

**Concept to commissioning**

Tacmin Madini is a registered distributor of enrichment and classification plants. We work in close association with Turkey based manufacturer CWP in the delivery of enrichment and classification plants from concept to commissioning, enabling us to offer our customers more than 20 years of experience in the design, manufacturing and construction of plants.

CWP has delivered a broad range of technology-based products and solutions since 1990 in more than 15 countries worldwide, and continues to do so.

As well as its manufacturing capabilities, CWP also provides complete plant process designs upon which the customers can procure the specified equipment at their own responsibility.

CWP's engineering capabilities and knowledge enable more competitive prices as CWP can provide its own in house designs for manufacturing and constructing on EPC basis. On the other hand, CWP can offer services for process correction and commissioning of false processed / designed plants.



*Tacmin Madini, formerly known as Tacmin Group, has been solving complex openpit mining business challenges since 1996. We are an independent consulting group, consisting of a mixture of permanent specialists and independent associates that co-operate in the delivery of professional services covering mineral resource evaluation, planning, design, management, construction, operation, maintenance and rehabilitation of open-pit mines.*

**Registered distributor of CWP products****DE-KA MINING GELIK / ZONGULDAK ( 200 t/h)**

100 t/h Capacity, +20-150mm Coarse Coal Washing Plant  
100 t/h Capacity, +0,5-20mm Dust Coal Washing Plant

**MILTEN / ISTANBUL (150 t/h)**

100 t/h Capacity +10-150 mm Coarse Coal Washing Plant  
50 t/h Capacity +0,5-20 mm Fine Coal Washing Plant

**UYAR MINING SOMA / MANISA (175 t/h) + ( 50 t/h)**

100 t/h Capacity +20-150mm Coarse Coal Washing Plant  
75 t/h Capacity +0,5-20 mm Fine Coal Washing Plant

50 t/h Capacity +0,5-20 mm Fine Coal Washing Plant

**ESIN MINING / SOKE (75 t/h)**

50 t/h Capacity +20-150 mm Coal Washing Plant  
25 t/h Capacity +0,5-20 mm Coal Washing Plant

**EGE UYARLAR MINING / SOKE ( 150 t/h)**

100 t/h Capacity +18-150mm Coarse Coal Washing Plant  
50 t/h Capacity +0,5-18mm Fine Coal Washing Plant

**SULUOVA ESKICELTEK / AMASYA (175 t/h)**

100 t/h Capacity, +18-150mm Coarse Coal Washing Plant  
75 t/h Capacity, +0,5-20 mm Fine Coal Washing Plant

**IMBAT MINING / SOMA ( 350 t/h)**

200 t/h Capacity +10-250 mm, Coarse Coal Washing Plant  
150 t/h Capacity +0,5-10 mm Fine Coal Washing Plant

**GURMIN MINING / SOMA (100 t/h)**

100 t/h Capacity +10-150mm Coarse Coal Washing Plant  
CELIKLER INSAAT / CORUM (150t/h)+ (175 t/h)

100 t/h Capacity +6-150 mm Coarse Coal Washing Plant  
50 t/h Capacity +0,5-10 mm Coarse Coal Washing Plant

100 t/h Capacity +20-150 mm Coarse Coal Washing Plant  
75 t/h Capacity +0,5-20 mm Fine Coal Washing Plant

**ZIRVE MINING / KILIMLI - ZONGULAK (175 t/h)**

100 t/h Capacity, +18-150 mm Coarse Coal Washing Plant  
75 t/h Capacity +0,5-18 mm Double Density Fine Coal Washing Plant

**ZIRVE MINING / KILIMLI - ZONGULAK (10 t/h)**

10 t/h Capacity, +0-0,15 mm Vacuum Filtration Plant for Sludge

**KARTALKAYA MINING / AZDAVAY - KASTAMONU (118 t/h)**

50 t/h Capacity, +18-150 mm Coarse Coal Washing Plant  
50 t/h Capacity +0,5-18 mm Double Density Fine Coal Washing Plant

