	KHPF45E4IG	12
6"	168.2	90	35	198	KHPF45E6IG	5



Elbow 45°



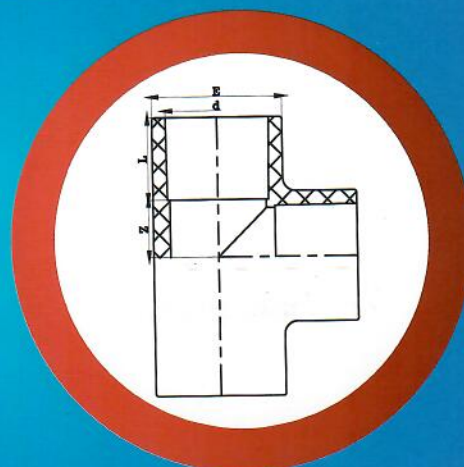
METRIC SIZE PN-16 As per DIN 8063						
SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	5	26	KHPF45E20MG	700
25mm	25.1	20	6	32	KHPF45E25MG	400
32mm	32.1	23	8	39	KHPF45E32MG	250
40mm	40.1	27	10	50	KHPF45E40MG	250
50mm	50.1	32	12	58	KHPF45E50MG	160
63mm	63.1	39	14	73	KHPF45E63MG	75
75mm	75.1	44	17	90	KHPF45E75MG	45
90mm	90.1	51	20	106	KHPF45E90MG	25
110mm	110.1	65	24	130	KHPF45E110MG	12
160mm	160.2	90	35	185	KHPF45E160MG	5

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL(INCH) SIZE CLASS-E/PN-15 As per BSEN 1452-3

SIZE	d	Z	L	E	CODE	PACKING
1/2"	21.3	17	11	26	KHPFT0.5IG	400
3/4"	26.7	20	14	32	KHPFT0.75IG	250
1"	33.5	23	17	39	KHPFT1IG	300
1 1/4"	42.2	27	23	50	KHPFT1.25IG	140
1 1/2"	48.2	32	26	58	KHPFT1.5IG	90
2"	60.3	39	33	73	KHPFT2IG	40
2 1/2"	75.1	44	39	90	KHPFT2.5IG	25
3"	88.8	51	47	106	KHPFT3IG	18
4"	114.2	65	57	130	KHPFT4IG	9
6"	168.2	90	82	198	KHPFT6IG	2

Tee



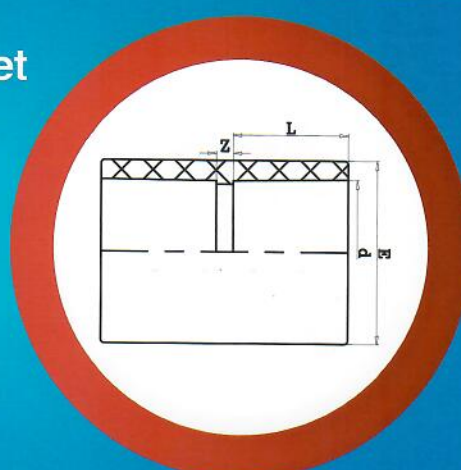
METRIC SIZE PN-16 As per DIN 8063

SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	11	26	KHPFT20MG	400
25mm	25.1	20	14	32	KHPFT25MG	250
32mm	32.1	23	17	39	KHPFT32MG	300
40mm	40.1	27	23	50	KHPFT40MG	140
50mm	50.1	32	26	58	KHPFT50MG	90
63mm	63.1	39	33	73	KHPFT63MG	40
75mm	75.1	44	39	90	KHPFT75MG	25
90mm	90.1	51	47	106	KHPFT90MG	18
110mm	110.1	65	57	130	KHPFT110MG	9
160mm	160.2	90	82	185	KHPFT160MG	2

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL(INCH) SIZE CLASS-E/PN-15 As per BSEN 1452-3						
SIZE	d	L	Z	E	CODE	PACKING
1/2"	21.3	17	3	26	KHPFS0.5IG	1000
3/4"	26.7	20	3	32	KHPFS0.75IG	500
1"	33.5	23	3	39	KHPFS1IG	300
1 1/4"	42.2	27	3	50	KHPFS1.25IG	150
1 1/2"	48.2	32	3	58	KHPFS1.5IG	250
2"	60.3	39	3	73	KHPFS2IG	125
2 1/2"	75.1	44	4	90	KHPFS75MG	75
3"	88.8	51	5	106	KHPFS3IG	40
4"	114.2	65	6	130	KHPFS4IG	20
6"	168.2	90	8	198	KHPFS6IG	7

Socket

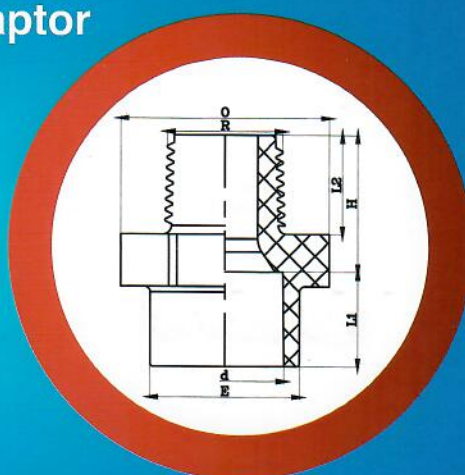


METRIC SIZE PN-16 As per DIN 8063						
SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	3	26	KHPFS20MG	1000
25mm	25.1	20	3	32	KHPFS25MG	500
32mm	32.1	23	3	39	KHPFS32MG	300
40mm	40.1	27	3	50	KHPFS40MG	180
50mm	50.1	32	3	58	KHPFS50MG	250
63mm	63.1	39	3	73	KHPFS63MG	125
75mm	75.1	44	4	90	KHPFS75MG	75
90mm	90.1	51	5	106	KHPFS90MG	40
110mm	110.1	65	6	130	KHPFS110MG	20
160mm	160.2	90	8	185	KHPFS160MG	7

