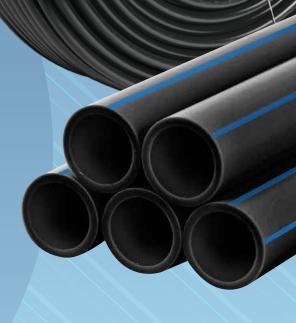


MS 1058-2:2005, MS 1058-3:2006, BS EN 12201-3

HDPE SOCKET FUSION

Pipes & Fittings













We Build Solutions In Fusion Joints

SANSICOTM HDPE Pipes

Pipe Brand: BBB SANSICO™

SANSICOTM HANSEN HDPE pipes adhere strictly to the SIRIM standard MS1058: Part 2: 2005 and have received approval from local water authorities. The issuance of the highest certification validates that Sansico's manufacturing, testing, and quality control processes meet the demanding licensing criteria, guaranteeing the consistent maintenance of product excellence.

Advantages for using SANSICO™ HDPE Pipe

Our pipes are SIRIM approved and manufactured using approved raw materials, high density polyethylene and comply to MS 1058.

The main advantages of polyethylene pipes for the transport of pressure fluids can be summarised as follow:

- Ease, reliability and cost efficiency of jointing and laying operations.
- Non toxic, low abrasion and flexibility.
- Excellent resistance to water hammer phenomena.
- Absence of scale on inside walls results in consistency of pipeline hydraulic performance.
- Immune to corrosion phenomena and has very good resistance to a wide range of chemicals.

Mechanical & Physical Characteristics

Characteristics	Test Parameters		Test Method	Type of Test	Test Results	Remarks	
Gharacteristics	Parameters	Value	lest Wethou	Type of lest	rest nesults	nemarks	
	Temperature	20°C					
Hydrostatic strength at 20°C, MPa	Period	100 hours	EN 921	Water-in-water	The pipe withstood the test pressure	Complied	
rrydrostatic strength at 20 0, Wil a	PE 80	10.0 MPa	LIN 32 I	vvater-iri-water	without any failure	Complied	
	PE 100	12.4 MPa					
	Temperature	80°C					
Indicatoria atropath at 20°C MDa	Period	165 hours	EN 921	Water-in-water	The pipe withstood the test pressure without any failure	Complied	
Hydrostatic strength at 80°C, MPa	PE 80	4.6 MPa	LIN JZ I				
	PE 100	5.5 MPa					
	Temperature	80°C		Water-in-water	The pipe withstood the test pressure without any failure	Complied	
Hydrostatic strength at 80°C, MPa	Period	1000 hours	EN 921				
Trydrostatio strongti at 55 G, Wi a	PE 80	4.0 MPa	LIN JZ I				
	PE 100	5.0 MPa					
Elongation at break, %	Temperature	200°C	ISO 6259-3		≥ 350%	Complied	
Maltirana flavorata (MED), a/10 asia	Load	5.0 kg	100 1100		Change of MFR by	Commission	
Melt mass-flow rate (MFR), g/10 min	Temperature	190°C	ISO 1133		processing < 25%	Complied	
Oxidation Induction Time (OIT), min (Thermal Stability)	Temperature	200°C	EN 728		≥ 20 min	Complied	
Effect on Water Quality		S	hall conform to MS	S 1583		Complied	

Nominal Diameter (mm)		iameter m)		ness (mm) SDR 13.6)	Wall Thick PN 16 (
Size	Min	Max	Min	Max	Min	Max
20	20.0	20.3	-	-	2.0	2.3
25	25.0	25.3	2.0	2.3	2.3	2.7
32	32.0	32.3	2.4	2.8	3.0	3.4
40	40.0	40.4	3.0	3.5	3.7	4.2
50	50.0	50.4	3.7	4.2	4.6	5.2
63	63.0	63.4	4.7	5.3	5.8	6.5
75	75.0	75.5	5.6	6.3	6.8	7.6
90	90.0	90.6	6.7	7.5	8.2	9.2
110	110.0	110.7	8.1	9.1	10.0	11.1

SANSICO



HDPE SOCKET FUSION Fittings

SOCKET FUSION is generally used for connecting pipes and fittings falling within the diameter range of ½" (20mm) to 4" (110mm). This method is widely utilized for joining plastic piping systems by utilizing injection-moulded plastic fittings. The operational principles are straightforward, involving a welding procedure that consists of a heating phase, succeeded by a cooling/welding phase. To achieve a proper fusion, it is imperative to accurately cut and mark the pipe to the correct insertion depth. Both the pipes and fittings are heated for a specified duration, after which the pipe is inserted into the fitting to form a joint and allowed to cool.

