

These General Technical Terms & Conditions of Purchase including the Appendices and documents are made and entered into by and between **WIELAND Austria Ges.m.b.H.** (Business ID FN93 165 h VAT ATU17095408) a corporation organized and existing under the laws of Austria, having its head office at **Fabrikstraße 4, 3300 Amstetten, Austria** ("BUYER") and .....( Business ID.....), a corporation organized and existing under the laws of ....., having its head office at .....("SELLER").

## 1. General technical terms & conditions

The machines, machine components, control cabinets and equipment delivered must all conform to the applicable guidelines, standards, regulations and recognised rules of engineering in force at the time of going into circulation.

It must be ensured, in particular, that the following are adhered to:

1. Applicable EU guidelines or those laws and regulations in place under Austrian law
2. Adhesion to harmonised European standards
3. Recognised technical regulations
4. CE-mark to be mounted to the entire piece of equipment and conformity declaration(s) to be furnished
5. Official constraints or requirements
6. Completion of a structure is in line with the current ÖNORM.

### 1.1. Equipping machines

1.1.1. Electrical equipping of machines is to be carried out according to valid Austrian "Elektrotechnikverordnung" ETV in reference to expressed standards therein and must adhere to

Directive 2014/30/EU (Electromagnetic Compatibility) as well as to  
Directive 2014/35/EU (Low Voltage) and  
Directive 2013/35/EU (Risks Arising from Physical Agents).

Initial test according ÖVE/ÖNORM 8001-6-61 and ÖVE/ÖNORM EN 60204, including functional test of all safety circuits is to be carried out after commissioning.

1.1.2. Adherence to the safety categories for control (pneumatic, electrical and hydraulic) and labelling according to the requirements of standard EN13849-1

1.1.3. The design of machines is to be carried out in accordance with the requirements of standard EN 12100-1 and EN12100-2

1.1.4. The design of fixed separating and moving separating protective equipment (mechanical performance, safety distances, height, dimensions, arrangement,...) is to be carried out in accordance with actual machinery safety regulation under Austrian law, derived from DIRECTIVE 2006/42/EC on machinery and amending Directive 95/16/EC (recast).

1.1.5. All pipework to be furnished according to ÖNORM Z1001. Format and content of labelling for piping and tanks containing pure or composite materials is to be carried out in accordance with regulation (EC) No 1272/2008.

1.1.6. Ergonomic design of work areas (control sections, ascents, working height, accessibility for maintenance work and change over,...) is to be observed for completion.

1.1.7. Design for easy maintenance and repair is to be observed for completion.

## 1.2. Device and component specifications

With regard to the devices and components to be used for electricity, electronics, control, pneumatics, hydraulics, drives, mechanical systems etc., BUYER's technical department must be contacted in order for the correct choice of manufacturers to be made for the project.

However, the following minimum standards apply (preferably in the order given):

### 1.2.1. Electrics

Control (Siemens S/F1500 TIA-Portal V15)

Drives (Siemens)

Motors (Siemens, Lenze and SEW)

Inverters (Siemens)

Cabling: durable cable labelling

Electrical Equipment: durable labelling in accordance with electrical plans and drawings

Air conditioners/electrical cabinets: Rittal

User Interface: WinCC v15 TIA or higher

Size of touch screens: min. 15" or easy to operate with gloves

Information technology: remote servicing is principally built in case of need only. The technical design, proceeding and implementation must be defined together with BUYER's responsible department at the time of order placement in need of a continuous data link or regular data transfer to SELLER's or BUYER's information network.

Electrical Safety Locks: Euchner

Electrical cabinets must be placed well accessible and outside of safety areas.

### 1.2.2. Hydraulics

Components: Rexroth

Hydraulic fittings: Walform

Hydraulic systems for foundry must be suitable for low flammable hydraulic fluids like Quintolubric 888-68 or Quintolubric 888-46

Hydraulic cooling: air

Hydraulic labelling: durable numbering according to the hydraulic drawings and diagrams

Valve blocks must be placed well accessible and outside of safety areas.

