

# SİMGE CHALLENGER



## SİMGE CHALLENGER Provides;

### 1. Energy Saving

- 50% energy saving due to using very dry aggregate during asphalt production
- As the aggregate is crushed and fed to the plant immediately, temperature of the aggregate will increase by approximately 10°C, leading to further energy savings
- The compact design of the system provides electrical energy savings up to 20%.

### 2. Environmental effects

- Reducing energy consumption and eliminating loaders provides reduction in CO<sub>2</sub> emission up to 50%
- As fine material is no longer stockpiled in open areas, dust pollution is eliminated
- Working in a dust free area reduces health problems significantly, malfunctions and maintenance requirement
- The dust produced is collected by the filtering unit of the system and provided to the asphalt plant as filler material instead of scattering in the air.
- All crushing, sieving, conveying and stockpiling processes are undertaken in one closed unit, thus leading to reduction in noise level
- In conventional facilities 20000m<sup>2</sup> production area is required; however with Simge Challenger only 5000m<sup>2</sup> production area is enough.

### 3. Production

- Increases aggregate production up to 50%
- Increases asphalt plant efficiency up to 15%
- Decreases labor, machinery and transportation up to 60%
- Purchasing only ballast material eliminates further stockpiling and transportation costs
- Aggregate quantity and gradation is balanced with asphalt production even for different asphalt products due to crusher variable speed and continuous feedback

### 4. Quality

- Because fine material produced with Simge Challenger system is clean and controlled efficiently, bitumen in mix design is reduced to the minimum level while space percentage reaches the desired value. That means bitumen consumption is reduced by 10-15%.
- Feedback of overflowed aggregate to the crusher improves flakiness index as aggregates are crushed once more.

### 5. Aggregate service

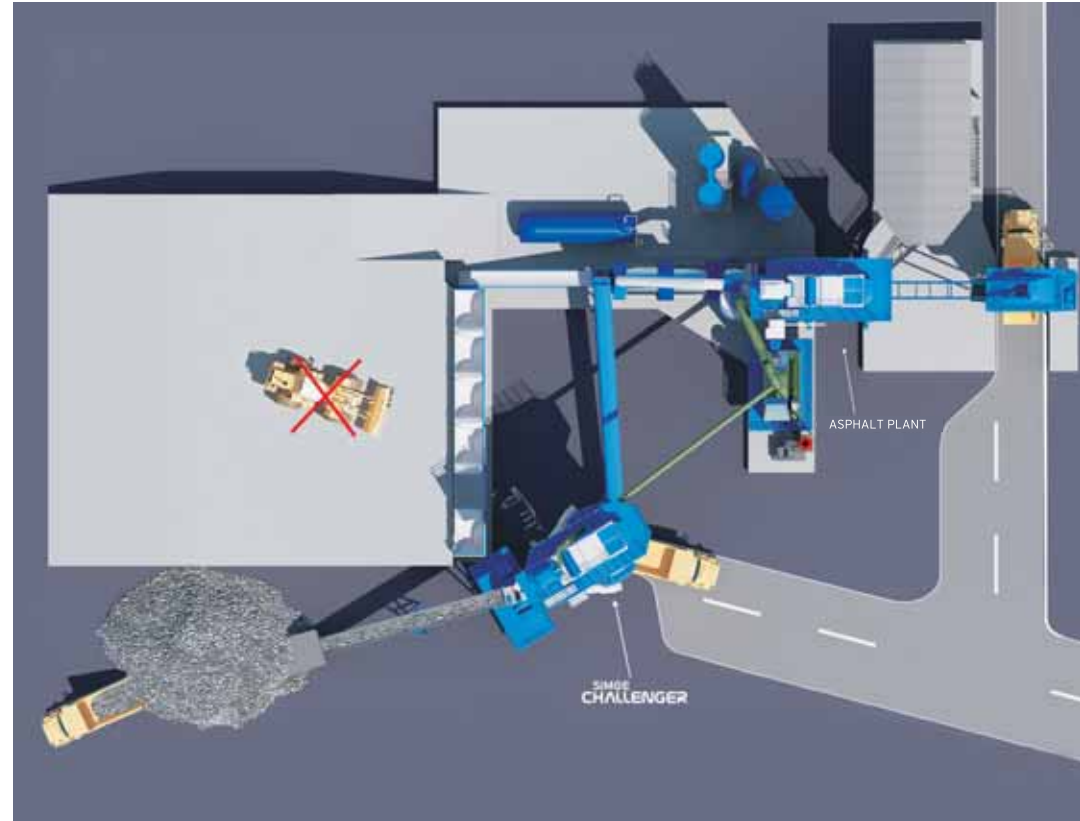
In addition to providing aggregate to the integrated asphalt plant, Simge Challenger can provide aggregate for other applications like concrete and sub base productions by conveyors or loading trucks directly without any need for loaders.



