

ASAHI VALVE AND PIPING SYSTEMS

ASAHI AV PP PIPE & FITTINGS

The specifications in this brochure are subject to change without prior notice due to improvements and modifications.

FEATURES

- Low leaching into medium.
- High corrosion resistance to acid/alkali application.
- High temperature resistance up to 90°C .
- Due to superior impact resistance at low temperature, PP piping material is suitable piping material to low temperature application.
- Since PP piping material has small specific gravity (0.91) and simple welding procedure, it provides easier field work at site.
- No dioxin is generated at waste procedure even it would be burnt.

 <p>PP PIPE PN10</p>	 <p>PP PIPE PN4</p>	 <p>SOCKET</p>	 <p>90° ELBOW</p>
 <p>45° ELBOW</p>	 <p>TEE</p>	 <p>REDUCER BUSHING</p>	 <p>END CAP</p>
 <p>SOCKET FLANGE</p>	 <p>FLANGE ADAPTER</p>	 <p>FLANGE ADAPTER</p>	 <p>LOOSE FLANGE</p>
 <p>WELDED FLANGE</p>	 <p>BLIND FLANGE(P)</p>	 <p>BLIND FLANGE(Q)</p>	 <p>PREFAB JOINT</p>
 <p>MALE ADAPTER</p>	 <p>FEMALE ADAPTER</p>	 <p>EF-SOCKET</p>	 <p>WELDING ROD</p>

Range of Nominal Size

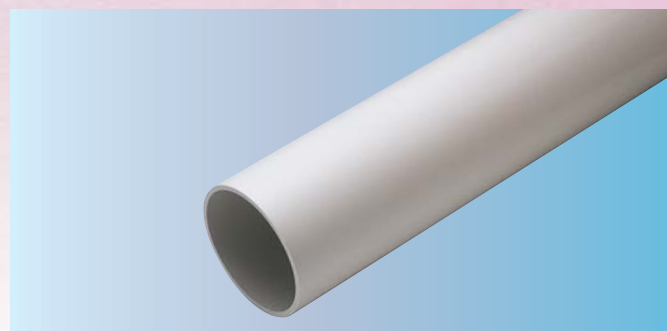
Nominal Size (mm)	Indication	Pipe		Socket	90° Elbow	45° Elbow	Tee	Reducer Bushing	End Cap	Socket Flange	Flange Adapter	Loose Flange
		PN10	PN4									
15	d20	⊙	—	⊙	⊙	⊙	⊙	—	⊙	⊙	⊙	⊙
20	d25	⊙	—	⊙	⊙	⊙	⊙	15	⊙	⊙	⊙	⊙
25	d32	⊙	—	⊙	⊙	⊙	⊙	15 20	⊙	⊙	⊙	⊙
32	d40	⊙	—	⊙	⊙	⊙	⊙	15 20 25	⊙	⊙	⊙	⊙
40	d50	⊙	—	⊙	⊙	⊙	⊙	15 20 25 32	⊙	⊙	⊙	⊙
50	d63	⊙	—	⊙	⊙	⊙	⊙	20 25 32 40	⊙	⊙	⊙	⊙
65	d75	⊙	—	⊙	⊙	⊙	⊙	50	⊙	⊙	⊙	⊙
80	d90	⊙	—	⊙	⊙	⊙	⊙	50 65	⊙	⊙	⊙	⊙
100	d110	⊙	—	⊙	⊙	⊙	⊙	80	⊙	⊙	⊙	⊙
125	d140	⊙	⊙	⊙	⊙	⊙	⊙	100	—	—	⊙	⊙
150	d180	⊙	⊙	⊙	⊙	⊙	⊙	125	—	—	⊙	⊙
200	d225	⊙	⊙	⊙	⊙	⊙	⊙	150	—	—	⊙	⊙

