

Containerized MHP

Hangzhou Regional Center (Asia-Pacific) for Small Hydro Power (HRC)
Hangzhou Yatai Hydro Equipment Completing Co., Ltd. (Hangzhou Yatai)



- **Introduction**
- **Technical Details**
- **Market Position**
- **Future Development**

Hangzhou Regional Center (Asia-Pacific) for Small Hydro Power (HRC)
Hangzhou Yatai Hydro Equipment Completing Co., Ltd. (Hangzhou Yatai)

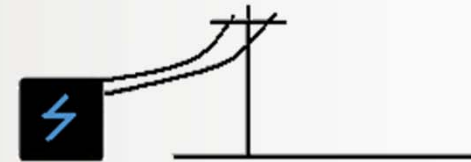
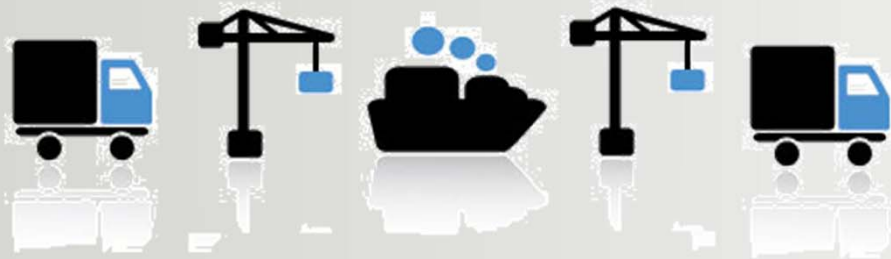


Introduction

C.MHP

Containerized MHP

— One-Stop service



40 Feet Container

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Introduction

C.MHP

- **Pre-works**
- **Less Time and Cost**
- **Independently Running**

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Introduction

C.MHP

- **Pre-works**

Pre-assembled & Pre-commissioned

Completely done in manufacturer



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Introduction

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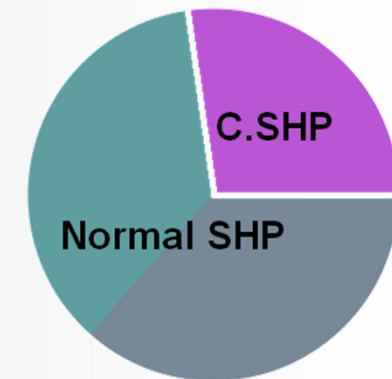
- **Less Time and Cost**

Cost needed	C.MHP	N.MHP
Powerhouse	NO	YES
Other Civil works: Penstock Tailrace etc.	Yes	YES
Installation Period & Personnel	LESS	Long period
Operation personnel	NO	YES

Installation & Commissioning Period

- 3 weeks ■ C.SHP Comm.
- 4 weeks ■ Normal Install
- 4 weeks ■ Normal Comm.

C.SHP & Normal SHP



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Introduction

C.MHP

- Independently Running

GRID?

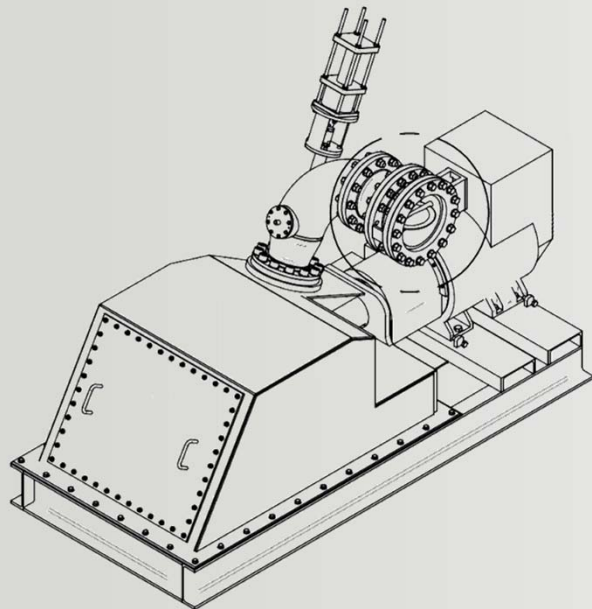
NO
GRID!

