

Power Transmission Equipment



Allbest Creative Development Ltd. (ALLBEST)

Technology Portfolio

➤ **Integrated Technology and Equipment for Power Substation & Transmission Line**

➤ **Substation**

➤ **Steel Tube Tower for Power Transmission Line**

➤ **Power Transformer & Distribution Transformer**

➤ **Pre-installed Transformer Substation**

➤ **High voltage Power Distribution Cabinet**

➤ **Low voltage Drawer Type Switch Cabinet**

➤ **Porcelain Insulator**

➤ **Arrester & Bushing**

➤ **Circuit Breaker**

➤ **Electric Power Fittings**

➤ **Kilowatt- hour Meter**

Integrated Technology and Equipment for Power Substation & Transmission Line

35 KV, 110 KV, 132 KV, 220 KV, (230 KV) and 500 KV



Substation



The substation covers Switchgears, Power transformers, Cast Resin type transformers, insulators, Capacitor Bank, SCADA System (Integrated Monitoring, Control & Protection system), and etc.

Steel Tube Tower for Power Transmission Line



Power Transformer & Distribution Transformer

Power & distribution transformers with the capacity from 5KVA to 900MVA with the voltage from 110V to 500KV



220KV/110KV/35KV POWER TRANSFORMER

31500- 360000KVA NO-FIELD DUAL-WINDING REGULATING VOLTAGE TRANSFORMER



Rated Capacity (KVA)	Voltage Combination			Connection Symbol	S-9 Standard Value			S-10 Standard Value			Impedance at Short Circuit (%)
	H. V. (KV)	Tapping Range of H.V.(%)	L. V. (KV)		No-load Losses (KW)	Load Losses (KW)	No-load Current (%)	No-load Losses (KW)	Load Losses (KW)	No-load Current (%)	
31500	220 242	2X2.5	6.3	189.2	30.6	135.0	0.20	28.0	127.5	0.20	12~14
40000			6.6#		36.2	157.5	0.20	33.1	148.8	0.20	
50000			10.5		42.4	189.0	0.18	38.8	178.5	0.18	
63000			11#		50.8	220.5	0.18	46.5	208.3	0.18	
90000			10.5		66.8	288.0	0.16	61.1	272.0	0.16	
120000			13.8		346.5	0.16	75.1	327.3	0.16		
150000			11#		97.4	405.0	0.15	89.1	382.5	0.15	
180000			13.8		459.0	0.15	101.8	433.5	0.15		
240000			15.75		567.0	0.13	127.2	535.5	0.13		
300000			15.75		164.3	675.0	0.11	150.8	637.35	0.11	
360000			18		774.0	0.11	173.1	731.0	0.11		

10KV DISTRIBUTION TRANSFORMER



Rated Capacity (KVA)	Voltage Combination			Connection Symbol	Losses		No-load Current (%)	Impedance at Short Circuit (%)
	H. V. (KV)	Tapping Range of H.V.(%)	L. V. (KV)		No-load Losses (KW)	Load Losses (KW)		
30	6 6.3 10	(+/-)5 or (+/-)2X2.5	0.4	Dyn11 or Yyn0	0.13	0.60	2.10	4
50					0.17	0.87	2.00	
63					0.20	1.04	1.90	
80					0.25	1.25	1.80	
100					0.29	1.50	0.60	
125					0.34	1.80	1.50	
160					0.40	2.20	1.40	
200					0.48	2.60	1.30	
250					0.56	3.05	1.20	
315					0.67	3.65	1.10	
400					0.80	4.30	1.0	
500					0.96	5.10	0.9	
630					1.20	6.20	0.8	
800					1.40	7.50	0.7	
1000					1.70	10.30	0.6	
1250	1.95	12.80	0.6					
1600	2.40	14.50	0.6					

10KV DRY-TYPE CAST RESIN POWER TRANSFORMER



Rated Capacity (KVA)	Voltage Combination			Connection Symbol	Po (W)	Pk (F class120 °c) (W)	Io (%)	Uk (%)	Noise LPA(AN) (dB)
	H. V. (KV)	Tapping Range of H.V.(%)	L. V. (KV)						
630	6 or 6.3 6.6 10 10.5 11	9450	3 or 3.15 6 6.3	Yd11	1570	6690	1.2	54	50
800					1800	7830			51
1000					2160	9270			52
1250					2500	11070	1.0		53
1600					2970	13410			54
2000					4050	16020	0.9		55
2500					4770	18900			56
3150					5670	22050	0.7		57
4000	6750	26550	58						
5000	31410	0.5	59						
6300	37260		60						

