

# Recoules Quackenbush®

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## Advanced Drilling

Precision Drilling - Every Time



**TOOL***impex*  
CZECH REPUBLIC s.r.o.

# The most complete product range

**Recoules  
Quackenbush**

## Specialty



CD Drill



Nut Plate Drill



Back Spotfacer



Compact Power Feed

## Self Collecting



Template Foot



Concentric Collet



Twist Lock



C Foot

## Peck Feed



## Cutters



## Positive Feed

### Right Angle



### Inline



### New Technology



A1



Chip Fragmentation – Mitis TM



# Our four inevitable drilling machines, presentation of the Best Sellers...



20932 (RA) / 20952 (IL)

- Performance and modularity at your service

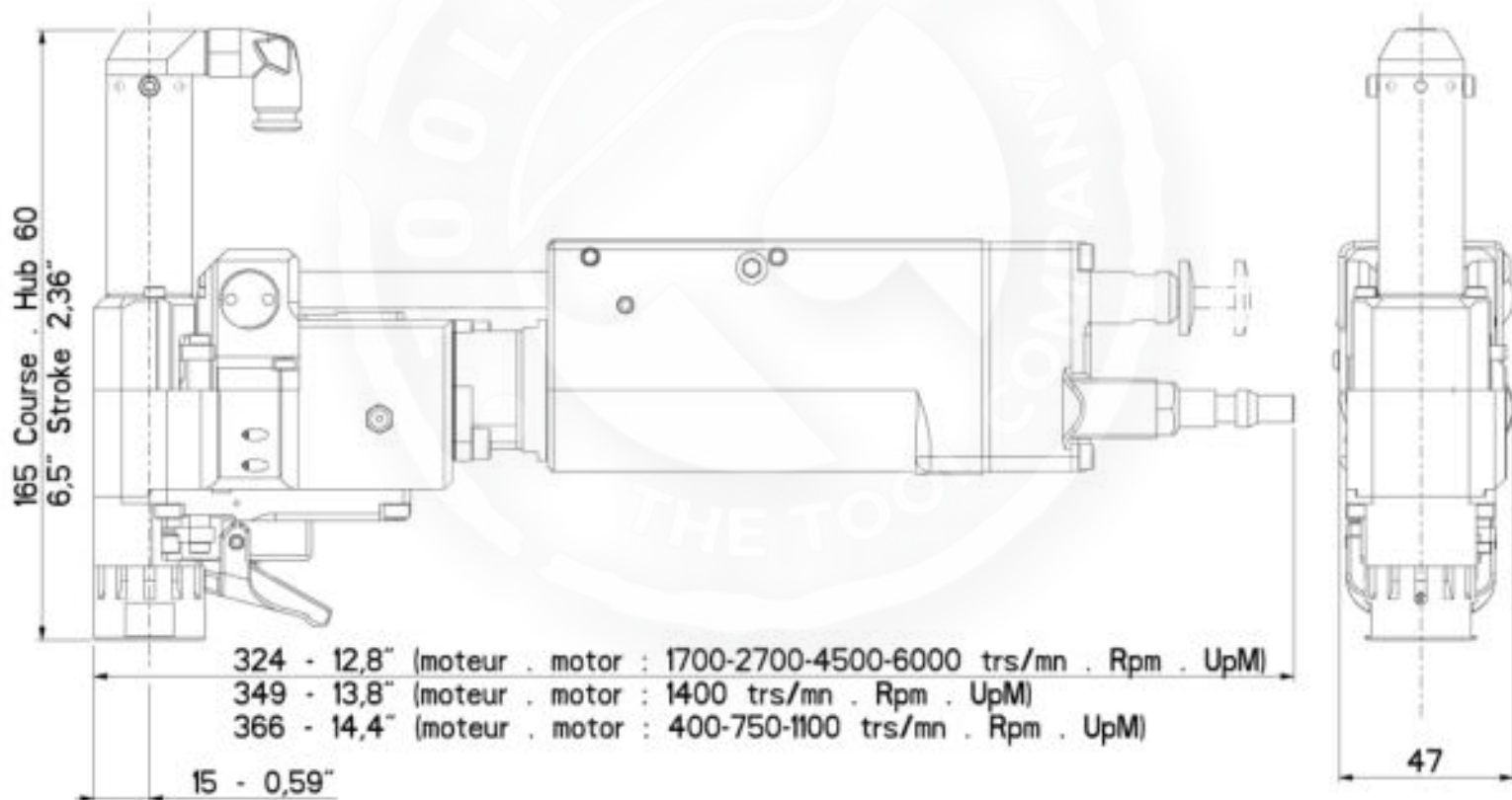
- Motor power: 1,2hp - 883W
- Spindle speed: 400 – 750 – 1100 – 1400 – 1700 – 2700 – 4500 – 6000rpm
- Feed in/rev (*mm/rev*):  
.0006 (0,015) - .0012 (0,03) - .002 (0,05) - .0028 (0,07) - .004 (0,10)
- Std stroke: 2.36"
- Cutter attachment: 1/4"-28f, 5/16"-24f and 3/8"-24f