Installation Method



Select the right heating bushes and set the temperature to 260°C.



Use a depth marker & mark the required insertion depth. (refer to table 1)



Cut the pipe perpendicularly using a suitable pipe cutter. Clean the inside & outside of the fitting & pipe respectively with a clean or lint-free cloth. Do not touch cleaned surface with your hands.



Insert the pipe stiffener into the pipe. Use only for wall thicknesses below 3mm. (refer to manufacturer's specifications)



Heat the fitting & pipe simultaneously by pushing the fitting onto the male face & the pipe into the female face of the heating bushes respectively.

DO NOT TWIST. (refer to table 1)



Remove pipe & fitting simultaneously from the heating bushes using snap action. Then firmly slide the melted fitting squarely onto the pipe until it reaches the marked depth.

DO NOT TWIST.

(refer to table 1) If the melt is not complete, do not continue with the joint. Cut off the melted pipe end, use a new fitting and start over from Step 1. Do not re-use a melted fitting.

Table 1: Socket Fusion Welding Parameters

OD (mm)	Insertion Depth (mm)	Heating Time (sec)	Fusion Time (sec)	Cooling Time (min)
20	14.0	5	4	2
25	15.0	7	4	2
32	16.5	8	6	4
40	18.0	12	6	4
50	20.0	18	6	4
63	23.0	24	8	6
75	27.5	30	8	8
90	32.0	40	8	8
110	38.0	50	10	8

SANSICO™ HDPE Smart Insert

Smart Inserts are compact, cylindrical elements engineered for insertion into the inner walls of HDPE (High Density Polyethylene) pipes as part of the installation process. They find their primary application in pipes with wall thicknesses measuring less than 3.5mm, specifically within the nominal diameter range of 20mm to 32mm (Please consult Table 2 for specific details).



Table 2:

Nominal (mm)	Outer Diameter (mm)			kness (mm) SDR 13.6)		kness (mm) (SDR 11)
Size	Min	Max	Min	Max	Min	Max
20	20.0	20.3	-	-	2.0	2.3
25	25.0	25.3	2.0	2.3	2.3	2.7
32	32.0	32.3	2.4	2.8	3.0	3.4

The primary function of Smart Inserts is to offer structural support to the inner walls of HDPE pipes during the fusion process. This role is crucial because HDPE pipes are susceptible to collapsing or crumpling when exposed to high temperatures and excessive insertion force during installation. In the absence of these Smart Inserts, there is a risk of pipes becoming deformed or crumpled, leading to reduced water flow and related issues.

Our patented Smart Inserts are meticulously crafted from a food-grade PP fibre-reinforced material, a durable, high-strength material that maintains its resilience even under conditions of high pressure or elevated temperatures. Notably, they are engineered to accommodate various nominal pressure (PN) ratings for PE100 HDPE pipes. This means that a single Smart Insert is suitable for both PN12.5 and PN16 rated PE100 HDPE pipes. This simplifies the installation process significantly, reducing the chances of incorrect usage and unnecessary stockpiling of Smart Inserts.

In summary, Smart Inserts provide a technical solution to a common challenge encountered during the installation of HDPE pipes. By providing internal wall support, they ensure the pipes maintain their integrity during installation and continue to function optimally over the long term.

Sansico™ Socket Fusion Welder

SSW-32DP (20mm-32mm)

SSW-63DP (20mm-63mm)

SSW-110DP (75mm-110mm)

SANSICO™ socket fusion welder is suitable for joining a variety of plastic pipes and fittings for different applications in the industry. This machine can weld PE (Polyethylene), PE-RT (PE Raised Temperature), PP-R (Polypropylene Random), PB (Polybutene).



