



SZ

50Hz

Fluorin Plastic Centrifugal Pump



Hangzhou Nanfang
Special Pump Industry Co.,Ltd.

Worldwide CNP Sales & Service Network

CNP Headquarter

Address: Renhe Town, Yuhang District, Hangzhou, Zhejiang

Tel: +86 571 86397810 , 86397838

Fax: +86 571 86397809

PostCode: 311107

E-mail: info@nanfang-pump.com

Website: www.cnppump.com

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The technical data are subject to amend without notice.



Company Profile



Hangzhou Nanfang Special Pump Industry Co.,Ltd. is specialized in manufacture of stainless steel multistage pumps, integrating scientific research, production and marketing. Since its establishment nearly 20 years ago, the company has devoted considerable efforts to innovation and management. The company has successfully developed various kinds of pumps which are applicable to industrial and mining enterprises, municipal water supply, farm irrigation, petrochemical engineering, domestic water and fire fighting water supply of high buildings, industrial water treatment, water purification, pharmaceutical industry, boiler, air-conditioning system etc. The main performances of CDL series stainless steel multistage vertical pump, TD in-line circulation pump, SJ series stainless steel multistage deep-well submersible pump, CDLK, CDLKF immersion type multi-stage centrifugal pump, CHL/CHLK/CHLF series stainless steel multistage horizontal pumps and QY series stainless steel pump conveying mixed gas and liquid, ZS series stainless steel horizontal single-stage centrifugal pump, MS series light stainless steel horizontal single-stage centrifugal pump, have fully reached international advanced level.

Besides designing pumps with advanced tools such as three-dimensional CAD and CFD software, the company boasts a complete set of precision manufacturing and inspection equipment. With perfect quality control system, the company has passed ISO9001 Quality System Certification, ISO14001 Environment Management System Certificate, and obtained CE Mark also. The company sell products well not only at home, but also in foreign countries, Europe, America, Southeastern Asia etc, gaining popularity due to their excellent quality, good credit standing and considerate after-sales service.

The company has established a wide sales and service network which has representative offices and service centers. Offices and service centers are set in all large and medium-scale cities, aiming to providing timely and satisfactory service for customers.

Satisfying customers will be eternal pursuit of the company. Looking forward to the future, the company will further keep up its fine tradition and persist in its business principle of "quality first, credit first and clients first" to offer customers products of high quality and more considerate services.

Nanfang pump, an international brand worthy of your trust!

Content

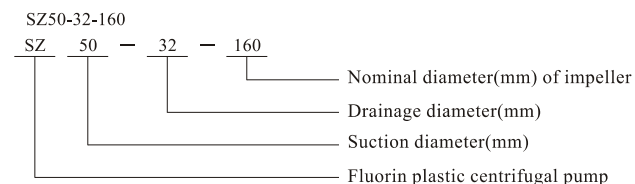
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Definition of Model



Structure feature

- SZ pump has one impeller, axial suction and radical discharge.
- Simple structure, shaft is directly connected with impeller.
- Easy for pipe works, inlet and outlet are connected by standard flanges.
- Wet parts are made of F26.F46, accessories are made of cast iron(HT200).

Typical application

- Any concentration of acid alkali, salty solution, strong oxidants, organic solvent etc. Strongly corrosive medium.
- Petrol, chemical, pesticide, acid cleaning, dying, paper making, galvanization, etc.

Operation conditions

- Thin medium not containing grain or fiber.
- Medium temperature: -20℃~120℃
- Medium density: Max $1.35 \times 10^3 \text{ kg/m}^3$
- Ambient temperature: Max+40℃
- Altitude: Max 1000m
- Pressure: Max 10bar

Motor

- TEFC motor, 2 pole
- Protection class: IP 55
- Insulation level: CLASS F
- Standard voltage: 50Hz, $3 \times 380\text{V}$

Curve conditions

- Curves tolerance is according to ISO9906, Annex A;
- All curves are based on the measured value of constant motor speed 2900rpm, 50Hz, $3 \times 380\text{V}$.
- The measurements were made with airless water at temperature of 20℃. The curves apply to a kinematic viscosity of $1 \text{ mm}^2/\text{s}$ (1 cst)
- It is suggested to operate the pump in the scope of the bold curve, to prevent motor from overload.
- When pumping liquids with a density higher than that of the operation conditions, use motors with correspondingly higher outputs.