ROLLED IRON-CORE TYPE DISTRIBUTION TRANSFORMER

10KV COMPLETE SEAL DISTRIBUTION TRANSFORMER



Rated Capacity (KVA)	Voltage Combination			Connection Symbol	Losses		No-load Current (%)	Impedance at Short Circuit (%)	
	H. V. (KV)	Tapping Range of H.V.(%)	L. V. (KV)		No-load Losses (W)	Load Losses (W)			
30	6 6.3 6.6 10 10.5 11	(±)5 or (±)2X2.5	0.4	Yyn0 or Dyn11	90	600	0.6	4	
50					115	870	0.6		
63					140	1040	0.57		
80					175	1250	0.54		
100					200	1500	0.48		
125					235	1800	0.45		
160					280	2200	0.42		
200					335	2600	0.39		
250					390	3050	0.36		
315					465	3650	0.33		
400					560	4300	0.3		
500					670	5100	0.3		
630					840	6200	0.27		4.5
800					980	7500	0.24		
1000					1190	10300	0.21		
1250					1370	12000	0.18		
1600	1680	14500	0.18						

SINGLE-PHASE ROLLED IRON-CORE TYPE TRANSFORMER

Rated Capacity (KVA)	Voltage Combination			Connection Symbol	Losses		No-load Current (%)	Impedance at Short Circuit (%)			
	H. V. (KV)	Tapping Range of H.V.(%)	L. V. (KV)		No-load Losses (W)	Load Losses (W)					
5	6 6.3 10 10.5 11	(+/-)5	0.23	0	25	130	1.2	3.5			
10					35	250	1.0				
15					50	330	0.9				
20					55	420	0.8				
30								75	600	0.6	4
50					120	860	0.5				
80					160	1260	0.4				
100					200	1500	0.3				



Pre-installed Transformer Substation

American type High/ Low voltage Pre- installed Transformer Substation



Being suitable for the open air power supplies for high buildings, residential areas, factories and mines, hotels, parks, oil fields, air ports and wharfs, railways, marketplaces and provisional facilities, the transformer stations are widely used in the power distributing system of ring network and power distributing terminals of emanant power transmission net.

Structure of Product:

The American type is composed of three major portion, such as the transformer, high voltage chamber and low voltage chamber. Loading switch of V type or T type with two-step fuses is used in high voltage side. It is mounted in the oil tank of transformer. The isolating oil of transformers is utilized as all isolating medium and heat-radiating medium. The inserting components of high voltage cable are used for high voltage side, made in full isolation and full sealing structure. The new type of intelligent fuse and plastic shell air switch are used for low voltage side, which has features of high disjunction ability and in good protecting performance.

Features of The Product:

1. Full sealing and isolating structure.
2. Small volume and compact structure.
3. Cable end can operate under a load of 2000A
4. Strong over loading capability
5. The case is treated by means of special technology, possessing excellent anti-corrosive ability

Good appearance, being harmonized with environment.

Compact Type High/ Low voltage Pre-installed Transformer Substation



Description of the Product

The compact transformer station is suitable for the open air power suppliers for high buildings, residential areas, factories and mines, parks, oil fields, air port and wharfs, railways, marketplaces and provisional facilities etc.

It can also be used in the power distributing system of ring net work and power distributing terminals of emanant power transmission net.

Structure of Product

The compact transformer station is composed of three major portions, such as high voltage chamber, transformer chamber and low voltage chamber.

- ▲ The high voltage side is generally equipped with HXGN26 sulfur hexachloride annular net or vacuum annular net cabinet, which has features of less maintenance, all functions for anti-malfunction, with over loading capacity up to 120%.
- ▲ The performance of transformer can meet the requirement of National standard of S11-M.R. S9-M.R. for oil immersed transformer.
- ▲ The new type of intelligent fuse and plastic shell air switch are used for low voltage side, which has features of high disjunction ability and in good protection performance.
- ▲ The outer shell can be made of steel plate, aluminum and zinc plated materials, which is in good appearance with various varieties.
- ▲ It is a medium product of both cases of American type and European type, it processes the advantages of both cases.

