TEST CERTIFICATE

Certificate number: TC-J0038

Client: Liang Chew Hardware Pte Ltd

133 Kitchener Road Singapore 208517

Product: Copper Press Fit Fittings

Brand / Model: Norika / PFN

Detail: Nominal sizes (mm): 15 to 65

Specification: BS EN 1254-2: 1998, AS 3688: 2006, ISO 6957:

1988, BS EN 1057: 2006, AS/NZS 4020: 2005, SS 270: 2015, SS 375: 2015, BS EN 12165: 2016

Test Report: 1820238/01-OYC, 1820238/03-OYC, 2020794-OYC,

7191198435-CHM18-NYL, 7191190440-CHM18-02-

YMG, 7191190440-CHM18-01A-CR1-YMG,

21803036-CLJ, 21802731-CLC, 2020843/01-CPC

Summary

A sample of product submitted was tested and found to comply with the test requirements of the above standard(s).

Head, Certification

Singapore Test Lab Pte Ltd

Date of Original Issue: Date of Last Revision: Date of Expiry:

21 November 2018 20 October 2022 20 November 2024

This Certificate is part of the listed full report(s) and should be read in conjunction with it. This Certificate remains the property of Singapore Test Lab Pte Ltd and shall be returned upon request. The use of this Certificate is subjected to the Terms and Conditions of Singapore Test Lab Pte Ltd.





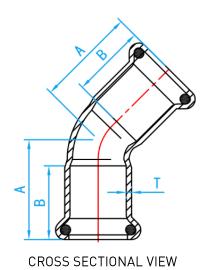


COMPLY WITH BSEN1254-2: 1998



45°ELBOW





DIMENSIONS SIZE Τ Α B WEIGHT SKU PCS/CTN (mm) (mm) (mm) (mm) (Kg) 15 PFNE45015 27.5 20 1.5 0.040 360 PFNE45020 22 32.0 21 1.5 0.062 120 1.5 PFNE45025 28 37.0 23 0.089 80 PFNE45035 35 43.5 26 1.5 0.196 52 PFNE45042 42 51.0 30 1.5 0.194 28 0.300 PFNE45050 54 62.0 35 1.5 18 PFNE45065 67 85.0 50.0 2.0 0.630 7 PFNE45080 76 91.0 2.0 0.884 50.0

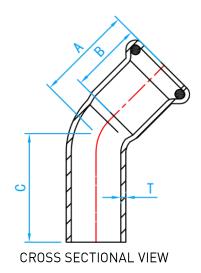


COMPLY WITH BSEN1254-2: 1998



45°ELBOW MXF





DIMENSIONS							
SKU	SIZE (mm)	A (mm)	B (mm)	C [mm]	T (mm)	WEIGHT (Kg)	PCS/CTN
PFNE45015MF	15	27.5	20	34.0	1.5	0.038	360
PFNE45020MF	22	32.0	21	42.0	1.5	0.066	120
PFNE45025MF	28	37.0	23	45.5	1.5	0.094	100
PFNE45035MF	35	43.5	26	58.0	1.5	0.148	48
PFNE45042MF	42	51.0	30	73.0	1.5	0.218	28
PFNE45050MF	54	62.0	35	85.0	1.5	0.331	16
PFNE45065MF	67	85.0	50	90.0	2.0	0.615	9
PFNE45080MF	76	91.0	50	97.0	2.0	0.888	6

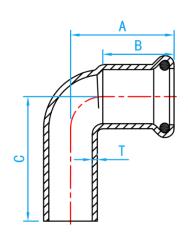


COMPLY WITH BSEN1254-2: 1998









CROSS SECTIONAL VIEW

DIMENSIONS							
SKU	SIZE (mm)	A (mm)	B (mm)	C [mm]	T (mm)	WEIGHT (Kg)	PCS/CTN
PFNE90015MF	15	29.0	20.0	35.0	1.5	0.044	360
PFNE90020MF	22	34.0	21.0	43.0	1.5	0.082	140
PFNE90025MF	28	40.0	23.0	47.0	1.5	0.117	80
PFNE90035MF	35	68.0	26.0	82.0	1.5	0.187	40
PFNE90042MF	42	80.0	30.0	103.0	1.5	0.283	24
PFNE90050MF	54	100.0	35.0	123.0	1.5	0.437	12
PFNE90065MF	67	132.0	50.0	140.0	2.0	0.745	5
PFNE90080MF	76	142.0	50.0	150.0	2.0	1.140	4