## SİMGE CHALLENGER

	250 t/h	300 t/h		
Aggregate Feeding System	Crawler Feeder			
Feeding Capacity	300 t/h			
Crusher* Type	Vertical Shaft Impact Crusher (VSI)			
Aggregate Type	Limestone	Basalt	Limestone	Basalt
Crushing Capacity	250 t/h	180 t/h	400 t/h	250 t/h
Vertical Elevator Capacity	280 t/h		350 t/h	
Sieve Fraction Quantity	4 - 5		5 - 8	
Sieve Type	SIV W35-600		SIV W68-600	
Vibration Type	Double Vibrating Motor			
Stocking Capacity	200 Ton		250 Ton	

\* = Recommended Crusher Type



## AGGREGATE PREPARATION PLANTS



E-MAK Machine Construction Industry&Trading Ltd. Co.  
Fuat Kuşçuoğlu Cad. Simge Tesisleri  
No:63 Yunuseli 16180 Osmangazi - Bursa / TÜRKİYE  
T: + 90 224 248 90 71 (pbx) F: + 90 224 248 88 72  
www.e-mak.com info@e-mak.com

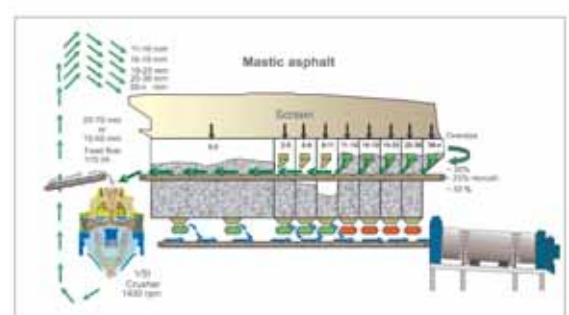
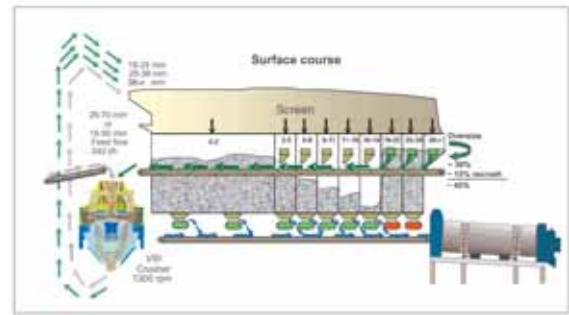
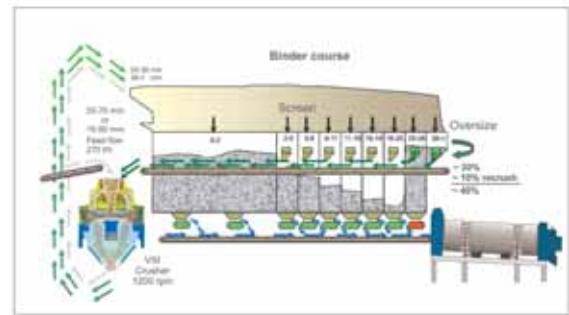
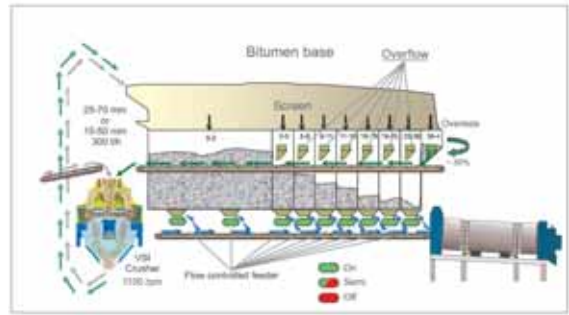
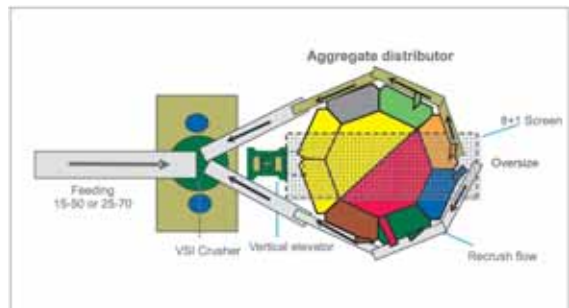
# SİMGE CHALLENGER

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# ENERGY SAVING AND COST REDUCTION BY INTEGRATING THE NEW CLOSED AGGREGATE PREPARATION SYSTEM TO ASPHALT PLANTS

## AGGREGATE DISTRIBUTION AND RECRUSH



## JUST IN TIME AGGREGATE

### RECOMMENDED CRUSHER

Vertical Shaft Impactors (VSI)  
Ideal feed,

- if hard material is used 15-50mm
- if softer material is used 25-70mm
- Required gradation can be obtained by adjusting the speed.
- Adequate cubical material for asphalt production is produced.
- The Simge Challenger is a universal system which can be used comprehensively equipped with any type of secondary crusher such as vertical shaft, conical, impact or hammer crusher or their related components without considering whether or not the crusher will be selected according to the type of stone to be crushed or an existing crusher in hand will be used.

### DRYER

Even during rainy and humid seasons, dry and just crushed aggregate is fed to the dryer.

- Asphalt plant operates efficiently
- Less fuel consumption
- Drying duration reduces
- The filter doesn't engorge,
- Work season extends

## JUST IN TIME ASPHALT

### FILTER

Fine dust produced during crushing and sieving processes is sucked and stocked by the asphalt plant filter as filler material. This filler material, which is a vital part of asphalt production is added into the system at no extra cost instead of being dispersed, and this eliminates environmental impact.

Moisture	
Size	25-70 mm
	% 0.25

The Simge Challenger is a closed aggregate crushing, sieving and stocking system that reduces facility costs, eliminates open aggregate stockpiling areas, increases asphalt quality and is environmentally friendly.  
SIMGE CHALLENGER 25-70mm



Size (mm)	0-2	2-5	5-8	8-11	11-16	16-20	20-26	26-29
Moisture (%)	~5	~2	~1,5	~0,9	~0,7	~0,6	~0,45	

Minimum moisture content  
Up-to 50% fuel consumption



**SIMGE**  
**CHALLENGER**