European Type High/ Low voltage Pre-installed Transformer Substation



European type/ American type/Compact transformer station
Being suitable for the open air power supplies for high buildings, residential areas, factories and mines, hotels, parks, oil fields, air ports and wharfs, railways, marketplaces and provisional facilities, the transformer stations are widely used in the power distributing system of ring network and power distributing terminals of emanant power transmission net.

Structure of Product:

European type sub-station consists of high voltage, transformer chamber and low voltage chamber.

▲ High side voltage is generally equipped with annular net cabinet (which can be equipped with production gas, pressed gas, vacuum, SF6 loading switch and fuse protection), and also equipped with vacuum, SF6 fuse, with features of smaller in volume, safe and reliable.

▲ Either S11-M.R, S9-M.R oil immersed transformer or SC9,SG10-R dry type transformer is used for the transformer.

▲ The new type of intelligent fuse and plastic shell air switch are used for low voltage side, which has the features of high disjunction and good protection performance.

▲ The outside shell is made of aluminum alloy, high quality steel plate, compound plate etc, the top cover is made in two layers to prevent from heat radiation efficiently.

▲ There are automatic winds discharging system and condensation proof device in the transformer body.

High voltage Power Distribution Cabinet



Low voltage Drawer Type Switch Cabinet



This device is suitable for low voltage power distributing system such as power plant, petroleum & chemical industry, metallurgy, textile and high building etc. It is used for power supply system, and also used as the low voltage device for idle work power compensations.

Porcelain Insulator



Disc Suspension Porcelain Insulator (Normal Type)

Type		XP-40C	XP1-40
Class		U40C	U40B
Figure No.		1	2
Unit spacing (H)	(mm)	140	110
Nominal diameter (D)	(mm)	190	175
Nominal creepage distance (mm)		200	185
Rated E&M failing load (kN)		40	40
Routine tensile load (kN)		20	20
Coupling size			11
Impact strength (Min.) (N·m)		5	5
Power frequency withstand voltage	Wet (kV)	30	30
	Dry (kV)	55	55
Dry lightning impulse withstand voltage (kV)		75	75
Power frequency puncture voltage (kV)		90	90
Radio interference voltage	Test voltage to ground (kV)	7.5	7.5
	Max. RIV at 1 MHz (μ V)	50	50
Mass per 100pcs (Kgs)		250	238
Applicable standard: GB IEC AS BS			

Anti-pollution Suspension Porcelain Insulator



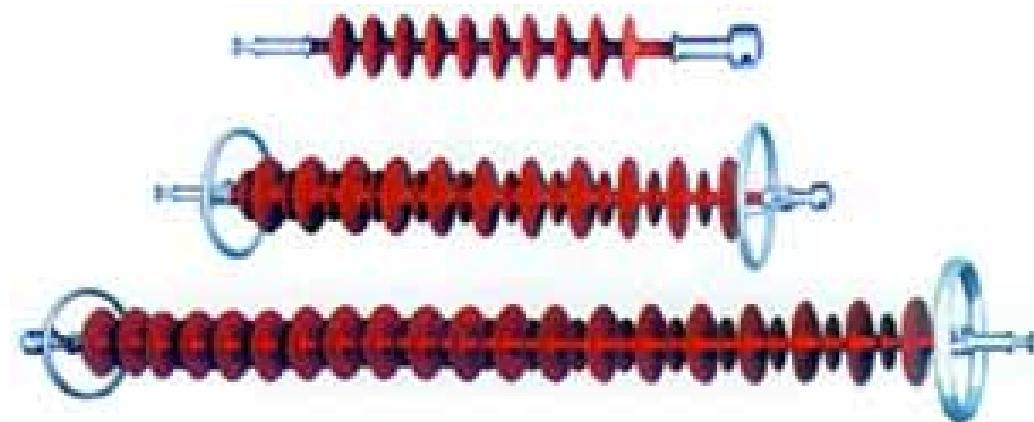
Type		XHP-70	XHP5-70	XHP-80	XHP3-80
Class		U70BLP	U70BLP	U80BP	U80BP
Figure No.		1	2	1	1
Unit spacing (H)	(mm)	146	146	146	140
Nominal diameter (D)	(mm)	255	280	255	255
Nominal creepage distance	(mm)	432	400	432	432
Rated E&M failing load	(kN)	70	70	80	80
Routine tensile load	(kN)	35	35	40	40
Coupling size		16	16	16	16
Impact strength (Min.)	(N·m)	6	6	6	6
Power frequency withstand voltage	Wet (kV)	42	42	42	42
	Dry (kV)	80	80	80	80
Dry lightning impulse withstand voltage	(kV)	120	120	120	120
Power frequency puncture voltage	(kV)	120	120	120	120
Radio interference voltage	Test voltage to ground (kV)	10	10	10	10
	Max. RIV at 1 MHz (μ V)	50	50	50	50
Mass per 100pcs (Kgs)		650	600/670	660	670
Applicable standard: GB IEC AS BS					

