

*Kale Aero		MILLING MACHINE LIST													
MACHINE DESCRIPTION-MILLING		Mng. Year	Machine Movement					Work Table (mm)	Spindle Speed (rpm)	Spindle Power (kW)	Max. Feed (m/min)	Coolant Tank Capacity (liter)	Internal Coolant Pressure (bar)	Control Unit	
			X (mm)	Y (mm)	Z (mm)	A (deg)	C (deg)								
1	Makino MAG3W-I	5 Axis H.Milling Machine	2017	4.000	1.800	1.000				33.000	120	25		Fanuc	
2	Makino MAG3W-II	5 Axis H.Milling Machine	2018	4.000	1.800	1.000				33.000	120	25		Fanuc	
3	Makino MAG3W-III	5 Axis H.Milling Machine	2019	4.000	1.800	1.000				33.000	120	25		Fanuc	
4	HURON KX200-I	5 Axis V.Milling Machine	2014	3.300	2.300	1.000	-95/+95	±190	3.500x1.250	12.000	34	40		Heidenhein ITCN530	
5	HURON KX200-II	5 Axis V.Milling Machine	2014	3.300	2.300	1.000	-95/+95	±190	3.500x1.250	12.000	34	40		Heidenhein ITCN530	
6	HURON KX200-III	5 Axis V.Milling Machine	2018	3.300	2.300	1.000	-95/+95	±190	3.500x1.250	12.000	34	40		Heidenhein ITCN530	
7	HURON KX200-IV	5 Axis V.Milling Machine	2019	3.300	2.300	1.000	-95/+95	±190	3.500x1.250	12.000	34	40		Heidenhein ITCN530	
8	HURON KXS0M	5 Axis V.Milling Machine	2015	2.000	1.700	800	-95/+95	±190	2.200x1.250	20.000	60	40		Heidenhein ITCN530	
9	HURON KXS0L	5 Axis V.Milling Machine	2015	3.000	1.700	800	-95/+95	±190	3.300x1.250	20.000	60	40		Heidenhein ITCN530	
10	HURON KXS0L	5 Axis V.Milling Machine	2019	3.000	1.700	800	-95/+95	±190	3.300x1.250	20.000	60	40		Heidenhein ITCN530	
11	MAKINO J3 5 AXIS	5 Axis V.Milling Machine	2013	630	550	550	-	-	400x400	16.000	15	60		FANUC	
12	MAKINO A61NX	5 Axis V.Milling Machine	2013	730	650	800	-	±360	500x500	15.000	22	60		FANUC	
13	CMS Router FXB2-30-12	3 Axis Stack Router	2007	1.260	3.120	300	-	-	-	24.000	12	40		Fanuc 18iMB	
14	DMG DMC835V-I	3 Axis V.Milling Machine	2009	810	510	510	-	-	560x1.000	18.000	35	30		Heidenhein ITCN530	
15	DMG DMC835V-II	3 Axis V.Milling Machine	2010	810	510	510	-	-	560x1.000	18.000	35	30		Heidenhein ITCN530	
16	DMG DMC1035V-I	3 Axis V.Milling Machine	2009	1.035	560	510	-	-	560x1.200	18.000	35	30		Heidenhein ITCN530	
17	DMG DMC1035V-II	3 Axis V.Milling Machine	2010	1.035	560	510	-	-	560x1.200	18.000	35	30		Heidenhein ITCN530	
18	DMG DMC1035V-III	3 Axis V.Milling Machine	2010	1.035	560	510	-	-	560x1.200	18.000	35	30		Heidenhein ITCN530	
19	DMG DMF260-700	3 Axis V.Milling Machine	2010	2.600	700	700	-	-	700x2.600	18.000	35	40		Heidenhein ITCN530	
20	DMG DMF260-1100	3 Axis V.Milling Machine	2010	2.600	1.000	700	-	-	1.000x2.600	18.000	35	40		Heidenhein ITCN530	
21	DMG DMC104V High Speed	3 Axis V.Milling Machine	2008	1.040	600	500	-	-	800x1.200	18.000	25	40		Fanuc 18iMB	