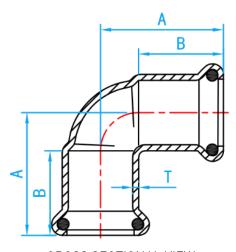


COMPLY WITH BSEN1254-2: 1998



90°ELBOW





CROSS SECTIONAL VIEW

DIMENSIONS						
SKU	SIZE (mm)	A (mm)	B (mm)	T (mm)	WEIGHT (Kg)	PCS/CTN
PFNE90015	15	29.0	20.0	1.5	0.045	360
PFNE90020	22	34.0	21.0	1.5	0.079	150
PFNE90025	28	40.0	23.0	1.5	0.115	100
PFNE90035	35	68.0	26.0	1.5	0.170	40
PFNE90042	42	80.0	30.0	1.5	0.247	24
PFNE90050	54	105.0	45.0	1.5	0.380	12
PFNE90065	67	132.0	50.0	2.0	0.800	6
PFNE90080	76	142.0	50.0	2.0	1.045	4

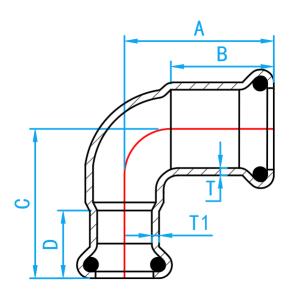


COMPLY WITH BSEN1254-2: 1998



90° REDUCER ELBOW





CROSS SECTIONAL VIEW

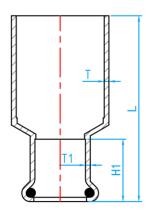
DIMENSIONS									
SKU	SIZE (mm)	A (mm)	B (mm)	C [mm]	D [mm]	T [mm]	T1 [mm]	WEIGHT (Kg)	PCS/CTN
PFNRE9002015	22×15	46.7	27.5	44.5	26.3	1.5	1.5	0.070	180
PFNRE9002515	28×15	43.0	20.0	37.0	17.0	1.5	1.5	0.083	140
PFNRE9002520	28×22	40.0	23.0	36.0	21.0	1.5	1.5	0.087	150



COMPLY WITH BSEN1254-2: 1998







CROSS SECTIONAL VIEW

DIMENSIONS							
SKU	SIZE (mm)	H1 (mm)	L (mm)	(mm)	T1 (mm)	WEIGHT (Kg)	PCS/CTN
							200
PFNRS02015MF	22×15	20.0	50.0	1.5	1.5	0.036	300
PFNRS02515MF	28×15	20.0	54.0	1.5	1.5	0.051	250
PFNRS02520MF	28×22	21.0	52.0	1.5	1.5	0.054	160
PFNRS03520MF	35×22	21.0	59.0	1.5	1.5	0.070	120
PFNRS03525MF	35×28	23.0	58.0	1.5	1.5	0.073	100
PFNRS04220MF	42×22	21.0	66.0	1.5	1.5	0.098	80
PFNRS04225MF	42×28	23.0	66.0	1.5	1.5	0.101	70
PFNRS04235MF	42×35	26.0	65.0	1.5	1.5	0.101	60
PFNRS05020MF	54×22	21.0	81.0	1.5	1.5	0.148	60
PFNRS05025MF	54×28	23.0	79.0	1.5	1.5	0.157	60
PFNRS05035MF	54×35	26.0	78.0	1.5	1.5	0.161	40
PFNRS05042MF	54×42	30.0	76.0	1.5	1.5	0.165	40
PFNRS06525MF	67×28	23.0	96.0	2.0	1.5	0.261	20
PFNRS06535MF	67×35	26.0	95.0	2.0	1.5	0.262	22
PFNRS06542MF	67×42	30.0	96.0	2.0	1.5	0.280	20
PFNRS06550MF	67×54	35.0	98.0	2.0	1.5	0.291	20
PFNRS08035MF	76×35	26.0	104.0	2.0	1.5	0.345	18
PFNRS08042MF	76×42	30.0	103.0	2.0	1.5	0.330	15
PFNRS08050MF	76×54	35.0	108.0	2.0	1.5	0.367	15
PFNRS08065MF	76×67	50.0	113.0	2.0	2.0	0.460	15