Manual Equipment

Manual socket welders for joining pipes and fittings, in compliance with the standards in force. They feature an aluminum heating plate and a practical, heat-insulated plastic handle. They can weld PE, PE-RT, HDPE, PP, PP-R, PVDF pipes and fittings and they're characterized by different shapes and working ranges, suitable for different applications. They' re available with an adjustable electronic thermoregulator. This new TFE control system features a new self-diagnostic device, provided with an alarm, which would alert the operator in case of abnormally; at the same time, the heating element would switch off automatically. Thanks to an algorithm PID microcontroller, combined with a platinum sensor, the temperature control system can react faster to the external temperature fluctuations, and guarantee higher reliability and longer durability.

Technical Features

TYPE: TE, TFE	SSW-32DP	SSW-63DP	SSW-110DP		
Working range	up to Ø 32 mm	up to Ø 63 mm	up to Ø 110 mm		
Materials	PE, PE-RT, HDPE, PP, PP-R PB, PVDF				
Power supply	230 V S. Ph. 50/60 Hz, 110 V S. Ph. 50/60 Hz				
Max, absorbed power	800 W				
Working temperature		180° to 290°C			
Ambient temperature	5° to 40°C				
Weight	1,82 Kg				
Dimensions	175 x 50 x 360 mm				

HDPE Pipe PE100

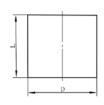




Pipe Sizes	Straight		Coil		
	5.8m/	length	100m	/Coil	
	PN 16 (SDR 11)	PN 12.5 (SDR 13.6)	PN 16 (SDR 11)	PN 12.5 (SDR 13.6)	
DN20	✓		✓		
DN25	✓	✓	✓	✓	
DN32	✓	✓	✓	✓	
DN40	✓	✓	✓	✓	
DN50	✓	✓	✓	✓	
DN63	✓	✓	✓	✓	
DN75	✓	✓			
DN90	✓	✓			
DN110	✓	✓			

Equal Coupler

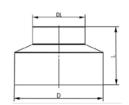




Code	Size	D (mm)	L (mm)
SF-EC 20	20	27	30
SF-EC 25	25	33	39
SF-EC 32	32	42	43
SF-EC 40	40	51	46
SF-EC 50	50	60	54
SF-EC 63	63	76	58
SF-EC 75	75	91	64
SF-EC 90	90	109	73
SF-EC 110	110	134	78

Reducing Coupler

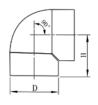




Code	Size	D (mm)	D1 (mm)	L (mm)
SF-RC 25.20	25 x 20	33	27	38
SF-RC 32.20	32 x 20	42	27	43
SF-RC 32.25	32 x 25	42	33	44
SF-RC 40.20	40 x 20	51	28	44
SF-RC 40.25	40 x 25	51	33	44
SF-RC 40.32	40 x 32	51	41	44
SF-RC 50.20	50 x 20	61	28	48
SF-RC 50.25	50 x 25	61	34	48
SF-RC 50.32	50 x 32	61	42	48
SF-RC 50.40	50 x 40	61	51	48
SF-RC 63.20	63 x 20	76	28	57
SF-RC 63.25	63 x 25	76	34	57
SF-RC 63.32	63 x 32	76	42	57
SF-RC 63.40	63 x 40	76	51	57
SF-RC 63.50	63 x 50	76	62	58
SF-RC 75.20	75 x 20	87	26	60
SF-RC 75.25	75 x 25	87	32	65
SF-RC 75.32	75 x 32	87	41	64
SF-RC 75.40	75 x 40	87	50	67
SF-RC 75.50	75 x 50	87	60	68
SF-RC 75.63	75 x 63	87	75	68
SF-RC 90.40	90 x 40	104	50	63
SF-RC 90.50	90 x 50	104	60	63
SF-RC 90.63	90 x 63	104	76	71
SF-RC 90.75	90 x 75	104	87	71
SF-RC 110.40	110 x 40	127	50	71
SF-RC 110.50	110 x 50	127	60	70
SF-RC 110.63	110 x 63	127	76	74
SF-RC 110.75	110 x 75	127	87	76
SF-RC 110.90	110 x 90	127	104	77

90° Equal Elbow





Code	Size	D (mm)	L (mm)
SF-90°EE 20	20	27	28
SF-90°EE 25	25	34	32
SF-90°EE 32	32	42	27
SF-90°EE 40	40	50	40
SF-90°EE 50	50	61	49
SF-90°EE 63	63	76	60
SF-90°EE 75	75	92	70
SF-90°EE 90	90	110	82
SF-90°EE 110	110	135	95