### 1.2.3. Pneumatics

Components: Festo or Norgren

Pneumatic service units must be placed well accessible and outside of safety areas.

### 1.2.4. Mechanics

Components (bearings, cams,...) on long shafts are to be engineered as tension elements for easy disassembly.

1.2.5. Water systems: stainless steel with durable labelling of system components and flow direction in reference to drawings and diagrams.

Colours:

For steel parts, a sand-blaster or similar must be used to remove rust prior to basic painting.

The equipment below is finish painted as follows:

Plant	Amstetten		Enzesfeld	
	Colour	RAL-#	Colour	RAL-#
Equipment parts	grey	RAL 7035	grey	RAL 7035
Electrical equipment, such as control cabinets, Containers*	grey	RAL 7035	grey	RAL 7035
Fixed mounted machine parts	grey or azure blue	RAL 7035 RAL 5009 <sup>1</sup>	gentian blue	RAL 5010
Furnace body	white aluminium	RAL 9006	white aluminium	RAL 9006
Moving machine parts	lemon yellow (colza yellow Building 9)	RAL 1012 (RAL 1021)	lemon yellow	RAL 1012
Valve blocks	Zinc coat passivation, no painting		Zinc coat passivation, no painting	
Safety barrier poles	lemon yellow	RAL 1012	lemon yellow	RAL 1012
Safety barrier grid	deep black	RAL 9005	deep black	RAL 9005
Orange Building Façade	pure orange	RAL 2004	blood orange	RAL 2002

Applicable ambient conditions, power- and utility parameters at BUYER's plants are shown in Appendix 1.

1.3. Energy Efficiency

High energy efficiency according to actual state of the art applies to design and components.

However, the following minimum standards apply:

Transformers in low-loss design

Motors in energy efficiency category IE3 as a minimum

Drives of type regenerative to be used instead of breaking resistors

Hydraulic systems to be built in low-loss design (inverter controlled pumps instead of static pumps with bypass losses, controlled shut off,...)

Electronic energy meters for all used sources of energy in the system are to be integrated for measuring total energy consumption.

1.4. IT-Infrastructure and –solutions

IT-infrastructure and solutions must be designed and carried out in accordance with the actual Contractual Agreements and Delivery Specifications Wieland Werke AG, part C) Electrical Engineering Delivery Specifications, chapter Planning Regulations, subchapter Computers and PC Systems .

1.5. CE-marking for concatenated machinery or equipment

Machinery and equipment that is interlinked with other machinery and equipment must be provided with a declaration of incorporation. If the security of the entire piece of equipment depends on the interface with other components (e.g.: interlocking and emergency stop circuits), all details must be passed on to the purchaser and/or supplier of the components connected, to ensure the conformity of all the concatenated machinery.

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<sup>1</sup> Definition with order

For machinery components, the BUYER must be given all the information required to carry out any necessary conformity investigations (provision of risk analyses; according to EU guidelines for machinery or machinery safety regulations).

### 1.6. Documentation

The documentation in German language (in 3 copies and 1 electronic) must include as a minimum, depending on the machinery:

Type of documentation	When	S.o.S <sup>2</sup>
Operating instructions for complete scope of supply in an easily readable pdf or MS-Word formatted document	Preliminary documentation for commissioning and final version prior to acceptance.	Y
Complete bill of materials in format Excel (xlsx) for entire scope of supply including referenced assembly drawings in format dwg (ACAD version 14 or older)	Preliminary documentation for commissioning and final version prior to acceptance.	Y
Parts lists for purchased parts according to which spare parts can be defined and ordered (manufacturer, type description, serial number, size, number of parts, ABC- priority etc.). Format Excel (xlsx)	List of important spare parts with long delivery time, as agreed, but at the latest with delivery with the full list by the time of acceptance.	Y
Bill of materials for spare parts with recommendation in format Excel (xlsx) Spare part drawings in format dwg (ACAD version 14 or older).	Prior to acceptance	Y
Bill of materials for wear parts with recommendation in format Excel (xlsx) Wear part drawings in format dwg (ACAD version 14 or older).	With delivery	Y
Bill of materials for tools in format Excel (xlsx) Tool drawings in format dwg (ACAD version 14 or older).	3 month prior to delivery	Y
Electrical plans in format EPLAN	Preliminary documentation for commissioning and final version prior to acceptance.	Y
Software and programs for control and drives	Preliminary documentation for commissioning and final version prior to acceptance.	Y
Maintenance and greasing instructions	Commissioning.	Y
Drawings and diagrams for pneumatics, hydraulics and water systems drawings in format dwg (ACAD version 14 or older).	Preliminary documentation for commissioning and final version prior to acceptance.	Y
CE-conformity declaration or declaration of incorporation for concatenated machinery	Commissioning.	Y
Risk analysis	Prior to acceptance	Y
Safety concept for complete scope of supply, in case of concatenated machinery for supplied equipment in regards to safety interface to other machinery.	By agreement, but at the latest 5 month prior to delivery	Y
Test report initial safety test of equipment and functions according ÖVE/ÖNORM 8001-6-61 and ÖVE/ÖNORM EN 60204, including functional test of all safety circuits	End of commissioning	Y
Documents for filing as mandated by trade law: <ul style="list-style-type: none"> <li>- Hazardous materials</li> <li>- Process description</li> <li>- Technical description of function</li> <li>- Table of summarized power rating and flow rates for connected media as part of the technical description</li> </ul>	4 month after ordering	Y

<sup>2</sup> S.o.S. = Scope of Supply (Y=Yes, N=No)

(electrical power, gas, pressurized air, hydraulics, water, miscellaneous media) - Emission and immission data (magnetic, electric fields, exhaust air, dust,...) - Sound technological data (sound power level or sound pressure level at a distance of 1m)		
Outline layout of the complete equipment/structure in clean version reduced to the essential (outlines and contours) in dwg format with a file size of max. 500kB (ACAD Version 14 or older)	Provisional layout prior to ordering. Revised layout suitable for project execution (building) 4 months after ordering and final version prior to acceptance.	Y
Layout with defined handover points for energy and all media (connected values, volume and dimensions) as well as overall infrastructure in format dwg (ACAD version 14 or older)	Provisional version 6 month after ordering, final version 4 month prior to delivery	Y
Foundation and load plan in format dwg (ACAD version 14 or older) Provisional version including: <ul style="list-style-type: none"> <li>- Support reaction at point of connection between scope of supply and foundation divided in dead load of structure, live load and dynamic load according specification by BUYER</li> <li>- Foundation drawings with main contour suitable for formwork engineering, including main ducts, recesses, pits, basements,...</li> </ul> Final Version including breakthroughs, ductwork	Provisional version 6 month after ordering, final version 4 month prior to delivery	Y
Cable drawings	3 month after ordering	Y
Detailed shop drawings for infrastructure (e.g. stairs, platforms, handrails,...) in format dwg (ACAD version 14 or older)	2 month prior to delivery	Y
Detailed schedule from ordering to acceptance (order, delivery, installation, cold commissioning, warm commissioning, training, test operation and acceptance)	Prior to ordering	Y
Installation schedule with specific personnel requirements regarding qualification and manpower	2 month after ordering	Y
Installation, assembling and positioning drawings including all transport loads and dimensions	4 month after ordering	Y
Installation and assembly instruction including risk assessment according to Safety and Health Protection Documentation as defined by Health and Safety Executive	4 month after ordering	Y

For positive acceptance, the complete and correct documentation must be available at the time of acceptance.

## 1.7. Environment and working materials

### 1.7.1. Noise:

Taking into account technical advances, the equipment must be laid out in such a way that the lowest level is achieved at all sources where noise is produced. The overall sound pressure level must not exceed 80 dBA at any operating equipment parts under free-field conditions or 85dBA under operating conditions. If this noise level can not be achieved with standard components, noise protection covers or similar equipment must be installed.

1.7.2. Emissions:

1.7.2.1. Exhaust air

The limits according to the technical instructions on air quality control must be adhered to during construction.