**4,63 lbs  
2,2 Kg**

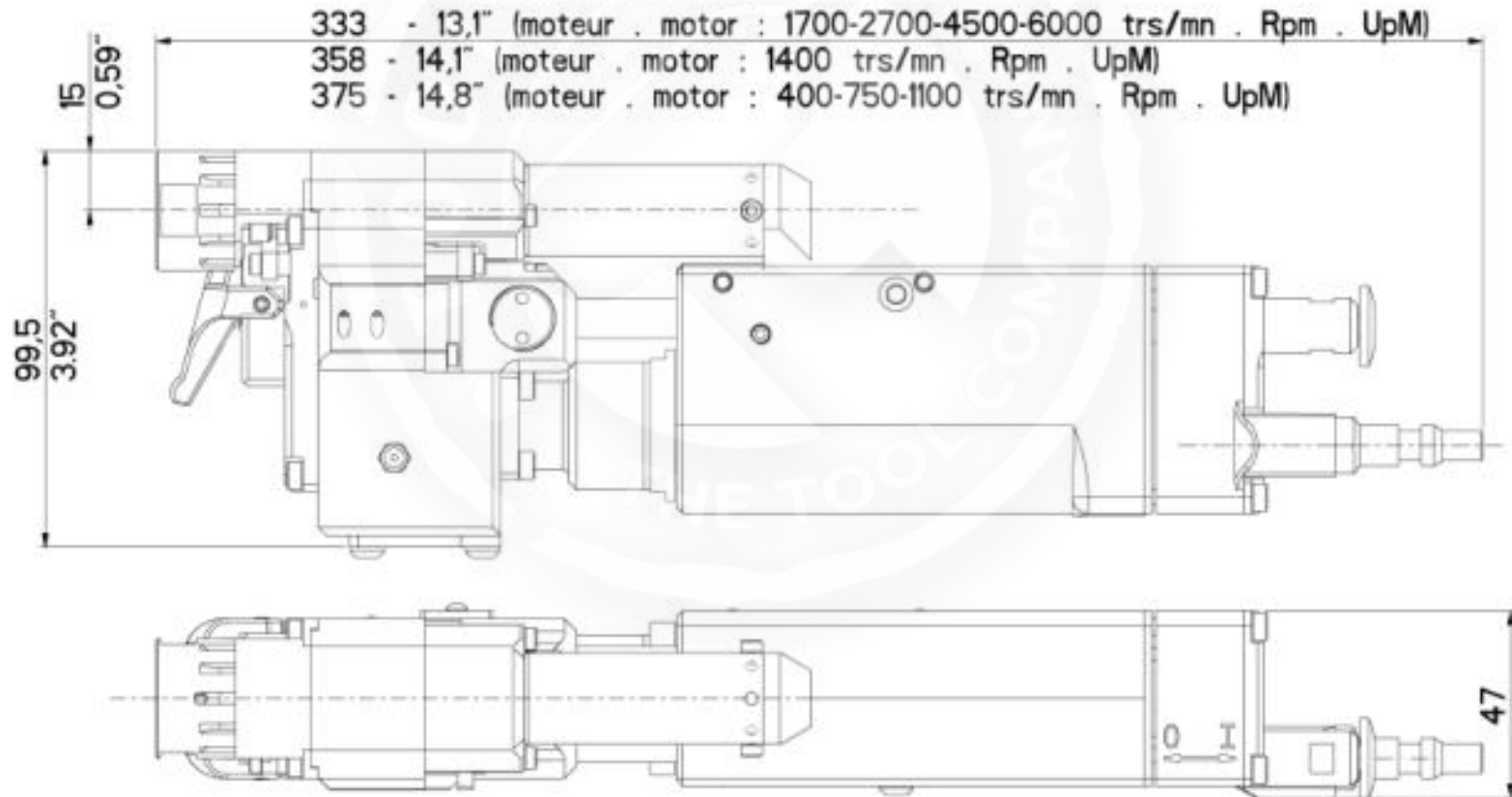
20932 (RA) / 20952 (IL)

- Reduced overall for constraining applications - 20932



20932 (RA) / 20952 (IL)