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL(INCH) SIZE CLASS-E/PN-15 As per BSEN 1452-3							
SIZE	d	L1	R	L2	O	CODE	PACKING
1/2"	21.3	17	1/2"	17	37	KHPFMA0.5IG	750
3/4"	26.7	20	3/4"	19	41	KHPFMA0.75IG	500
1"	33.5	23	1"	22	46	KHPFMA1IG	250
1 1/4"	42.2	27	1 1/4"	24	55	KHPFMA1.25IG	320
1 1/2"	48.2	32	1 1/2"	25	65	KHPFMA1.5IG	270
2"	60.3	39	2"	29	80	KHPFMA2IG	140
2 1/2"	75.1	44	2 1/2"	31	90	KHPFMA75X2.5MG	100
3"	88.8	51	3"	34	105	KHPFMA3IG	50
4"	114.2	65	4"	40	130	KHPFMA4IG	25

Male Adaptor

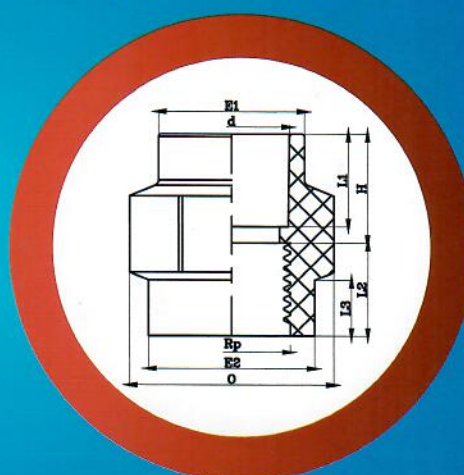


METRIC SIZE PN-16 As per DIN 8063							
SIZE	d	L1	R	L2	O	CODE	PACKING
25/20mm	20.1	17	1/2"	17	37	KHPFMA20X0.5MG	750
32/25mm	25.1	20	3/4"	19	41	KHPFMA25X0.75MG	500
40/32mm	32.1	23	1"	22	46	KHPFMA32X1MG	250
50/40mm	40.1	27	1 1/4"	24	55	KHPFMA40X1.25MG	320
63/50mm	50.1	32	1 1/2"	25	65	KHPFMA50X1.5MG	270
75/63mm	63.1	39	2"	29	80	KHPFMA63X2MG	140
90/75mm	75.1	44	2 1/2"	31	90	KHPFMA75X2.5MG	100
110/90mm	90.1	51	3"	34	105	KHPFMA90X3MG	50
110mm	110.1	65	4"	40	130	KHPFMA110X4MG	25

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL SIZE CLASS-E/PN-15 As per BSEN 1452-3							
SIZE	d	L1	RP	L2	O	CODE	PACKING
1/2"	21.3	17	1/2"	17	36	KHPFFS0.5IG	700
3/4"	26.7	20	3/4"	18	40	KHPFFS0.75IG	400
1"	33.5	23	1"	20	50	KHPFFS1IG	250
1 1/4"	42.2	27	1 1/4"	22	59	KHPFFS1.25IG	250
1 1/2"	48.2	32	1 1/2"	25	70	KHPFFS1.5IG	180
2"	60.3	39	2"	28	85	KHPFFS2IG	100
2 1/2"	75.1	44	2 1/2"	31	90	KHPFFS75X2.5MG	75
3"	88.8	51	3"	34	104	KHPFFS3IG	50
4"	114.2	65	4"	40	130	KHPFFS4IG	25

Female Socket Adaptor



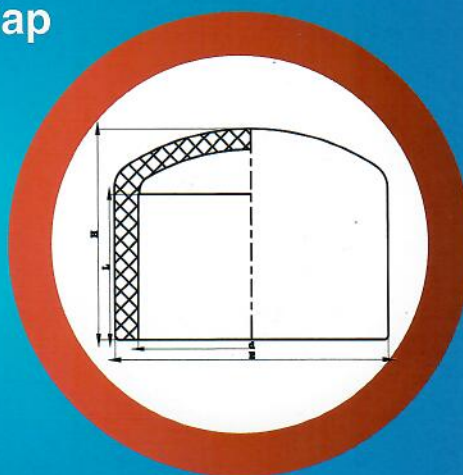
METRIC SIZE PN-16 As per DIN 8063							
SIZE	d	L1	RP	L2	O	CODE	PACKING
25/20mm	20.1	17	1/2"	17	36	KHPFFS20X0.5MG	700
32/25mm	25.1	20	3/4"	18	40	KHPFFS25X0.75MG	400
40/32mm	32.1	23	1"	20	50	KHPFFS32X1MG	250
50/40mm	40.1	27	1 1/4"	22	59	KHPFFS40X1.25MG	250
63/50mm	50.1	32	1 1/2"	25	70	KHPFFS50X1.5MG	180
75/63mm	63.1	39	2"	28	85	KHPFFS63X2MG	100
90/75mm	75.1	44	2 1/2"	31	90	KHPFFS75X2.5MG	75
110/90mm	90.1	51	3"	34	104	KHPFFS90X3MG	50
110mm	110.1	65	4"	40	130	KHPFFS110X4MG	25