1.7.2.2. Waste water

Waste water-free operation of the equipment must be achieved. Where waste water is present, the limit must be adhered to according to the regulations on waste water emissions (non-ferrous).

This is to be documented in the form of logs and the confirmed logs are to be included in the documentation.

1.7.3. Working materials:

The most up-to-date safety data sheets must be included when the goods are handed over. Should SELLER make changes to SELLER's product, which are relevant to the safety data sheets, SELLER is obliged to communicate these in writing and to send BUYER the changed current safety data sheet.

This applies for as long as BUYER is purchasing SELLER's product.

When using dangerous working materials (e.g. oils, fats and lubricants) every effort must be made to use the most environmentally-friendly products with the lowest risk potential for people and the environment. In this respect, SELLER must consult with BUYER about the correct choice of product.

1.7.4. Packaging

Wood as part of shipments entering the EU from all third countries must be treated in line with ISPM15 procedures and officially marked with the ISPM15 mark.

1.8. Transportation and traffic:

Suppliers or courier companies commissioned by SELLER will be given the leaflet for drivers and suppliers by BUYER's factory security manager, which is to be adhered to fully across the entire site. Acknowledgement must be made by signature. The wearing of safety shoes is also obligatory for drivers across the whole site.

1.9. Installation

Transport from place of unloading to place of installation, complete assembly and commissioning will be carried out by SELLER's staff.

1.9.1. Safety for installation work:

SELLER is obliged for his personnel to adhere to the current legally applicable and official regulations precisely in all his work.

SELLER alone carries responsibility here for delivering SELLER's services and any permits required or demanded by BUYER (e.g. test reports, registrations, acceptance findings, certificates, etc.) must be procured by the SELLER free of charge for the BUYER.

For installation work in BUYER's production areas and associated buildings, the general provisions of employment law apply.

SELLER's staff will be handed a safety pass including general safety provisions across the entire site. The project manager will also give workplace-related instruction, the acknowledgement of which must be signed by SELLER's staff.

#### 1.9.2. Welding and grinding work:

For welding, cutting and soldering work outside the appropriately set-up workshops (i.e. in the production areas with increased fire and explosion risk and in basements) agreement with the site fire services must always be sought. A written agreement for welding (hot working certificate) is always required for this. These regulations must be adhered to strictly for weekend working in particular.

#### 1.9.3. Construction waste separation / removal

The SELLER is responsible for construction waste separation and removal of waste products, packaging material and empty containers. Any costs, including taxes and charges up to final storage or removal are included in the unit prices.

Construction waste forms, according to proof of waste regulations, must be completed and included with the final invoicing.

Should the SELLER not fulfil their duties with regard to complete, proper removal along with all documentation, then the final invoice will include a deduction of at least 5%.

#### 1.10. Training

The complete training of BUYER's operating and maintenance staff is carried out by the SELLER, x days will be set aside for this.

Training must include as a minimum:

- Use of the equipment
- Operating the equipment
- Maintenance and servicing of the equipment
- Introduction to the software

Training is to be carried out at least on the basis of as complete as possible preliminary operation instructions, operation manual and maintenance instruction as well as safety instructions available on paper.

The complete training is to be carried out prior to start of test operation (see chapter 1.11).

SELLER is responsible for complete training and documentation including attestation for each trainee with a signed list latest with acceptance.

#### 1.11. Acceptance

Acceptance is carried out after positive completion of the 2-week test run, i.e. without serious defects<sup>3</sup>.

The functional testing and acceptance of all equipment will be carried out jointly by both parties. At this time all values and details guaranteed by SELLER will be checked.

The precondition for acceptance is a positive completion of all acceptance test runs (max. 3 repetitions) with the following criteria and secondary conditions:

- Products to be tested

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<sup>3</sup> Definition of serious defects:

1. Production operation is adversely affected. Productivity does not yet need to be running at full capacity.
2. Essential functions of the equipment are limited or do not exist.