Nominal Size (mm)	Indication	Welded Flange	Blind Flange		Prefab Joint			Male Adapter	Female Adapter	EF-Socket
		Ⓜ	Ⓟ	Ⓠ	PP-PP	PP×PVC	PP×C-PVC			
15	d20	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
20	d25	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
25	d32	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
32	d40	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
40	d50	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
50	d63	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
65	d75	⊙	⊙	⊙	—	—	—	—	—	⊙
80	d90	⊙	⊙	⊙	—	—	—	—	—	⊙
100	d110	⊙	⊙	⊙	—	—	—	—	—	⊙
125	d140	⊙	⊙	⊙	—	—	—	—	—	⊙
150	d180	⊙	⊙	⊙	—	—	—	—	—	⊙
200	d225	⊙	⊙	⊙	—	—	—	—	—	⊙

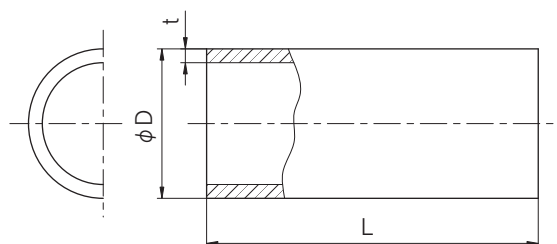
Welding Rod	Shape	Diameter	Unit	
	Single	3	3	2kg (Stick type1m)
				4kg (Scroll type)
		4	4	2kg (Stick type1m)
				4kg (Scroll type)
	5	5	2kg (Stick type1m)	
4kg (Scroll type)				
Double	3	3	2kg (Stick type1m)	

■ PP pipe (PN10/SDR11)

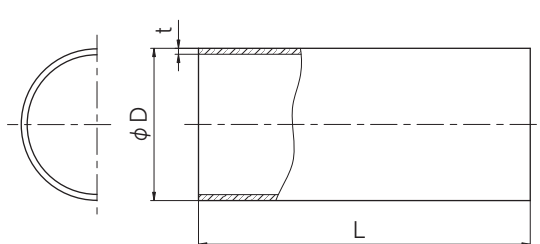
■ PP pipe (PN4/SDR26)



PP pipe (PN10/SDR11)



PP pipe (PN4/SDR26)



(Unit : mm)

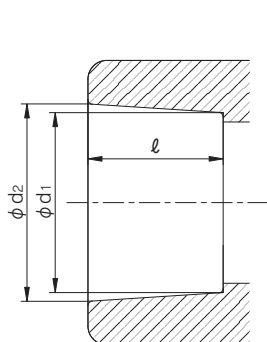
PN10/SDR11									
Nominal Size (mm)	Product Indication	D		t		Approximate I.D. (for reference)	L		Weight (kg/m)
		Basic Dimension	Average O.D. Tolerances	Basic Dimension	Tolerance		Basic Dimension	Tolerance	
15	d20	20	+0.3 0	1.9	+0.4 0	16.2	4000	±10	0.110
20	d25	25	+0.3 0	2.3	+0.5 0	20.4			0.166
25	d32	32	+0.3 0	3.0	+0.5 0	26.2			0.271
32	d40	40	+0.4 0	3.7	+0.6 0	32.6			0.421
40	d50	50	+0.5 0	4.6	+0.7 0	40.8			0.649
50	d63	63	+0.6 0	5.8	+0.8 0	51.4			1.028
65	d75	75	+0.7 0	6.9	+0.9 0	61.4			1.447
80	d90	90	+0.9 0	8.2	+1.1 0	73.6			2.083
100	d110	110	+1.0 0	10.0	+1.2 0	90.0			3.099
125	d140	140	+1.3 0	12.8	+1.5 0	114.6			5.008
150	d180	180	+1.7 0	16.4	+1.9 0	147.2			8.250
200	d225	225	+2.1 0	20.5	+2.3 0	184.0			12.864

PN4/SDR26									
Nominal Size (mm)	Product Indication	D		t		Approximate I.D. (for reference)	L		Weight (kg/m)
		Basic Dimension	Average O.D. Tolerances	Basic Dimension	Tolerance		Basic Dimension	Tolerance	
125	d140	140	+1.3 0	5.4	+0.8 0	129.2	4000	±10	2.224
150	d180	180	+1.7 0	7.0	+1.0 0	166.0			3.697
200	d225	225	+2.1 0	8.7	+1.1 0	207.6			5.702