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL SIZE CLASS-E/PN-15 As per BSEN 1452-3

SIZE	d	L	E	H	CODE	PACKING
1/2"	21.3	17	26	22.5	KHPFPC0.5IG	1600
3/4"	26.7	20	32	28	KHPFPC0.75IG	1000
1"	33.5	23	39	32	KHPFPC1IG	600
1 1/4"	42.2	27	50	39	KHPFPC1.25IG	330
1 1/2"	48.2	32	58	44	KHPFPC1.5IG	180
2"	60.3	39	73	56	KHPFPC2IG	210
2 1/2"	75.1	44	90	65	KHPFPC75MG	70
3"	88.8	51	106	73	KHPFPC3IG	50
4"	114.2	65	130	88	KHPFPC4IG	40
6"	168.2	90	190	123	KHPFPC6IG	10

Plain Cap



METRIC SIZE PN-16 As per DIN 8063

SIZE	d	L	E	H	CODE	PACKING
20mm	20.1	17	26	22.5	KHPFPC20MG	1600
25mm	25.1	20	32	28	KHPFPC25MG	1000
32mm	32.1	23	39	32	KHPFPC32MG	600
40mm	40.1	27	50	39	KHPFPC40MG	330
50mm	50.1	32	58	44	KHPFPC50MG	180
63mm	63.1	39	73	56	KHPFPC63MG	210
75mm	75.1	44	90	65	KHPFPC75MG	70
90mm	90.1	51	106	73	KHPFPC90MG	50
110mm	110.1	65	130	88	KHPFPC110MG	40
160mm	160.2	90	190	123	KHPFPC160MG	10

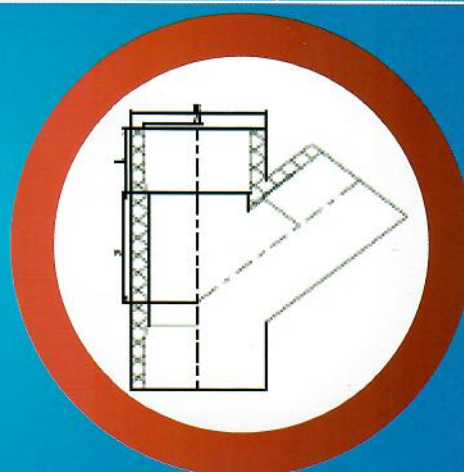
KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL(INCH) SIZE CLASS-E/PN-15 As per BSEN 1452-3

SIZE	d	Z	L	E	CODE	PACKING
1/2"	21.3	17	11	27	KHPFY0.5IG	400
3/4"	26.7	20	14	33	KHPFY0.75IG	200
1"	33.5	23	17	42	KHPFY1IG	100
1 1/4"	42.2	27	23	51	KHPFY1.25IG	75
1 1/2"	48.2	32	26	63	KHPFY1.5IG	60
2"	60.3	39	33	79	KHPFY2IG	30



Y 45°



METRIC SIZE PN-16 As per DIN 8063

SIZE	d	L	Z	E	CODE	PACKING
20mm	20.1	17	11	27	KHPFY20MG	400
25mm	25.1	20	14	33	KHPFY25MG	200
32mm	32.1	23	17	42	KHPFY32MG	100
40mm	40.1	27	23	51	KHPFY40MG	75
50mm	50.1	32	26	63	KHPFY50MG	60
63mm	63.1	39	33	79	KHPFY63MG	30

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL SIZE CLASS-E/PN-15 As per BSEN 1452-3

SIZE	d	L1	RP	E1	E2	CODE	PACKING
1/2"	21.3	17	1/2"	26	30	KHPFFE0.5IG	600
3/4"	26.7	20	3/4"	32	35	KHPFFE0.75IG	250
1"	33.5	23	1"	39	45	KHPFFE1IG	200
1 1/4"	42.2	27	1 1/4"	50	55	KHPFFE1.25IG	200
1 1/2"	48.2	32	1 1/2"	58	62	KHPFFE1.5IG	125
2"	60.3	39	2"	73	75	KHPFFE2IG	60
2 1/2"	75.1	44	2 1/2"	90	95	KHPFFE2.5IG	45
3"	88.8	51	3"	106	110	KHPFFE3IG	20

Female Elbow 90°



METRIC SIZE PN-16 As per DIN 8063

SIZE	d	L1	RP	E1	E2	CODE	PACKING
20mm	20.1	17	1/2"	26	30	KHPFFE20X0.5MG	600
25mm	25.1	20	3/4"	32	35	KHPFFE25X0.75MG	250
32mm	32.1	23	1"	39	45	KHPFFE32X1MG	200
40mm	40.1	27	1 1/4"	50	55	KHPFFE40X1.25MG	200
50mm	50.1	32	1 1/2"	58	62	KHPFFE50X1.5MG	125
63mm	63.1	39	2"	73	75	KHPFFE63X2MG	60
75mm	75.1	44	2 1/2"	90	95	KHPFFE75X2.5MG	45
90mm	90.1	51	3"	106	110	KHPFFE90X3MG	20