45° Elbow

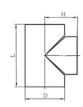




Code	Size	D (mm)	H (mm)
SF-45°EE 20	20	27	21
SF-45°EE 25	25	33	24
SF-45°EE 32	32	42	28
SF-45°EE 40	40	47	39
SF-45°EE 50	50	54	46
SF-45°EE 63	63	75	54
SF-45°EE 75	75	87	64
SF-45°EE 90	90	105	74
SF-45°EE 110	110	128	86

Equal Tee





Code	Size	D (mm)	H (mm)	L (mm)
SF-ET 20	20 x 20 x 20	27	28	54
SF-ET 25	25 x 25 x25	34	32	63
SF-ET 32	32 x 32 x 32	42	37	74
SF-ET 40	40 x 40 x 40	50	46	80
SF-ET 50	50 x 50 x 50	61	48	95
SF-ET 63	63 x 63 x 63	76	68	127
SF-ET 75	75 x 75 x 75	90	68	134
SF-ET 90	90 x 90 x 90	107	86	168
SF-ET 110	110 x 110 x 110	132	96	195

Reducing Tee





Code	Size	D (mm)	L (mm)	D1 (mm)	H (mm)
SF-RT 25.20	25 x 20	33	58	27	31
SF-RT 32.20	32 x 20	42	63	27	33
SF-RT 32.25	32 x 25	42	69	33	36
SF-RT 40.20	40 x 20	50	59	26	36
SF-RT 40.25	40 x 25	50	65	30	38
SF-RT 40.32	40 x 32	50	70	41	40
SF-RT 50.20	50 x 20	61	68	26	42
SF-RT 50.25	50 x 25	61	77	34	45
SF-RT 50.32	50 x 32	61	83	42	45
SF-RT 50.40	50 x 40	61	91	50	46
SF-RT 63.20	63 x 20	77	70	26	48
SF-RT 63.25	63 x 25	77	76	31	50
SF-RT 63.32	63 x 32	77	82	41	52
SF-RT 63.40	63 x 40	77	91	50	53
SF-RT 63.50	63 x 50	77	100	61	58
SF-RT 75.20	75 x 20	87	80	29	56
SF-RT 75.25	75 x 25	87	87	34	58
SF-RT 75.32	75 x 32	87	91	40	57
SF-RT 75.40	75 x 40	87	100	50	62
SF-RT 75.50	75 x 50	87	112	61	65
SF-RT 75.63	75 x 63	87	130	76	67
SF-RT 90.40	90 x 40	107			
SF-RT 90.50	90 x 50	107	120	61	70
SF-RT 90.63	90 x 63	107	147	76	80
SF-RT 90.75	90 x 75	107	151	90	81
SF-RT 110.40	110 x 40	132	136	48	77
SF-RT 110.50	110 x 50	132	137	60	88
SF-RT 110.63	110 x 63	132	159	76	100
SF-RT 110.75	110 x 75	132	161	90	101
SF-RT 110.90	110 x 90	132	177	107	91

Female Threaded Coupling





Code	Size	D (mm)	L (mm)
SF-FTC 20.1/2"	20 x ½"	27	41
SF-FTC 20.3/4"	20 x ¾"	27	43
SF-FTC 25.1/2"	25 x ½"	33	44
SF-FTC 25.3/4"	25 x ¾"	33	46
SF-FTC 32.1/2"	32 x ½"	41	39
SF-FTC 32.3/4"	32 x ¾"	41	43
SF-FTC 32.1"	32 x 1"	41	50
SF-FTC 40.11/4"	40 x 1¼"	50	52
SF-FTC 50.11/2"	50 x 1½"	60	54
SF-FTC 63.2"	63 x 2"	77	64
SF-FTC 75.21/2"	75 x 2½"	90	70
SF-FTC 90.3"	90 x 3"	108	82
SF-FTC 110.4"	110 x 4"	131	85