Line post porcelain Insulator



Type		24413	24461	24462
Figure No.		1	2	3
Nominal creepage distance	(mm)	625	530	500
Defect leakage distance	(mm)	220	250	250
Min Cantilever failing load	(KN)	4	12.5	12.5
Power freq.1 min wet withstand voltage	(KV)	62	50	65
Lightening impulse withstand voltage	(KV)	166	150	150
Mass per 100pcs	(KG)	700	980	940
Applicable standard: IEC 60383				

Long-rod Suspension Composite Insulator



Type		XB-20/40	XB-20/70
Figure No.		1	2
Spacing (H)	(mm)	438	423
Nominal diameter (D)	(mm)	135	180
Nominal creepage distance	(mm)	863	550
Rated mechanical failing Load	KN	40	70
Routine tensile load	KN	32	56
Coupling size		16L	16L
Temperature loop		70k/15min/3times	70k/15min/3times
Porosity Test	kv	180Mpa.h	180Mpa.h
Dry lightning impulse withstand voltage	kv	213	170
Mass per 100pcs	kg	760	1000
Applicable standard: 60383			

Pin Type Porcelain Insulator



Type			P-3-M	P-6-M	P2-10-M	P-10-M
Class			55-1	55-2	55-3	55-4
Figure No.			1	2	3	4
Nominal creepage distance	(mm)		102	127	178	229
Arcing distance	(mm)		57	86	114	127
Radio interference voltage	Low frequency test voltage to ground		5	5	10	10
	Mac. RIV. At 1MHz	Anti radio interference type μV	50	50	50	50
		Normal type μV	2500	2500	5500	5500
Critical impulse Flashover voltage	Positive	Anti radio interference type μV	50	70	90	105
		Normal type μV	50	75	100	110
	Negtive	Anti radio interference type μV	70	85	110	130
		Normal type μV	70	95	130	140
Low frequency Flashover voltage	Dry flashover	Anti radio interference type μV	35	45	55	65
		Normal type μV	35	50	65	70
	Wet flashover	Anti radio interference type μV	20	25	35	40
		Normal type μV	20	25	35	35
Cantilever strength	lb		3000	2500	2500	3000
Low-freq. puncture voltage	kv		5	70	90	95
Mass per 100pcs	kg		58	70	104	160
Applicable standard: ANSI C29.5						

Arrester & Bushing



COMPOUND INSULATION BUSHING



COMPOUND INSULATION ARRESTER



METAL OXIDE ARRESTER

Circuit Breaker



Applicable standard: IEC 56 and IEC 694

Electric Power Fittings



GROUNDING FITTINGS

1. Grounding Clamp
2. Grounding Rod
3. Insulator Pin
4. Pole Top Pin

GUY WIRE FITTINGS

1. Wedge Clamp
2. Strain Clamp of Compression joint (adjustable type)
3. UT Wedge Clamp (adjustable type)
4. Shackle

PROTECTION FITTINGS

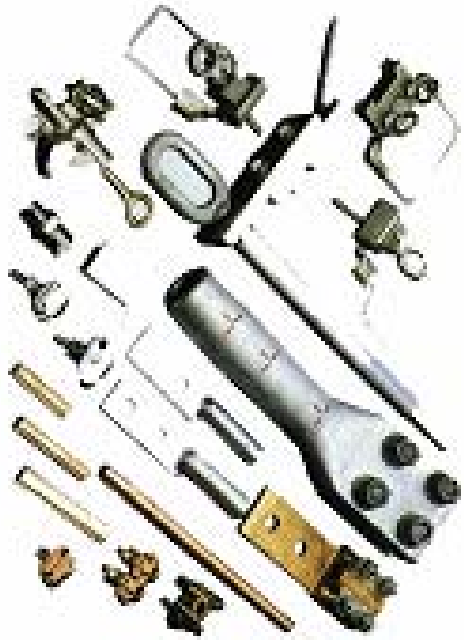
1. Preformed Armour Rod
2. Preformed Armour Rod for Conductor Repairing
3. Stockbridge Vibration Damper
4. Vibration Damper

