

XAP85 Asphalt Mixing Plant Specification




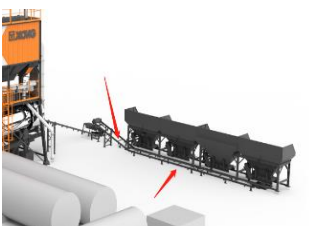



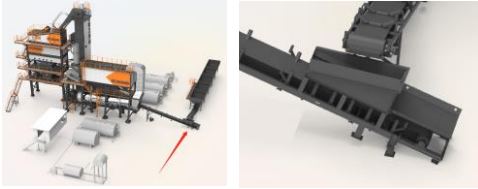
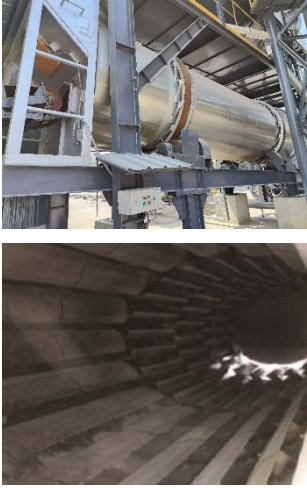
☆Basic specification



- 1 Rated productivity 80 t/h
- 2 Nominal mixing capacity 1000 kg/batch
- 3 Rated working condition:
 - Aggregate: $\leq 32\text{mm}$ 100%
 - $\leq 2\text{mm}$ 35%
 - $\leq 0.09\text{mm}$ 10%
 - Dryer output temperature 160°C
 - Ambient temperature 20°C
 - Moisture $\leq 5\%$
 - Filler content 5%
 - Asphalt content 5%
- 4 Static dosing precision:
 - Bitumen $\pm 0.2\%$
 - Filler $\pm 0.2\%$
 - Minerals $\pm 0.3\%$
- 5 Fuel consumption ≤ 6.5 kg/t
- 6 Required operating power About 250 kW (whichever is the actual configuration)
- 7 Maximum single unit power 55 kW
- 8 Minimum installation area 702(27m×26m) m²
- 9 Power supply:
 - Single voltage: 220V
 - Three phase: 380V
 - frequency: 50Hz
- 10 Environment protection standard:
 - Dust emission content $\leq 20\text{mg/Nm}^3$ (Rated working condition)
 - Smoke blackness \leq Ring elmann 1st level
 - Ambient noise $\leq 80\text{dB}$
 - Control room noise $\leq 70\text{dB}$

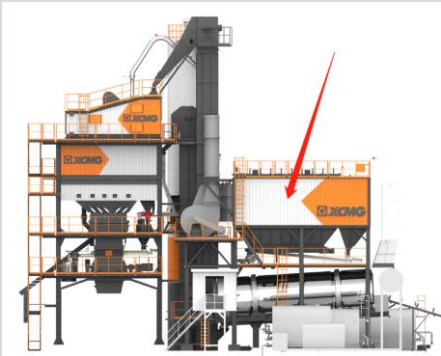
☆Detailed specification


Note: the item with “ * ”before the serial number in the above table is the optional items, which can be adjusted according to the purchase demand.




| No. | Content | Capacity | Q'ty | Unit | |
|---|--|--|---|------|------|
| 1 | Cold feed system | | | | |
| 1.1 | Cold hopper  | Single hopper capacity | 7.5m ³ | 4 | set |
| | | Loading height | 2.8m | | |
| | | Loading width | 3.3m | | |
| | | Filter screen | Each hopper with a filter(≥120mm) | | |
| 1.1.1 | Vibration motor | Power | 0.08kW | 1 | pcs |
| 1.2 | Dosing machine  | Conveying capacity | 100t/h | 4 | set |
| | | Speed adjustment method | Frequency conversion control, infinite speed regulation | | |
| | | Attachments | Anti-deviation block idler and carrier roller | | |
| | | Belt Type | No-interface high-strength circular belt | 4 | set |
| | | Belt Width | 500mm | | |
| 1.2.1 | Gear motor  | Power | 2.2kW(ea) | 4 | Unit |
| 1.2.2 | Frequency converter | Adjust gear motor speed to control minerals supply | | 4 | pcs |
| * The discharge gate is adjustable, to get better aggregate proportion; * Sand hopper has breaking vibrato motor, when aggregate moisture is high, it will start automatic, also it can be controlled by operator inside control room by manual. | | | | | |
| 1.3 | Belt conveyor  | Conveying capacity | 90t / h | 1 | set |
| | | Attachments | Belt tensioning device, sweeper, block idler | | |



