



EDU-VET

E-Learning, Digitisation and Units for Learning at VET schools –
Creating online Learning Environments in Technical Education for
European metal industry

Overview online tasks – H5P

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Project Title: E-Learning, Digitisation and Units for Learning at
VET schools – Creating online Learning
Environments in Technical Education for European metal industry

Acronym: EDU-VET

Reference number: 2019-1-DE02-KA202-006068

Quick overview and user information to H5P

This guideline to h5p shows you how you can use interactive, online modules to create new types of digital learning and teaching material.

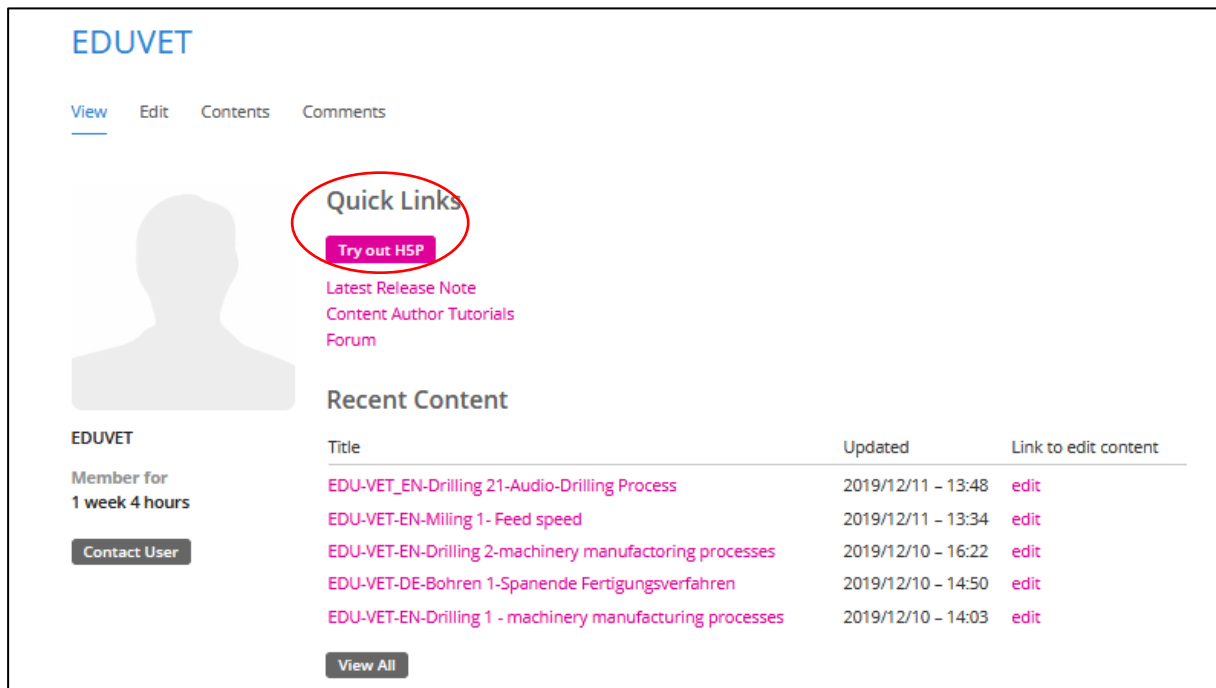
After a free and quick registration at the homepage of h5p (link: <https://h5p.org/>) you can start to create new learning and teaching materials.

Login data:

Accountname: eduvet@gmx.de

Password: 20eduvet19

The platform offers 46 types of interactive and digital content types. Click on the button “try out H5P” and you can select one of the several types:



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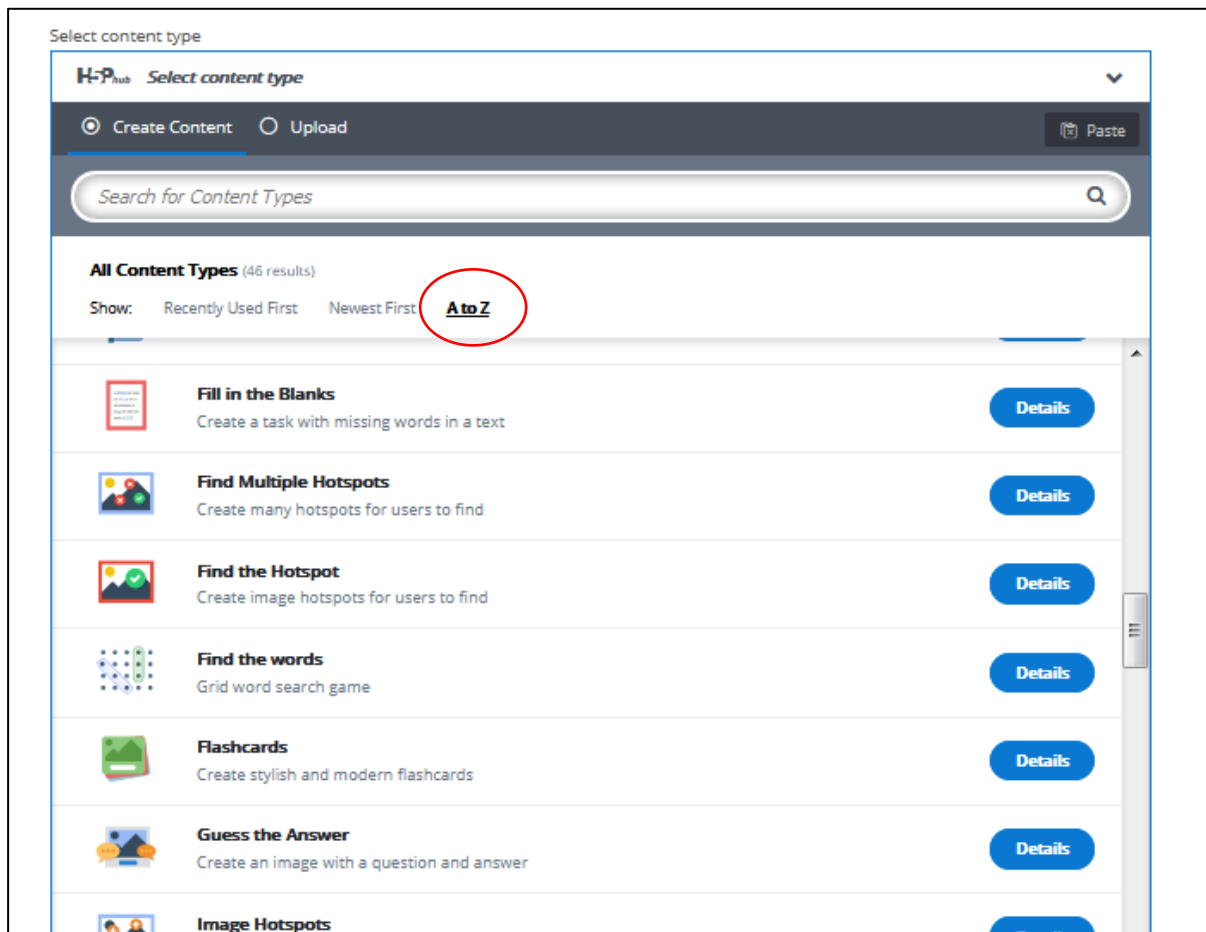
Title	Updated	Link to edit content
EDU-VET_EN-Drilling 21-Audio-Drilling Process	2019/12/11 - 13:48	edit
EDU-VET-EN-Milling 1- Feed speed	2019/12/11 - 13:34	edit
EDU-VET-EN-Drilling 2-machinery manufacturing processes	2019/12/10 - 16:22	edit
EDU-VET-DE-Bohren 1-Spanende Fertigungsverfahren	2019/12/10 - 14:50	edit
EDU-VET-EN-Drilling 1 - machinery manufacturing processes	2019/12/10 - 14:03	edit