SPLICING FITTINGS

1. Splicing Sleeve for Steel Wire (hydraulic compression Type)
2. Splicing Sleeve for AAC Conductor (hydraulic compression Type)
3. Splicing Sleeve for Insulated Overhead Cable (ABC)
4. Splicing Sleeve for AS. Stranded Wire (hydraulic compression Type)
5. Splicing Sleeve for Steel Wire (explosive overlap joint)
6. Splicing Sleeve for ACSR Conductor (explosive overlap joint)
7. Splicing Sleeve for ACSR Conductor (compression with pliers)
8. Splicing Sleeve for Aluminium Conducotor (twisting type)
9. Splicing Sleeve for ACSR/AS Conductor (hydraulic overlap joint)
10. Repair Sleeve for ACSR/AS Conductor (hydraulic overlap joint)
11. Repair Sleeve for ACSR, AAC, AAAC Conductor
12. Repair Sleeve for Steel Clamp
13. Aluminium Parallel Groove Clamp
14. Parallel Groove Clamp for Steel Wire
15. Wedge Parallel Groove Clamp (ejection type)
16. S-Parallel Groove Clamp (compression type)
17. C-Shape Copper Wire Clamp (compression type)
18. C-Shape Aluminium Wire Clamp (compression type)
19. H-Parallel Groove Clamp (Compression type)

LINK FITTINGS

1. Ball Eye
2. Ball Eye (perpendicular type, with horn holder)
3. Ball Eye (parallel type, with horn holder)
4. Ball Eye (horn holder type)
5. U Type Ball Eye
6. Ball Clevis
7. Ball Clevis (horn holder type)
8. Socket Tongue
9. Socket Eye
10. Socket Clevis
11. Socket Clevis (elongated type)
12. Socket Thimble
13. Socket Clevis (Y-type)
14. Anchor Shackle
15. Shackle
16. Twisted Shackle
17. Vee Shackle
18. Twisted Strap
19. Hinge to Tower
20. Clevis Eye
21. Eye Chain Link (900C shifted)
22. Chain Link (forged type)
23. Clevis
24. Clevis Hinge
25. Extension Link
26. U-Bolt
27. Adjusting Plate
28. Sag Adjustor Plate
29. Yoke Plate
30. Double Yoke Plate
31. Turnbuckle



STRAIN CLAMP

1. Dead End Clamp for ACSR Conductor (compression type)
2. Compression Dead-End Clamp (compression type)
3. Dead End Clamp for ACSR Conductor (hydraulic compression type)
4. Aluminium Alloy Strain Clamp (bolted type)
5. Malleable Iron Strain Clamp (bolted type)
6. Strain Clamp (bolted type)
7. Strain Clamp (straight line type)
8. Aluminium Alloy Strain Clamp (straight line type)



SUSPENSION CLAMP

1. Suspension Clamp (trunnion type)
2. Suspension Clamp (envelope type)
3. Suspension Clamp for Twin Jumper Conductors
4. Suspension Clamp (tower top clamp & bracket)
5. Suspension Clamp (envelope type)
6. Suspension Clamp (trunnion type)
7. Suspension Clamp (carried-up type)
8. Suspension Clamp (hang-down type)
9. Suspension Clamp (abrasion-proof type)
10. Suspension Clamp for Jumper Conductor
11. Top Clamp for Horizontal Post Insulation Aluminium Alloy Suspension Clamp (envelope type)

Kilowatt- hour Meter

**Single-phase
electronic
prepayment
kilowatt-hour
meter**



Single-phase electronic prepayment kilowatt-hour meter **DDSF2000 Single-Phase Static Meter with Multi-rate Calculation Feature**

Key Specifications/Special Features:

Single-phase multi-rate watt-hour meter is a new generation electric energy measuring meter

It uses two meters respectively to record the electric energy at flat and valley positions and with additional infrared interface.