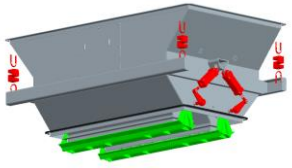
| No. | Content | | Capacity | Q'ty | Unit |
|---|---|-------------------------|---|------|------|
| 1.3.1 | Drive motor | Power | 4kW | 1 | Unit |
| 1.3.2 | Belt | Type | No-interface high-strength circular belt | 1 | set |
| | | Width | 550mm | | |
| 1.4 | Belt feeder  | Conveying capacity | 90t / h | 1 | set |
| | | Attachments | Belt tensioning device, sweeper, block idler | | |
| 1.4.1 | Drive motor | Power | 4kW | 1 | Unit |
| 1.4.2 | Belt | Type | No-interface high-strength circular belt | 1 | set |
| | | Width | 550mm | | |
| 1.4.3 | Filter device  | | Reject big material($\geq 100\text{mm}$) | 1 | set |
| The number of hopper can be selected according to actual demand | | | | | |
| 2 | Drying drum system | | | | |
| 2.1 | Drying drum  | Drying capacity | 90t / h (Standard cold mineral humidity $\leq 5\%$) | 1 | set |
| | | Diameter | $\phi 1.5\text{m}$ | | |
| | | Length | 7.1m | | |
| 2.2 | Gear motor | Power | 7.5kW(ea) | 4 | Unit |
| 2.3 | Thermal device | Type | Mineral wool insulation, covered with stainless steel plate | 1 | set |
| 2.4 | Discharge chute | Temperature measurement | Highly-sensitive thermal resistor | 1 | set |



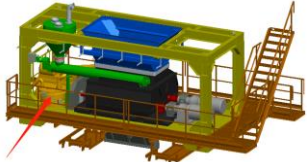

| No. | Content | Capacity | Q'ty | Unit | |
|----------------------|--|---|---|------|-----|
| 2.5 | Negative-pressure device | Real-time monitoring of the negative pressure value in the bag filter | 1 | set | |
| 2.6 | Burner | | 1 | set | |
| 2.6.1 | Standard burner   | Fuel | Heavy oil or diesel (See Annex 1) | 1 | set |
| | | Output power | $\geq 6.5\text{MW}$ | | |
| | | Adjustment ratio | 1: 10 | | |
| | | Fuel pump power | $\geq 1.5\text{kW}$ | | |
| | | Fuel volume control | Variable frequency control of fuel pump | | |
| | | Fan power | $\geq 7.5\text{kW}$ | | |
| | | Air flow control | Frequency control and air door adjustment | | |
| | | Control mode | Manual and automatic control | | |
| * Option al 2.6.2 | Gas burner | Fuel | Natural gas(calorific value above 8600kcal/m^3) | 1 | set |
| | | Output power | $\geq 6.5\text{MW}$ | | |
| | | Adjustment ratio | 1: 10 | | |
| | | Fan power | $\geq 11\text{kW}$ | | |
| | | Air flow control | Frequency control and air door adjustment | | |
| | | Control mode | Manual and automatic control | | |
| | | Supply gas pressure | 45-50kPa | | |
| | | Pipe diameter | $\geq \text{DN}65$ | | |
| | | Nitrogen oxide emission concentration | $\leq 200\text{mg/Nm}^3$ | | |
| | | Max. gas consumption | $730\text{Nm}^3/\text{h}$ | | |
| * 2.6.3 | Dual-fuel burner | Fuel | Heavy oil or diesel (See Annex 1) | 1 | set |