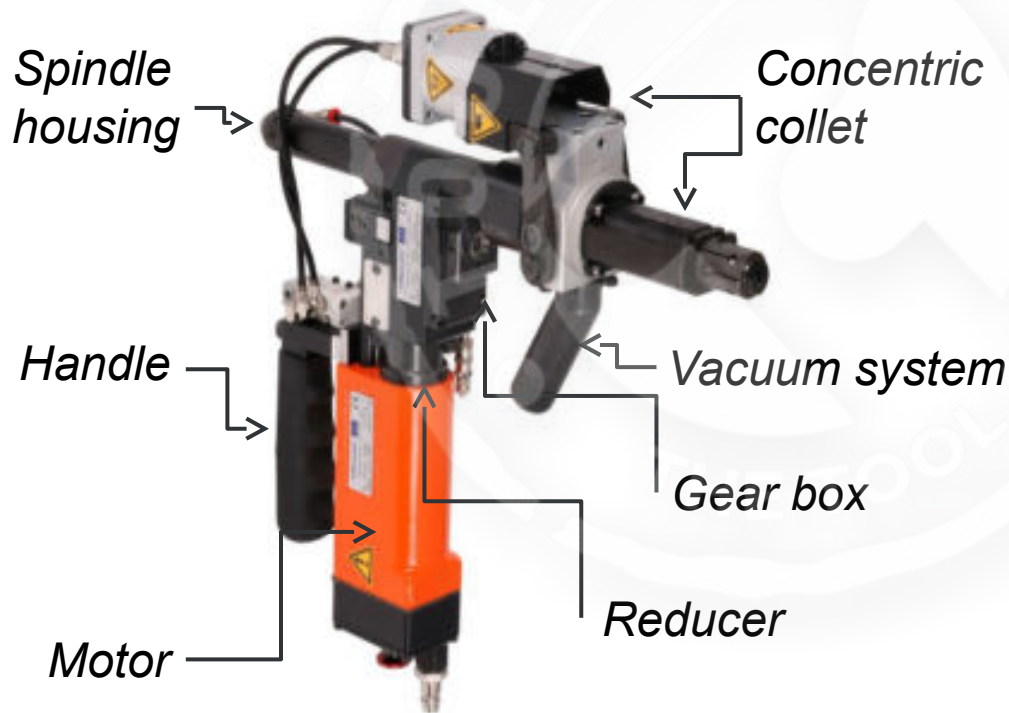
- Reduced overall for constraining applications - 20952





20932 (RA) / 20952 (IL)

- Key components & options for each customer requirement



*Plenty of options...*



*...and more*

20942 (RA) / 20962 (IL)

