

# **PRESENTATION**



OVERHEAD TRAVELLING CRANES PROCESS CRANES PORTAL CRANES

ELECTRIC WIRE ROPE HOIST

PROCESS CRANES PORTAL CRANES OVERHEAD TRAVELLING CRANES



### **OVERVIEW**

**SAYAL Crane Systems**<sup>©</sup> established since 2000 and we are specialized in engineering, manufacturing, installation and after sale support of **Overhead Travelling Cranes (EOT)** and **Lifting Equipment**.

**SAYAL Crane Systems®** has been able to take its place among the top prestigious corporate sector with high quality products, experienced work force and customer satisfaction. With 8600 m2 modern production facility includes; precision machining, lifting equipment installation, testing units, oven bake paint boot unit and steel construction – **Robotic welding units**.

**SAYAL Crane Systems®** continues investments and **R&D operations** permits to build safer and technologically advanced products. Our contributions add to its value, to our region and to our country. We have accomplished this with the acquisition of technology and Engineering Developments.

Our Product Range includes:

- Electrical Hoists
- Overhead Travelling Cranes (EOT)
- Portal / Gantry Cranes
- Jib Cranes
- Process Cranes
- End-Carriages
- Automation (PLC) Systems
- Special Lifting Equipment
- Transfer Carts



## **PRODUCTION PARTNERS**

LIFTING MOTOR	:	ABM <sup>©</sup> Greiffenberger	Germany
LIFTING GEAR BOX	:	ABM <sup>©</sup> Greiffenberger	Germany
LIFTING BRAKE	:	ABM <sup>©</sup> Greiffenberger	Germany
TROLLEY MOTOR	:	WAT-TEE <sup>©</sup> (ARÇELİK <sup>©</sup> )	Turkey
TROLLEY GEAR BOX	:	PGR <sup>©</sup>	Turkey
TROLLEY BRAKE	:	TEMPORITI <sup>©</sup>	Italy
HOOK SYSTEM	:	GÜNEŞ <sup>©</sup> MAKİNE	Turkey
ROPE	:	HAS ÇELİK <sup>©</sup>	Turkey
PENDANT WITH CABLE	:	TELEMECANIQUE <sup>©</sup>	France
SWITCHGEAR EQUIPMENT	:	WEIDMÜLLER®	Germany
INVERTERS	:	SCHNEIDER®	France
INVERTERS	:	MITSUBISHI ELECTRIC©	Japan
BUSBAR SYSTEM	:	STEMMANN TECHNIK <sup>©</sup>	Germany
WIRELESS CONTROLLER	:	TELE-RADIO <sup>©</sup>	Sweden
WIRELESS CONTROLLER	:	HBC RADIOMATIC©	Germany
SENSORS	:	SICK <sup>©</sup>	Germany
ELECTRO HYDRAULIC BRAKE	:	GALVI <sup>©</sup>	Italy
LOAD-CELL	:	CAS <sup>©</sup>	South Korea































Sensor Intelligence.





### **CERTIFICATES**





































## **MACHINERY DIRECTIVES**

### **Codes & Standards**

SAYAL Crane Systems<sup>©</sup> in compliance with the harmonized standards UNI-EN292 part 1, Item 3.20 and Part 2, Item 5.

Our Hoists are manufactured in compliance with the Machinery Directive 98/37/EEC.

The components of the hoist comply with the requirements of the Directive and the CE Mark confirms the conformity of the whole equipment.

**SAYAL Crane Systems**<sup>©</sup> Hoists produced under a registered quality control system approved to EN ISO 9002, with issue from the certification of following international certificates:

Machinery Directive 89/392/EEC with successive amendments: 91/368/EEC, 93/44/EEC and 93/68/EEC.