| No. | Content | | Capacity | Q'ty | Unit |
|--|------------------------|---------------------------------------|--|------|-------|
| | | | Natural gas(calorific value above 8600kcal/m ³) | | |
| | | Output power | ≥6.5MW | | |
| | | Adjustment ratio | 1: 10 | | |
| | | Fuel pump power | ≥1.5kW | | |
| | | Fuel volume control | Variable frequency control of fuel pump | | |
| | | Fan power | ≥7.5kW | | |
| | | Air flow control | Frequency control and air door adjustment | | |
| | | Control mode | Manual and automatic control | | |
| | | Supply gas pressure | 45-50kPa | | |
| | | Pipe diameter | ≥DN65 | | |
| | | Nitrogen oxide emission concentration | ≤200mg/Nm ³ (natural gas burning) | | |
| | | Maximum gas consumption | 730Nm ³ /h | | |
| 2.7 | Maintenance platform | | Easy to maintain burner | 1 | |
| Four wheels of drum is friction driven | | | | | |
| * 3 | Dust collector system | |  | | |
| 3.1 | Primary dust removal | | Gravity dust collector | 1 | set |
| 3.11 | Coarse filler spiral | Conveying capacity | 25t / h | 1 | piece |
| | | Power | 7.5kW | | |
| 3.2 | Secondary dust removal | Type | Filter bag | 1 | set |
| | | Filteration area | ≥360m ² | | |
| | | Filteration ability | 36000m ³ /h | | |

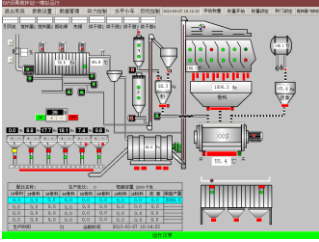

| No. | Content | | Capacity | Q'ty | Unit |
|-------|--|-----------------|--|------|---------|
| 3.2.1 | Bag | Texture | Aramid fiber | 1 | set |
| | | Density | 450g/m ² | | |
| 3.2.2 | Counter-blow cylinder | | Valve cylinder | 1 | set |
| 3.2.3 | Temperature measuring equipment | | Thermocouple measures the temperature to protect the bag | 1 | set |
| 3.3 | Cold air door | Cold air door | Feedback control by temperature sensor | 1 | set |
| | | Air cylinder | Valve cylinder | | |
| *3.4 | Waste filler mixer | Mixing capacity | 30t/h | 1 | Unit |
| | | Power | 11kW | | |
| 3.5 | Spiral below the silo | Power | 5.5kW | 1 | piece |
| 3.6 | Ash discharge screw | Power | 5.5kW | 1 | piece |
| 3.7 | Induced draft fan | Type | Highly-efficient centrifugal fan | 1 | Unit |
| | | Motor power | 55kW | 1 | Unit |
| 3.10 | <p>Particle size of dust collected by the primary dust remover $\geq 0.075\text{mm}$, large particles are sent to the hot elevator for recycling through the gravity flap valve by the screw conveyor;</p> <p>The dust collected by the secondary bag collector is directly discharged, and the recycled filler can not be used under the standard configuration.</p> <p>The temperature sensor mounted on the flue is connected to the controller; it prevents the bag from working under high temperature by controlling the emergency cold air door.</p> | | | | |
| 3 | Wet cyclone filter | |  | | |
| 3.1 | Exhaust fan power | | 75kW | 1 | set |
| 3.1.1 | Water pump | Water pump 1 | 2.2Kw | 1 | set |
| 3.2 | Screw conveyor | | 5.5Kw | 1 | set |
| 3.2.1 | Dust emission: | | $\leq 200\text{mg/Nm}^3$ | 1 | set |
| 4 | Hot mineral elevator | | | | |
| 4.1 | Elevator | Structure | Single row wear-resistant plate chain hopper type | 1 | set set |