Performance curve

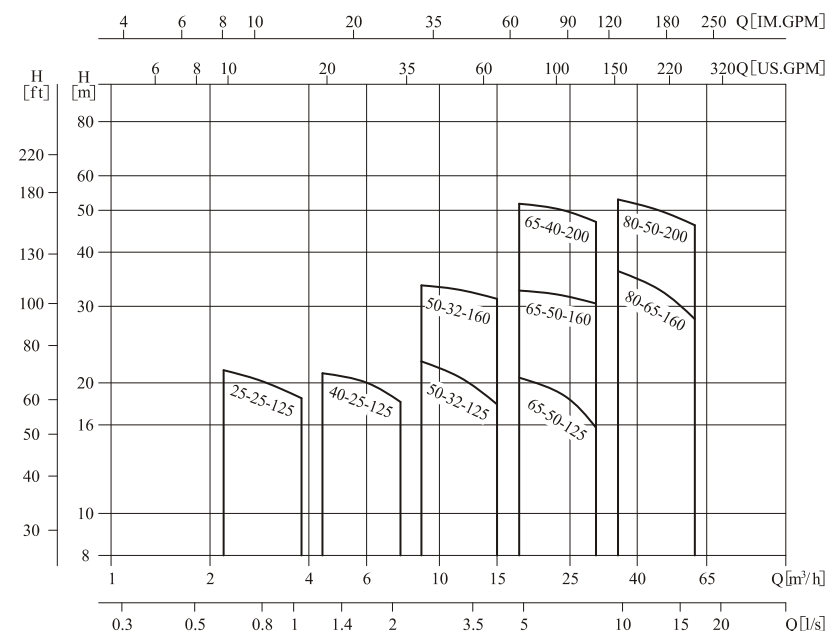
- Q/H: means the curve of the flow and head at the nominal rotating speed.
- Power curve: P2 means the pump input power, if the medium density is $1 \times 10^3 \text{ kg/m}^3$.
- Efficient curve: Eta means the pump efficient.

Installation conditions

- When installation, please make sure the pump would not be effected by the pipeline force when pump operation.
- The pump should be strongly fixed on the horizontal base.
- In order to make motor work well, pump should be installed on the frozen-free and ventilate place.
- The electric protection devices should protect pump from being damaged by phase lack, unstable voltage, electric leakage, overload.

Performance scope

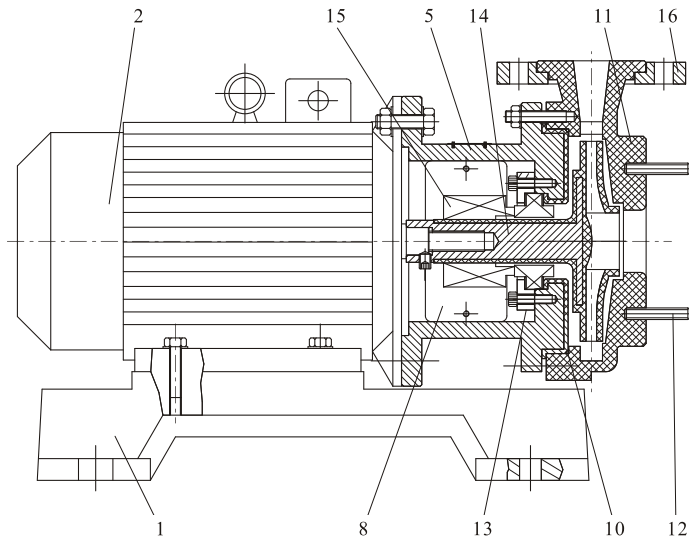
SZ 50Hz 2900rpm



Performance table

Model	Nominal flow [m³/h]	Nominal head [m]	Flow range [m³/h]	Max bar [bar]	Power [kW]	Max efficiency [%]
SZ25-25-125	3.2	20	2.2~3.8	2.1	1.1	28
SZ40-25-125	6.3	20	4.4~7.6	2.1	1.5	41
SZ50-32-125	12.5	20	8.8~15	2.3	3	44
SZ50-32-160	12.5	32	8.8~15	3.3	4	51
SZ65-50-125	25	20	17.5~30	2	4	55
SZ65-50-160	25	32	17.5~30	3.3	5.5	60
SZ65-40-200	25	50	17.5~30	5.1	11	55
SZ80-65-160	50	32	35~60	3.6	11	62
SZ80-50-200	50	50	35~60	5.4	18.5	63