- Drill and countersink application for wide range of materials

- Motor power: 1,2hp - 883W
- Spindle speed: 400 – 750 – 1100 – 1400 – 1700 – 2700 – 4500 – 6000rpm
- Feed in/rev (*mm/rev*):  
.0006 (0,015) - .0012 (0,03) - .002 (0,05) - .0028 (0,07) - .004 (0,10)
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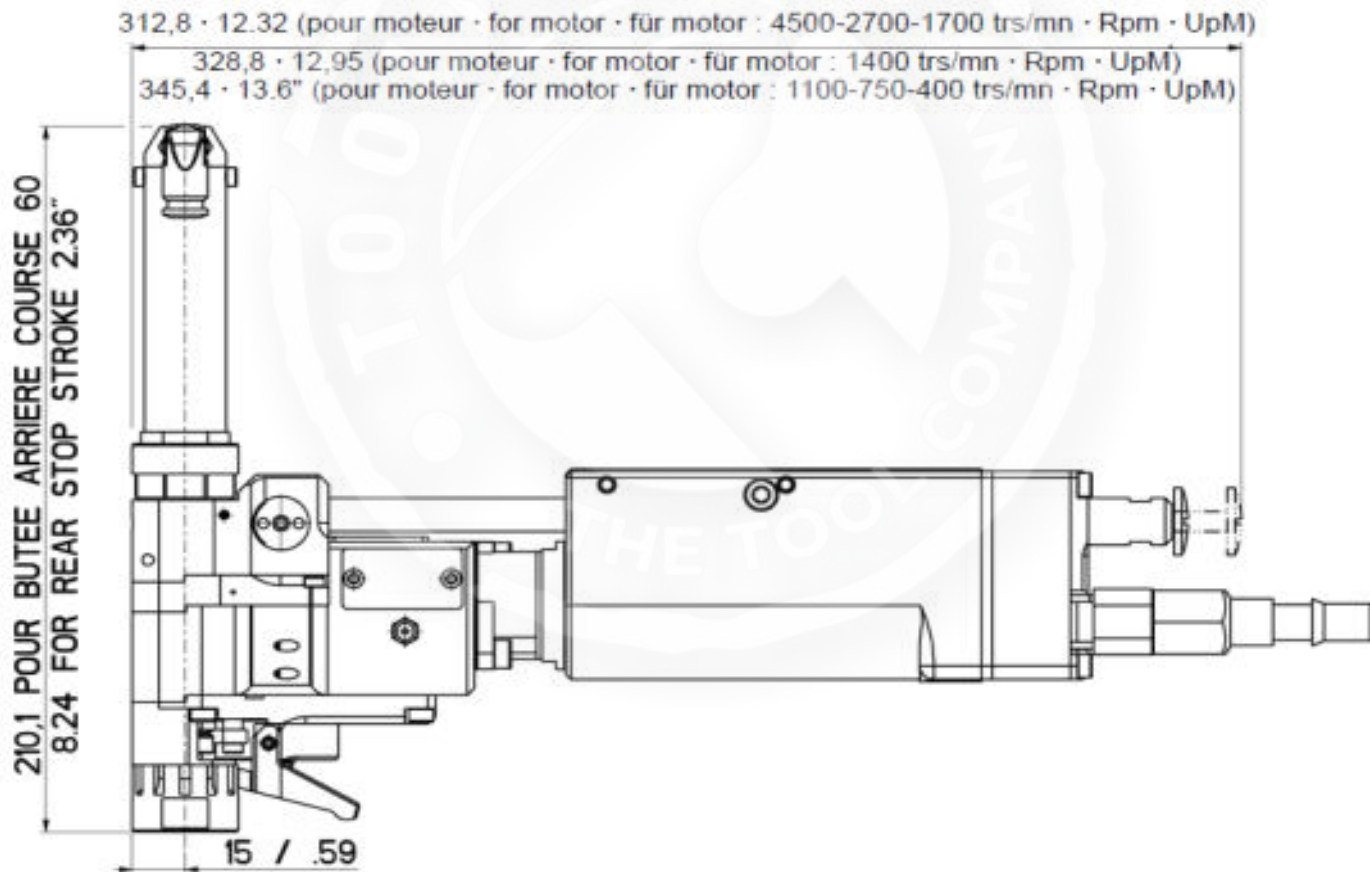
**4,63 lbs  
2,2 Kg**





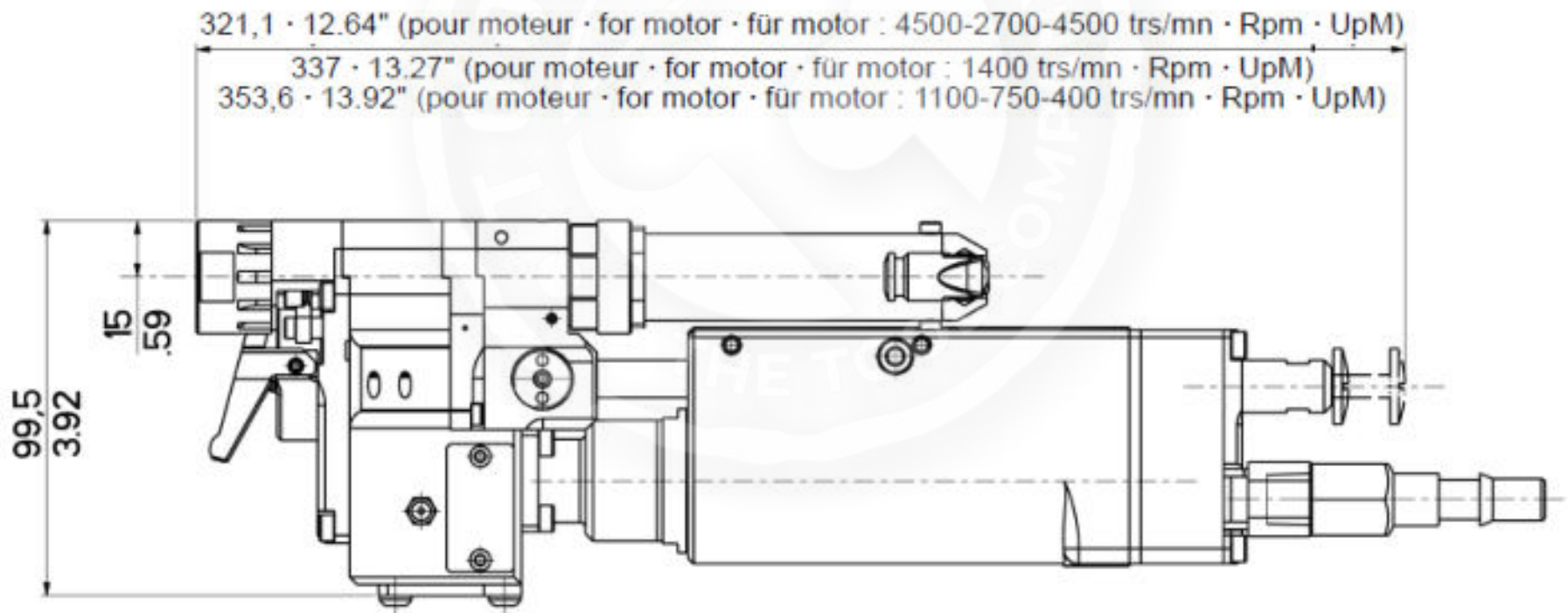
20942 (RA) / 20962 (IL)