The construction of standard hoists is performed in compliance with following rules:

- Directive 73/23 EEC "Low voltage electric equipment";
- Directive Electromagnetic compatibility 89/336/EEC;
- EN 292 Part 1 and 2 Safety of machines;
- EN 60529 IP Protection classes;
- EN 12077-2 Limiting and indicating devices;
- ISO 4301 Cranes and lifting appliances Classification;
- ISO 4308-1 Rope selection;
- UNI 7670 Mechanisms for lifting appliances Instructions for design;
- FEM 1001 Rules for the design of hoisting appliances;
- FEM 9.511 Rules for the design of serial lifting equipment; Classification of mechanisms;
- FEM 9.661 Rules for the design of serial lifting equipment; Dimensions and design of rope reeving components;
- FEM 9.683 Selection of lifting and travel motors;
- FEM 9.755 Measures for achieving safe working periods for motorized serial hoist units (S.W.P.);
- FEM 9.761 Lifting force limiters for controlling the loading on motorized series hoist mechanisms;
- FEM 9.761 Test specifications for electric hoists





**SAYAL Crane Systems**<sup>©</sup> is a quality manufacturer of Monorail, Trolley hoists and overhead traveling cranes (EOT) for wide range of lifting applications from the **Light Duty to Severe Industrial** work conditions.

- Utilizing the latest technology, **SAYAL Crane Systems**<sup>©</sup> line of Heavy Duty Electric Wire Rope Hoists and Cranes are manufactured to provide a high performance lifting system.
- Our products are in more than 20 countries worldwide for 100's of different applications.
- SAYAL Crane Systems<sup>©</sup> are heavy-duty workload designed with low maintenance requirements.



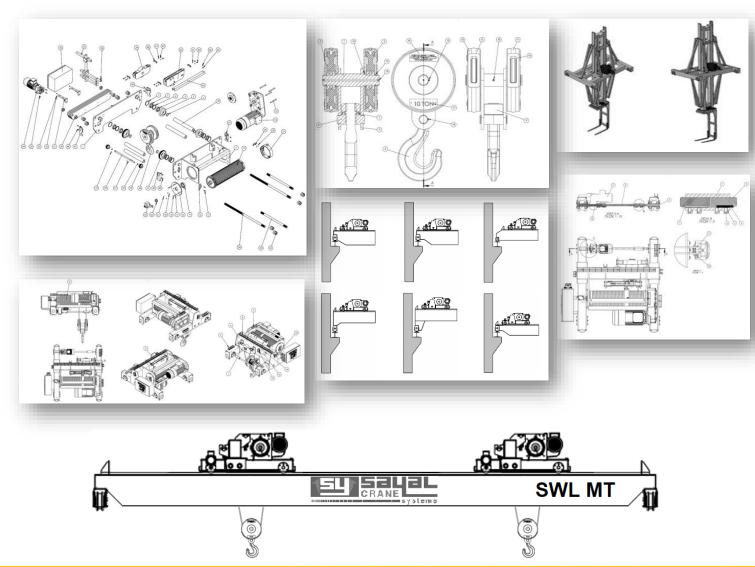
### **ENGINEERING**

**SAYAL Crane Systems**<sup>®</sup> Hoist / Girder construction start with initial Engineering phase that consist of all analytical calculations and material selection, followed by 3-D design of the actual project to conclude all with computer aided structural tests to optimize best results for both the longevity of the structure and safety.

All material selection according to according F.E.M. standard 1.001 3rd EDITION REVISION 1998.10.01.

Material of structural plates will be selected according to static calculations and stress analysis with help of state of the art computer aided design.

Once the analysis completed your material selection (\$235, \$275, \$355 according to EN 10025) completed according to all safety and crane manufacturing regulations.





### **PRODUCTION**

SAYAL Crane Systems® with 8600 m2 modern production facility includes;

Precision machining, lifting equipment installation, testing units, oven bake paint boot unit and steel construction – **SAW with Robotic welding units**.

















