



Ashot Ashkelon Industries Ltd.

Equipment & Machinery List

Updated: February 2009

GEAR MANUFACTURING

<u>QTY</u>	<u>Manufacturer</u>	<u>Description</u>
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HOBBING:

1	Gleason- Pfauter (CNC)	P600/800 (May 2009)
1	Pfauter (CNC)	P.E.800
1	Pfauter (CNC)	P.350
2	Pfauter	P.900
2	Pfauter	P.403
1	Pfauter	P.400
1	Pfauter	P.160H

GEAR SHAPING:

1	Gleason- Pfauter (CNC)	PSA 300
1	Lorenz (CNC)	LS424 CNC
2	Fellows	36-6
1	Fellows	36-8
2	Lorenz	SN8
1	Lorenz	SN4

SPIRAL BEVEL:

1	Gleason	116
2	Gleason	118
1	Gleason	610
1	Gleason	16
1	Gleason	520 Lapper
1	Gleason	514 Tester

STRAIGHT BEVEL:

4	Gleason	14 Coniflex
3	Gleason	6 Tester
1	Gleason	512 Tester

DEBURRING:

3	Hey	Gear Chamfering
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GEAR GRINDING:

1	Gleason- Pfauter (CNC)	P600/800G (Jan 2009)
1	Samputensili (CNC)	S 375G

<u>QTY</u>	<u>Manufacturer</u>	<u>Description</u>
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BROACHING:

1	Arthur Kling	Vertical Broach
1	Lapoint	Horizontal Broaching

VARIOUS:

1	Fischer	Center Grinder
2		Center Lapping

THREAD GRINDING:

1	Reishauer (CNC)	UL 900
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GRINDING, LAPPING, HONING

4	Studer CNC 40S	O.D.- I.D. Grinding 3 wheels
1	Studer	O.D. Grinding
1	Studer	O.D. - I.D. Grinding
1	Cincinnati Model 2 EF	CNC Internal Grinder
1	ELB	Rotary Surface Grinder with magnetic table
1	Gehring Model p350	Honing Machie
1	Sunnen 1802 C	Honing MDC
1	Speedfam	Lapping Machine
1	Blanchard No. 20-36	Surface Grinding
2	V.E.B SFW 200X600	Surface Grinding
1	Cincinnati 237	Universal Grinding
1	Buderus-Lindner	SJ 7 Internal Grinding
5	Various Cylindrical	Grinding
2	Internal	Grinding
3	Various	Centerless

TURNING

<u>QTY</u>	<u>Manufacturer</u>	<u>Description</u>
1	Daewoo (Doosan)	PUMA 600 CNC Lathe
1	Dainichi	F45 CNC Lathe
1	Danobat	CNC Lathe dia 500X2100mm
1	Okuma LC 20	CNC Lathe
1	Okuma LC 30	CNC Lathe
6	Nakamura	CNC Lathe
1	Cincinnati Milacron Model 18C	CNC Lathe
1	Cincinnati Milacron Model 15C	CNC Lathe
2	Cincinnati Milacron Model 8C	CNC Lathe
1	Cincinnati Milacron 12/12U	CNC Lathe Model
2	Hitachi Seiki Model 40S	CNC Lathe
2	Hitachi Seiki TF 25/1100	CNC Lathe
1	Mazak	CNC Lathe
1	Ashot	CNC Tracer Lathe
1	Schiess	CNC Vertical Turret Lathe
1	Gray	CNC Vertical Turning
1	Cazeneuve	HB 575
1	Cazeneuve	HB 360
37	Various Universal	Center & Turret Lathe

DRILLING

1	TBT Tiefbohrtechnik	M500-1-3000 NC Deep Hole Drilling Max 2100mm Length Max
1130mm		dia.
1	Tacchi	FT 35/350 x 2500, Deep Hole Drilling & Boring Machine
1	Maflan	1500 mm Deep Hole Drilling Machine
3	Various	Radial drilling machine
13	Various	Drilling Machine