- Performance criteria
- Quality criteria
- Testing volume (time, repeated tests, etc.)
- Availability according appendix 2
- Change Over
- Energy efficiency

The acceptance is only declared if all tests have shown a satisfactory outcome, agreed technical documents have been handed over to the BUYER in full and the attestation for the agreed scope of training has been provided by the SELLER.

#### 1.12. Test certificates and attestations

BUYER reserves the right to request test reports from an independent source to confirm that operation conforms to the regulations for the machinery or equipment delivered, as part of the documentation. BUYER will select the testing organisation.

If test certificates or confirmations are required for the completion (acceptance) of the commissioned services, the final payment of around 10% of the order amount will only be made after all certificates requested are received. The performance must conform to the valid standards in force and be recognised by the authorities. The testing staff used must be able to demonstrate the appropriate specialist knowledge required. Insofar as these are available in the form of attestations or certificates of competence, these must be made available during the testing.

## 2. General terms & conditions

### 2.1. Confirmation of order:

Confirmation of the order must be given to BUYER signed (by the company) at the latest within 14 days after receiving BUYER's order. Any other form of order confirmation will not be recognised by BUYER, not even tacitly.

The actual execution of the business processes without written order confirmation does not count as a waiver for the written confirmation of the order under BUYER's terms and conditions.

### 2.2. Delivery deadline / deadline safeguarding:

If SELLER realises that the agreed deadlines cannot be achieved, he must inform BUYER of this immediately in writing or by e-mail, giving reasons and the probably duration of the delay, such notification to be sent to the relevant project manager. This also applies if the delay is the fault of the BUYER.

SELLER will inform BUYER in good time when the object of the delivery is ready for despatch (approx. 4 weeks before delivery).

SELLER will ensure adherence to the agreed deadlines by recognising a deadline safeguarding fee in the sum of 0.5% of the entire order amount per week of delay commenced, up to a maximum of 5%, unless the delay is BUYER's fault. If the deadline safeguarding amount falls due, proof of loss or culpability is not required. The delay will be accepted in the course of the agreed deadline, without the need for a special notice of default.

### 2.3. Delivery conditions/place of delivery

Delivery will be DAP BUYER (in line with INCOTERMS 2010) unloaded at place of delivery

Plant at Fabrikstrasse 4, 3300 Amstetten, Austria

Plant at Fabrikstrasse 2, 2551 Enzesfeld, Austria

### 2.4. Payment conditions:



30% upon receipt of order acceptance confirmation by BUYER with provision of a bank guarantee valid until delivery.

30% upon delivery of the equipment with provision of a bank guarantee

20% after commissioning.

20% after fault-free acceptance

For the duration of the warranty period of 24 months, a liability retention sum of 10% of the order amount is to be rendered, covered by a bank guarantee.

All payments of BUYER shall be made within 14 days from presentation of invoice and provision of the agreed documents by SELLER.

#### 2.5. Transfer of ownership/risk

Ownership is transferred after commissioning and payment of 80% in total of the full price. Up to this point, SELLER must hold the object of the delivery free from all rights of third parties.

Risk of accident damage to and/or loss of the object of the delivery passes to BUYER upon commencement of test operation.

#### 2.6. Warranty:

In the event of defects SELLER is obliged, during the warranty period, to take measures within 24 hours for making the equipment fully operational again.

SELLER guarantees all values, figures and details mentioned in SELLER's offers as well as in this order the smooth functioning of the equipment, without exception.

Should it be ascertained at acceptance or in the course of the warranty period, that the guaranteed values or execution of BUYER's order does not conform, SELLER is obliged to repair the defects at SELLER's own expense as quickly as possible.

If it is not possible for SELLER to put right defects ascertained within a reasonable time, BUYER has the right to instruct third parties to take further corrective measures at the cost of the SELLER or to withdraw from the contract at the full price. Expenses arising for the BUYER are to be refunded by the SELLER in this case.

The same also applies if successive defects of the same type cannot be repaired within the warranty period.

The full warranty applies as agreed, i.e., that in the event of defects, the supply of parts, as well as extension and installation, will be carried out by SELLER at no expense to BUYER.