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I. Turbine & Generator

Completed Unit



Wide selection space

C.MHP Turbine	
Type	Output Capacity
Pelton	50 ~ 600(kw)
Francis	
(Kaplan)	

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II. Automatic Control System

No-personnel Running	Self-protection
Stable Power Output	Easy Operation

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A. HPU Turbine Control

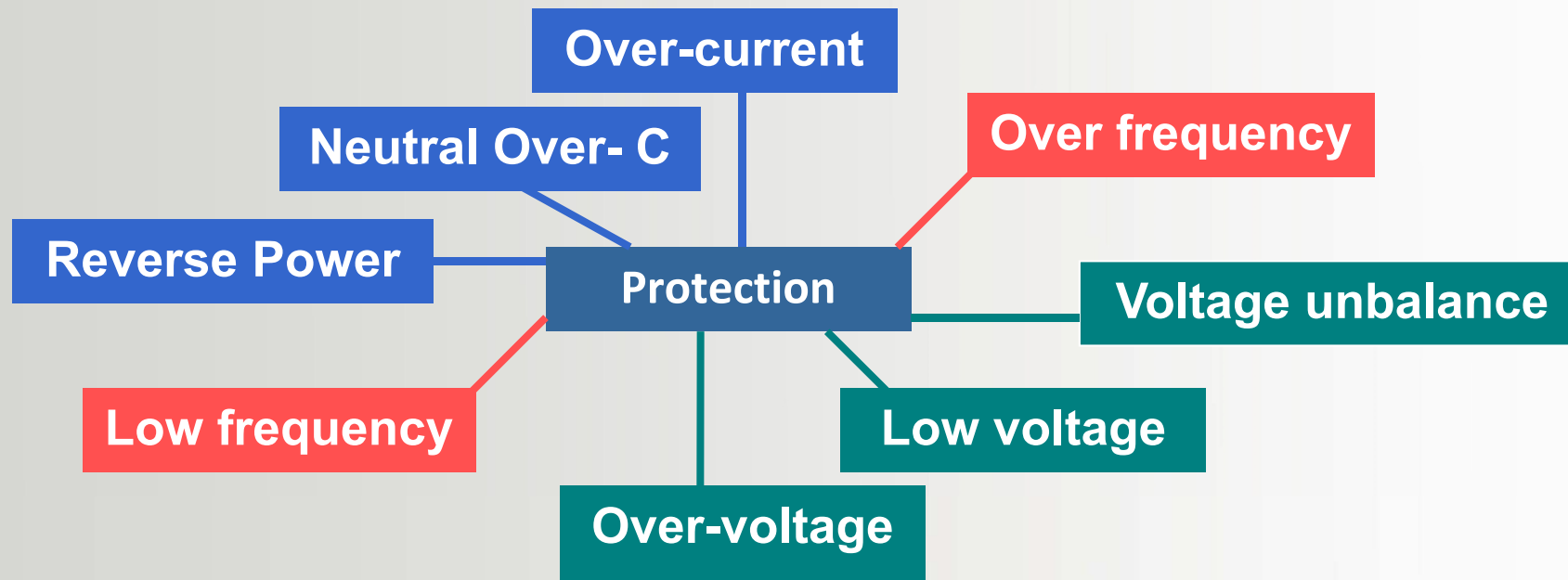
- Main assurance for C.MHP running



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B. Electric control cabinets ——Electrical Protection



Market Position

C.MHP

- **Remote Countryside**

**Not only for the Main Cities,
Towns or Villages under GRID**



**But for the Countryside where is far
from GRID, also can say**

YES!

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Market Position

C.MHP

- **Remote Countryside**



C.MHP in Wenzhou, China

400km to HRC, Hangzhou City

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Market Position

C.MHP

- Existing MHP Rehabilitation

What we can do if we want to rise an existing HEPP's output capacity?

——Well, of course we will set one more unit, but it also means that we do need to **MODIFIER THE WHOLE CIVIL CONDITION...**

——Then we need **SHUT DOWN** all the units for the installation of the new unit,
----- days, months, etc..

But maybe we don't have to.....