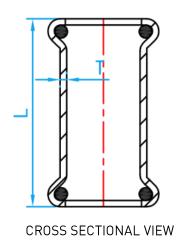


COMPLY WITH BSEN1254-2: 1998



EQUAL SOCKET





DIMENSION:	S				
SKU	SIZE (mm)	L (mm)	T (mm)	WEIGHT (Kg)	PCS/CTN
PFNES015	15	43.45	1.5	0.033	300
PFNES020	22	44.95	1.5	0.049	200
PFNES025	28	49.50	1.5	0.061	120
PFNES035	35	55.00	1.5	0.095	72
PFNES042	42	62.00	1.5	0.128	50
PFNES050	54	74.00	1.5	0.189	24
PFNES065	67	110.00	2.0	0.435	13
PFNES080	76	110.00	2.0	0.605	10

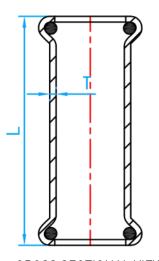


COMPLY WITH BSEN1254-2: 1998



LONG SOCKET





CROSS SECTIONAL VIEW

DIMENSIONS					
SKU	SIZE (mm)	L (mm)	T (mm)	WEIGHT (Kg)	PCS/CTN
PFNES015L	15	80.25	1.5	0.054	200
PFNES020L	22	80.50	1.5	0.079	100
PFNES025L	28	90.60	1.5	0.103	70
PFNES035L	35	102.00	1.5	0.156	48
PFNES042L	42	120.00	1.5	0.223	50
PFNES050L	54	140.00	1.5	0.330	20
PFNES065L	67	150.00	2.0	0.600	8
PFNES080L	76	150.00	2.0	1.000	6



COMPLY WITH BSEN1254-2: 1998



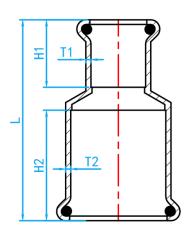






REDUCEING SOCKET





CROSS SECTIONAL VIEW

DIMENSIONS								
SKU	SIZE (mm)	L (mm)	H1 (mm)	H2 (mm)	T1 (mm)	T2 (mm)	WEIGHT (Kg)	PCS/CTN
PFNRS02015	22×15	48	20	21	1.5	1.5	0.042	250
PFNRS02515	28×15	53	20	23	1.5	1.5	0.057	180
PFNRS02520	28×22	51	21	23	1.5	1.5	0.061	150
PFNRS03515	35×15	60	20	26	1.5	1.5	0.079	120
PFNRS03520	35×22	57	21	26	1.5	1.5	0.083	120
PFNRS03525	35×28	56	23	26	1.5	1.5	0.083	100
PFNRS04220	42×22	65	21	30	1.5	1.5	0.116	80
PFNRS04225	42×28	63	23	30	1.5	1.5	0.120	70
PFNRS04235	42×35	63	26	30	1.5	1.5	0.127	60
PFNRS05025	54×28	73	23	35	1.5	1.5	0.165	48
PFNRS05035	54×35	74	26	35	1.5	1.5	0.175	40
PFNRS05042	54×42	75	30	35	1.5	1.5	0.170	32
PFNRS06525	67×28	98	23	50	1.6	1.3	0.315	20
PFNRS06550	67×54	96	35	50	1.5	2.0	0.332	18
PFNRS08050	76×54	102	35	50	1.5	2.0	0.460	15
PFNRS08065	76×67	111	50	50	1.6	2.0	0.560	11