If – irrespective of BUYER's acceptance – the execution of the equipment is not recognised as conforming under the regulations in force by the bodies of the working inspectorate or TÜV, and changes are prescribed, then these will be carried out by SELLER at SELLER's expense.

The warranty starts on the day on which the report on the acceptance of the equipment is issued. The warranty runs for a period of 24 months at the minimum.

For parts of the object of the delivery that have to be repaired or replaced during the warranty period, the warranty starts afresh from the date of the perfect repair or delivery by SELLER for a period of 12 months at the minimum.

#### 2.7. Third-party property rights

SELLER guarantees that the goods and services to be provided by it do not violate any industrial property rights (patents, trade marks, rights to designs and models) in Austria, licence and copyrights, protected designations or other intellectual property rights of third parties. If nonetheless a violation of such rights occurs, SELLER will obtain for BUYER at expense the right for further use or modify the object of the delivery in a way that is acceptable for BUYER such that there is no longer any violation of property rights.

SELLER shall hold BUYER free from all claims of property rights holders, including the costs of any legal action arising from such a violation.

#### 2.8. Secrecy:

The parties are obliged mutually to keep secret all documents and information received from the other party, which are described as confidential, or which are recognisable as a business or operational secret by reason of other circumstances, and to use these exclusively for the purpose of the contract. This secrecy obligation does not apply to expertise, data and information, which are not and will not become common property, and do not involve those who have received information from the other party, or are disclosed to this party by a third party entitled to do this.

Photographs and video recordings inside the factory areas of the parties require the prior agreement of the other party. Photographs and video recordings of the object of the delivery are only permitted for purposes of processing the order. Publications require the prior written approval of BUYER.

#### 2.9. Insurances:

SELLER has the following insurance protection:

(1) Transport insurance covering damage to the object of the delivery itself which occur during transport. Transport insurance ends with arrival of the object of the delivery at the agreed BUYER factory in Amstetten or Enzesfeld; the unloading process is also insured.

(2) Product and operating liability insurance.  
The product and operating liability insurance has a cover of at least EUR 10 million per claim and accumulated for the duration of the implementation of this contract for personal injury and damages to materials and assets, although damage to assets is only covered in so far as this relates to personal injury and material damage.

(3) Installation insurance  
Installation and commissioning insurance has a level of cover up to the new value of the object of delivery.

At the BUYER's request, SELLER will prove to BUYER that the above insurances have been concluded by presenting an insurance confirmation.

#### 2.10. Force majeure:

The term 'force majeure' is understood to be unforeseeable and unavoidable incidents which are not deliberate and outside the sphere of influence of the parties which prevent or hinder the provision of the contractual obligations in whole or in part. Such incidents are, for example:

Forces of nature, fire, explosion, epidemics, earthquakes, storms, flood, drought, war (whether declared or not), terrorism, rioting, revolution or sabotage, atomic accidents, strikes, lockout, interventions by legislators or regulators or public administrative bodies (e.g. export restrictions) or any other reasons outside the responsibility of the parties.

The incident of force majeure releases the parties from the obligations undertaken according to the scope and duration of such disruptive influence.

If such disruptive influences based on force majeure continue for more than 6 months, the parties shall decide by mutual agreement whether and how the contract should be continued. If the parties cannot definitively agree, both BUYER and SELLER have the right to terminate the contract subject to 30 days' notice in writing sent to the other contracting party.

In such a case, BUYER shall pay SELLER for all work carried out until the time of the occurrence of the act of force majeure and SELLER shall hand over to BUYER the object of the delivery in the relevant state of completion and transfer ownership therein.

#### 2.11. Jurisdiction:

In the event of any dispute or difference, both parties will make every effort to reach an amicable agreement. If no such amicable agreement can be reached within 60 days after a party has made a claim against the other party, all disputes arising from and in connection with the order will be decided by the ordinary courts in Austria. The legal venue is Vienna. Austrian law shall apply, excluding the UN Sales Convention. The parties can agree at any time to make use of a court of arbitration instead of an ordinary court.

