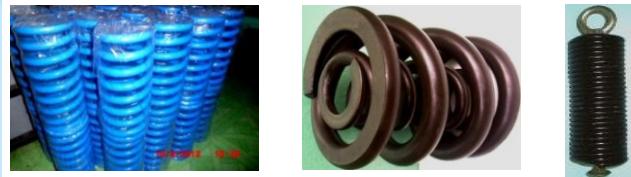


## COIL AND PLATE SPRING

### A. COIL SPRING



We make and produce any kind of precision spring **just for a special order**. Send us your technical drawing and product specification !!!!

#### Material and Diameter :

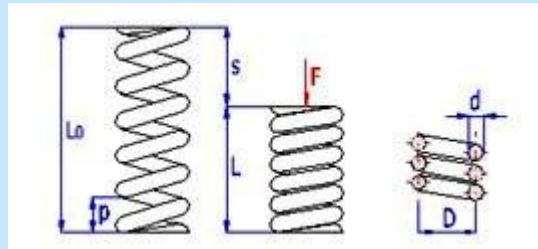
Carbon steel wire or stainless steel wire with range of steel spring wire from  $\varnothing 0.4 \text{ mm}$  until  $\varnothing 38 \text{ mm}$ . Material Standard according to DIN, JIS, SAE, AISI, or equivalent

#### Any Kinds of Coil Spring :

Compression Spring, Extension Spring or Torsion Spring, Valve Spring (Pump, Gas, Hydraulic, Pneumatic), Conical Spring, etc. We can produce in big shape of spring wire  $\varnothing$  for heavy duty work



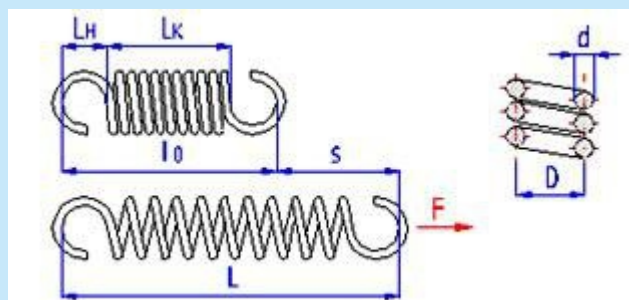
### COMPRESSION SPRING DETAIL & TERMINOLOGY



**d** : Wire  $\varnothing$   
**D** : Mean Coil Spring  $\varnothing$   
**s** : Spring Deflection  
**L0** : Free Length of Spring

**Ls** : Solid Length  
**P** : Pitch  
**N** : Number of Coils  
**F** : Spring Force

### EXTENSION SPRING DETAIL & TERMINOLOGY



**d** : Wire  $\varnothing$   
**D** : Mean Coil Spring  $\varnothing$   
**OD** : Outside Coil Spring  $\varnothing$   
**LH** : Length of Hook

**LK** : Length over coil  
**L0** : Length Inside Hook  
**s** : Spring Deflection  
**F** : Spring Force

### B. PLATE SPRING

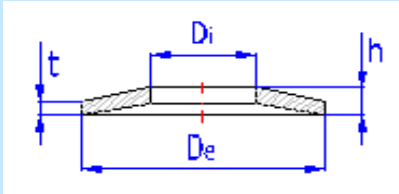
We make and produce any kind of precision (sheet) plate springs **just for a special order**. Send us your technical drawing and your product specification ...!

#### Any Kinds of Plate Spring :

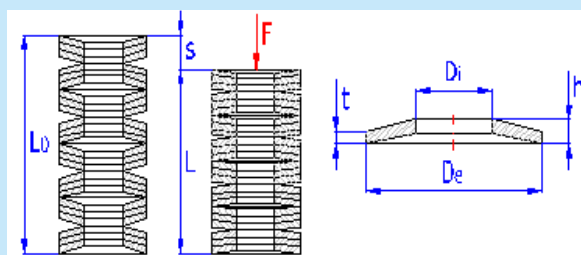
Disk spring (also known as belleville spring), spring washer or wave spring washer, spiral spring, tension plate spring, rolling helical plate for feeding support, and many other shapes of plate spring according to special order from user. We also receive order to supply (sheet) plate spring material for industrial needs.