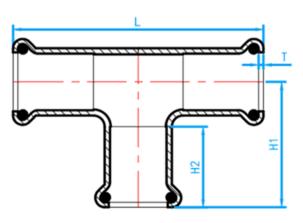


COMPLY WITH BSEN1254-2: 1998



EQUAL TEE





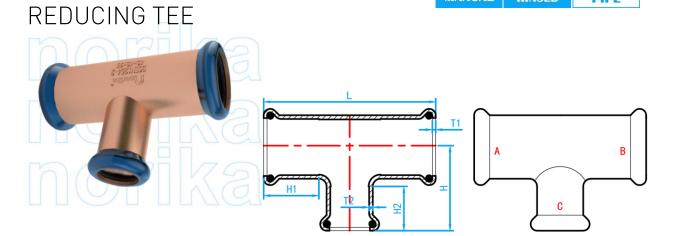
CROSS SECTIONAL VIEW

DIMENSIONS												
SKU	SIZE (mm)	H1 (mm)	H2 (mm)	L (mm)	T (mm)	WEIGHT (Kg)	PCS/CTN					
PFNET015	15	32	20	64	1.5	0.072	180					
PFNET020	22	37	21	74	1.5	0.111	80					
PFNET025	28	42	23	84	1.5	0.156	50					
PFNET035	35	50	26	100	1.5	0.274	30					
PFNET042	42	58	30	116	1.5	0.400	18					
PFNET050	54	69	35	138	1.5	0.588	12					
PFNET065	67	85	50	190	2.0	1.126	5					
PFNET080	76	87	50	202	2.0	1.463	3					



COMPLY WITH BSEN1254-2: 1998





CROSS SECTIONAL VIEW

DIMENSIONS									
CIZLI	A×B×C	Н	H1	H2	L	T1	T2	WEIGHT	DOC/OTN
SKU	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Kg)	PCS/CTN
PFNRT0202015	22×22×15	38.0	21	20	74	1.5	1.5	0.109	120
PFNRT0252515	28×28×15	40.5	23	20	84	1.5	1.5	0.142	60
PFNRT0252520	28×28×22	41.0	23	21	84	1.5	1.5	0.154	60
PFNRT0353515	35×35×15	44.0	26	20	90	1.5	1.5	0.202	40
PFNRT0353520	35×35×22	45.0	26	21	90	1.5	1.5	0.220	40
PFNRT0353525	35×35×28	44.0	26	23	100	1.5	1.5	0.262	36
PFNRT0424215	42×42×15	48.0	30	20	100	1.5	1.5	0.239	32
PFNRT0424220	42×42×22	48.0	30	21	100	1.5	1.5	0.247	24
PFNRT0424225	42×42×28	49.0	30	23	112	1.5	1.5	0.362	24
PFNRT0424235	42×42×35	50.0	30	26	112	1.5	1.5	0.358	22
PFNRT0505015	54×54×15	54.0	35	20	114	1.5	1.5	0.386	18
PFNRT0505020	54×54×22	54.0	35	21	120	1.5	1.5	0.368	18
PFNRT0505025	54×54×28	55.0	35	23	120	1.5	1.5	0.457	18
PFNRT0505035	54×54×35	55.0	35	26	122	1.5	1.5	0.442	14
PFNRT0505042	$54 \times 54 \times 42$	64.0	35	30	138	1.5	1.5	0.559	12
PFNRT0656525	67×67×28	58.0	50	23	140	2.0	1.5	0.640	10
PFNRT0656535	67×67×35	61.0	50	26	148	2.0	1.5	0.707	8
PFNRT0656542	67×67×42	72.0	50	30	156	2.0	1.5	0.875	7
PFNRT0656550	67×67×54	75.0	50	35	166	2.0	1.5	0.927	6
PFNRT0808020	76×76×22	62.0	50	21	138	2.0	1.5	0.955	5
PFNRT0808025	76×76×28	65.0	50	23	148	2.0	1.5	1.035	6
PFNRT0808035	76×76×35	67.0	50	26	152	2.0	1.5	1.040	5
PFNRT0808042	76×76×42	80.0	50	30	160	2.0	1.5	1.240	5
PFNRT0808050	76×76×54	85.0	50	35	172	2.0	1.5	1.280	5
PFNRT0808065	76×76×67	89.0	50	50	182	2.0	2.0	1.385	4



COMPLY WITH BSEN1254-2: 1998



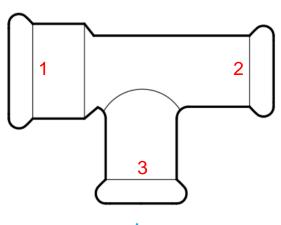


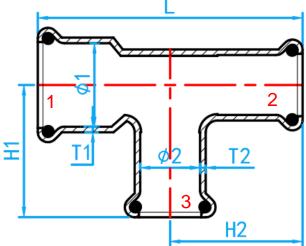




REDUCING TEE







CROSS SECTIONAL VIEW

DIMENSIONS									
SKU	Ø1 (mm)	Ø2 (mm)	H1 (mm)	H2 (mm)	L [mm]	T1 (mm)	T2 (mm)	WEIGHT (Kg)	PCS/CTN
PFNRT0201515	15	22	38.7	32.0	80.6	1.5	1.5	0.104	100