22	TAKUMI LER VH320T	3 Axis V.Milling Machine	2012	3.200	2.200	800	-	-	3200x2200	24.000	75	16		Fanuc 311 - MODEL B	
23	TAKUMI LER H32T	3 Axis V.Milling Machine	2013	3.200	2.200	800	-	-	3200x2200	10.000	26	20		Fanuc 311 - MODEL B	
24	MAZAK FJV250	3 Axis V.Milling Machine	2005	1.050	510	510	-	-	550x1.300	12.000	15	36		Mazatrol 640 M	
25	MAZAK Nexus 510 C	3 Axis V.Milling Machine	2005	1.050	510	510	-	-	550x1.300	12.000	15	36		Mazatrol 640 M	
26	Mazak Nexus 410B.2	3 Axis V.Milling Machine	2008	760	410	510	-	-	450x1.000	12.000	15	36		Mazatrol 640 M	
27	MAZAK FH6000-I	4 Axis H.Milling Machine	2006	800	800	880	-	±360	500x500	15.000	30	40		Mazatrol FMS	
28	MAZAK FH6000-II	4 Axis H.Milling Machine	2007	800	800	880	-	±360	500x500	15.000	30	40		Mazatrol FMS	
29	MAZAK FH6000-III	4 Axis H.Milling Machine	2008	800	800	880	-	±360	500x500	15.000	30	40		Mazatrol FMS	
30	MAZAK FH6000-IV	4 Axis H.Milling Machine	2009	800	800	880	-	±360	500x500	15.000	30	40		Mazatrol FMS	
31	MAZAK VORTEX I-630V-I	5 Axis V.Milling Machine	2018	1.425	1.050	1.050	-	±360	15.000	45	52		Mazak SMOOTHX		
32	MAZAK VORTEX I-630V-II	5 Axis V.Milling Machine	2018	1.425	1.050	1.050	-	±360	15.000	45	52		Mazak SMOOTHX		
33	CHIRON MPS15	4 Axis V.Milling Machine	2006	550	400	425	-	±360	6.000	20.000	14	40		Fanuc 18i	
34	ENSHU-VMC-40	4 Axis V.Milling Machine	1991	560	400	460	-	±360	900x400	6.000	12	6		Fanuc O M	
35	DMF360L High Speed	5 Axis H.Milling Machine	2009	3.600	920	820	-100/+100	±360	900x4.000	18.000	35	100		Heidenhein ITCN530	
36	SNK HPS-120B High Speed	5 Axis H.Milling Machine	2005	3.150	1.320	762	-90/+90	±270	1.220x3.048	15.000	55	24		Fanuc 15iMB	
37	Breton Matrix 800 High Speed	5 Axis V.Milling Machine	2007	2.000	2.500	800	-105/+105	±360	2.000x3.000	28.000	28	40		Heidenhein ITCN530	
38	DMG DMC100U High Speed	5 Axis V.Milling Machine	2009	1.000	1.000	1.000	-105/+105	±360	0800	18.000	28	60		Heidenhein ITCN530	
39	DMG DMC105V High Speed-I	5 Axis V.Milling Machine	2007	1.110	800	600	-110/+110	±360	0950	18.000	46	90		Heidenhein ITCN530	
40	DMG DMC105V High Speed-II	5 Axis V.Milling Machine	2007	1.110	800	600	-110/+110	±360	0950	18.000	46	90		Heidenhein ITCN530	
41	DMG DMC105V High Speed-III	5 Axis V.Milling Machine	2007	1.110	800	600	-110/+110	±360	0950	18.000	46	90		Heidenhein ITCN530	
42	DMG DMC105V High Speed-IV	5 Axis V.Milling Machine	2008	1.110	800	600	-110/+110	±360	0950	18.000	46	90		Heidenhein ITCN530	
43	DMG DMC105V High Speed-V	5 Axis V.Milling Machine	2008	1.110	800	600	-110/+110	±360	0950	18.000	46	90		Heidenhein ITCN530	