Main functions: Metering function: time-sharing metering wattful energy,

2 rates, 8 time periods

Double meters respectively record the accumulative power consumption of two rates

Onboard infrared communication function for use with palmtop computer for meter setting and reading

Pulse output: provided with energy pulse output function, used for

checking meter and collecting power consumption data

Primary Competitive Advantages: Price, Reputation, Prompt Delivery

Technical Data of Kilowatt-hour meter model DDSF2000

Model	DDSF2000
Basic current Ib (Maximum current)	2.5(10)A 5(20)A 10(40)A 15(60)A
Rated Voltage	220V 230V 240V
Rated frequency	50Hz?%
Limit operating temperature range	-10 degrees Celsius to 55 degrees Celsius
Limit operating voltage range	70% to 120%
Maximum impulse voltage	8KV
Total power loss	Not more than 2W(8V.A)
S Reference temperature	23°C
Data save period under continuous power cut	≥ 10 years
Clock Accuracy	≤ 0.5S/d(23 degrees Celsius)
Accuracy class	Class2.0
Battery capacity	≥ 1000mAh
Outside dimensions	170?25?14mm
Working life	More than 15 years
Net weight	2kg appro

**Three-phase,
Four-wire static
kilowatt-hour
meter**



Primary Competitive Advantages:

- Price
- Quality
- Reputation
- Prompt Delivery

Main Export Markets:Worldwide

This series watt-hour meters feature has high accuracy, wide range load, and stable and reliable operation, which are required by modern watt-hour meters and

Technical Data of Kilowatt-hour meter model DT962

Model	DT962
Basic current Ib (Maximum current)	1.5(6)A 3(6)A 5(20)A 10(40)A 15(60)A 20(80)A 30(100)A
Rated Voltage	3?20/380V 3?30/400V 3?40/415V
Rated frequency	50Hz
Starting current	≤0.005Ib
Basic revolution r/min	14.85r/min
Maximum impulse voltage	6KV
Power loss of voltage coil	<1.4W <5VA
Tated torque	8.9?0-4N.m
Accuracy class	Class2.0
Insulation	Class2.0
Outside dimensions	273?/SPAN>172?/SPAN>125mm(I _{max} ≤40A) 279?/SPAN>172?/SPAN>125mm(I _{max} >40A)
Working life	More than 20 years
Net weight	3781g

Single-phase static meter with multi-rate calculation feature



w/Bi-Directional Measurement

Bi-directional measurement of single AC active energy. Logical resistance to running with no-load. Photoelectric isolated pulse output function for easy digital collection. Resistance to tampering and attempted theft:

- 1.Short circuit of inlet and outlet wire.
- 2.Exchange Inlet and outlet wire
- 3.The application of magnetic fields outside meter.
- 4.Incline the meter.

High accuracy, high stability, no need of regular calibration. Wide test range, perfect over-load ability. Perfect ability of bearing over-voltage.

high reliability design and workmanship:

- 1.Uses industrial-grade and international brand name electronic components, using less power in large range
- 2.SMT manufacturing workmanship.
- 3.Long time high temperature aging workmanship workmanship.

Lower power consumption.

Lower starting current.

Technical Data of Kilowatt-hour meter model DDS188

Model	DDS188	DDS188	DD202-6
Basic current Ib (Maximum current)	2.5(10)A	5(25)A	5(30)A
	5(20)A	10(50)A	10(60)A
	10(40)A	15(75)A	
	15(60)A		
Rated Voltage	220V 230V 240V		
Rated frequency	50Hz 60Hz		
Starting current	≤0.004Ib		
Power loss of voltage coil	2VA		
Accuracy class	Class2.0		
Outside dimensions	150?12?6mm		
Working life	More than 30 years		
Net weight	450g		

Service

- **Advanced and reliable technology & engineering**
- **Procurement, manufacture, and delivery of the goods**
- **Project management**
- **Construction, installation, and commissioning**
- **Technical service**
- **Training program**
- **Service after completion of the project**
- **Financing assistance and export credit**
- **Other services and functions upon request**

CREATE THE FUTURE



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