## **OPTIONS**









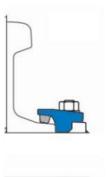










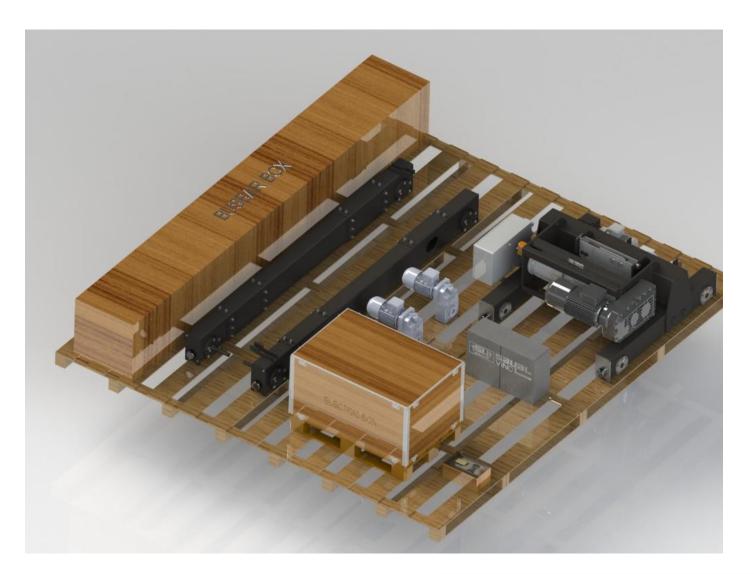




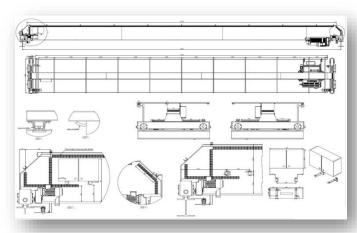
## **REMOTE CONTROLS**



## **CRANE KITS**



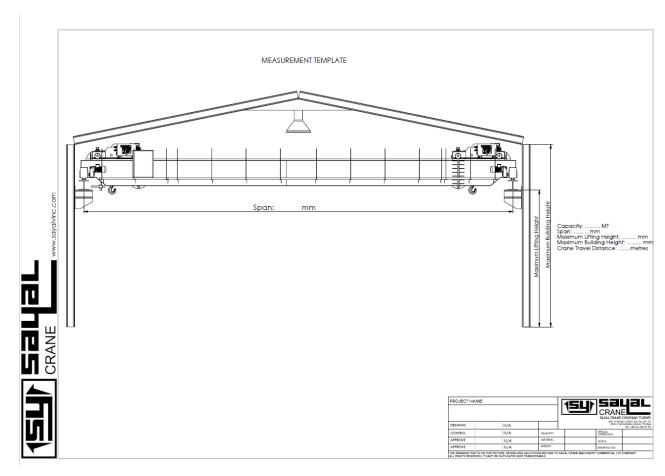
- Hoist
- End Carriages and gear box
- Electrical Panel
- Bus-bar and Equipment
- Electric Crate (festoon line, c profile, cable & other attachments)
- Pendant Button
- Remote control\*

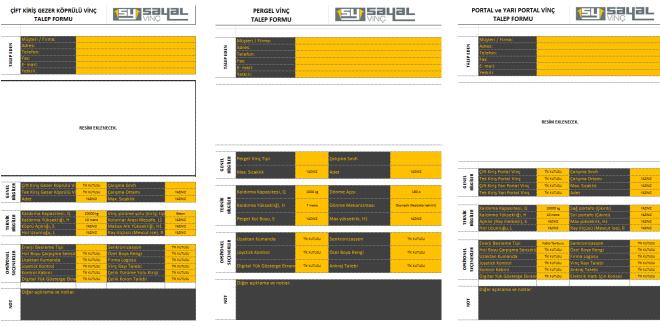


(\*) optional units with wide range of selection (\*\*) Design assistance



## **MEASUREMENTS**

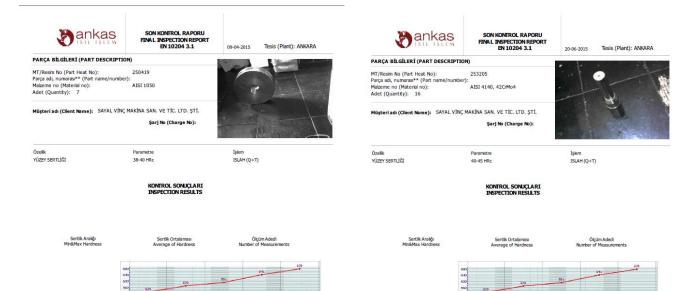






## **HEAT TREATMENT**

All Sayal Crane Systems Wheels are heat treated for better performance and extended product life.