IMPERIAL(INCH) SIZE CLASS-E/PN-15 As per BSEN 1452-3

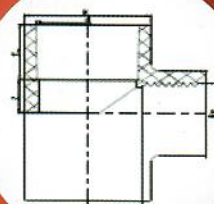
SIZE	d	RP	Z	L	E	CODE	PACKING
1/2"	21.3	1/2"	17	11	26	KHPFFT0.5IG	400
3/4"	26.7	3/4"	20	14	32	KHPFFT0.75IG	250
1"	33.5	1"	23	17	39	KHPFFT1IG	300
1 1/4"	42.2	1 1/4"	27	23	50	KHPFFT1.25IG	140
1 1/2"	48.2	1 1/2"	32	26	58	KHPFFT1.5IG	90
2"	60.3	2"	39	33	73	KHPFFT2IG	40
2 1/2"	75.1	2 1/2"	44	39	90	KHPFFT2.5IG	25
3"	88.8	3"	51	47	106	KHPFFT3IG	18

Female Tee



METRIC SIZE PN-16 As per DIN 8063

SIZE	d	RP	L	Z	E	CODE	PACKING
20mm	20.1	1/2"	17	11	26	KHPFFT20X0.5MG	400
25mm	25.1	3/4"	20	14	32	KHPFFT25X0.75MG	250
32mm	32.1	1"	23	17	39	KHPFFT32X1MG	300
40mm	40.1	1 1/4"	27	23	50	KHPFFT40X1.25MG	140
50mm	50.1	1 1/2"	32	26	58	KHPFFT50X1.5MG	90
63mm	63.1	2"	39	33	73	KHPFFT63X2MG	40
75mm	75.1	2 1/2"	44	39	90	KHPFFT75X2.5MG	25
90mm	90.1	3"	51	47	106	KHPFFT90X3MG	18

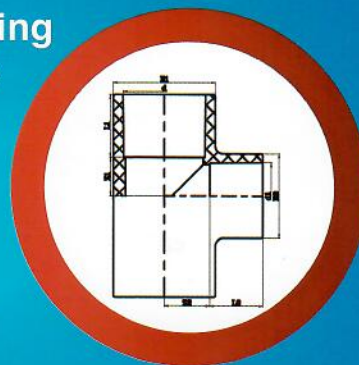
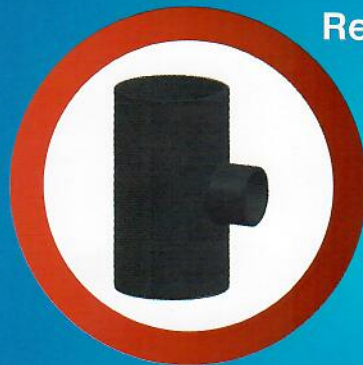


KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

CLASS-E/PN-15 As per BSEN 1452-3

SIZE	d	d1	L1	L2	CODE	PACKING
3/4x1/2"	26.7	21.3	20	17	KHPFRT0.75X0.5IG	250
1x1/2"	33.5	21.3	23	17	KHPFRT1X0.5IG	350
1x3/4"	33.5	26.7	23	20	KHPFRT1X0.75IG	350
11/4x1/2"	42.2	21.3	27	17	KHPFRT1.25X0.5IG	190
11/4x3/4"	42.2	26.7	27	20	KHPFRT1.25X0.75IG	190
11/4x1"	42.2	33.5	27	23	KHPFRT1.25X1IG	190
11/2x1/2"	48.2	21.3	32	17	KHPFRT1.5X0.5IG	100
11/2x3/4"	48.2	26.7	32	20	KHPFRT1.5X0.75IG	100
11/2x1"	48.2	33.5	32	23	KHPFRT1.5X1IG	100
11/2x11/4"	48.2	42.2	32	27	KHPFRT1.5X1.25IG	100
2x1/2"	60.3	21.3	39	17	KHPFRT2X0.5IG	60
2x3/4"	60.3	26.7	39	20	KHPFRT2X0.75IG	60
2x1"	60.3	33.5	39	23	KHPFRT2X1IG	60
2x11/2"	60.3	48.2	39	32	KHPFRT2X1.5IG	60
21/2x11/2"	75.1	48.2	44	32	KHPFRT2.5X1.5IG	25
21/2x2"	75.1	48.2	44	39	KHPFRT2.5X2IG	25
3x2"	88.8	60.3	51	39	KHPFRT3X2IG	18
3x11/2"	88.8	48.2	51	32	KHPFRT3X1.5IG	18
4x2"	114.2	60.3	65	39	KHPFRT4X2IG	8
4x3"	114.2	88.8	65	51	KHPFRT4X3IG	8