Male Threaded Coupling

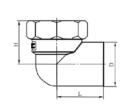




Code	Size	D (mm)	L (mm)
SF-MTC 20.1/2"	20 x ½"	27	58
SF-MTC 20.3/4"	20 x ¾"	27	55
SF-MTC 25.1/2"	25 x ½"	33	58
SF-MTC 25.3/4"	25 x ¾"	33	60
SF-MTC 32.1/2"	32 x ½"	41	52
SF-MTC 32.3/4"	32 x ¾"	41	55
SF-MTC 32.1"	32 x 1"	41	65
SF-MTC 40.11/4"	40 x 11/4"	51	70
SF-MTC 50.11/2"	50 x 1½"	60	72
SF-MTC 63.2"	63 x 2"	76	83
SF-MTC 75.21/2"	75 x 2½"	90	94
SF-MTC 90.3"	90 x 3"	107	105
SF-MTC 110.4"	110 x 4"	131	115

Female Threaded Elbow





Code	Size	D (mm)	H (mm)	L (mm)
SF-FTE 20.1/2"	20 x ½"	27	32	32
SF-FTE 20.34"	20 x ¾"	27	32	30
SF-FTE 25.1/2"	25 x ½"	33	34	33
SF-FTE 25.¾"	25 x ¾"	33	36	35
SF-FTE 32.1/2"	32 x ½"	41	39	30
SF-FTE32.¾"	32 x ¾"	41	39	35
SF-FTE 32.1"	32 x 1"	41	40	36
SF-FTE 40.11/4"	40 x 1¼"	50	47	45
SF-FTE 50.11/2"	50 x 1½"	63	54	52
SF-FTE 63.2"	63 x 2"	77	67	61

Male Threaded Elbow

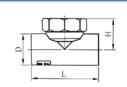




Code	Size	D (mm)	H (mm)	L (mm)
SF-MTE 20.1/2"	20 x ½"	27	46	32
SF-MTE 20.34"	20 x ¾"	27	46	32
SF-MTE 25.1/2"	25 x ½"	33	48	33
SF-MTE 25.3/4"	25 x ¾"	33	48	35
SF-MTE 32.1/2"	32 x ½"	41	51	31
SF-MTE 32.3/4"	32 x ¾"	41	52	34
SF-MTE 32.1"	32 x 1"	41	55	36
SF-MTE 40.11/4"	40 x 1¼"	50	67	45
SF-MTE 50.11/2"	50 x 1½"	63	69	52
SF-MTE 63.2"	63 x 2"	77	79	61

Female Threaded Tee

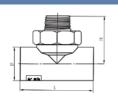




Code	Size	D (mm)	H (mm)	L (mm)
SF-FTT 20.1/2"	20 x ½"	27	31	51
SF-FTT 25.1/2"	25 x ½"	33	33	58
SF-FTT 25.3/4"	25 x ¾"	33	34	60
SF-FTT 32.1/2"	32 x ½"	41	37	61
SF-FTT 32.¾"	32 x ¾"	41	40	67
SF-FTT 32.1"	32 x 1"	41	41	72

Male Threaded Tee





Code	Size	D (mm)	H (mm)	L (mm)
SF-MTT 20.1/2"	20 x ½"	27	45	52
SF-MTT 25.1/2"	25 x ½"	33	47	58
SF-MTT 25.¾"	25 x ¾"	33	48	60
SF-MTT 32.1/2"	32 x ½"	41	51	61
SF-MTT 32.3/4"	32 x ¾"	41	52	67
SF_MTT 32 1"	32 v 1"	41	55	72

Reducing Elbow

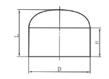




Code	Size	D (mm)	d (mm)	H (mm)	H1 (mm)
SF-RE 25.20	25 x 20	34	28	27	31
SF-RE 32.20	32 x 20	42	28	32	32
SF-RE 32.25	32 x 25	42	34	33	36
SF-RE 40.32	40 x 32	52	42	39	42
SF-RE 50.40	50 x 40	63	52	46	52
SF-RE 63.50	63 x 50	80	63	54	58

End Cap

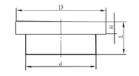




Code	Size	D (mm)	H (mm)	L (mm)
SF-ECP 20	20	27	18	20
SF-ECP 25	25	33	20	23
SF-ECP 32	32	42	23	25
SF-ECP 40	40	51	27	28
SF-ECP 50	50	63	29	31
SF-ECP 63	63	76	31	41
SF-ECP 75	75	91	32	51
SF-ECP 90	90	108	51	69
SF-ECP 110	110	126	45	59

Stub End (Flange Adapter)