Sectional drawing

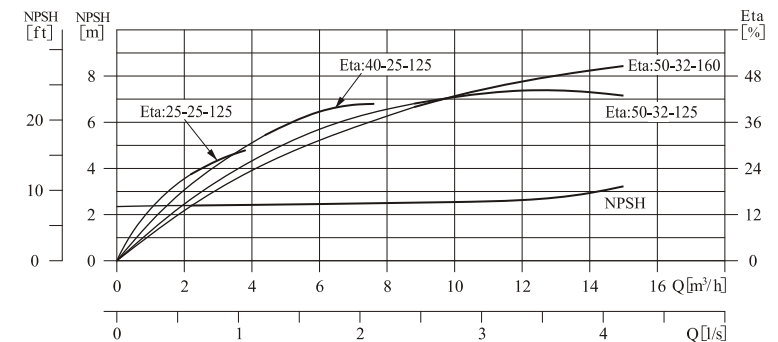
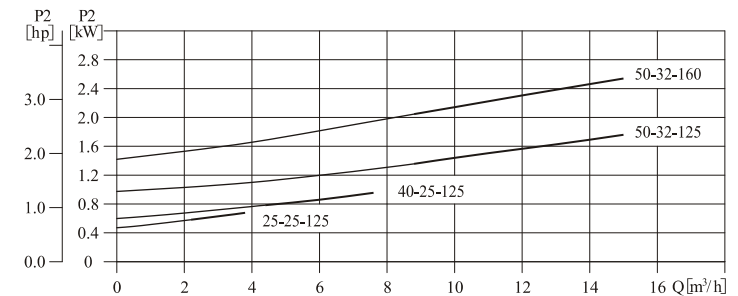
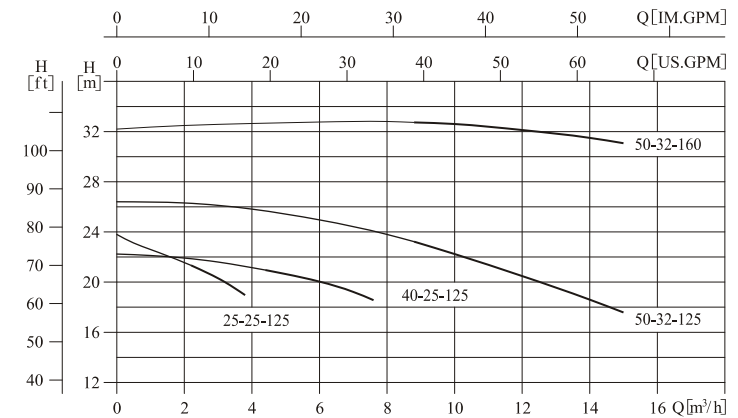


Part list

No.	Name	Material	Code/AISI/ASTM
1	Base	HT200	ASTM25B
2	Motor		
5	Injection moulding pump head	HT200+F26(F46)	ASTM25B+F26(F46)
8	Guard	Stainless Steel OCr18Ni9	AISI304
10	O ring	FPM	
11	Casing	F26(F46)	
12	Double end studs	Stainless Steel OCr18Ni9	AISI304
13	Seal cover	HT200	ASTM25B
14	Impeller	Steel+F26(F46)	ASTMA570+F26(F46)
15	Mechanical seal	Silicon Carbide/Silicon Carbide	
16	Outlet flange	HT200	ASTM25B