**HEMA KANDILLI COAL MINING/ ZONGULDAK (150 t/h)**

100 t/h Capacity, +10-150 mm Coarse Coal Washing Plant  
50 t/h Capacity +0,5-10 mm Fine Coal Washing Plant

**CEKTAS A.S.- CIFTAY A.S. / OREN-MILAS-MUGLA (800 t/h)**

800 t/h Capacity, +0-400 mm Triage Coarse Coal Washing

<http://www.tacmingroup.com/enrichment-classification-mine-activities.html>

**Tacmin Madini – CWP Solutions****Plan extraction and beneficiate**

This turnkey service is unique to Tacmin Madini customers and consists of a combination of mineral resource extraction and EPCM contract for the classification and enrichment of extracted ore.

Head grade is consistently been achieved through a careful transparent planning and management of ore extraction process followed by the management of the crushing, screening and washing of the product.

This turnkey service ensures that the customers mining process (contractor or owner) is properly managed, monitored and optimised and dilution and contamination of ore is strictly controlled.

A turnkey planning and beneficiation contract consists of mining and beneficiation cost estimate, front-end engineering design, procurement, construction, provision of manpower, mineral resource extraction and management of crushing, screening and washing of product.

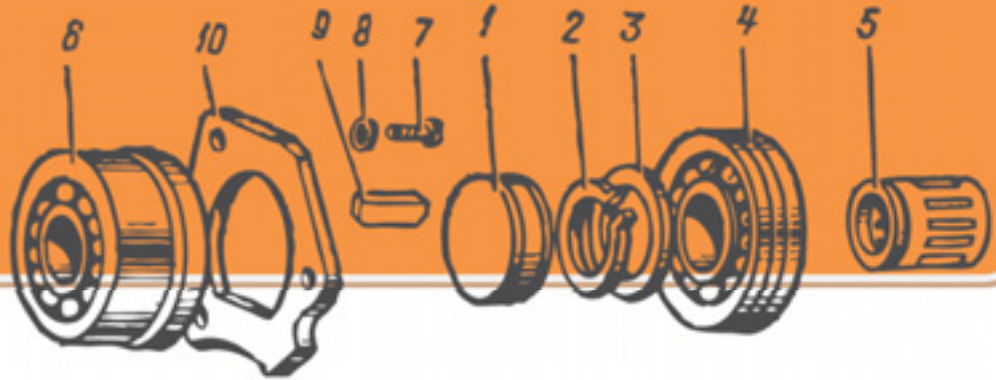
## SPIRAL CONCENTRATORS

MINING EQUIPMENT

PRODUCT# TM/SC/27072011

### CWP services can be cited as:

- EPC plant procurement
- Equipment manufacture on custom requirements
- Plant process design
- Correction of false process designs and commissioning these flawed plants.
- Improving existing process designs / plants



PRODUCT #TM/SC/27072011

### Spiral Concentrators

CWP Spiral concentrators are a gravity based concentrating device, that separates light density granular heavier density material within the size ranges of + 0,15 mm - 3 mm.

Slurry is fed on to the top of the spiral and evenly distributed to each spiral concentrator. The slurry travels down the spiral path with gravitational acceleration. During the flow, the minerals are sorted according to their densities through centrifugal force.

The lightest grains travel on the furthest outwards path, the medium density on middle path and the heavy particles in the inner path.

### MECHANICAL PRODUCT SPECIFICATIONS SHEET

#### TECHNICAL SPECIFICATIONS

CWP Spiral Concentrators are available as:

- Single-stage, 4-turn spiral
- Two-stage, 7-turn spiral
- Single start, double start and triple start configurations

As well as +0,15 – 3mm coal washing equipment's, CWP also manufactures Spiral concentrators for the beneficiation of heavy minerals such as Silica sand, Tin, Gold, Garnet (dermatoid), Tungsten, Sand minerals, Chromite, Iron ore.

#### Advantages of CWP Spiral Concentrators

- Low installation and operation costs
- Small space requirement
- No mechanical malfunction as there is no moving parts.
- No power consumption.
- Abrasion resistant material covered surface



Tacmin Madini is a registered distributor of CWP Plants

