checklist for the interview with the machine-supplier

machine-supplier Bumotec; s 181		
Main criterion	**Sub criterion**	**Answers**
machine start up	time till job No.1	between 1 and 2 days depanding the peripheral devices
	proofing parts quality	parts of the client - repetability +/-3um;
	measurement of axis	Linear encoder for X-Y1-Y2-Z-U-W axis, absolute encoder for B Axis, absolute encoder C axis, servo motor encoder E
	instruction of machine operator	yes 3 to 5 day (more depanding of the needs)
ease of maintenance	interchangeability of machine parts	maintenance unit; easy checks, by removing axis-devices parts of the housing are to be taken off,
	accessibility of machine parts during machine -stops	serviceability in workspace: o.k.; devices inside, sheet metal coverings to be taken off
	time to change spindle	
	time to change feed drive	
	functions for automatic checks on the machine	safety, reference, brakes, tool measurment TS27 station 1 + (masked time broken tool measurement in tool changer in option) + broken tool and tool length station 2 (soon)+ OMI/OMP40-400 for part measurment; sensor on main spindle for temp-control **(in option)**
automatisation	complexity for clamping of parts	almost any shape
	Operation/Loading	Pneumatic or electric bar feeder up to a bar of 3m (Milling) Pneumatic or electic bar feeder up to 750mm (Turning) Thrid party bar feeder (LNS, IEMCA, …)
controller	controller-smart functions;	Fanuc 31 i; Userfriendly HMI by bumotec (specific macros for client needs)
	collision check	Not in process; pre process checks on CAD/CAM possible
	machine start/ reference check	yes (spindle only); normaly 30 minutes warm up
ease of retooling and retrofiting	flexibility of clamping - system	Station 1:F16/F35/F37/F38 / Ottet / Mecatool / Jaw-chuck / Profiled bar clamping system Station 2:Power-operated centering vices (KZS100 on face A of the retake arm / KZS64 on face B) / center points / Ottet chuk
	set up efforts	no efforts, cause of absolute measurement on the axis
	multiple parts clamping/model mix	specific to client needs;
service	availability of service staff	8.00 am to 6.00pm; email -service
	stock of spare parts; time for producing spare parts	storage of spare parts in a great quantity, clearly aranged and well sorted
	archive of detail drawings; availability via internet	drawings available
	service contract	on demand
TCO	analysis of cost drivers available; belonging to the main modules of the machine	no analysis on TCO; Starrag -system SAP is planned to be installed
	evaluation of data/ data for machine down- time and service time	see above; approximately 1 % of machine-cost are service-cost per year
	continual improvement of machine parts by the engineering departments when customer reports defects	is done on rotative meetings
form of contract	time of guaranty	12 month
	terms of payment	30 / 60 / 10 %
	TCO-process is fixed in contracts	no
additional aspects from the point of view of machine company	…..	2 units for milling / turning parallel; up to 50 % more productivity; compact footprint; options available see s 191;