#### 2.12. Liability:

SELLER is liable to the BUYER or third party in connection with the execution of this contract, for all material damage and personal injury arising due to employees, support people or other contractors and agents deployed by them, or from working equipment they have brought in.

The SELLER's liability is based on the provisions of the law.

#### 2.13. Final provisions

- (1) The SELLER's General Terms of Business and other General Purchase Conditions of BUYER are not part of the contract. These do not apply even if reference has been made to them in previous written correspondence and/or in the offers and/or inquiries, etc..
- (2) The parties will each name a technical and commercial project manager by the time of the kick-off meeting.
- (3) The parties are not entitled to transfer rights or obligations under the contract to third parties without the agreement of the other party, unless otherwise agreed in the contract.
- (4) BUYER will inform SELLER about any safety regulations that apply on its operating site and instruct SELLER's employees in these. These regulations must be followed (chapter 1.9.1. "Safety for installation work:" applies in addition to this)

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For the buyer: Signature, Date, Place	For the seller: Signature, Date, Place

Appendix 1: ambient conditions, power- and utility parameters at BUYER's plants

Parameter Valid at Hand Over Point		Plant	
Media	Parameter	Amstetten	Enzesfeld
Ambience	Above Sea Level [m]	275	314
Ambience	Ambient Temperature $t_{Umin} \dots t_{Umittel} \dots t_{Umax}$ [C]	-20 +10 +35	-20 +10 +35
Ambience	Rel. Humidity min...max [%]	30...80	30...80
Ambience	Room/hall temp. $t_{Rmin}$ $t_{Rmax}$ [C]	+10 +40	+5 +40
Power Supply Medium Voltage	Voltage [kV]	3x20kV	3x20kV
Power Supply Medium Voltage	Frequency [Hz]	50	50
Power Supply Machines	Voltage [V]	3x400V	3x400V
Power Supply Machines	Frequency [Hz]	50	50
Power Supply Machines	Maximum Voltage Fluctuation in % from Nominal	+/-10%	+/-10%
Power Supply Lighting	Voltage [V]	3x400 / 230V	3x400 / 230V
Power Supply Lighting	Frequency [Hz]	50	50
Natural Gas	Nominal Fuel Value [kWh/Nm <sup>3</sup> ]	11,14	
Natural Gas	Mains Pressure p [mbar]	500mbar u. 50mbar	50 mbar
Natural Gas	Wobbeindex Wo		
Protective Gas	Composition [%N <sub>2</sub> - %H <sub>2</sub> ]	max 4% Wasserstoff (Hydrogen) je nach Produkt. Für jeden Ofen einzeln gemischt.	nicht vorhanden (N.A.)
Protective Gas	Working Pressure p [mbar]		nicht vorhanden (N.A.)
Hydrogen	Max. Pressure $p_{max}$ [bar]	50 bar in Tank	nicht vorhanden (N.A.)
Hydrogen	Working Pressure p [bar]	5 bar	nicht vorhanden (N.A.)
Nitrogen	Purity	99,999%	99,999%
Nitrogen	Quality	5.0	Verunreinigungen (Impurities) H <sub>2</sub> O - 3ppmv O <sub>2</sub> - 2ppmv KW - 0,1ppmv
Pressurized Air	Working Pressure $p_{min} \dots p_{max}$ [bar]	6,4 - 6,9 bar	5 - 6,5 bar
Pressurized Air	Quality	ISO8573-1 Staub <sub>2</sub> ;Wasser <sub>4</sub> ;Ö <sub>13</sub>	trocken (dry)
Industrial Water	Mains Pressure $p_{min} \dots p_{max}$ [bar]	4,5 bar	5,5 bar
Industrial Water	Temperature $t_{min} \dots t_{max}$ [C]	ca. 12° C	ca. 12°C

Parameter Valid at Hand Over Point		Plant	
Media	Parameter	Amstetten	Enzesfeld
DI Water	Mains Pressure $p_{min...p_{max}}$ [bar]	4 bar	5,5 bar
DI Water	Temperature $t_{min...t_{max}}$ [C]	ca. 15°C	ca. 20°C
DI Water	Type of equipment used for deionizing	Osmoseanlage (Osmose)	Pendelanlage (pendulum system)