ACRIAMALAR:

SONUC:

Onay veren mühendis:

ACRIAMALAR:

SONUC:

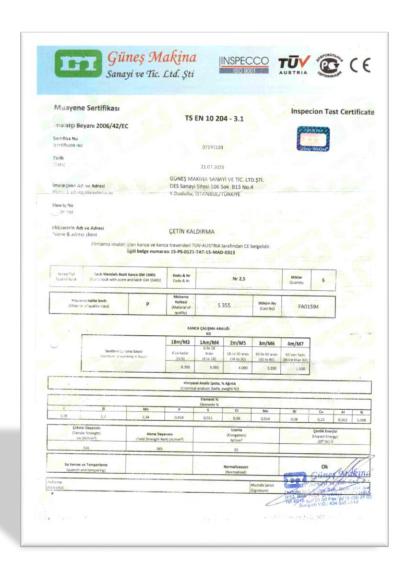
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F13 Rev:00 F13 Rev:00





## **HOOK TESTS**











## **CABLE TESTS**



Tet. 0352 442 16 40 (8 Half) Falks: 0352 442 16 4
ALÜMINYUM - BAKIR İLETKEN VE KABLO FA
Organiza Sanayi Bolgesi 18, Cad. No.20 KAYSE
Tet. 0352 321 15 55 Falks: 0352 321 16 29 - 35
What Paccells come? + hascellik Stangellik com tr

#### TEST SERTIFIKASI

MÜŞTERİ :

CETIN KALDIRMA

TARIH

: 09.02.2015

ON			15000437
MAKARA NO		_	1100142268
CAP (mm)		;	14
KONSTRUKSIYON		;	6x36 WS
TANDARD		:	TS EN 12385-4+A1
MUKAVEMET	(N/mm <sup>2</sup> )		1960

YÖN		1	s/Z
YAĞLAMA		:	A1
ÖZ		:	FC
UZUNLUK	(M)	:	500
KAPLAMA		:	SİYAH

KİMYASAL ANALİZ :

C %	Si %	Mn %	P %	5 %
0.55 - 0.75	0.10-0.30	0.50-0.80	0.006-0.013	0.003-0.006

TEST SONUC:

Tel Adet	Çap (mm)	Mukavemet (N/mm²)	Eğme test (Number)	Burma test (Number)	Galvaniz (Gr/m²)	Düğümlü Kopma (daN)
6	0,90	2057	14	35		
42	0,67	2035	12	33		
42	0,63	2049	14	40		
42	0,49	2036				21
84	0,75	2046	22	37		
						1

Bu sertifikadaki bilgilerin EN 12385'e göre doğruluğunu beyan ve tasdik ederim

Minumum Kopma Kuvveti : 127 KN Gerçekleşen Kopma Kuvveti : 135 KN

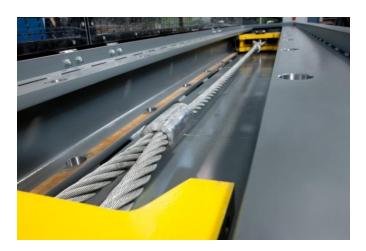
> Hatice VURAL HASÇELİK GRUP KALİTE ÇEVRE YÖNETİM , MÜDÜRÜ

TICARET SICIL NO : 14905 MIMARSINAN V.D. : 4580010964







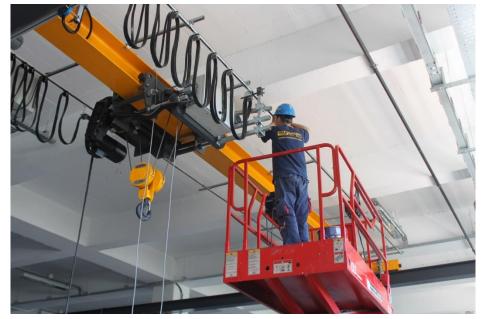






## **SERVICE**





- SAYAL Crane Systems® Rapid Service and reliability are your BEST coverage when you need it
- All OEM parts are readily available in SAYAL's parts bin.