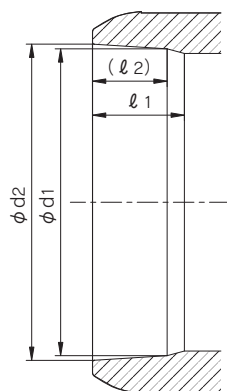
- (Note) 1. 15mm~200mm : DIN8077
 2. SDR (Standard Dimension Ratio) : (D/t)
 3. PN10 : Working Pressure 1.0MPa(20°C)
 4. PN4 : Working Pressure 0.4MPa(20°C)

■ PP Fitting Dimension Common

(Unit : mm)



15mm~100mm
(d20~d110)

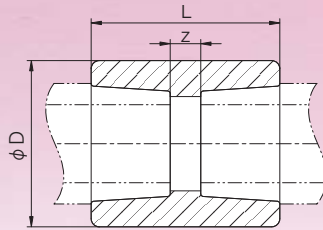


125mm~200mm
(d140~d225)

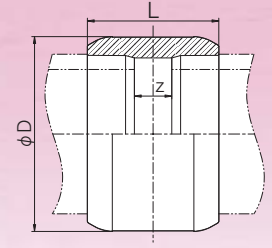
Nominal Size (mm)	Product Indication	d1			d2			ℓ (minimum)	ℓ 1	ℓ 2 (for reference)
		Basic Dimension	Average I.D. Tolerances	Circularity (Max)	Basic Dimension	Average I.D. Tolerances	Circularity (Max)			
15	d20	19.3	-0.3 0	0.4	19.5	-0.3 0	0.4	14.5	—	—
20	d25	24.3	-0.4 0	0.4	24.5	-0.3 0	0.4	16	—	—
25	d32	31.3	-0.4 0	0.5	31.5	-0.4 0	0.5	18	—	—
32	d40	39.2	-0.4 0	0.5	39.45	-0.4 0	0.5	20.5	—	—
40	d50	49.2	-0.5 0	0.6	49.45	-0.5 0	0.6	23.5	—	—
50	d63	62.1	-0.5 0	0.6	62.5	-0.6 0	0.6	27.5	—	—
65	d75	73.95	-0.5 0	1	74.25	-0.5 0	1	31	—	—
80	d90	88.85	-0.6 0	1	89.2	-0.6 0	1	35.5	—	—
100	d110	108.65	-0.6 0	1	109.05	-0.6 0	1	41.5	—	—
125	d140	139.1	-2.0 0	2.0	139.4	-2.0 0	2.0	—	41.5	32.7
150	d180	178.7	-2.0 0	2.0	179.1	-2.0 0	2.0	—	50.5	41.7
200	d225	223.2	-2.0 0	2.0	223.7	-2.0 0	2.0	—	61.0	52.3

- (Note) 1. 15mm~100mm : DIN16962 typeB
 2. 125mm~200mm : AV Standard
 3. Circularity : The dimension of Max I.D.-Min I.D.

Socket



15mm~100mm (d20~d110)



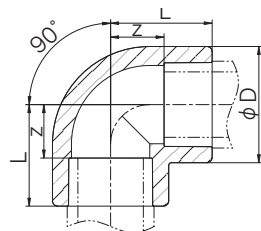
125mm~200mm (d140~d225)

(Unit : mm)

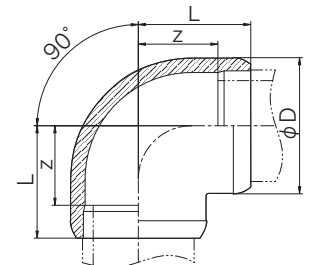
Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	30.5	35	6	0.015
20	d25	35.5	39	7	0.019
25	d32	43.5	43	7	0.030
32	d40	53.5	48	7	0.047
40	d50	66	55	8	0.079
50	d63	82	62	7	0.131
65	d75	92.5	70	8	0.161
80	d90	110	81	10	0.253
100	d110	134	96	13	0.431
125	d140	172	116	33	0.821
150	d180	221	140	39	1.562
200	d225	276	167	45	2.820