### DISK (BELLEVILLE) SPRING DETAIL & TERMINOLOGY

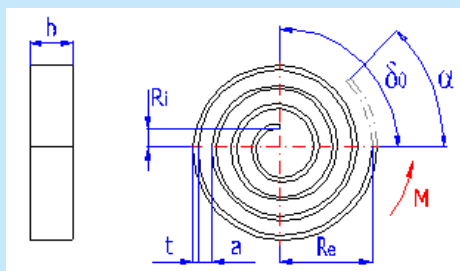


**Di** : Inside  $\varnothing$   
**De** : Outside  $\varnothing$   
**t** : Plate Thickness  
**h** : Overall Height



**L0** : Free Spring Length  
**Ls** : Solid Length Spring  
**S** : Length over coil  
**F** : Spring Force

### PLATE SPRING DETAIL & TERMINOLOGY



**h** : Height of Plate Strip  
**Ri** : Inner Radius  
**Re** : Outer Radius  
**t** : Thickness of Spring Strip

**a** : Space Between Coil  
**alpha** : Angular Deflection  
**alpha\_0** : Leg angle of free Spring  
**M** : Loading of Spring

## SPRING ENGINE MOUNTING & SPRING PIPE HANGER



### FUNCTION or USEFUL OF SPRING MOUNTING

- ◆ **To isolate** or **reduce** the transmission of noise and vibration from engine or mechanical equipment to building structure, such as in hotel, commercial and office building, industrial building, hospital, etc.
- ◆ **To solve** the toughest at shock transmission problem, such as in operation of punch presses, doing heavy blanking operation, die cast machines, machine tool, and other industrial machinery.
- ◆ **To protect** mechanical or electrical equipment and building structure from damaging effect of continuously engine operation that producing vibratory force.
- ◆ **To create** the comfortable working or living environment, and free from severe vibration or structure borne noise, and free from occupant complaint.



Spring Mounting With Single or Double Spring



Spring Mounting With Multiple Spring



Pipe Spring Hanger



Many Types Of Pipe Spring Hanger

### APPLICATION

Spring mounting can be applied to the engine or mechanical equipment, as below :

- Generator Engine Set
- Metal Stamping Presses Machine
- Engine base on Oil Refinery Construction
- Pumping Unit
- Refrigeration Machines
- Laundry Machine in the Hotels
- Air Compressor
- Cooling Towers and Chillers
- Grain Vibrator
- Laboratory Equipment
- More Kinds of Industrial Equipment, etc.



### LOAD SELECTION OF VIBRATION ISOLATOR

There are many types and designs of our spring mounting to proper customer needs to effectively isolate reducing vibration and noise; and the most important is firstly in calculating load on isolator, as below:

LOAD ON ISOLATOR	
Number of Mounting Point	Maximum Load = Machine Weight x Factor
4	30%
6	25%
8	20%
10	15%
12	8%

**Example**  
Machine Weight = 5000 kgs  
Mounting Point (Stand) consist of : 6 ( six ) points  
So, Max. Load on each Isolator =  $5000\text{kgs} \times 25\% = 1250 \text{ kgs}$

### DAMPED SPRING MOUNTING



Damped Spring Mounting Application for Metal Stamping Machine



Prepare for Installation

A Metal stamping machine operation, punch, heavy metal blanking operation in your building will generate **shock** or **vibration**. And vibration creates **noise** which has become a major source of resident's **complaint** in modern building, **disturbing** a neighboring company, and cause of making **uncomfortable** working and living environment.

Selecting the proper damped isolator for base installation of the machine is very important to solve all these problems.



Our Company is now a leading player in the field of vibration control engineering and machine mounting methods. One of our mounting products is Damped Spring Mounting that's used for heavy duty operation, like as metal stamping, punch, rock crusher, marine, mining vibrator equipment, etc. We can produce and supply damped spring mounting from: **50 tons till 1500 tons** of work capacity.

If you would any further information regarding to our products and services, and to get free technical assistance, please contact us directly.

## FLOOD PROTECTION GATE FOR COMMERCIAL AND OFFICE BUILDING, RESIDENTIAL AREAS, ETC.

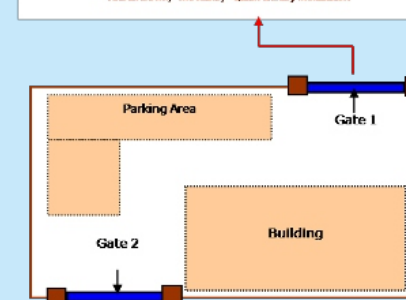
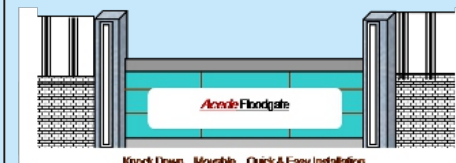
**Acede** Flood Protection Gate are designed to protect your private and commercial building or residential area from flash flooding, such as:

- ◆ Residential properties
- ◆ Office and commercial building
- ◆ Hotel and Hospital Building
- ◆ Factory building & warehouse
- ◆ General or Public Infrastructure.
- ◆ Etc.