- Reduced overall for constraining applications - 20942



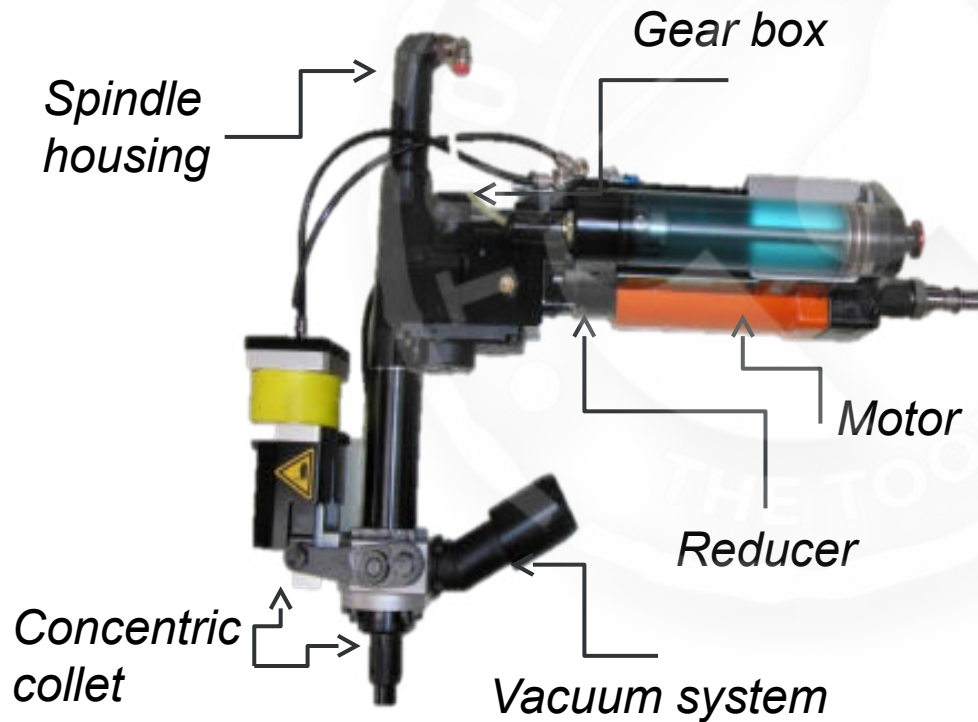
20942 (RA) / 20962 (IL)

- Reduced overall for constraining applications - 20962



20942 (RA) / 20962 (IL)

- Durable components & judicious options



*Some optional parts...*



A1

- New modular design fully automatic tool
  - Improved durability 300 000 cycles
  - Greater hole capacity
  - Improved mechanical design to minimize spindle jam
  - Configurable error proofing reduces defects
  - Easy (10 minute) feed gear change or Mitis change
  - Integral Easy Access Mitis



## The Best Sellers

**Recoules  
Quackenbush**

### 2QNPD Nutplate Drill

- Capacity .1285" Drill/ .250" Countersink\*
- .6"/15mm Feed Stroke, 7/16"/11mm Clamp Stroke
- Power 0.7hp/0.5kW
- Weight 5lbs/2.3Kg\*
- RPM 600/6000
- Minimum Countersink Depth Accuracy of  $\pm .001"$



**5 lbs  
2,3 Kg**

We are already working  
on your future  
applications...