MILLING

<u>QTY</u>	<u>Manufacturer</u>	<u>Description</u>
1	Doosan- HM800	Horizontal Milling
2	Okuma- MA600 HB	Horizontal Milling (Mar. 2008)
1	Mazak FH-8800	Horizontal Milling
1	Mazak PFH-4800	Horizontal Milling
1	Mazak NEXUS 6000	Horizontal Milling
2	HAAS VF3	Vertical Machining Center
1	Cincinnati Milacron	CNC Machining Center 20 HC
1	Cincinnati Milacron	CNC Machining Center 15 HC
2	Cincinnati Milacron	CNC Machine With 8 Pallets Model T10/8
1	Cincinnati Milacron	CNC Machine With 2 Pallets Model T10/2
1	Scharmann	CNC Machining Center D-4050
1	Hitachi Seiki - HG 630	CNC Machine with 2 Pallets
2	Hitachi Seiki -HG 500	CNC Machine with 2 Pallets
2	Hitachi Seiki - HG	CNC Machine with 2 Pallets
1	Hitachi Seiki VK 40	CNC Vert. Milling Twin Spindle
1	Hitachi Seiki VK 55	CNC Vert. Milling Twin Spindle
1	Mazak AJV 35/60	Vertical Milling
1	Mazak H-400N	Horizontal Milling
1	Deckel FP3A	CNC Boring/Milling
1	Scharmann	CNC Boring/Milling
1	SIP 600 N.C.	Jig Boring
1	Deckel FP 3 LV	Boring/Milling
1	Maho 1000	CNC Boring/Milling
1	Maho 700	CNC Milling
1	Maho 500	CNC Milling
1	Dixi 60	Jig Boring
1	Ingersoll HD- 3 Spindle	Milling
1	Various Vertical	Milling
10	Various Universal	Milling

WELDING

6	Various	Welding machine, MIG & Tig (Controlled atmosphere, atomic welders, hydrogen or argon)
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HEAT TREATMENT FURNACES & EQUIPMENT

QTY	Manufacturer	Description
1	Surface	Internal quench furnace including endothermic generator
1	Lindberg	Internal quench furnace including endothermic generator
1	Aichelin	Nitride pit type furnace Pit type tempering furnace
1	Nitrex	Nitride pit type furnace
1	Wild Barfield	Rotary Furnace
1	Lindberg	Rotary Furnace
1	Electroterm	Normalizing pit furnace
1	lectroterm	Tempering pit furnace
1	Electroterm	Box type tempering furnace
1	Electroterm	Vacuum Tempering, Pit type
1	Electroterm	Aging (Aluminum)
1	Electroterm	Solution Treatment (Aluminum)
2	Blue M	Dip Freezing & Tempering device
2	Gleason	Quenching presses
1		Induction Heating equipment medium frequency + Low Frequency
3		Induction heating equipment high frequency
-	Various	Salt bath furnace
-	Various	Auxiliary equipment for washing, sand blasting, shot peening, shot blasting, metal coating (Copper, Cadium and Phosphates)

METALLURGICAL & LABORATORY EQUIPMENT

1	Perkin	Atomic Absorption Spectrophotometer Model 5000 P.E.
1	Bausch & Lomb	UV Visible Spectronic 2000
1	WSP	Spectromobile
1	C. Reichert	Universal Camera Microscope MF F2
2	Tinius Olsen	Universal Testing Machine Super L + MTS 8800 U.T.M
5	Hardness Machine	Rockwell, Brinell, Vickers Hardness Testing Machines
1	Leco	Carbon Determinator Leco IK -12
1	Leco	Oxygen Determinator Leco RO-17
1	Leco	Carbon Sulphur Determinator CS-244
1	Unimet	Microscope
3	Sartorius	Scales, Analytical, Semi-Analytical and others Sartorium 3804 M.D.
1	Wab Instruments	Particle Size Turbidometer
1	Ardrocks	Magnetic Particle Inspection System
1		Penetrant Inspection system for Non-Ferrous

GENERAL AND GEAR TESTING EQUIPMENT

QTY	Manufacturer	Description
1	Klingelberg	CNC gear testing machine
3	LK	CMM Microvector G80, C90
2	DEA	CMM
1	ZEISS	PRISMO 5 CMM
1	TESA SCAN 130	Optiline measuring machine
1	Hommel Verke	Optical measuring machine
2	Start	Optical comparators
1	Hommel Verke	Surface finish measuring device
1		Torque keys calibration system
1	Schenk	Vertical Balancing machine
1	ASHOT	Test system for dynamic testing of parts back-to- back principal for automatic vehicle transmission and final drives up to 240,000 NM
1	Hofler	Gear measuring machine ZW630 Rolling
2	Nikon	Optical comparators - U-20
2	Mitutoyo	Optical comparator
12	Trimos	Horizontal universal measuring machine for caliberation
2	Trimos	Vertical measuring machine
1	Reicherter	Hardness testing on gear tooth
1	Reicherter	Hardness measuring on internal diameter