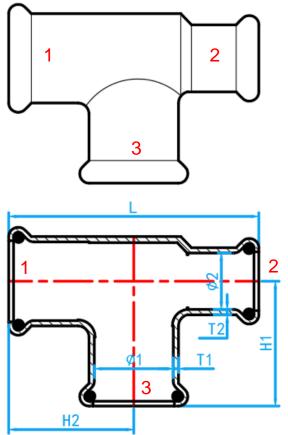


COMPLY WITH BSEN1254-2: 1998



REDUCING TEE





CROSS SECTIONAL VIEW

DIMENSIONS									
CIZLI	Ø1	Ø2	H1	H2	L	T1	T2	WEIGHT	PCS/CTN
SKU	(mm)	(mm)	(mm)	(mm)	[mm]	[mm]	[mm]	(Kg)	
PFNRT0201520	22	15	38.4	37.0	83.9	1.5	1.5	0.121	100

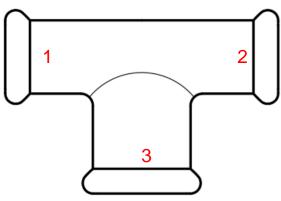


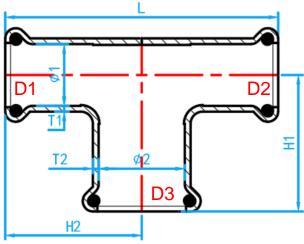
COMPLY WITH BSEN1254-2: 1998



REDUCING TEE







CROSS SECTIONAL VIEW

DIMENSIONS									
SKU	Ø1 (mm)	Ø2 (mm)	H1 (mm)	H2 (mm)	L [mm]	T1 (mm)	T2 (mm)	WEIGHT (Kg)	PCS/CTN
PFNRT0151520	15	22	35.4	14.3	74.6	1.5	1.5	0.109	100

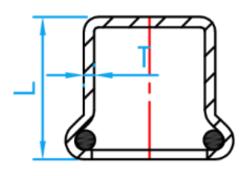


COMPLY WITH BSEN1254-2: 1998



END CAP





CROSS SECTIONAL VIEW

DIMENSIONS					
SKU	SIZE (mm)	L (mm)	T (mm)	WEIGHT (kg)	PCS/CTN
PFNEC015	15	22.5	1.5	0.019	800
PFNEC020	22	24.5	1.5	0.032	400
PFNEC025	28	27	1.5	0.046	260
PFNEC035	35	29.5	1.5	0.062	150
PFNEC042	42	34	1.5	0.087	100
PFNEC050	54	39	1.5	0.142	50
PFNEC065	67	53	2.0	0.261	30
PFNEC080	76	80	2.0	0.350	25

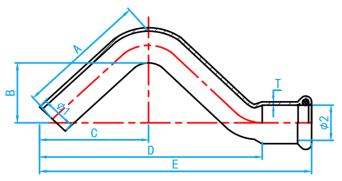


COMPLY WITH BSEN1254-2: 1998



CROSS OVER





CROSS SECTIONAL VIEW

DIMENSIONS										
SKU	Ø1	Ø2	А	В	С	D	E	Т	WEIGHT	PCS/CTN
5110	(mm)	(mm)	(mm)	(mm)	[mm]	[mm]	[mm]	[mm]	(Kg)	
PFNC0015	15	15	56.2	25.8	43.5	92.8	114.2	1.5	0.072	150
PFNC0020	20	20	56.2	25.8	43.5	108.8	135.0	1.5	0.124	80