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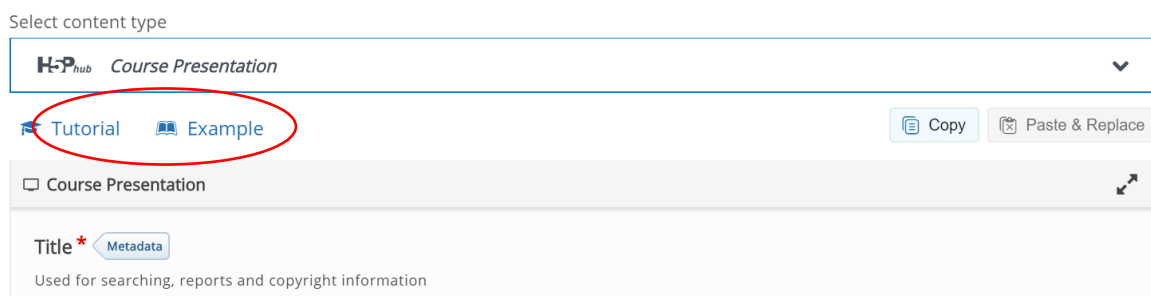
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1 week 4 hours

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This overview shows the actual 46 content types of H5P. Even if you work in groups or with a partner be sure, that you select the "A to Z" format to publish the results, otherwise your partner just see the used first and not the last module you worked on (the recently used first option).

Moreover you will also find explanations and tutorials at the homepage of h5p:





Examples of H5P content types

Accordion

EDU-VET-EN-Drilling 1-machinery manufacturing processes-Accordion

▼ **Machinery manufacturing processes**

"Drilling screw thread tapping, countersinking and reaming are machinery manufacturing processes that mainly use multi-cutter tools which have similar cut and feed conditions."

Source: Bartenschlager et al. (2016, S. 139).

Bartenschlager et al. (2016): Metal Engineering Textbook. Haan-Gruiten: Verlag Europa-Lehrmittel.

> **Drilling process**

> **Drilling process and cutting parameters**

Reuse <> Embed H5P



Advanced fill the blanks

EDU-VET-EN-Drilling 2-machinery manufacturing processes-Advanced fill the blanks

Fill in the missing words.

"The **feed rate** f in mm per rotation primarily depends on the , the and of the drill, on the drill process and the drilling depth. It influences the and the power requirement."

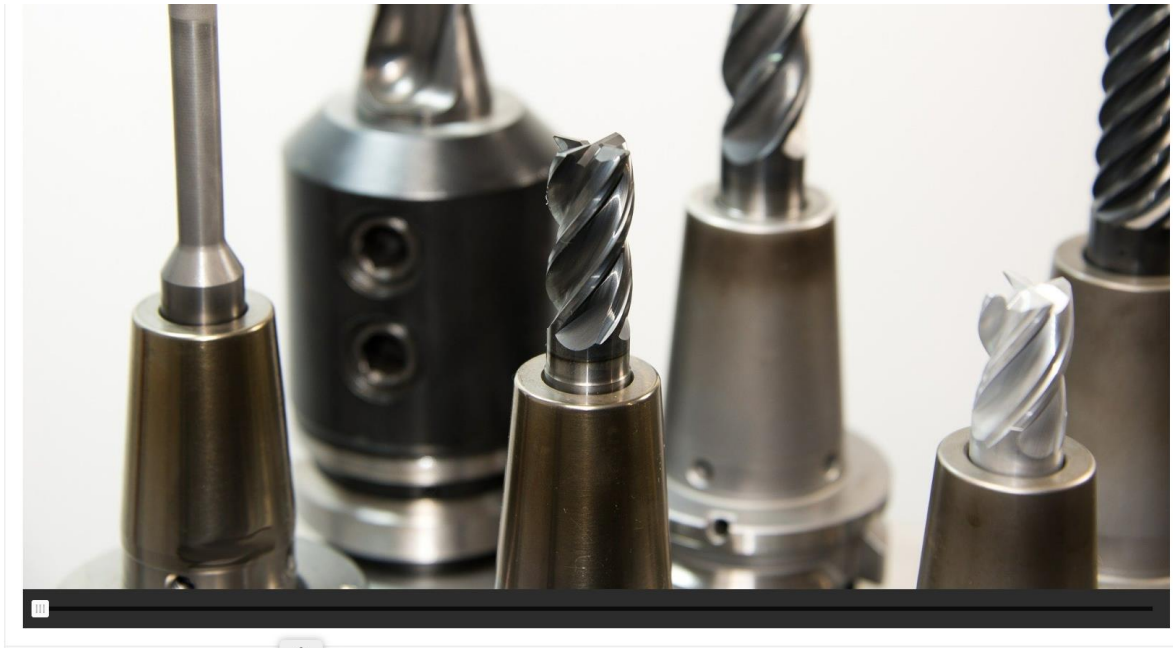
Check

[Reuse](#) [Embed](#)