## 20802 Mini C-Clamp

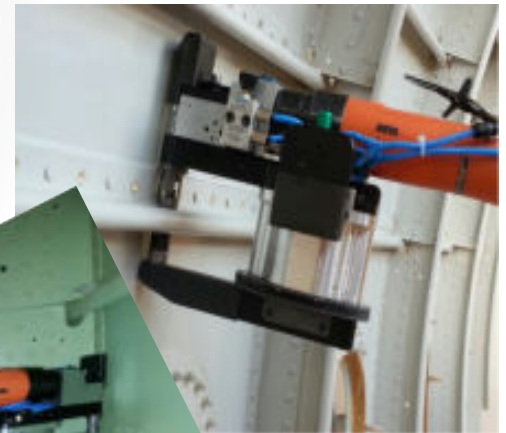
- The Most Compact ADE on the Market!

- Dedicated to holes up to 10 mm
- 0,9 HP Pneumatic motor
- Speed 500 to 3200rpm (6000 and 9000 ongoing)
- Feed 0,07 to 0,14 mm/tr (.003 to .006 in/rev)
- Less than 3 kg!! (6.6 lbs)

- Designed to Increase Quality

- Due to its incredible small size and efficiency, this ADE can replace most of the manual drilling to increase quality

**Already available !**

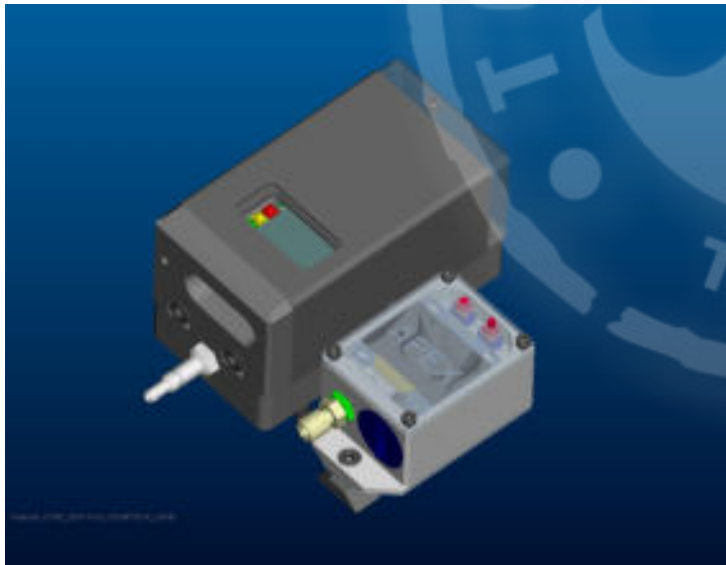


- Cycle time optimization

## New E-COUNTER

- The Smallest Colored Screen Counter on the Market!

- Cycle Time monitoring
- Process control

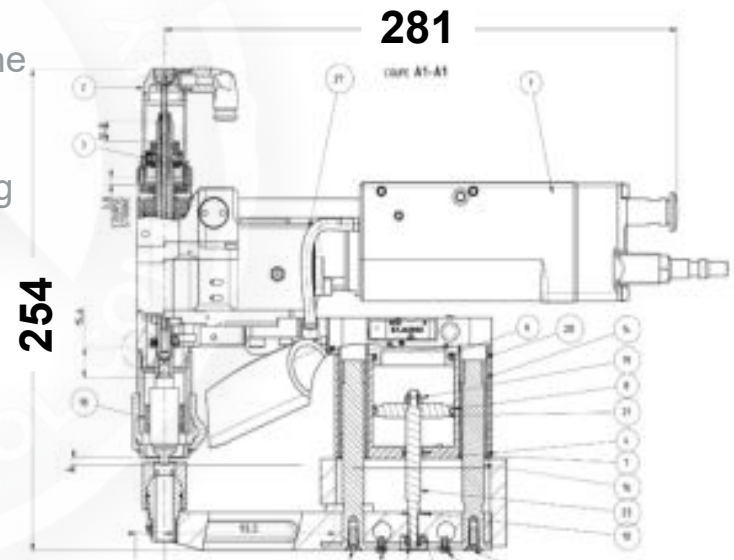


**Already available !**

## The future 20942 C-Clamp

- The 20942 qualities, associated to C-Clamp benefits

- C-Clamp integrated to one of the Best Sellers, the 20942 machine
- The most appropriate machine for countersinking applications with difficult access !



**Available soon !**

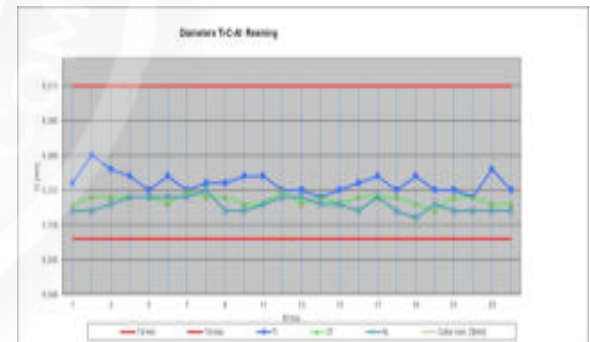
ATG customer service &  
maintenance :  
Technicians & engineers  
always available for you...