Reducing Tee



PN-16 As per DIN 8063

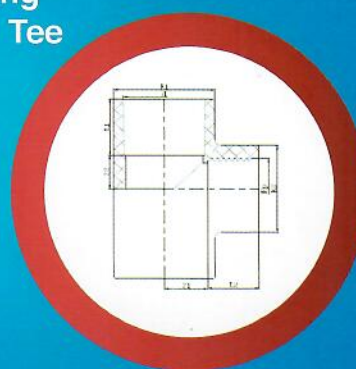
SIZE	d	d1	L1	L2	CODE	PACKING
25 X 20	25.1	20.1	20	17	KHPFRT25X20MG	250
32 X 20	32.1	20.1	23	17	KHPFRT32X20MG	350
32 X 25	32.1	25.1	23	20	KHPFRT32X25MG	325
40x20	40.1	20.1	27	17	KHPFRT40X20MG	190
40x25	40.1	25.1	27	20	KHPFRT40X25MG	190
40x32	40.1	32.1	27	23	KHPFRT40X32MG	190
50x20	50.1	20.1	32	17	KHPFRT50X20MG	100
50x25	50.1	25.1	32	20	KHPFRT50X25MG	100
50x32	50.1	32.1	32	23	KHPFRT50X32MG	100
50x40	50.1	40.1	32	27	KHPFRT50X40MG	100
63x20	63.1	20.1	39	17	KHPFRT63X20MG	60
63x25	63.1	25.1	39	20	KHPFRT63X25MG	60
63x32	63.1	32.1	39	23	KHPFRT63X32MG	60
63x50	63.1	50.1	39	32	KHPFRT63X50MG	60
75x50	75.1	50.1	44	32	KHPFRT75X50MG	25
75x63	75.1	63.1	44	39	KHPFRT75X63MG	25
90x50	90.1	50.1	51	32	KHPFRT90X50MG	18
90x63	90.1	63.1	51	39	KHPFRT90X63MG	18
110x63	110.1	63.1	65	39	KHPFRT110X63MG	8
110x90	110.1	90.1	65	51	KHPFRT110X90MG	8
160x90	160.2	90.1	90	51	KHPFRT160X90MG	2
160x110	160.2	110.1	90	65	KHPFRT160X110MG	2
200x160	200.2	160.2	110	90	KHPFRT200X160MG	1

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

CLASS-E/PN-15 As per BSEN 1452-3

SIZE	d	L1	RP	E1	E2	CODE	PACKING
3/4x1/2"	26.7	20	1/2"	32	29	KHPFRFT0.75X0.5IG	400
1x1/2"	33.5	23	1/2"	39	29	KHPFRFT1X0.5IG	350
1x3/4"	33.5	23	3/4"	39	34	KHPFRFT1X0.75IG	300
1 1/4x1/2"	42.2	27	1/2"	50	29	KHPFRFT1.25X0.5IG	225
1 1/4x3/4"	42.2	27	3/4"	50	34	KHPFRFT1.25X0.75IG	225
1 1/2x1/2"	48.2	32	1/2"	58	29	KHPFRFT1.5X0.5IG	100
1 1/2x3/4"	48.2	32	3/4"	58	34	KHPFRFT1.5X0.75IG	100
1 1/2x1"	48.2	32	1"	58	41	KHPFRFT1.5X1IG	100
2x1/2"	60.3	39	1/2"	73	29	KHPFRFT2X0.5IG	75
2x3/4"	60.3	39	3/4"	73	34	KHPFRFT2X0.75IG	60
2x1"	60.3	39	1"	73	41	KHPFRFT2X1IG	60

Reducing Female Tee



PN-16 As per DIN 8063

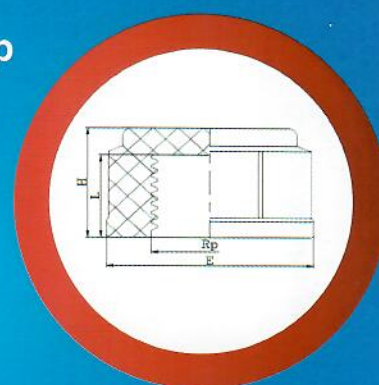
SIZE	d	L1	RP	E1	E2	CODE	PACKING
25x1/2"	25.1	20	1/2"	32	29	KHPFRFT25X0.5MG	400
32x1/2"	32.1	23	1/2"	39	29	KHPFRFT32X0.5MG	350
32x3/4"	32.1	23	3/4"	39	34	KHPFRFT32X0.75MG	300
40x1/2"	40.1	27	1/2"	50	29	KHPFRFT40X0.5MG	225
40x3/4"	40.1	27	3/4"	50	34	KHPFRFT40X0.75MG	225
50x1/2"	50.1	32	1/2"	58	34	KHPFRFT50X0.5MG	100
50x3/4"	50.1	32	3/4"	58	34	KHPFRFT50X0.75MG	100
50x1"	50.1	32	1"	58	41	KHPFRFT50X1MG	100
63x1/2"	63.1	39	1/2"	73	29	KHPFRFT63X0.5MG	75
63x3/4"	63.1	39	3/4"	73	34	KHPFRFT63X0.75MG	60
63x1"	63.1	39	1"	73	41	KHPFRFT63X1MG	60