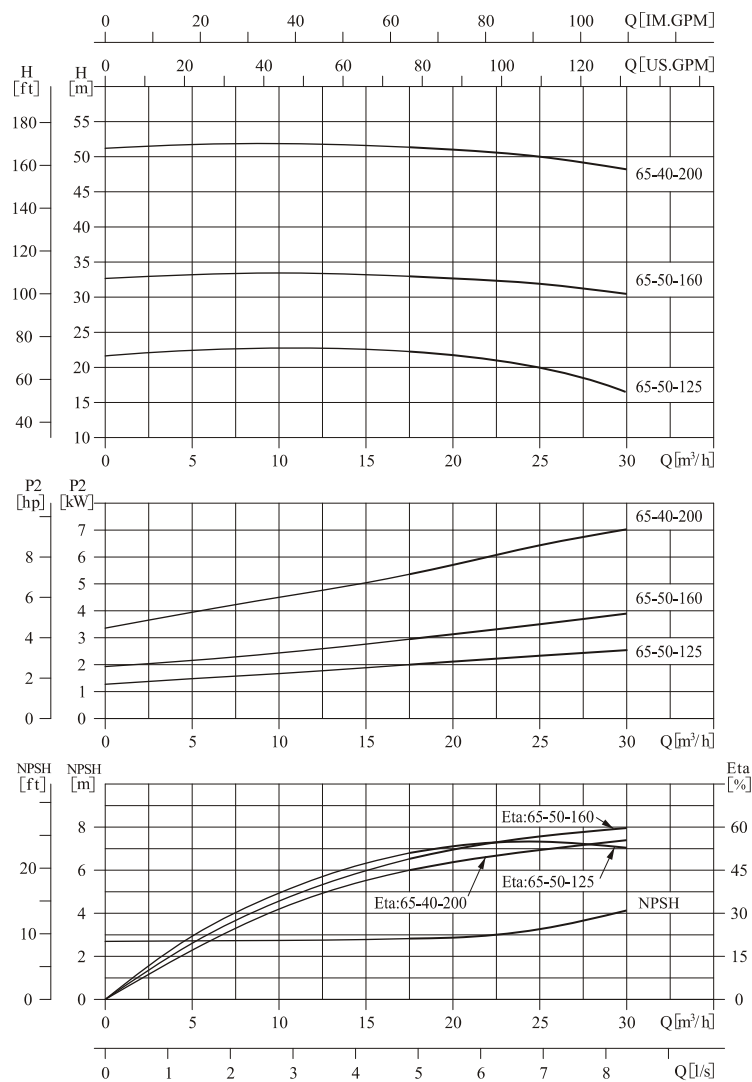
Performance curve SZ25 SZ40 SZ50

50Hz 2900rpm



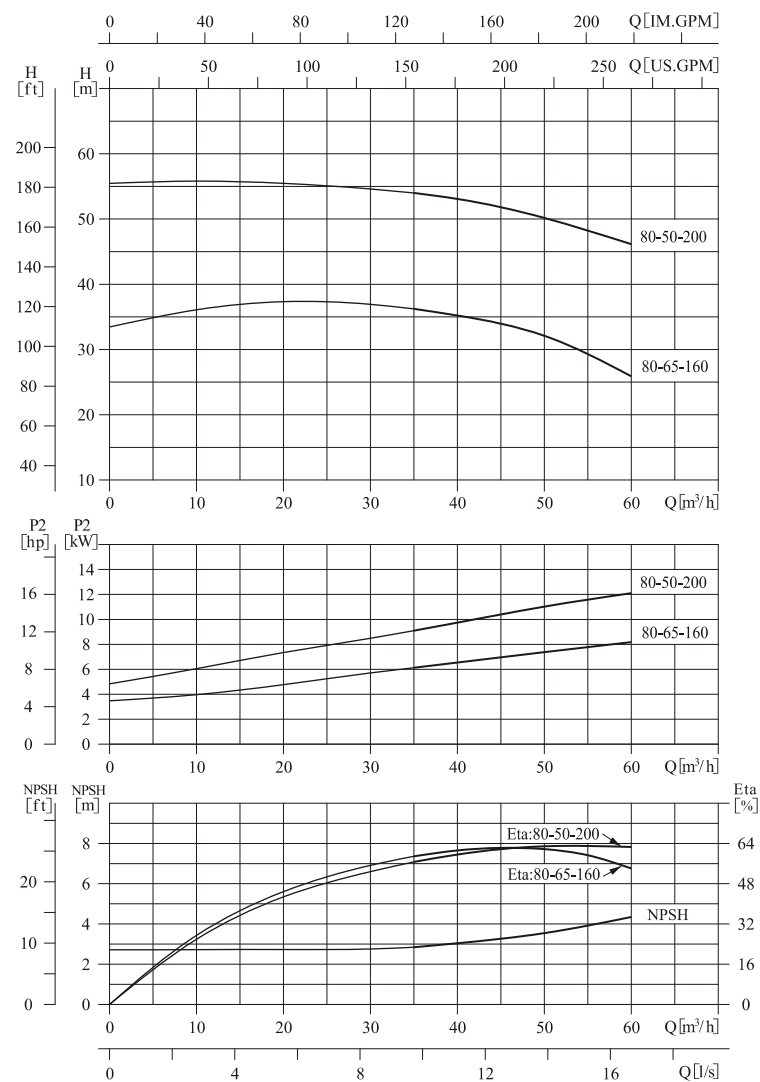
● Performance curve SZ65

50Hz 2900rpm



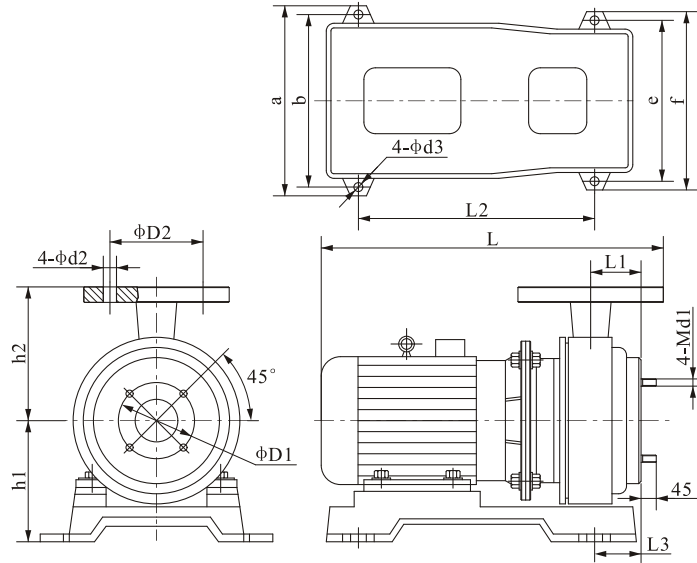
● Performance curve SZ80

50Hz 2900rpm



Technical Data

● Pump dimensions



● Size and weight

Model	Size (mm)																Weight (kg)	
	L	L1	L2	L3	D1	Inlet flange	d1	h1	h2	D2	outlet flange	d2	a	b	d3	e		f
SZ25-25-125	457	37	300	64	75	DN25/PN6	10	164	120	100	DN32/PN10	14	265	230	15	230	265	45
SZ40-25-125	461	37	300	72	100	DN40/PN6	10	165	120	100		14	265	230	15	230	265	48
SZ50-32-125	531	43	370	79	125	DN50/PN10	14	175	140	100		14	275	235	17	235	275	74
SZ50-32-160	553	53	370	103	125	DN65/PN10	14	191	159	100	DN50/PN10	14	315	270	17	270	315	78
SZ65-50-125	563	50	370	95	145		14	175	147	125		18	315	270	17	270	315	79
SZ65-50-160	618	51	400	88	145		14	219	165	125		18	370	330	17	290	335	113
SZ65-40-200	727	55	440	96	145	DN80/PN10	14	255	180	110	DN40/PN10	18	425	380	19	320	365	181
SZ80-65-160	750	57	440	97	160		14	255	186	145	DN65/PN10	18	425	380	19	320	365	183
SZ80-50-200	797	57	440	110	160		14	255	195	125	DN50/PN10	18	425	380	19	320	365	205