- Ongoing communication with our customer during all the project, and even after !
- For every problem, a solution: we commit to quickly respond to your questions and comments
- 360° overview

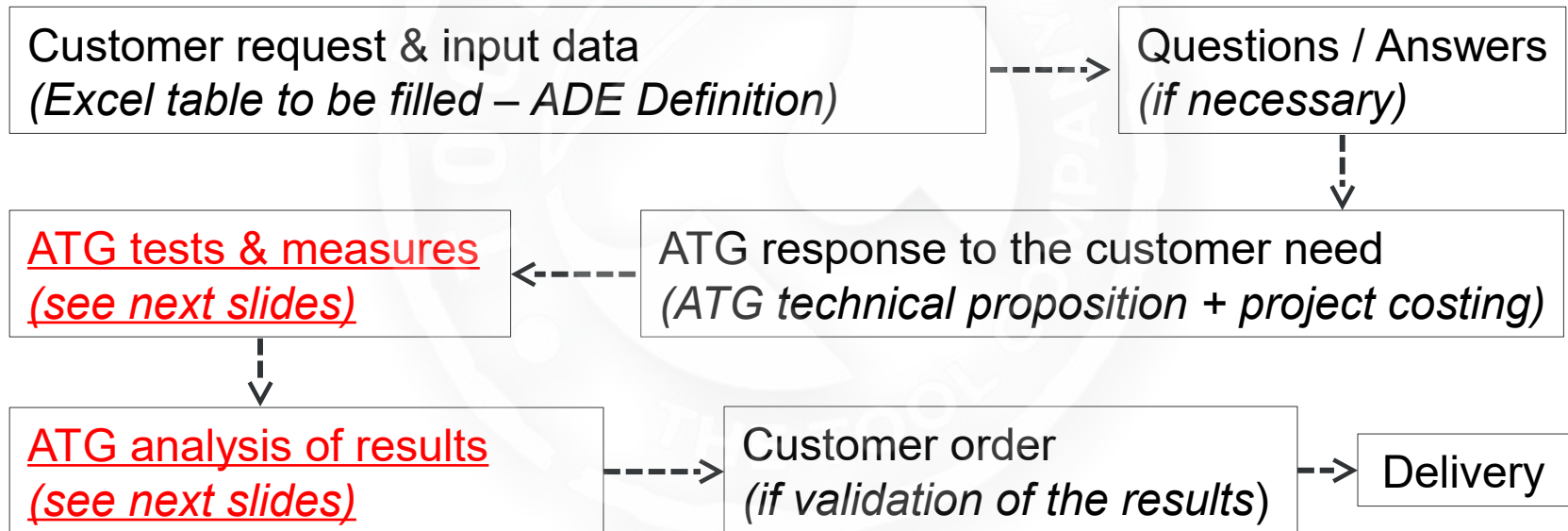


# Quality of products & services thanks to well-managed working methods...





- Satisfying our customers is the main priority



- Customer proximity · Engineers & technicians at your service · Reactivity

- As a turn key solution provider (providing drilling machine + cutters), our team has developed a UNIQUE know-how in analyzing and optimizing drilling processes
- This capability has been possible by creating an analysis methods which has proven to bring clear advantages in developing turn key solutions. This method is based on:
  - Live measurement of the drilling torque
  - Live measurement of the drilling thrust
  - Live measurement of the machine speed
  - Analysis of the chip
  - Accurate measurement of the hole quality
  - Drilling machine power capabilities analysis

- The complete set of means available in our lab will be put at the customer disposable.
- A test plan will be agreed prior the test session to prepare the means

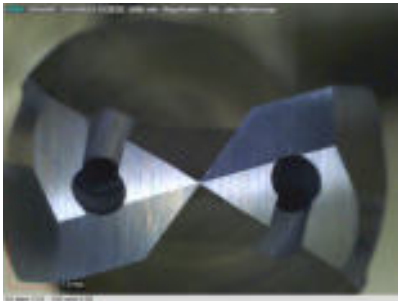
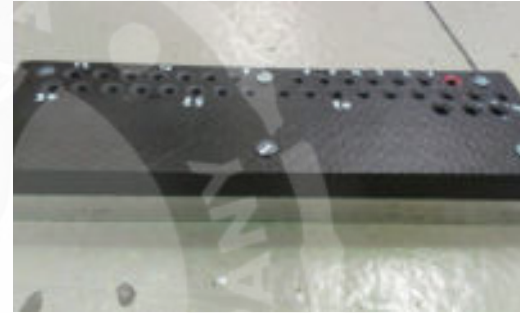