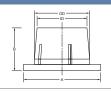




Code	Size	D (mm)	d (mm)	L (mm)	H (mm)
SF-SE 50	50	85	63	30	14
SF-SE 63	63	98	78	34	14
SF-SE 75	75	121	94	40	15
SF-SE 90	90	125	110	44	17
SF-SF 110	110	160	126	50	20

Smart Insert





Code	Pipe	OD	ID	Α	H (B)
SF-SI 20	20 PN16	14.88	13.08	17.48	12.63
SF-SI 25	25 PN16 & PN12.5	19.65	17.38	22.81	16.77
SF-SI 32	32 PN16 & PN12.5	25.36	22.66	28.84	16.83

Stop Valve





Code	Size	D (mm)	H (mm)	L (mm)
SF-SV 20	20	28	56	54
SF-SV 25	25	34	73	61
SF-SV 32	32	43	80	63
SF-SV 40	40	51	85	60
SF-SV 50	50	63	96	68
SF-SV 63	63	75	115	74

Chrome Cross Handle Stop Valve - Standard





Code	Size	D (mm)	H (mm)	L (mm)
SF-CSV 20	20	28	107	68
SF-CSV 25	25	34	109	78
SF-CSV 32	32	43	112	84

Chrome Cross Handle Stop Valve - A Series





Code	Size	D (mm)	H (mm)	L (mm)
SF-CSV 20A	20	28	108	68
SF-CSV 25A	25	34	109	78
SF-CSV 32A	32	43	113	84

Repair Heating Bushes



Code	Size
SF-RR7	7
SF-RR11	11

PE	Re	pair	Roc	ls
	110	Pull	1100	-



Code	Size
SF-RR7/11	7-11

Socket Fusion Welder



Code	Size
SSW-32DP	20-32mm
SSW-63DP	20-63mm
SSW-110DP	75mm-110mm

Product Warranty

Sansico Industries Sdn Bhd warrants its materials to be free of defects in workmanship and under normal use, service and when used for the purposes under the conditions for which they are intended.

This warranty shall not apply to any Sansico Industries Sdn Bhd material that has been altered, repaired and/or used in any way, stored outside, or has been subject to misuse, negligence, accident and/or has not been installed in accordance with installation instructions.

The obligation of Sansico Industries Sdn Bhd under this warranty shall be limited to the replacement of any part that may prove defective under normal use.

Sansico Industries Sdn Bhd shall not be liable for indirect, special, incidental or consequential damage or penalties and does not assume any liability of purchaser to others, or to anyone for injury to persons and/or property.

Any claim regarding shortage or damages from shipment of material must be submitted in writing to Sansico Industries Sdn Bhd within 10 days after receipt of shipment. Buyer shall note loss or damage on delivery order and provide a delivery receipt stating such with driver's signature.

Purchaser is responsible for passing on this Limited Warranty to their customer.

Installation

Installation instructions must be adhered to, or our Product Warranty is null and void. Installation of socket fusion fittings must be carried out by properly trained and qualified operator(s) and/or by witness of the factory representative.

Sansico Industries Sdn Bhd shall have the right to inspect the said material and purchaser shall, if requested, return defective product prepaid to the Sansico Industries Sdn Bhd Purchaser shall assume all responsibility and expenses for removal, reinstallation and freight charges in connection with the foregoing remedy.

Notes

Notes

About Us

SANSICO Industries Sdn Bhd have grown rapidly to become a leader in the supply of HDPE (High Density Polyethylene) pipes and fittings in Malaysia and have over 15 years of experience in the thermoplastic pipe and fitting industry. Sansico™ are committed to providing innovative, quality products and services throughout all of our product offerings. Our dedication drives the values that we strive to live up to daily at Sansico™. We hold teamwork, innovation, accountability, integrity, mutual trust and respect, and a desire to continuously improve our quality above all else. We are also very customer-centric, aspiring to make the Sansico experience the best it can be for all of our customers.

We provide durable and yet affordable polyethylene HDPE pipes and fittings. All Sansico™ products are made to meet and exceed stringent certification standards and, above all, the needs and demands of professional installers. Our goal is to offer our customers outstanding guaranteed fittings and pipes for a very competitive price.

We take great pride in the people we hire, train, and promote. We have a specialized team with knowledge in fusion procedures and maintenance experience. We offer technical site support and we stand by our product. At SANSICO Industries Sdn Bhd customer satisfaction is our #1 priority.



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