H-P

Agamotto (Blender)

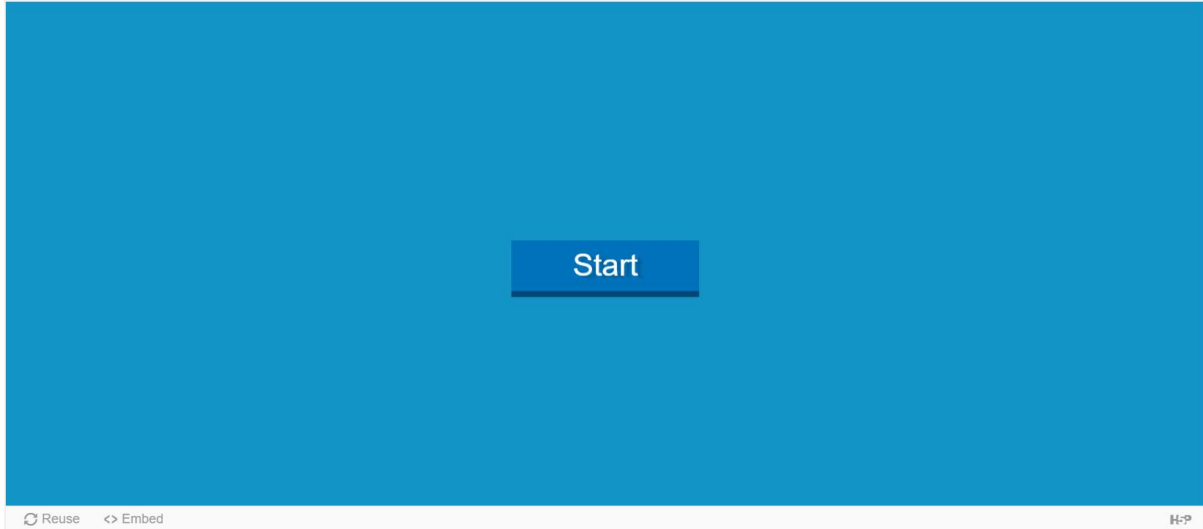
EDU-VET-EN-Drilling 3-machinery manufacturing processes-Agamotto





Arithmetic Quiz

EDU-VET-EN-Drilling 4-machinery manufacturing processes-Arithmetic Quiz



The image shows a large blue rectangular area representing the quiz interface. In the center of this area is a white rectangular button with the word "Start" written in blue text. Below the blue area is a white footer bar containing the text "Reuse" with a circular arrow icon, "Embed" with a double-headed arrow icon, and "H-P" on the right side.



Audio

Your browser does not support this audio

[Reuse](#) [Embed](#)

H-P

➔ **Task type is not applicable**

Audio Recorder

Your browser does not support this audio

[Reuse](#) [Embed](#)