The product is designed for **fast protection, ease of use, quick installation, and budgetable design**.

We only design and make this product according to the customer needs with many choices of material used, such as steel plate, wood, or aluminum.



Building with a flood gate system In Gate 1 and Gate 2

**Acede** Flood Protection System consists of :

- ◆ Barrier in modular box ( Boxed frame) with rubber sealing
- ◆ Ground fitting
- ◆ Stanchion /
- ◆ And barrier support

If you want to order this product, please send us the data required, such as :

1. Dimension of gate area, if you want to protect the rising flood from the gate. Or dimension of door if you want to protect the rising flood for the door ( Length, height).
2. Tell us where it'll be applied ( for gate, door, engine room, or others) and a type of building.
3. Technical drawing of where the flood gate will be used. ( for a commercial building )
4. Or you can invite us for coming to your place.



Flood Protection Gate Installation In Office / Commercial Building In Jl. Sudirman Jakarta

**Acede** Flood Protection System can be generally applied for :

- ◆ gates
- ◆ doors
- ◆ windows
- ◆ Parking area in ground floor
- ◆ Engine System & Electrical Room
- ◆ Field, etc.

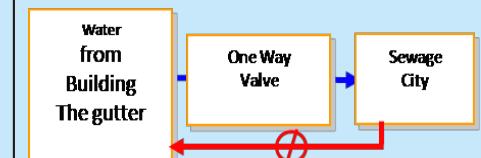


Flood Protection Gate Installation Pantai Mutiara Residential-Jakarta



Flood Protection Gate Installation. Protect from flood of sea water tide - Jakarta

**It's important**, that the flood protection system has closed relationship with one way **water valve control system**. The water from building and the gutter flow out to sewage city, by using one way valve control.



See our Special Blog : <http://floodprotectiongate.blogspot.com/>



## Mechanical Engineering, Machinery, And Innovation Technology

We can design, calculate, and make the mechanical parts and products to support industrial companies. The following services are in our expert :

- Technical Component (Spare Part) for industrial requirement, especially for import substitution parts.
- Iron Casting & Machining Product.
- Supporting machine for industrial needs. (We've made much supporting machines for industrial companies, such as : Machine for wire straightening, press steel wire, machine for Abaca fiber process)
- We are working on a range of projects, from ongoing machine testing for customers ( higher education institutions and government agencies or the Ministry) - to development of commercial renewable energy generation in any remote Islands
- Etc.

The following products bellow are samples those we've made.

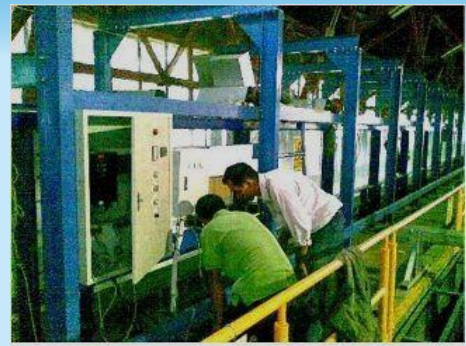


### WAVEMAKER PROJECT

We design and manufacture for lab equipment  
User : Ocean Engineering Program  
Bandung Institute of Technology



Mechanical Part for Industrial Needs



### TOWING TANK PROJECT

We design and manufacture for lab equipment  
User : Ocean Engineering Program  
Bandung Institute of Technology



### Testing Devices for Highway Strength

Collaboration Project between PT. Prima Springs Mfg and Center for Research and Development Road and Bridge - The Ministry of Public Work RI - 2010



Heavy Duty Chain for Mining Industrial Needs  
Special Order Only



### Heavy Duty Chain for Timber

User : PT. Sumber Karya Lestari Pratama Jakarta



### Water Pressure Regulator

Reducing & saving water consumption : 30 ~ 45%,

for Hotel, Commercial Building or apartment  
Material : Stainless steel & Brass

Water pressure regulators are commonly installed in commercial and industrial buildings which the water tank storage is located in top level of the building. the water pressure flowing to all appliances and outlets within the pipe line with high pressure. We use Water pressure regulators to reduce and provides an inexpensive means of supplying lower, more functional water pressure to outlets and appliances.