(Note) 1. 15mm~100mm : DIN16962-8
2. 125mm~200mm : AV Standard

90° Elbow



15mm~100mm (d20~d110)



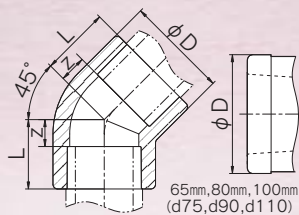
125mm~200mm (d140~d225)

(Unit : mm)

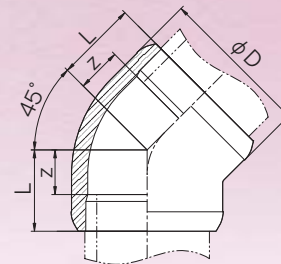
Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	30.5	28	13.5	0.023
20	d25	35.5	32	16	0.032
25	d32	43.5	38	20	0.052
32	d40	53.5	44	23.5	0.084
40	d50	66	51	27.5	0.136
50	d63	82	62	34.5	0.250
65	d75	92.5	75.5	44.5	0.340
80	d90	110	88	52.5	0.526
100	d110	134	106	64.5	0.953
125	d140	172	142	100.5	1.922
150	d180	221	179	128.5	4.058
200	d225	276	220	159.0	7.618

(Note) 1. 15mm~100mm : DIN16962-6
2. 125mm~200mm : AV Standard

45° Elbow



15mm~100mm (d20~d110)



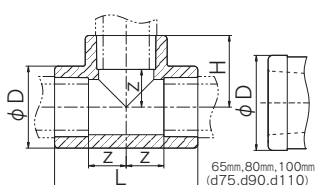
125mm~200mm (d140~d225)

(Unit : mm)

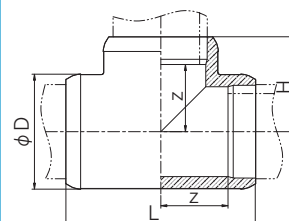
Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	31	21.5	7	0.018
20	d25	36	24.5	8.5	0.025
25	d32	44	28	10	0.037
32	d40	55	34	13.5	0.070
40	d50	66	37	13.5	0.102
50	d63	82	48	20.5	0.180
65	d75	92	51.5	20.5	0.203
80	d90	111	59	23.5	0.340
100	d110	135.5	69	27.5	0.605
125	d140	172	92	50.5	1.299
150	d180	221	114	63.5	2.662
200	d225	276	140	79.0	4.939

(Note) 1. 15mm~100mm : DIN16962-6
2. 125mm~200mm : AV Standard

Tee



15mm~100mm (d20~d110)



125mm~200mm (d140~d225)

(Unit : mm)

Nominal Size (mm)	Product Indication	D	L	H	z	Weight (kg)
15	d20	30.5	57	28.5	14	0.029
20	d25	35.5	65	32.5	16.5	0.041
25	d32	43.5	76	38	20	0.060
32	d40	55	88	44	23.5	0.108
40	d50	66	103	51.5	28	0.163
50	d63	82	126	63	35.5	0.292
65	d75	92.5	152	76	45	0.358
80	d90	111	176	88	52.5	0.625
100	d110	135	213	106.5	65	1.030
125	d140	172	284	142	100.5	1.317
150	d180	221	358	179	128.5	4.902
200	d225	276	440	220	159.0	9.300

(Note) 1. 15mm~100mm : DIN16962-7
2. 125mm~200mm : AV Standard

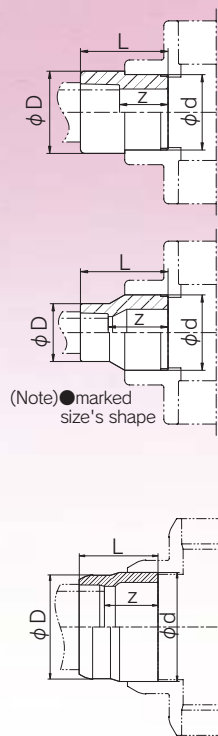
Reducer Bushing



20mm×15mm~100mm×80mm
(d25×d20~d110×d90)