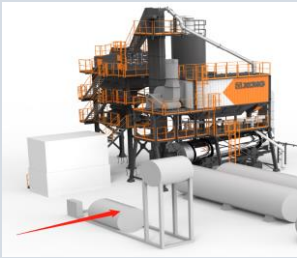

| No. | Content | | Capacity | Q'ty | Unit |
|-------|---|--------------------------|--|------|------|
| |  | Lifting capacity | 90t / h | | |
| | | Wear-resistant structure | Anti-wear structure is designed at the receiving and feeding chute | | |
| 4.1.1 | Gear motor | Power | 15kW | 1 | Unit |
| | | Anti-reverse | With anti-return device | | |
| 5 | Vibration screening system | | | | |
| 5.1 |  | Type | Double vibration motor drive | 1 | set |
| | | Screening capacity | 90t / h | | |
| | | Screening area | 11.6m ² | | |
| 5.1.1 | Screen | Layer numbers | 4 | 1 | set |
| | | Standard specifications | 5、11、19、32 | | |
| 5.1.2 | Vibration motor | Power | 2.35kW (each) | 2 | pcs |
| 5.10 | Double vibration motor drive, 2000 hours free of maintenance; screen specification can be customized according to production requirements | | | | |
| 6 |  <p>Hot mineral storage system</p> | | | | |
| 6.1 | Silo | Structure | 4 positions | 1 | set |
| | | Capacity | 10.9m ³ | | |
| 6.1.1 | Material level gauge | Type | Point-type level detection | 4 | pcs |


| No. | Content | Capacity | Q'ty | Unit | |
|-------|---|--|--|------|-----|
| 6.1.2 | Material temperature measuring | The high-precision thermocouple temperature sensor monitors the mineral temperature in the sand bin in real time | 1 | pcs | |
| 6.2 | Hopper door | | 4 | set | |
| 6.2.1 | Air cylinder | | 4 | set | |
| 6.10 | Each silo comes with a sampling port for easy access. | | | | |
| 7 |  <p>Weighing and mixing system</p> | | | | |
| 7.1 |  <p>Mixer</p> | Mixing capacity | 1000kg/batch | 1 | set |
| | | Type | Double horizontal shaft forced mixing | | |
| | | Attachments | Additives and other expansion interfaces, recycled materials, and emergency stop device. | | |
| 7.1.1 | Gear motor | Power | 18.5kW(ea) | 2 | set |
| 7.1.2 | Paddle arms, paddle tips, liners | | Highly wear-resistant material | 1 | set |
| 7.2 |  <p>Mineral weighing hopper</p> | Weighing method | “Cumulative” incremental measurement | 1 | set |
| | | Weighing capacity | 1200kg | | |
| | | Weighing type | Three points type weighing | | |
| | | Static measuring precision | ±0.3% | | |

| No. | Content | Capacity | Q'ty | Unit | |
|-------|---|---|-------|------|----------------------------|
| 7.2.1 | Weighing transducer | High-precision sensor | 3 | pcs | |
| 7.3 | Filler weighing hopper   | Weighing method | 1 | set | |
| | | Weighing capacity | | | 120kg |
| | | Weighing type | | | Three points type weighing |
| | | Static measuring precision | ±0.2% | | |
| 7.3.1 | Weighing transducer | High-precision sensor | 3 | pcs | |
| 7.3.2 | Butterfly valve | Pneumatic butterfly valve control filler feeding | 1 | pcs | |
| 7.4 | Bitumen weighing tank   | Weighing method | 1 | set | |
| | | Weighing capacity | | | 100kg |
| | | Weighing type | | | Three points type weighing |
| | | Static measuring precision | ±0.2% | | |
| 7.4.1 | Weighing transducer | High-precision sensor | 3 | pcs | |
| 7.4.2 | Butterfly valve | Pneumatic butterfly valve controls bitumen material feeding | 1 | pcs | |