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

CLASS-E/PN-15 As per BSEN 1452-3						
SIZE	L	Rp	H	E	CODE	PACKING
1/2"	17	1/2"	37	37	KHPFTC0.5IG	1200
3/4"	18	3/4"	42	42	KHPFTC0.75IG	800
1"	20	1"	50	50	KHPFTC1IG	400
1 1/4"	22	1 1/4"	59	59	KHPFTC1.25IG	250
1 1/2"	25	1 1/2"	65	65	KHPFTC1.5IG	180
2"	28	2"	77	77	KHPFTC2IG	110
2 1/2"	31	2 1/2"	90	90	KHPFTC2.5IG	100
3"	34	3"	105	105	KHPFTC3IG	50
4"	40	4"	130	130	KHPFTC4IG	20



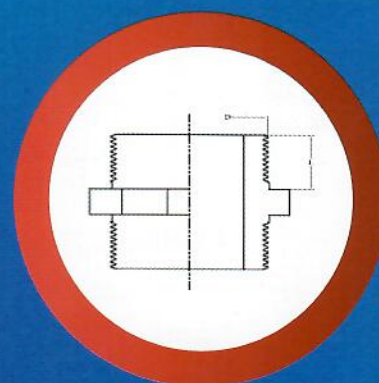
Female Threaded Cap



CLASS-E/PN-15 As per BSEN 1452-3				
SIZE	L	Rp	CODE	PACKING
1/2"	17	1/2"	KHPFHN0.5IG	1000
3/4"	19	3/4"	KHPFHN0.75IG	700
1"	22	1"	KHPFHN1IG	400
1 1/4"	24	1 1/4"	KHPFHN1.25IG	250
1 1/2"	25	1 1/2"	KHPFHN1.5IG	150
2"	29	2"	KHPFHN2IG	100



Hex Nipple

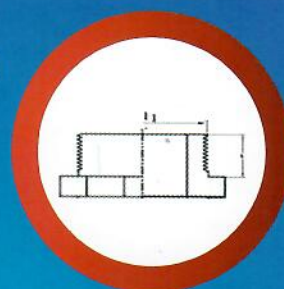


KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

CLASS-E/PN-15 As per BSEN 1452-3				
SIZE	L	Rp	CODE	PACKING
1/2"	17	1/2"	KHPFMTP0.5IG	1500
3/4"	19	3/4"	KHPFMTP0.75IG	1000
1"	22	1"	KHPFMTP1IG	500
1 1/4"	24	1 1/4"	KHPFMTP1.25IG	400
1 1/2"	25	1 1/2"	KHPFMTP1.5IG	250
2"	29	2"	KHPFMTP2IG	150



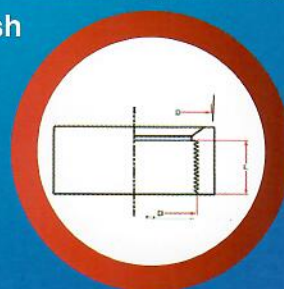
Male Threaded Plug



CLASS-E/PN-15 As per BSEN 1452-3					
SIZE	L	D	Rp	CODE	PACKING
3/4x1/2"	20	26.6	1/2"	KHPFFRB0.75X0.5IG	1200
1x1/2"	23	33.5	1/2"	KHPFFRB1X0.5IG	700
1x3/4"	23	33.5	3/4"	KHPFFRB1X0.75IG	700
1 1/2x1/2"	32	48.2	1/2"	KHPFFRB1.5X0.5IG	200
1 1/2x3/4"	32	48.2	3/4"	KHPFFRB1.5X0.75IG	200
2x1/2"	39	60.3	1/2"	KHPFFRB2X0.5IG	150
2x3/4"	39	60.3	3/4"	KHPFFRB2X0.75IG	150



Female Reducer Bush

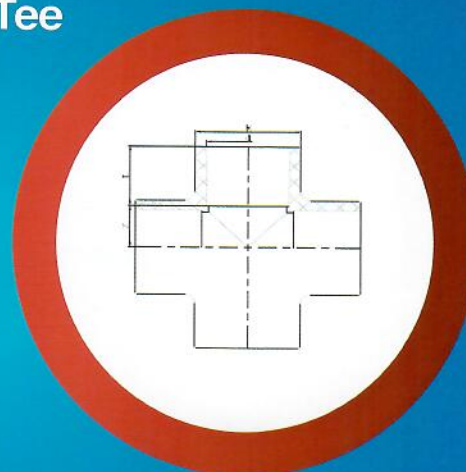


PN-16 As per DIN 8063					
SIZE	L	D	Rp	CODE	PACKING
25x1/2"	20	25	1/2"	KHPFFRB25X0.5MG	1200
32x1/2"	23	32	1/2"	KHPFFRB32X0.5MG	700
32x3/4"	23	32	3/4"	KHPFFRB32X0.75MG	700
50X1/2"	32	50	1/2"	KHPFFRB50X0.5MG	200
50X3/4"	32	50	1/2"	KHPFFRB50X0.75MG	200
63X1/2"	39	63	1/2"	KHPFFRB63X0.5MG	150
63X3/4"	39	63	3/4"	KHPFFRB63X0.75MG	150

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

IMPERIAL(INCH) SIZE CLASS-E/PN-15 As per BSEN 1452-3						
SIZE	d	Z	L	D	CODE	PACKING
1/2"	21.3	17	11	26	KHPFCT0.5IG	300
3/4"	26.7	20	14	32	KHPFCT0.75IG	200
1"	33.5	23	17	39	KHPFCT1IG	150
1 1/4"	42.2	27	23	50	KHPFCT1.25IG	100
1 1/2"	48.2	32	26	58	KHPFCT1.5IG	75
2"	60.3	39	33	73	KHPFCT2IG	30
3"	88.8	51	47	106	KHPFCT3IG	10
4"	114.2	65	57	130	KHPFCT4IG	5
6"	168.2	90	82	198	KHPFCT6IG	2