125mm×100mm~200mm×150mm
(d140×d110~d225×d180)



(Unit : mm)

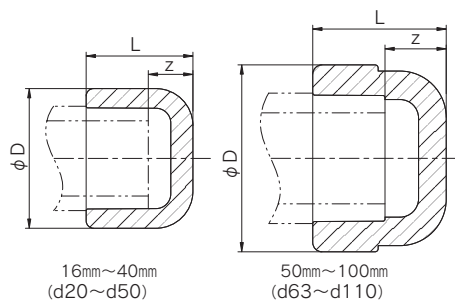
Nominal Size (mm)	Product Indication	D	d	L	Z	Weight (kg)
● 20×15	d25×d20	30	25	35	20.5	0.011
25×15	d32×d20	30	32	43	28.5	0.016
● 25×20	d32×d25	35	32	38	22	0.016
32×15	d40×d20	30	40	50	35.5	0.022
32×20	d40×d25	35	40	50	34	0.024
● 32×25	d40×d32	43	40	48	30	0.029
40×15	d50×d20	31	50	54	39.5	0.034
40×20	d50×d25	36	50	54	38	0.035
40×25	d50×d32	43	50	54	36	0.035
● 40×32	d50×d40	54	50	54	33.5	0.050
50×20	d63×d25	37	63	65	49	0.058
50×25	d63×d32	43	63	65	47	0.056
50×32	d63×d40	54	63	64	43.5	0.068
● 50×40	d63×d50	66	63	64	40.5	0.085
● 65×50	d75×d63	81	75	61	33.5	0.105
80×50	d90×d63	81	90	89	61.5	0.171
● 80×65	d90×d75	92.5	90	70	39	0.148
● 100×80	d110×d90	112	110	81	45.5	0.267
125×100	d140×d110	135.5	140	110	68.5	0.502
150×125	d180×d140	172	180	130	88.5	0.971
200×150	d225×d180	221	225	160	109.5	1.868

(Note) 1. 20mm×15mm~100mm×80mm : DIN 16962-9
2. 125mm×100mm~200mm×150mm : AV Standard

End Cap



15mm~100mm (d20~d110)



(Unit : mm)

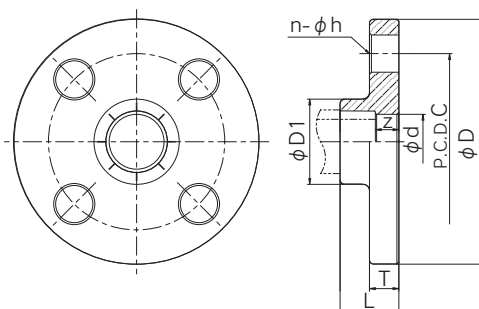
Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	30	27	12.5	0.013
20	d25	36	30	14	0.019
25	d32	44	32	14	0.028
32	d40	55	36	15.5	0.039
40	d50	66	43	19.5	0.076
50	d63	85	47	19.5	0.129
65	d75	92	63	32	0.165
80	d90	111	74	38.5	0.296
100	d110	133.5	91	49.5	0.430

(Note) DIN16962-8

Socket Flange



15mm~50mm (d20~d63)



(Unit : mm)

Nominal Size (mm)	Product Indication	D1	d	Z	T	L	JIS 10K				Weight (kg)
							D	C	n	h	
15	d20	30.5	16	15.5	14	30	95	70	4	15	0.090
20	d25	35.5	21	15.0	15	31	100	75	4	15	0.105
25	d32	43.5	28	13.0	15	31	125	90	4	19	0.161
32	d40	53.5	36	12.5	16	33	135	100	4	19	0.198
40	d50	66.0	45	10.5	16	34	140	105	4	19	0.215
50	d63	82.0	57	9.5	20	37	155	120	4	19	0.317
65	d75	92.5	69	23.0	22	54	175	140	4	19	0.452
80	d90	110.0	84	18.5	22	54	185	150	8	19	0.473
100	d110	134.5	102	12.5	22	54	210	175	8	19	0.613

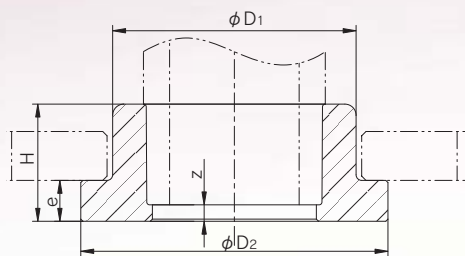
(Note) Flange Standard is available only JIS 10K.