## Renewable Energy Technology Division

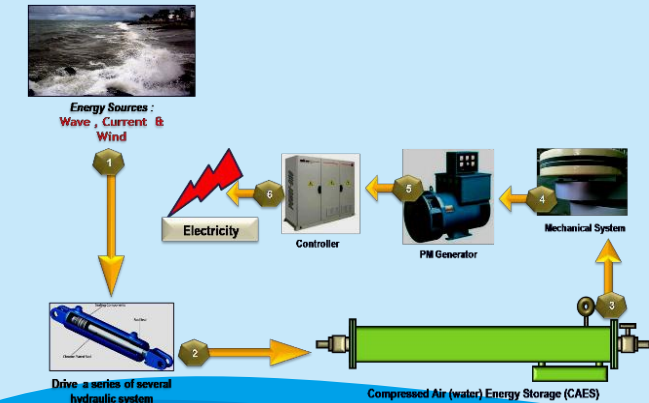
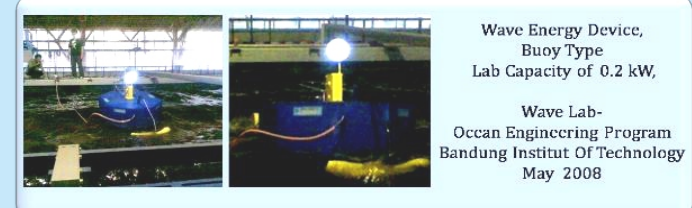
(Ocean Energy, Wind Turbine & River Current Energy)

### Our Experience Project

PT. Prima Springs Mfg are working on a range of projects, from ongoing machine testing for customers (higher education institutions and government agencies or the Ministry) - to development of commercial renewable energy generation in any remote Islands



Testing Wave Energy Device, Capacity 10kW, in Suramadu Bridge - Surabaya  
Work Unit: JSS - Sunda Strait Bridge, Bina Marga, Ministry of Public Works RI  
May 2012



Technology of Conversion System

### Ocean Energy Device for Coastal EcoTourism

brings more benefits than just green electricity



### OUR SERVICES

Our company, with pleasure, will provide services to all partners, both institutes of higher education, university, government agencies or private companies, to make the initial planning of the implementation of renewable energy - until the end of the process of making the renewable power generation systems.

Now, in our renewable energy division of the company, we have developed sustainable energy which is derived from :

- ocean energy (wave and current),
- river currents and
- wind energy.

We can serve you for :

- consultation on the implementation of renewable energy
- planning and feasibility studies of renewable energy
- energy system for green building concept
- Design, construction and manufacturing work for renewable energy development.

Sustainable energy system for :

- ◆ Rural Area, Remote Islands, The outer and The Border
- ◆ Coastal Resort / Coastal Tourism Development
- ◆ Green Port Development Concept
- ◆ Coastal Protection and Coastal Community Development
- ◆ Electrical Power for Public (Mass) Transportation
- ◆ Electrical Power for Inter-Island Bridge

Etc.

Please don't hesitate to contact us !!!



PT. Prima Springs Mfg  
プリマスプリング製造業

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www.primasprings-mfg.com

## Company Overview

Our company, with pleasure, will provide services to all partners (costumers) with the following our product and service:

A

### SPRING INDUSTRY Coil and Plate Springs (Design & Manufacturing)



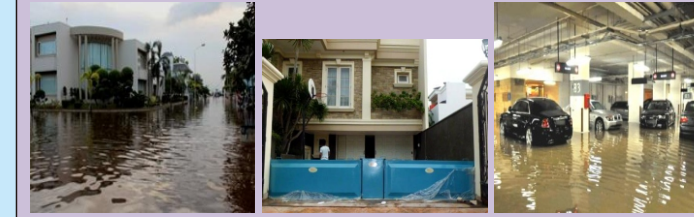
B

### SPRING ENGINE MOUNTING & SPRING PIPE HANGER



C

### FLOOD PROTECTION GATE for Commercial & Office Building and Residential Areas



D

### MECHANICAL ENGINEERING, MACHINERY & INNOVATION TECHNOLOGY

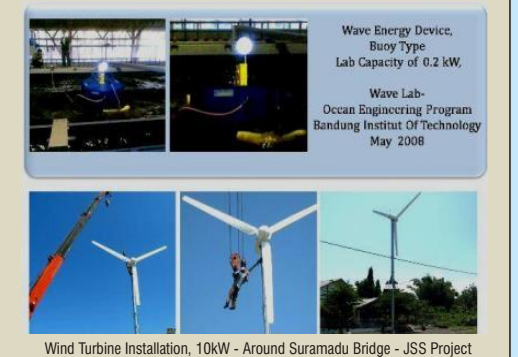


E

### RENEWABLE ENERGY TECHNOLOGY (Ocean Energy, Wind Turbine & River Current Energy) (Design & Manufacturing)

#### Ocean Energy Device for Coastal EcoTourism

brings more benefits than just green electricity



Wind Turbine Installation, 10kW - Around Suramadu Bridge - JSS Project  
Work Unit JSS - Sunda Strait Bridge, Bina Marga, Ministry of Public Works RI  
May 2012



PT. PRIMA SPRINGS MFG  
プリマスプリング製造業

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