Cross Tee



METRIC SIZE PN-16 As per DIN 8063						
SIZE	d	L	Z	D	CODE	PACKING
20mm	20.1	17	11	26	KHPFCT20MG	300
25mm	25.1	20	14	32	KHPFCT25MG	200
32mm	32.1	23	17	39	KHPFCT32MG	150
40mm	40.1	27	23	50	KHPFCT40MG	100
50mm	50.1	32	26	58	KHPFCT50MG	75
63mm	63.1	39	33	73	KHPFCT63MG	30
75mm	75.1	44	39	90	KHPFCT75MG	20
90mm	90.1	51	47	106	KHPFCT90MG	10
110mm	110.1	65	57	130	KHPFCT110MG	5
160mm	160.2	90	82	185	KHPFCT160MG	2

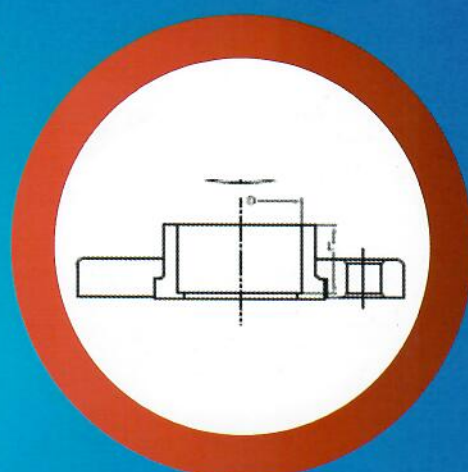
KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

CLASS-E/PN-15 As per BSEN 1452-3

SIZE	d	L	CODE	PACKING
1 1/2"	48.2	32	KHPFFL1.5IG	50
2"	60.3	39	KHPFFL2IG	30
2 1/2"	75.1	44	KHPFFL75MG	25
3"	88.8	51	KHPFFL3IG	20
4"	114.2	64	KHPFFL4IG	10
6"	168.2	90	KHPFFL6IG	5



Flanges with Stub



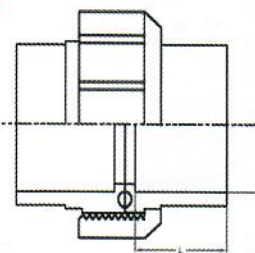
PN-16 As per DIN 8063

SIZE	d	L	CODE	PACKING
50mm	50.1	32	KHPFFL50MG	50
63mm	63.1	39	KHPFFL63MG	30
75mm	75.1	44	KHPFFL75MG	25
90mm	90.1	51	KHPFFL90MG	20
110mm	110.1	65	KHPFFL110MG	10
160mm	160.2	90	KHPFFL160MG	5

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

CLASS-E/PN-15 As per BSEN 1452-3				
SIZE	d	L	CODE	PACKING
1/2"	21.3	17	KHPFUN0.5IG	800
3/4"	26.7	20	KHPFUN0.75IG	500
1"	33.5	23	KHPFUN1IG	300
1 1/4"	42.2	27	KHPFUN1.25IG	200
1 1/2"	48.2	32	KHPFUN1.5IG	100
2"	60.3	39	KHPFUN2IG	50
2 1/2"	75.1	44	KHPFUN75MG	30
3"	88.8	51	KHPFUN3IG	20
4"	114.2	64	KHPFUN4IG	10

Union Solvent Socketed



PN-16 As per DIN 8063				
SIZE	d	L	CODE	PACKING
20mm	20.1	17	KHPFUN20MG	800
25mm	25.1	20	KHPFUN25MG	500
32mm	32.1	23	KHPFUN32MG	300
40mm	40.1	27	KHPFUN40MG	200
50mm	50.1	32	KHPFUN50MG	100
63mm	63.1	39	KHPFUN63MG	50
75mm	75.1	44	KHPFUN75MG	30
90mm	90.1	51	KHPFUN90MG	20
110mm	110.1	65	KHPFUN110MG	10

KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

PN-16 As per DIN 8063							
SIZE	d	d1	L1	L2	Z	CODE	PACKING
25 X 20	20.1	25	20	17	3	KHPFRB25X20MG	2000
32 X 20	20.1	32	23	17	6	KHPFRB32X20MG	1000
32 X 25	25.1	32	23	20	3	KHPFRB32X25MG	1000
40 X 20	20.1	40	27	17	10	KHPFRB40X20MG	550
40 X 25	25.1	40	27	20	7	KHPFRB40X25MG	550
40 X 32	32.1	40	27	23	4	KHPFRB40X32MG	550
50 X 20	20.1	50	32	17	15	KHPFRB50X20MG	340
50 X 25	25.1	50	32	20	12	KHPFRB50X25MG	340
50 X 32	32.1	50	32	23	9	KHPFRB50X32MG	340
50 x 40	40.1	50	32	27	5	KHPFRB50X40MG	340
63 X 20	20.1	63	39	17	22	KHPFRB63X20MG	160
63 X 25	25.1	63	39	20	19	KHPFRB63X25MG	160
63 X 32	32.1	63	39	23	16	KHPFRB63X32MG	160
63x40	40.1	63	39	27	12	KHPFRB63X40MG	160
63 x 50	50.1	63	39	32	7	KHPFRB63X50MG	160
75X50	50.1	75	44	32	12	KHPFRB75X50MG	200
75X63	63.1	75	44	39	5	KHPFRB75X63MG	200
90X50	63.1	90	51	39	12	KHPFRB90X63MG	150
90x63	63.1	90	51	39	12	KHPFRB90X63MG	150
90X75	75.1	90	51	44	7	KHPFRB90X75MG	150
110X50	50.1	110	65	32	33	KHPFRB110X50MG	75
110x63	63.1	110	65	39	26	KHPFRB110X63MG	75
110x75	75.1	110	65	45	20	KHPFRB110X75MG	75
110x90	90.1	110	65	51	14	KHPFRB110X90MG	75
160x90	90.1	160	90	51	39	KHPFRB160X90MG	20
160x110	110.1	160	90	65	25	KHPFRB160X110MG	20

Reducer Bushes

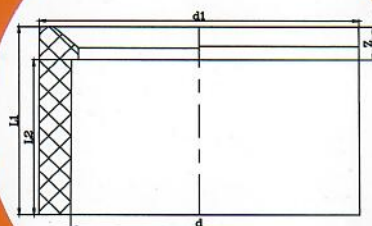


KALISTER UPVC HIGH PRESSURE PIPE FITTINGS

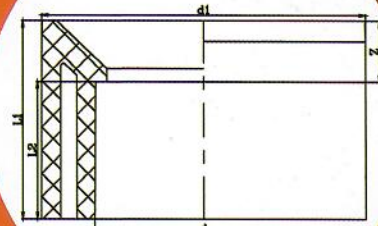
CLASS-E/PN-15 As per BSEN 1452-3

SIZE	d	d1	L1	L2	Z	CODE	PACKING
3/4x1/2"	21.3	26.6	20	17	3	KHPFRB0.75X0.5IG	2000
1x1/2"	21.3	33.4	23	17	6	KHPFRB1X0.5IG	1000
1x3/4"	26.7	33.4	23	20	3	KHPFRB1X0.75X0.5IG	1000
11/4x1/2"	21.3	42.1	27	17	10	KHPFRB1.25X0.5IG	550
11/4x3/4"	26.7	42.1	27	20	7	KHPFRB1.25X0.75IG	550
11/4x1"	33.5	42.1	27	23	4	KHPFRB1.25X1IG	550
11/2x1/2"	21.3	48.1	32	17	15	KHPFRB1.5X0.5IG	340
11/2x3/4"	26.7	48.1	32	20	12	KHPFRB1.5X0.75IG	340
11/2x1"	33.5	48.1	32	23	9	KHPFRB1.5X1IG	340
11/2x11/4"	42.2	48.1	32	27	5	KHPFRB1.5X1.25IG	340
2x1/2"	21.3	60.2	39	17	22	KHPFRB2X0.5IG	160
2x3/4"	26.7	60.2	39	20	19	KHPFRB2X0.75IG	160
2x1"	33.5	60.2	39	23	16	KHPFRB2X1IG	160
2x11/4"	42.2	60.2	39	27	12	KHPFRB2X1.25IG	160
2x11/2"	48.2	60.2	39	32	7	KHPFRB2X1.5IG	160
21/2x11/2"	48.2	75	44	32	12	KHPFRB2.5X1.5IG	200
21/2x2"	60.3	75	44	39	5	KHPFRB2.5X2IG	200
3x11/2"	48.2	88.7	51	32	19	KHPFRB3X1.5IG	150
3x2"	60.3	88.7	51	39	12	KHPFRB3X2IG	150
3x21/2"	60.3	88.7	51	39	12	KHPFRB3X2.5IG	150
4x11/2"	48.2	114.1	65	32	33	KHPFRB4X1.5IG	75
4x2"	60.3	114.1	65	39	26	KHPFRB4X2IG	75
4x3"	88.8	114.1	65	51	14	KHPFRB4X3IG	75
6x3"	88.8	168	90	51	39	KHPFRB6X3IG	20
6x4"	114.2	168	90	65	25	KHPFRB6X4IG	20

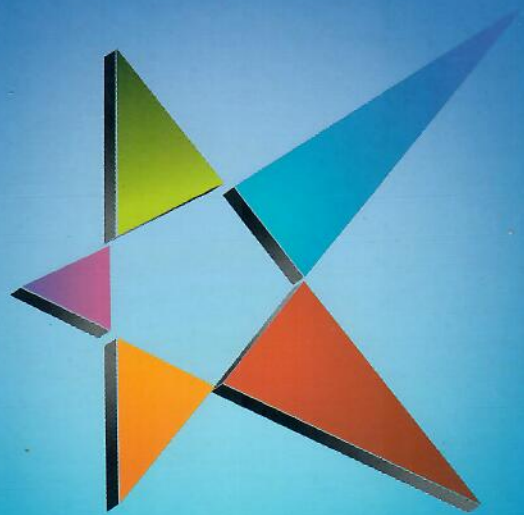
Reducer Bushes



A



B



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