# +90 312 267 58 58 / 24 HRS RAPID SERVICE



## **INSTALLATION**















## **PAINTING**











## **WELDING**









## **CNC MACHINES**













## **INSPECTION**



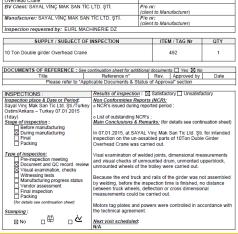
















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## **TRANSPORT**











## **INFORMATIONAL**

#### STEEL CONSTRUCTION

The bridge girder of every **SAYAL Crane Systems**<sup>©</sup> is designed to the current CE, ISO specifications and can be engineered to meet other local codes and regulations.

• Both operational shapes and welded plate box girder designs are used depending on design requirements.

#### **END CARRIAGES**

- SAYAL Crane Systems<sup>©</sup> end carriages are manufactured in-house and jig assembled, both wheel centers are handled at the same time with precision CNC incisions to ensure alignment of bearings and axles.
- Dual motor bridge drives are standard and they are with Hub Driven System to prevent gear slipping.
   Other drive types are available upon request\*.
- Rubber collision polyurethane bumpers are standard on all end carriages.

#### HOISTING MACHINERY

- The hoisting machinery is from **SAYAL Crane Systems**<sup>©</sup> and ABM with "1 million clicks warranty" is containing of heavy duty industrial type standard wire rope hoist unit that is mounted on a *low headroom type trolley*.
- •ABM Motors are totally enclosed fan cooled and also consists ABM electro mechanical brake System.
- All Gears and Transmission units are precision machined by ABM just for Hoisting applications and does not require maintenance for 10 yrs.
- Steel wire rope drums are precision (CNC with CAM Designed) machined in our **SAYAL Crane Systems**® factory in Ankara.
- Hoists are equipped with rope guides (Patented by SAYAL Crane Systems<sup>©</sup>) to prevent over lapping of the rope on the drum and to extend rope life.

It also satisfies strictest Safety regulations with no cast-iron design from rope guide falling injuries.

• Upper and lower hoisting limit switches are standard equipment.

#### **MOTORS AND BRAKES**

- All motors are specifically designed for hoist and crane duty by ABM in Germany.
- All motors are totally enclosed fan cooled and Electro Magnetic Brake Systems by ABM and Temporiti Spa and all standard with SAYAL Crane Systems'.



# INFORMATIONAL

#### **CONTROLS**

- Each crane is supplied with a pendant (Télémécanique) control with Mushroom **Emergency Stop** as standard equipment.
- Other types of controls such as wireless radio controllers, In Cabin controllers, infrared or laser collision sensors, position sensors are available.
- SAYAL Crane Systems<sup>©</sup> are supplied with 2-speed controls for the trolley and bridge motions with Inverters (Schneider and Mitsubishi) and ABM hoist motor is supplied with a 2-speed configuration without inverters.
- The electrical components are housed in electrical cabinets designed for all ambient temperatures.

#### **BRIDGE ELECTRIFICATION**

• Bridge electrification is provided via a flat cable festoon system suspended from a track as standard equipment.

Optional Cable Canal system is also available upon request or due to special requirements of a project.

#### **SURFACE TREATMENT**

• Hoist preparation starts with 2 coats of Anti-Corrosion layers and finished with 2 coats of enamel paint.



### **FEATURE LIST**

### **STANDARD:**

- Overload Switch
- 24 VDC Control Voltage with short circuit detection.
- Phase Protection (PTC Unit) with overheat protection
- Over Current Protection with thermic and magnetic protection.
- Rotation Warning Beacon
- Runway Electrification (Bus-bar systems by Stemman Technik Germany)
- Travel Limits for Bridge & Trolley

### **OPTIONAL:**

- Weighing Equipment
- Anti-Collision Equipment
- Runway Electrification for Galvanizing Factories for special Bus-bar Systems
- Extra Bridge Lights
- Warning Horn or Bell Other options are available on request or local codes.

#### **RUNWAY SYSTEMS**

• Custom designed to work for your applications as part of a SAYAL Crane System design.







Sayal Vinç Makine Sanayi ve Ticaret Ltd. Şti.

ASO 1. Organize Sanayi Bölgesi Ahi Evran Mah. Oğuz Cad. No:41

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