## Appendix 2: Definition and Calculation of Technical Availability

Following conditions apply for the calculation of technical availability values as specified

- VDI guideline 3423 "Verfügbarkeit von Maschinen und Anlagen" is basis for the calculation of technical availability
- Described equipment is a single machine or a component of a system
- Technical availability shall be at least 98%
- Calculation of Technical Availability ( $A_T$ ) according to following formula:

$$A_T = 100\% - \left( \frac{T_{TD}}{T_O} \times 100\% \right) = \left( 1 - \frac{T_{TD}}{T_O} \right) \times 100\%$$

with:  $A_T$  = Technical Availability

Technical availability defines the percentage of occupancy time, for which the new machine component is available for production without any technical defect

$T_{TD}$  = Technical Downtime

Technical Downtime is the total of all downtimes, which are caused by defects in concept or design of the delivered item. It is in SELLER's responsibility.

$T_O$  = Occupancy Time

(= 15 shifts x 8 hours on 5 consecutive workdays)

Occupancy Time is the time slice the utilization of the equipment is planned for within the period under observation and the time period for what the technical availability is calculated.

Occupancy time is the reference for all key figures in this agreement and calculates according to following formula:

$$T_O = T_U + T_{Or} + T_{TD} + T_M$$

$T_U$  = Utilization Time

The machine is running at full productivity during the utilization time.

$T_{Or}$  = Organisational Downtime

Organisational downtime is the total of all downtimes caused by organizational deficiencies or preparation times for production processes It is in BUYER's responsibility.

Examples are.:

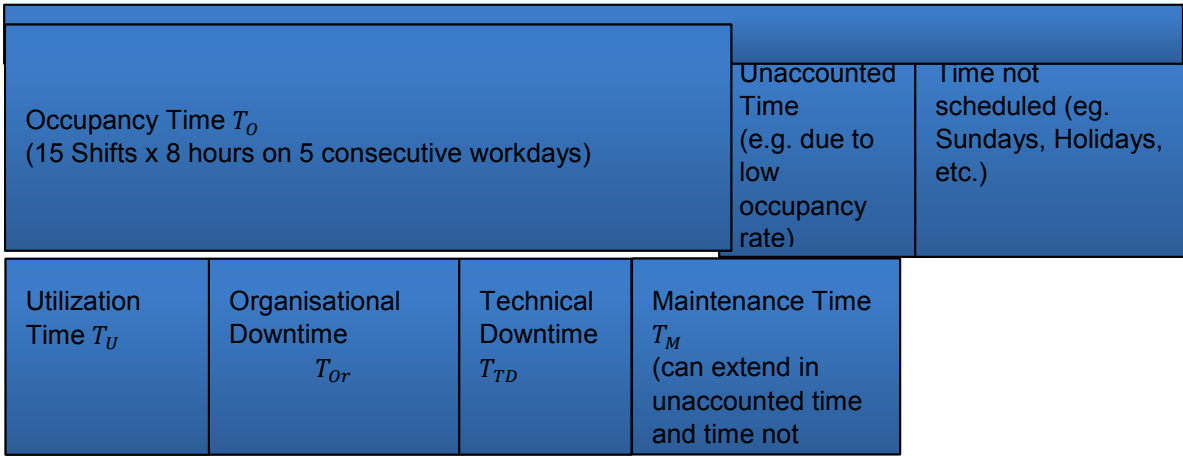
- Missing energy, material or tooling
- Deficiencies in process flow, like waiting times for crane, fork truck, etc.
- Downtimes caused by incorrect operation in resulting trouble-shooting
- Time for change overs
- Break times
- All interruptions, which are clearly not technical down times

$T_{TD}$  = Technical Downtime

See above

$T_M$  = Maintenance Time

All work defined in maintenance schedule



Picture 1: graphic illustration of the relation between times within period under observation

BUYER is responsible for documenting relevant data for the calculation of technical downtime and shows downtimes in SELLE