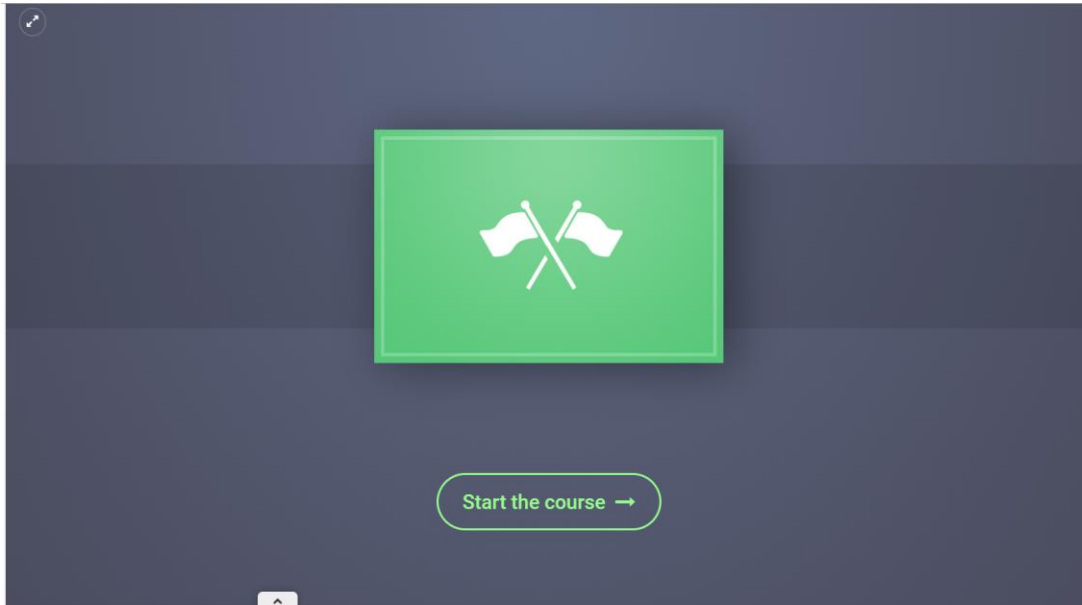
H-P

➔ **Task type is not applicable**



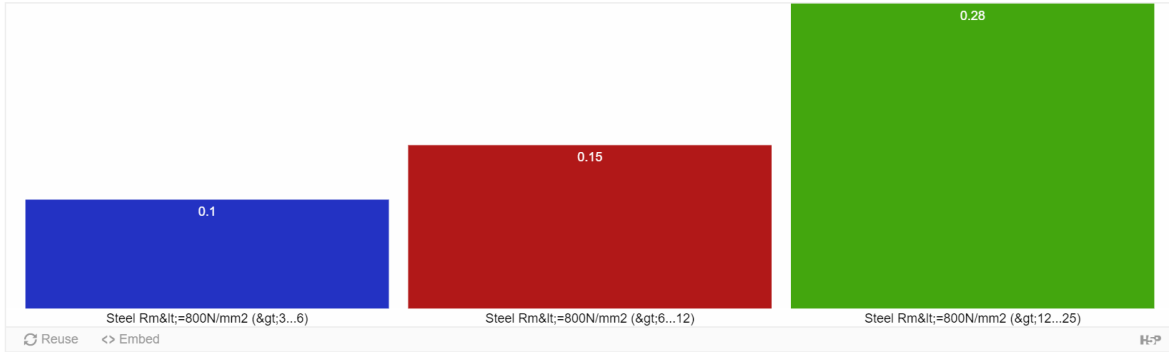
Branching Scenario

EDU-VET-EN-Drilling 5-Types of drills-Branching Scenario



Chart

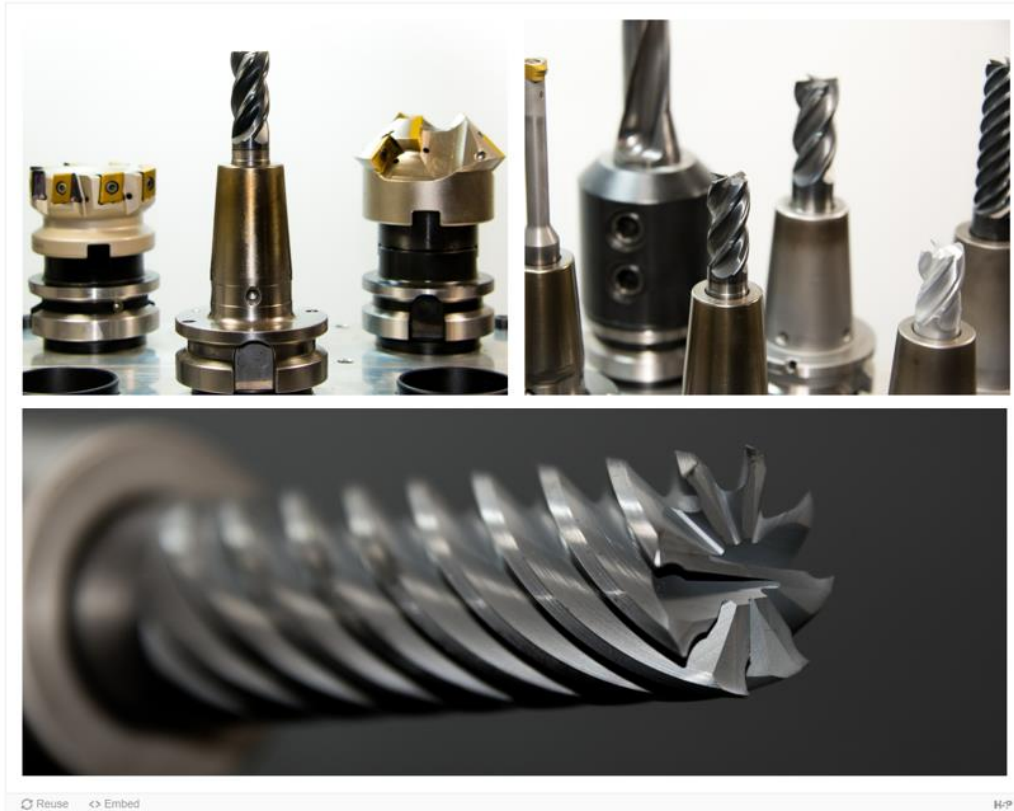
EDU-VET-EN-Drilling 6-Chart






Collage

EDU-VET-EN-Drilling 7-machinery manufacturing processes-Collage



Column

EDU-VET-EN-Drilling 8-Drill types-Column



Do you see a spiral drill on the picture?

True False

Please fill in blanks.

Type N is a "normal version for , grey , stainless , e. g. high-tensile steel, laminates". Type W is "for soft tough , e. g. aluminium, cooper and zinc .

[Reuse](#) [Embed](#) H:P

Course Presentation

EDU-VET-EN-Turning 1-Turning processes-Course Presentation

The turning processes

For the turning different tools exist. For a deeper overview watch the video, please.



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2019-1-DE02-KA202-006068
IO2 Curriculum

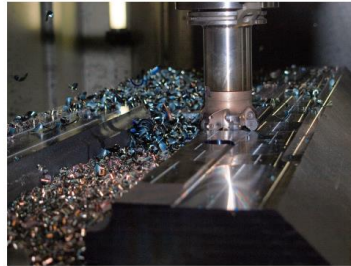
Co-funded by the
Erasmus+ Programme
of the European Union



Dialog Cards

EDU-VET-EN-Milling 4-machining parameters-Dialog Cards

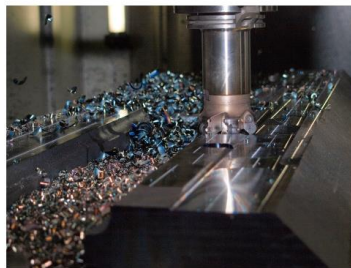
In this task you have to handle with machining parameters of the milling process. Please describe these technical terms.



Cutting speed (V_c)

Turn

In this task you have to handle with machining parameters of the milling process. Please describe these technical terms.