Flange Adapter

(unit : mm)



15mm~100mm (d20~d110)



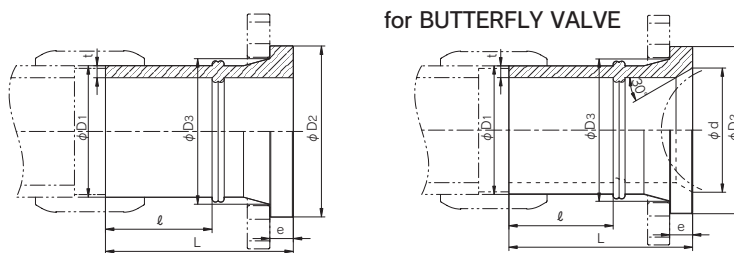
Nominal Size (mm)	Product Indication	D1	D2	e	H	z	Weight (kg)
15	d20	27.5	45	10	21.5	7	0.015
20	d25	33.5	56	10	22	6	0.023
25	d32	41.5	62	10	24.5	6.5	0.029
32	d40	50	74	11	28.5	8	0.044
40	d50	61	78	12	32	8.5	0.052
50	d63	76	93	14	36	8.5	0.081
65	d75	90	106	10.5	35	4	0.091
80	d90	109	125	11	43	7.5	0.156
100	d110	131	150	12.5	51	9.5	0.254

(Note) DIN16962-12

Flange Adapter



125mm~200mm (d140~d225)



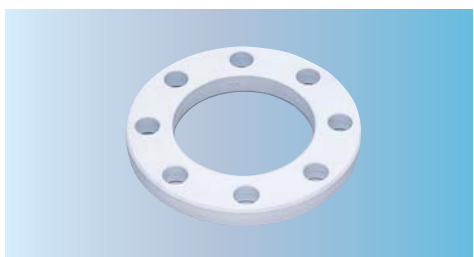
(unit : mm)

Nominal Size (mm)	Product Indication	D1	t	D2	D3 (for reference)	e	l	L±2	d	Weight (kg)
125	d140	140	12.8	182	155	25	105 (Minimum)	195	125	5.7
150	d180	180	16.4	211	180	30	265 (for reference)	350	-	6.9
200	d225	225	20.5	262	235	32	250 (for reference)	370	200	11.3

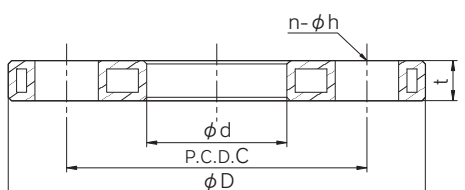
(Note) The dimension of "D1""t"are based on DIN8077(PIN10/SDR11)

Loose Flange

(unit : mm)



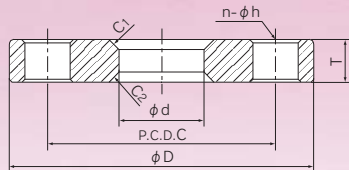
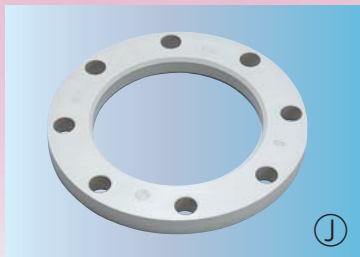
15mm~200mm (d20~d225)



Nominal Size (mm)	Product Indication	d	JIS 10K				t	Weight (kg)
			D	C	n	h		
15	d20	28	95	70	4	15	12	0.243
20	d25	34	100	75	4	15	12	0.305
25	d32	42	125	90	4	19	16	0.470
32	d40	51	135	100	4	19	18	0.708
40	d50	62	140	105	4	19	18	0.785
50	d63	78	155	120	4	19	18	0.895
65	d75	92	175	140	4	19	18	1.165
80	d90	110	185	150	8	19	20	1.360
100	d110	133	210	175	8	19	20	1.695
125	d140	158	250	210	8	23	24	2.335
150	d180	183	280	240	8	23	24	3.220
200	d225	240	330	290	12	23	24	4.230

(Note) 1. material : STEEL+PPG lining.
2. Products conforming to the DIN and ANSI are also available.