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Market Position

C.MHP

- Existing MHP Rehabilitation



Shuanglong, Jinhua City
200km from HRC Hangzhou

Capacity

160kW

An existing MHP adjacent also is

160kW

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Future Development C.MHP

Standard Inventory

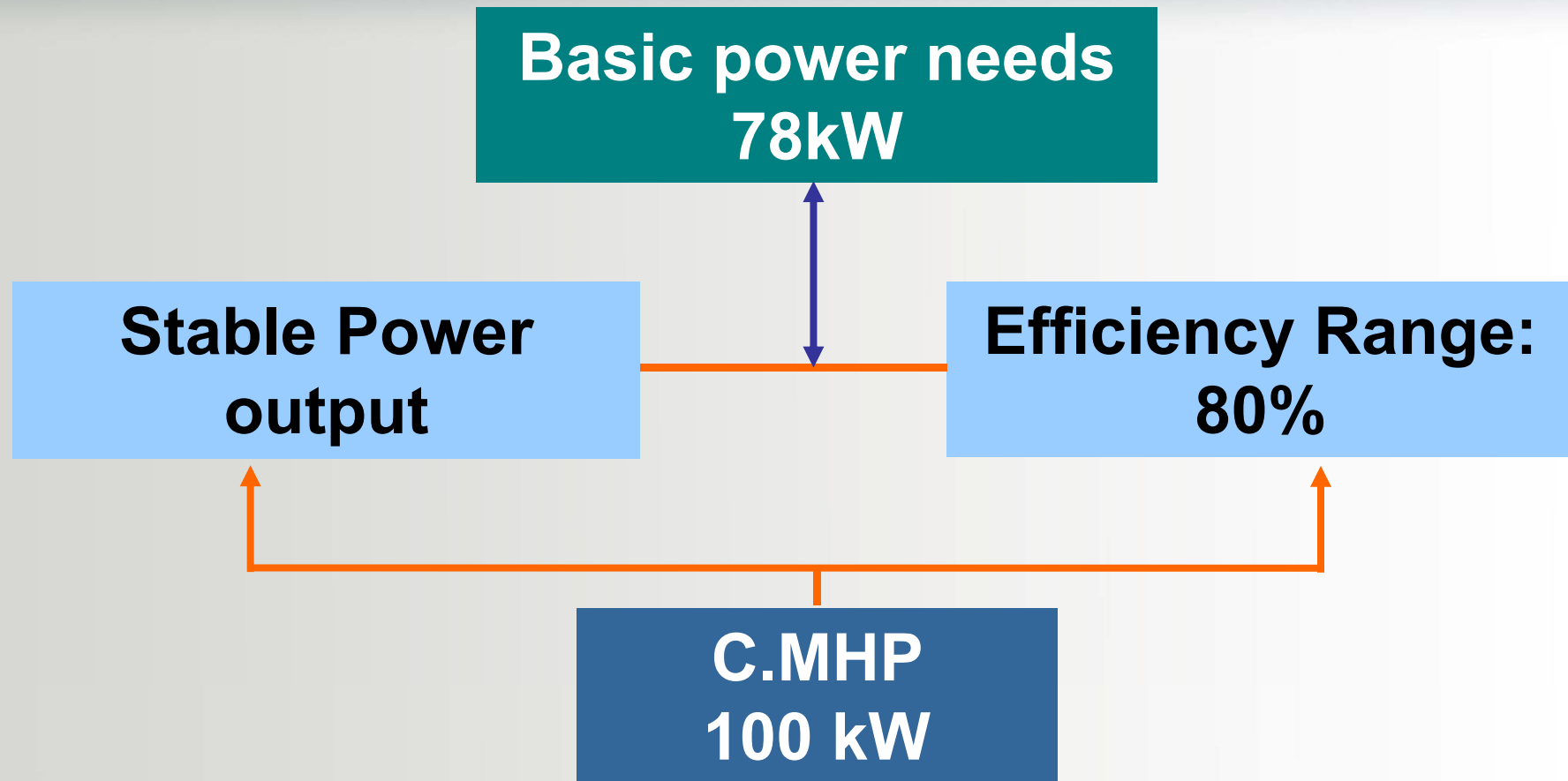
Water HEAD	Quantity/SPEED	Turbine	OUTPUT
—	—	—	—
—	—	—	—
180-200m	0.09-0.15m³/s	Pelton	>130kW
60-90m	0.12-0.18m³/s	Francis	>55kW
—	—	—	—
—	—	—	—
—	—	—	—

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Future Development

C.MHP



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THANK YOU

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