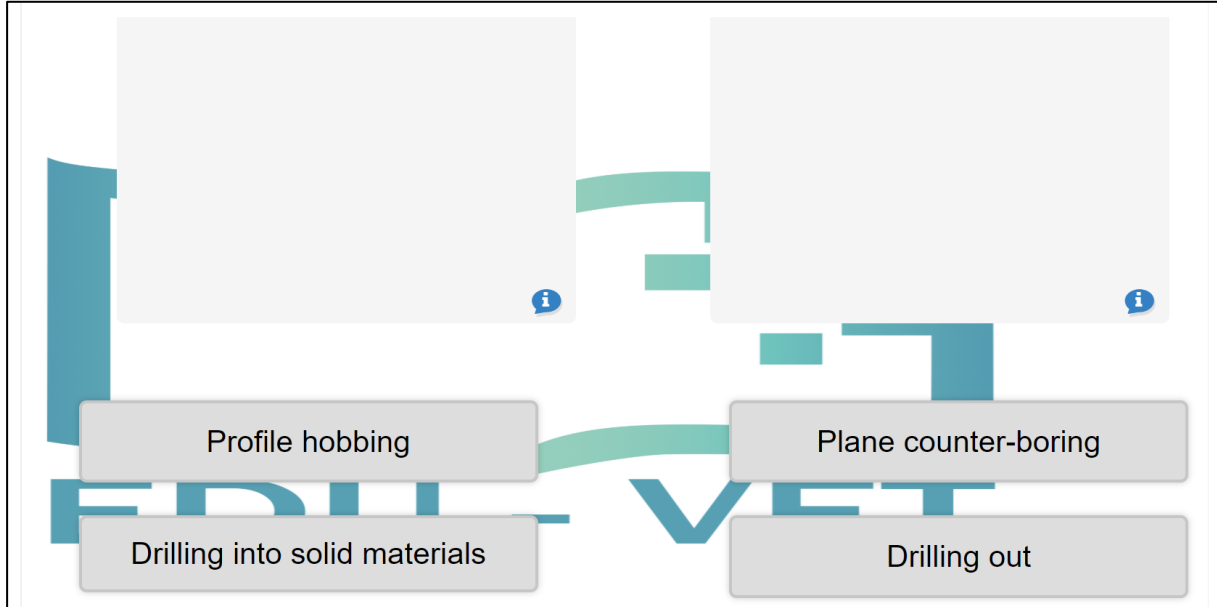
"The cutting speed V_c is selected depending on the cutting material and the material. During this process the manufacturer's guide value recommendations for rough and finish milling should be observed."

Source: Bartenschlager et al. (2016, S. 171).

Turn

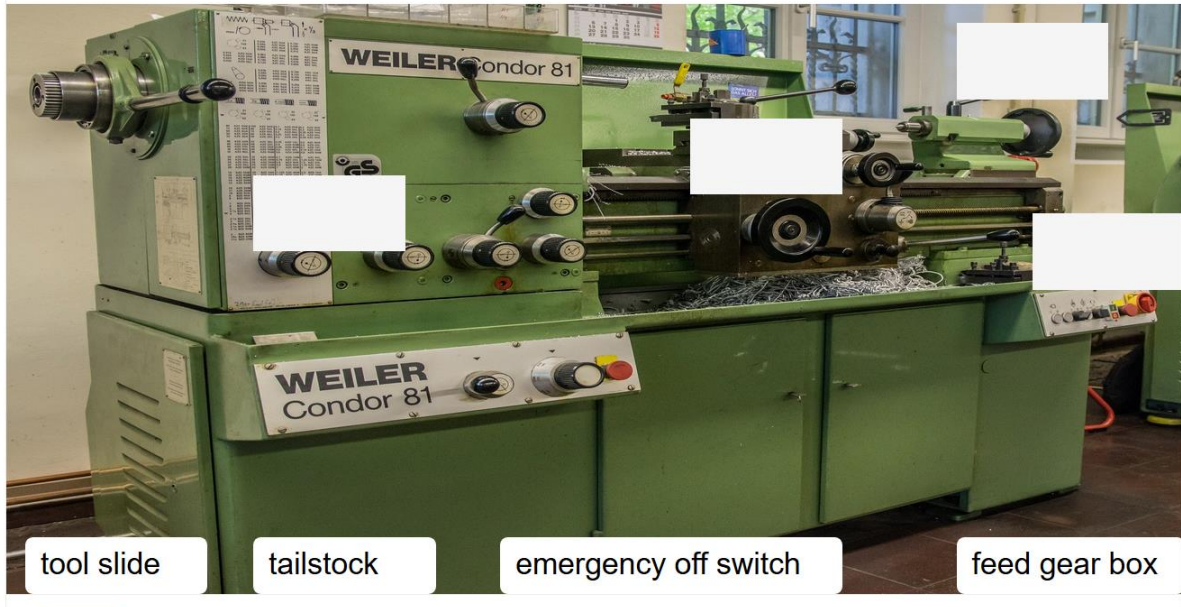
Drag and Drop

EDU-VET-EN-Drilling 9-machinery manufacturing processes-Drag and Drop



Drag and Drop

EDU-VET-EN-Turning 2-universal lathes-Drag and Drop



Drag the Words

EDU-VET-EN-Milling 1- Feed speed-Drag the words

[View](#) [Edit](#)

[Clone content](#)

Submitted by EDUVET on Wed, 12/11/2019 - 13:34

Drag the words into the correct boxes

The cutting width is also known as the . It also named as , which indicates how wide the mill cuts the workpieces. The material removal rate Q in cm^3 the workpiece volume removed per minute.