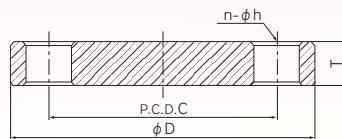
Welded Flange



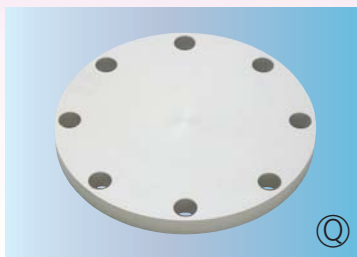
(unit : mm)

Nominal Size (mm)	Product Indication	d	JIS 10 K				C ₁	C ₂	T
			C	D	n	h			
15	d20	20	70	95	4	15	3	3	12
20	d25	25	75	100	4	15	3	3	14
25	d32	32	90	125	4	19	3	3	14
32	d40	40	100	135	4	19	3	3	16
40	d50	50	105	140	4	19	3	3	16
50	d63	63	120	155	4	19	3	4	16
65	d75	75	140	175	4	19	3	4	18
80	d90	90	150	185	8	19	3	4	18
100	d110	110	175	210	8	19	3	4	18
125	d140	140	210	250	8	23	4	4	20
150	d180	180	240	280	8	23	4	4	22
200	d225	225	290	330	12	23	4	4	22
250	d250	250	355	400	12	25	4	4	24
300	d315	315	400	445	16	25	4	4	24

(Note) The dimension of "d" is based on DIN8077 PP pipe O.D.



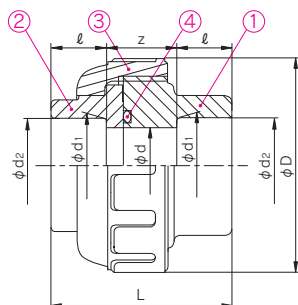
Blind Flange



Prefab Joint (21type) DIN Socket



16mm~50mm (d20~d63)



(unit : mm)

Nominal Size (mm)	Product Indication	d	d ₁	d ₂	l	D	L	z	Weight (kg)
16(15)	d20	15	19.3	19.5	14.5	46	40	11	0.030
20	d25	20	24.3	24.5	16	57	52	20	0.056
25	d32	25	31.3	31.5	18	67	58	22	0.089
30(32)	d40	31	39.2	39.45	20.5	79	65	24	0.133
40	d50	40	49.2	49.45	23.5	95	74	27	0.216
50	d63	51	62.1	62.5	27.5	104	90.5	35.5	0.262

(Note) The dimension of "d1" "d2" "l" are based on DIN16962.

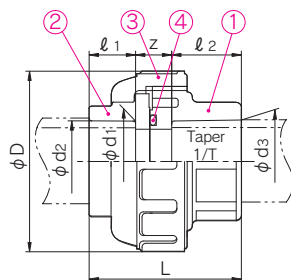
Parts & Materials

No.	Discription	Pcs.	Materials
①	BODY	1	PP
②	END CONNECTOR	1	PP
③	UNION NUT	1	PP
④	O-RING	1	EPDM, FKM

Prefab Joint (21type) DIN-JIS Socket



15mm~50mm



(unit : mm)

Nominal Size (mm)	DIN Socket(PP)					JIS Socket(U-PVC, C-PVC)		
	d ₁	d ₂	l ₁	L _{±1.5}	Z	d ₃	l ₂	1/T
16(15)	19.3	19.50	14.5	41.5	7	22.11	20	1/34
20	24.3	24.50	16.0	53.0	13	26.13	24	1/34
25	31.3	31.50	18.0	59.0	14	32.16	27	1/34
30(32)	39.2	39.45	20.5	65.5	15	38.19	30	1/34
40	49.2	49.45	23.5	74.5	14	48.21	37	1/37
50	62.1	62.50	27.5	92.0	22.5	60.25	42	1/37

(Note) The dimension of "d1" "d2" "l1" are based on DIN16962.