| No. | Content | Capacity | Q'ty | Unit | |
|------|--|--|---|------|------|
| 7.10 | <p>Mixer adopts double horizontal shaft forced mixing with low speed gear synchronization; The“cumulative” incremental measurement and unique expert database intelligent weighing technology ensures high precision weighing, with axial discharge through the cylinder driven material door;</p> <p>Filler is measured incrementally, and the filler is discharged into the screw conveyor by controlling the pneumatic butterfly valve, and at last spread into the mixer.</p> <p>The bitumen adopts incremental metering and“secondary weighing” technology to ensure the accurate bitumen-mineral ratio of finished materials.</p> <p>The mineral measuring hopper, hot mineral silo and mixing main building are connected with the forced negative pressure system, preventing the dust from escaping during the weighing and mixing process and isolating the pressure disturbance to ensure measurement accuracy.</p> | | | | |
| 8 | Filler supply system | | | | |
| 8.1 | Mineral filler weighing spiral | Conveying capacity | 10t / h | 1 | pcs |
| | | Power | 7.5kW | | |
| 9 | Main tower leg | | | | |
| 9.1 |  | Structure | Independent high strength steel structure | 1 | set |
| | | Traffic Height | 3.8m | | |
| | | Traffic width | 4.5m | | |
| | | Fixation | Pre-embedded steel plate welding fixed | | |
| 10 | Gas circuit system | | | | |
| 10.1 | Air compressor | Type | Screw-type air compressor | 1 | Unit |
| | | Capacity | 3.3m ³ /min | | |
| | | Power | 22kW | | |
| 10.2 | Pneumatic components | Quick-plug connector, hose, three pneumatic components, joints, etc. | 1 | set | |
| 11 | Control system | | | | |
| 11.1 |  | Control mode | PLC+PC, all computer control | 1 | set |
| | | Communication method | Ethernet or Industrial field bus | | |
| | | Power | 380V/220V (± 5%), 50Hz, 3 phase 4 lines | | |

| No. | Content | | Capacity | Q'ty | Unit | |
|--------|---|---------------------------|---|----------------------|------|------|
| |  | Control interface display | Production process and production status monitoring, operation fault warning and alarm, hot mineral material level indication, system negative pressure and temperature display, maintenance prompt information display, fault diagnosis information display, production data query, etc. | | | |
| 11.2 | Control room | Type | Container control room, modular | 1 | set | |
| | | Area | 9m ² | | | |
| 11.2.1 | Air conditioner | | 1P | 1 | Unit | |
| 11.3 | PLC | | | 1 | set | |
| | Contactor | | | | | |
| | Circuit breaker | | | | | |
| | Relay | | | | | |
| | Emergency stop switch | | | | | |
| | Travel switch | | | | | |
| 11.10 | Each motor operation method is computer operation; the control system can be automatic or semi-automatic production, real-time carry-over automatic compensation, bitumen excess protection, input automatic calibration, data storage and output printing; the computer can control the mixing in real time; as for burner control, it has PLC automatic program control, ignition, safety monitoring, and automatic fault protection. | | | | | |
| 12 | Bitumen supply system | | | | | |
| 12.1 |  | Heating mode | Thermal oil | 1 | pcs | |
| | | Capacity | 30000L | | | |
| | | Attachments | Level gauge, thermometer, valve | | | |
| 12.2 | Bitumen circulation pump | | Power | 5.5kW | 1 | Unit |
| | | | Flow | ≥16m ³ /h | | |