## Drilling Column

- The ADE is installed in a position representative of the position it has in “real life”, with or without lubrication, vacuum or cooling
- The lub, vacuum or cooling are representative of the customer's ones



- To monitor the holes quality and the results obtained, the holes will be measured



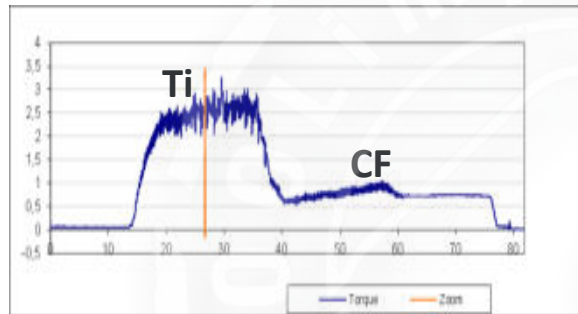
## Control

- Hole Quality Control (Mitutoyo / Bowers)
- Tolerance precision diameters (Cpk)
- Ra, burrs and countersink variation
- Cutting tool wear development with microscope

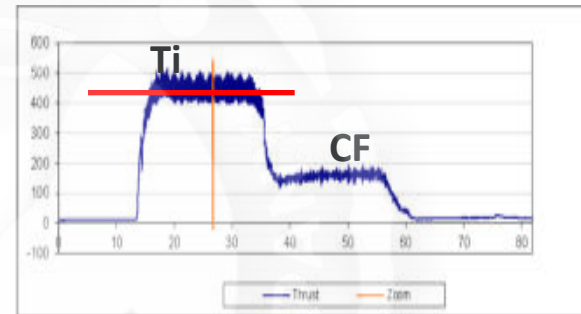
# ATG Tests, Measures & Analyses

- Once the analysis done, a report will be edited and transmitted to the customer with all the data recorded

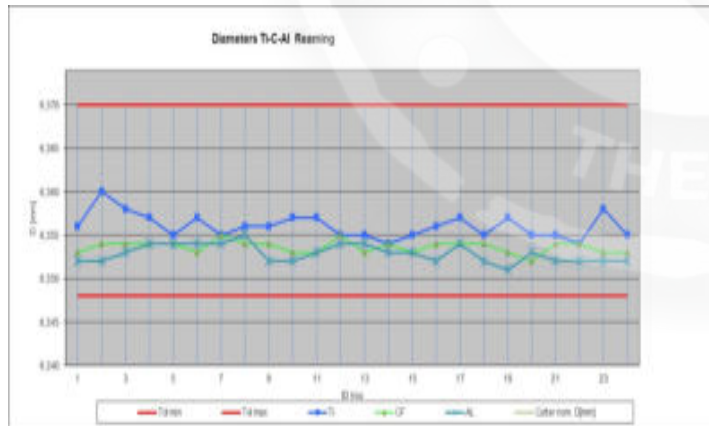
**Torque (Nm)**



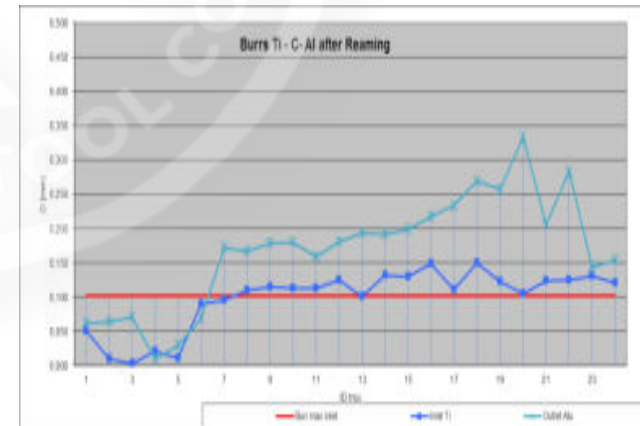
**Thrust (N)**



**Diameters (mm)**



**Burrs (mm)**



## Reaming

Cpk Ti	1,87
Cpk C	2,63
Cpk Al	1,57
	0

- Strengthen with these data, the process will be understood by our customers that will have the freedom to:
  - Let the process « as is »
  - Eventually make some modifications to improve the process (cutter life, cycle time, hole quality...)
- Of course, the Team of APEX will be able to support and help if needed to propose changes or new solutions



# Conclusions

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**Recoules  
Quackenbush**



Thank you for your attention,  
any questions ?