Parts & Materials

No.	Discription	Pcs.	Materials
①	BODY	1	U-PVC, C-PVC
②	END CONNECTOR	1	PP
③	UNION NUT	1	U-PVC, C-PVC
④	O-RING	1	EPDM, FKM

Male Adapter

(unit : mm)



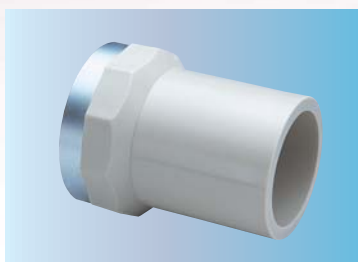
15mm~50mm (d20~d63)

Nominal Size (mm)	Product Indication	D	t	d	R	L	ℓ ₁	ℓ ₂	Z	Weight (kg)
15	d20	20	1.9	13	R1/2	60	37	15	24	0.009
20	d25	25	2.3	18	R3/4	62	40	15	27	0.012
25	d32	32	3.0	23	R1	70	44	19	36	0.021
32	d40	40	3.7	29	R1 1/4	76	49	20	46	0.037
40	d50	50	4.6	34	R1 1/2	84	55	21	55	0.057
50	d63	63	5.8	45	R2	93	63	22	65	0.095

(Note) 1. R : tapere pipe male threads.
 2. Used for only PP pipe not steel pipe.

Female Adapter

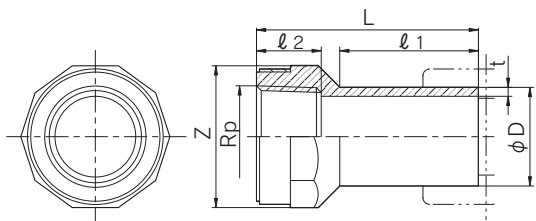
(unit : mm)



15mm~50mm (d20~d63)

Nominal Size (mm)	Product Indication	D	t	Rp	L	ℓ ₁	ℓ ₂	Z	Weight (kg)
15	d20	20	1.9	Rp1/2	58	37	16	30	0.016
20	d25	25	2.3	Rp3/4	63	40	18	36	0.022
25	d32	32	3.0	Rp1	71	44	21	46	0.039
32	d40	40	3.7	Rp1 1/4	79	49	23	55	0.056
40	d50	50	4.6	Rp1 1/2	84	55	24	60	0.078
50	d63	63	5.8	Rp2	97	63	29	75	0.138

(Note) 1. Rp : Paralle pipe female threads.
 2. Used for only PP pipe not steel pipe.



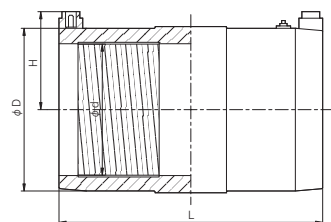
EF-Socket

(unit : mm)



15mm~200mm (d20~d225)

Nominal Size (mm)	Product Indication	d	D	H	L	Weight (kg)
15	d20	20	30	36	70	0.042
20	d25	25	36	39	78	0.051
25	d32	32	44	41	80	0.071
32	d40	40	53	46	92	0.098
40	d50	50	64	51	104	0.137
50	d63	63	80	58	118	0.224
65	d75	75	96	64	132	0.342
80	d90	90	120	75	146	0.491
100	d110	110	137	82	162	0.801
125	d140	140	171	100	184	1.344
150	d180	180	220	123	212	2.481
200	d225	225	273	149	212	3.870



Welding Rod



Variety	diameter	package unit
Single	3	2kg (1m rod)
		4kg (roll type)
	4	2kg (1m rod)
		4kg (roll type)
5	2kg (1m rod)	
	4kg (roll type)	
Double	3	2kg (1m rod)