44	DMG HSC75 High Speed	5 Axis V.Milling Machine	2010	450	600	400	-110/+110	±360	0400	18.000	30	41		Heidenhein ITCN530	
45	DMG HSC75L High Speed	5 Axis V.Milling Machine	2009	750	600	560	-110/+110	±360	0750	18.000	46	90		Heidenhein ITCN530	
46	DOOSAN VC 510	3 Axis V.Milling Machine	2017	762	516	570			2860x570	10000	15	40		DOOSAN FANUC I	
47	DOOSAN DNM 750L	3 Axis V.Milling Machine	2017	2160	762	650			2160x760	12000	11	24		DOOSAN FANUC I	
48	DOOSAN DNM750L-II	3 Axis V.Milling Machine	2019	2160	762	650			2160x760	12000	11	24		DOOSAN FANUC I	

*Kale Aero		TURNING MACHINE LIST													
MACHINE DESCRIPTION-TURNING		Mng. Year	Mach. Diameter (mm)	Y (mm)	Mach. Length (mm)	Bar Capacity (mm)	C (deg)	A (deg)	Max. Spindle Speed (rpm)	Spindle Power (kW)	Max. Feed (m/min)	Coolant Tank Capacity	Internal Coolant Pressure	Control Unit	
															1
2	OKUMA LT200MY	Mill Turn Machine	2009	Ø210	-52/+42	960	Ø53/Ø80	±360	-	6.000	11	40		Okuma OSP200L	
3	OKUMA MACTURN 350SW	Mill Turn Machine	2006	Ø530	-95/+95	190	Ø72	±360	-105/+105	12.000	22/3	30		Okuma OSP200	
4	OKUMA MACTURN 250SW-I	Mill Turn Machine	2010	Ø530	-95/+95	190	Ø72	±360	-105/+105	12.000	22/3	30		Okuma OSP200	
5	OKUMA MACTURN 250SW-II	Mill Turn Machine	2010	Ø530	-95/+95	190	Ø72	±360	-105/+105	6.000	22/3	30		Okuma OSP200	
6	OKUMA LB3000 EX-MY-I	Mill Turn Machine	2010	Ø340	-50/+75	450	Ø80	±360	225°(-30°, +195°)	5.000	22	20		Okuma OSP200	
7	OKUMA LB3000 EX-MY-II	Mill Turn Machine	2010	Ø340	-50/+75	450	Ø80	±360	225°(-30°, +195°)	5.000	22	20		Okuma OSP200	
8	OKUMA MULTUS B300C II	Mill Turn Machine	2012	Ø630	-80/+80	855	Ø52	±360	-110/+110	6.000	15/11	40		Okuma OSP P300S	
9	DMG MORI NTX2000 1500T	Mill Turn Machine	2018	Ø660	-125/+125	1.540	Ø65	±360	-110/+110	10.000	30/11	40		CELOS - ERGOline Touch	
10	DMG MORI NTX2000 1500SZ	Mill Turn Machine	2019	Ø660	-125/+125	1.540	Ø65	±360	-110/+110	10.000	30/11	40		CELOS - ERGOline Touch	

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**MACHINE LIST MISCELLANEOUS**

MACHINE DESCRIPTION-OTHER	MNG. YEAR	Mach. Diameter (mm)	Stroke (mm)	Explanation
1 SUNNEN MBC-1805G	Horizontal Honing Machine	1985	Ø2-90	300
2 LAPPING MACHINE	Horizontal Lapping Machine	2011	-	-
3 DALMA EROZYON TEZGAHI-AGIETRON KOPF-20	EDM 1	-	-	-
4 TEL EREZYON TEZGAHI-MAKINO U53TJ WEDM	WEDM	2005	-	-
5 PROFIL TASLAMA TEZGAHI-JUNG JF 520M	PROFILE GRINDING 1	-	-	-
6 PROFIL TASLAMA TEZGAHI-JUNG JF 520M	PROFILE GRINDING 2	-	-	-
7 SILINDIRIK TASLAMA TEZGAHI-KARSTENS	CYLINDRICAL GRINDING 1	-	-	-
8 SATIH TASLAMA TEZGAHI-SUPERTEC STP 1834 AD C	FACE GRINDING	2010	-	-
9 Kellenberger Kelvista ID/OD CNC Grinding Machine	ID/OD CNC Grinding	2014	175	1.000