| No. | Content | | Capacity | Q'ty | Unit |
|--------|--|------------------|--|------|------|
| 12.3 | Unloading pump | Power | ≥7.5kW | 1 | Unit |
| | | Flow | ≥24.4m ³ /h | | |
| 12.10 | <p>Bitumen pump can realize bilateral rotation, to achieve the bitumen transport and circulation; The Piping specification and quantity of bitumen tank can be Optional according to the actual production demand. If the bitumen tank is cancelled, the bitumen pipeline from the tank to the circulating pump, the pipeline from the circulating pump to the bitumen weighing drum, valves, relevant heat transfer oil pipelines and the pipeline from the heat transfer oil furnace to the tank shall be cancelled; The customer is required to provide a complete set of pipelines, valves, booster pumps from the tank to the circulating pump, from the circulating pump to the bitumen weighing drum, and a complete set of pipelines from the heat transfer oil furnace to the tank. On the basis of canceling the bitumen tank and retaining the oil unloading tank, only the oil unloading tank and oil unloading pump will be retained.</p> | | | | |
| * 13 | Fuel supply system | |  | | |
| 13.1 | Diesel tank and pipeline | Capacity | 10000L | 1 | set |
| | | Attachments | Valves, pipeline, etc. | | |
| 13.10 | <p>The specifications and quantities of diesel tanks and pipelines can be Optional according to actual production requirements. If the diesel tank is cancelled, the diesel pipeline, valve and other accessories will be cancelled. The customer needs to configure a full set of pipeline, valve and other accessories connecting the tank to the burner.</p> | | | | |
| 14 | Heating system of conduction oil | |  | | |
| 14.1 |  | Type | Organic heat transfer oil furnace | 1 | set |
| | | Heating capacity | 200 000kcal/h | | |
| 14.1.1 | Heat conduction oil furnace burner | | | 1 | Unit |

| No. | Content | Capacity | Q'ty | Unit | |
|---------------|--|---------------------------------------|---|------|------|
| 14.1.1.1 1 | Standard burner  | Type | Secondary flame control, automatic ignition, automatic shut down, flame monitoring and automatic fault alarm. | 1 | Unit |
| | | Fuel | Diesel oil | | |
| *14.1.1.2 | Gas burner | Type | Secondary flame control, automatic ignition, automatic shut down, flame monitoring and automatic fault alarm. | 1 | Unit |
| | | Fuel | Natural gas(calorific value above 8600kcal/m ³) | | |
| | | Gas supply pipe diameter | ≥DN32 | | |
| | | Supply gas pressure | 3-20kPa | | |
| | | Nitrogen oxide emission concentration | ≤120mg/Nm ³ | | |
| | | Max. gas consumption | 28.7 m ³ /h | | |
| *14.1.1.3 | Dual-fuel burner | Type | Secondary flame control, automatic ignition, automatic shut down, flame monitoring and automatic fault alarm. | 1 | Unit |
| | | Fuel | Light diesel, natural gas (calorific value above 8600kcal/m ³) | | |
| | | Gas supply pipe diameter | ≥DN32 | | |
| | | Supply gas pressure | 3-20kPa | | |
| | | Nitrogen oxide emission concentration | ≤120mg/Nm ³ (natural gas burning) | | |
| | | Maximum gas consumption | 28.7 m ³ /h | | |

| No. | Content | Capacity | Q'ty | Unit |
|-------|---|------------------------------------|------|------|
| 14.10 | Heat transfer oil furnace control system automatically monitors the temperature, pressure, liquid level and other parameters and automatically control the furnace to work within the set temperature range; the furnace comes with a low position shut down device, and the heating chamber comes with an insulating layer. According to the local environmental protection requirements, the gas type heat-conducting oil furnace with nitrogen oxide emission concentration $\leq 50\text{mg}/\text{Nm}^3$ or $\leq 80\text{mg}/\text{Nm}^3$ is optional and price calculation is required. If the tank is cancelled and the heat-conducting oil furnace is retained, only the heat-conducting oil furnace is configured and the pipeline is made by the customer. | | | |
| 15 | Attached parts | | | |
| 15.1 | Attached tools | Wrench, socket, tool kits, etc. | 1 | set |
| 15.2 | Attached spare parts | Solenoid valve, thermocouple, etc. | 1 | set |
| 15.3 | Commissioning tools | Angle steel, etc. | 1 | set |