Technical Data

● F46,F26 Corrosion resistance table

Medium	F46	F26	Medium	F46	F26	Medium	F46	F26
Acetic acid; Benzene acid	✓	✓	Sulfuric Acid +20% Smoke sulfate	✓/80℃	—	Titanium tetrachloride; zinc chloride	✓	✓
Arsenate; Boric acid	✓	✓	Smoke sulfate	✓	×	Ferric Trichloride, carbon tetrachloride	✓	✓
Carbonate	✓	✓/20℃	sulfurous acid	✓	✓	Salt solution; seawater	✓	✓
Fluoride acid	✓	—	Ammonium hydroxide, potassium hydroxide	✓	✓	Alum (slurry); black liquor (slurry)	×	—
Hypochlorite; Wet chlorine	✓	✓	Sodium hydroxide <20%	✓	✓	Blue alum; NaHSO ₃	✓	✓
Chromic Acid	✓	✓/50℃	Sodium hydroxide <80%	✓	×	Sodium bicarbonate; soda	✓	✓
citric acid	✓	✓/120℃	Calcium hydroxide	✓	✓	Sodium hypochlorite	✓	✓/20%
Toluene-acid	✓	✓/65℃	Acetic acid salt solution	✓	✓	Sodium chlorate; calcium chloride	✓	✓
Formic acid	✓	✓	Ammonium nitrate; barium nitrate	✓	✓	Chromium sodium	✓	—
Glycolic acid	—	✓/20℃	Sodium nitrate; copper nitrate	✓	✓	Al acetic	✓	✓
hydrochloric acid	✓/65℃	✓/37%	Iron nitrate	✓	✓	Bromine	✓	✓/20℃
hydrofluoric acid; Fluorosilicic acid	✓	✓	Nitrate lead; silver nitrate	✓	—	Glycerol	✓	✓
Hydrogen Peroxide; lactic acid	✓	✓/20℃	Aluminum sulfate, ammonium sulfate	✓	✓	Pyridine	✓	×
Maleic acid; malic acid	✓	✓	ammonium sulfate + Sulfuric Acid	✓	✓	acetic (acid) anhydride	✓	✓/20℃
Mixed acid	✓	—	Barium sulfate; sodium sulfate	✓	✓	Aniline dye; hydrochloride aniline	✓	—
Oleic acid	✓	✓	Copper sulfate	✓	✓	Methane, ethane, propane	✓	✓
Oxalate acid	✓	✓/50℃	Copper sulfate +10% Sulfuric Acid	✓	—	Nitrobenzene	✓	✓/20℃
Picric acid; stearic acid	✓	✓/20℃	Ferrum sulfate +10% Sulfuric Acid	✓	—	Tar and ammonia	✓	—
Tartrate; Tannin	✓	✓	Magnesium sulfate; zinc sulfate	✓	✓	Toluene; SO ₃	✓	✓
Nitrate 5% to 10%	✓	✓/50℃	Ammonium; sodium	✓	✓	Glycol; ethylene oxide	✓	✓
Nitric Acid <50%	✓	✓	Chloride; barium chloride	✓	✓	Two-acetone; dichloro-ethanol	✓	✓/20℃
Concentrated nitric acid	✓	×	Calcium chloride	✓	✓	Ethylene dichloride, vinyl Trichloride	✓	✓
Nitric Acid +3.5% hydrofluoric acid	✓	—	Aluminum Trichloride	✓	✓/20%	Formaldehyde	✓	✓/50℃
Phosphoric Acid	✓	✓	Potassium chloride	✓	✓/65℃	Freon	×	—
Phosphoric Acid +2% Sulfuric acid +1% hydrofluoric acid	✓	—	Sodium chloride; tin chloride	✓	✓	CS ₂	✓	✓/20℃
sulfuric acid <10%	✓	✓	Silver chloride, magnesium chloride	✓	✓	Molten sulfur	✓	✓
Sulfuric acid 10% to 75%	✓	✓/65℃	Nickel Chloride	✓	✓			
Sulfuric acid 75% to 98%	✓/80℃	✓/50℃	Sulphur dichloride	✓	✓/20℃			

Note: 1. ✓/20℃ means the material can be used in the medium that temperature is below 20℃. ✓ means workable, × means doesn't work. — means not known.
2. ✓/20% means the material can be used in the 20% medium.

CNP India
NANFANG PUMPS INDIA PVT. LTD.
Address: 103,Kasturi Tower, 238/A, L.B.S Marg, Opp.Red Cross Bhavan,
Thane-400 602, India.
Tel : +91-22-2542 5540
Fax: +91-22-2542 7306
E-mail: sales@nanfangpumps.com
Website: <http://www.nanfangpumps.com>

CNP Indonesia
PT SOUTHERN INDONESIA (Lindeteves Trade Centre)
Address:Blk RA No 56-57,Jl Hayam Wuruk 127,Jakarta 11180,Indonesia
Tel: +62 21 62200955 / 30012832
Fax: +62 21 62201026 / 30064055
E-mail: info@southernindonesia.com
Website: <http://www.southernindonesia.com>

CNP Malaysia
IKHUA ENGINEERING SDN.BHD.
Address: Plot F, Lot 1998, Jalan Perusahaan Tiga, Taman Selesa Jaya,
43300 Balakong, Selangor Darul Ehsan, Malaysia.
Tel: 603-8961 6858 (Hunting Line)
Fax: 603-8961 3118
E-mail: ikhuaengrg@pd.jaring.my
Website: <http://www.ikhua.com.my>