COMPLY WITH BSEN1254-2:1998

[MI] ADAPTOR



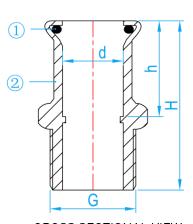












CROSS SECTIONAL VIEW

DIMENSIONS							
SKU	SIZE (mm)	d (mm)	h (mm)	H (mm)	G [mm]	WEIGHT (Kg)	PCS/CTN
PFNMIA015	15	15	20	43.5	1/2"	0.053	300
PFNMIA020	22	22	21	46	3/4"	0.066	200
PFNMIA025	28	28	23	50	1"	0.104	132
PFNMIA035	35	35	26	56	11/4"	0.165	60
PFNMIA042	42	42	30	61	11/2"	0.212	48
PFNMIA050	54	54	35	71	2"	0.372	30
PFNMIA065	67	67	50	85	21/2"	0.638	24
PFNMIA080	76	76	55	95	3"	0.990	18



COMPLY WITH BSEN1254-2:1998

[FI] ADAPTOR



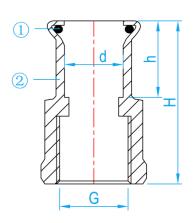












CROSS SECTIONAL VIEW

DIMENSIONS										
SKU	SIZE (mm)	d (mm)	h (mm)	H (mm)	G BSP [mm]	WEIGHT (Kg)	PCS/CTN			
PFNFIA015	15	15	20	42	1/2"	0.041	300			
PFNFIA020	22	22	21	45	3/4"	0.076	160			
PFNFIA025	28	28	23	47	1"	0.100	132			
PFNFIA035	35	35	26	52	11/4"	0.159	60			
PFNFIA042	42	42	30	56	1½"	0.204	48			
PFNFIA050	54	54	35	65	2"	0.358	32			
PFNFIA065	67	67	50	83	21/2"	0.672	20			



COMPLY WITH BSEN1254-2:1998

FI ELBOW



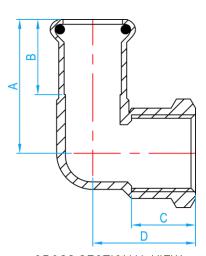












CROSS SECTIONAL VIEW

DIMENSIONS	5							
SKU	SIZE (mm)	Ø2 (mm)	A (mm)	B (mm)	C [mm]	D [mm]	WEIGHT (Kg)	PCS/CTN
PFNFIE015	15.3	18.7	35.6	20.0	17.0	27.3	0.072	250



COMPLY WITH BSEN1254-2:1998

FI ELBOW LONG



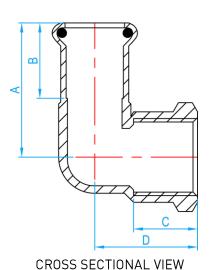












DIMENSIONS								
SKU	Ø1	Ø2	А	В	С	D	WEIGHT	PCS/CTN
SNO	(mm)	(mm)	(mm)	(mm)	[mm]	[mm]	(Kg)	
PFNFIE015L	15.4	18.6	35.6	20.0	35.9	46.2	0.101	200



COMPLY WITH BSEN1254-2:1998

MI ELBOW



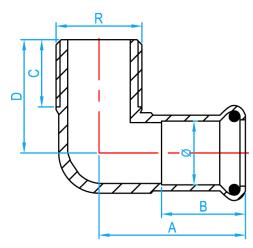












CROSS SECTIONAL VIEW

DIMENSIONS)							
SKU	SIZE (inch)	Ø (mm)	A (mm)	B (mm)	C [mm]	D [mm]	WEIGHT (Kg)	PCS/CTN
PFNMIE015	½" BSPT	15.2	34.9	20.0	16	27	0.063	200



COMPLY WITH BSEN1254-2:1998

FI WALLPLATE ELBOW

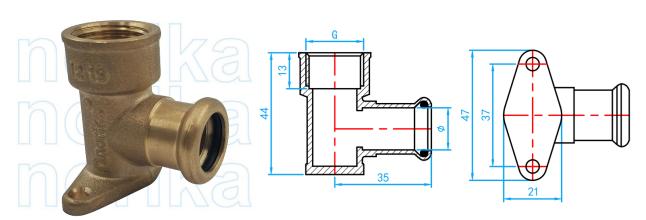












CROSS SECTIONAL VIEW

DIMENSIONS				
SKU	G (inch)	Ø (mm)	WEIGHT (Kg)	PCS/CTN
PFNFE015	1/2" BSP	15.2	0.085	240