[Reuse](#) [Embed](#) H-P



Essay

EDU-VET-EN-Milling 2-Tool wear-Essay

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Submitted by EDUVET on Thu, 12/12/2019 - 12:42

Tool wear

"Milling tools always operate with interrupted cutting. After the cutting action with corresponding heating, the cutting edge cools down again, which means that it is subject to large temperature changes. Every cut made by the insert results in shock loads. If the milling axle is outside the workpiece, edge upon entering the workpiece. If the milling axle is inside the workpiece, the more stable machining face receives the impact loading.

Cracks or insert fractures can also occur on brittlehard cutting materials when exiting the workpiece due to the sudden pressure relief" (Bartenschlager et al., 2013).

Please write everything down you know about "tool wear". Especially, which problems can appear.

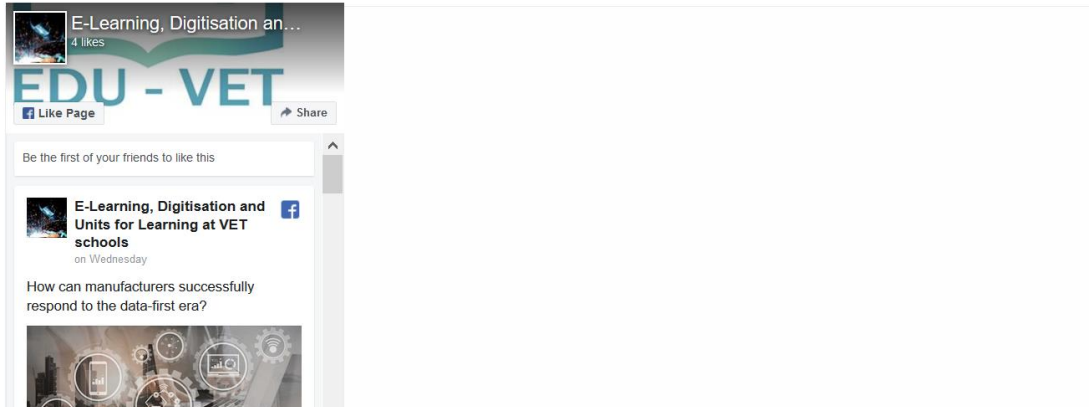
Facebook Page Feed

EDU-VET-EN-Milling 3-Facebook Page Feed

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[Clone content](#)

Submitted by EDUVET on Thu, 12/12/2019 - 12:50





Fill in the Blanks

EDU-VET-EN-Milling 3-Cutting materials in milling tools-Fill in the Blanks

Please, fill in the blanks if the text below.

"HSS end and arbor mills have a higher toughness with lower hardness and temperature resistance compared to carbide mills. End mills made of or Cermet (titanium carbide + titanium nitride) have a longer service life and stiffness compared with HSS. They are also suitable for high-speed cutting (HSC) and hard machining.

Mills with inserts:

inserts, which are mostly , enable use in almost any milling machining including HSC and hard machining in addition to dry machining (Bartenschlager et al., 2013, S.174)".

Check

[Reuse](#) [Embed](#)

H-P

Find the words

EDU-VET-EN-Turning 2-Universal lathes-Find the words

Find the words from the grid

A	D	R	I	L	L	E	R	B	C	P	M	Q	F
D	K	W	N	N	F	E	A	L	O	G	S	D	M
M	T	U	U	H	A	T	X	I	U	Q	K	J	Y
T	L	V	H	M	M	N	Q	O	N	M	O	B	F
K	M	F	I	W	L	R	V	H	T	Z	H	Y	Z
S	M	N	D	U	U	J	S	M	E	Z	V	T	X
U	G	C	F	K	J	N	E	Z	R	Q	L	G	L
C	Y	R	L	Y	F	T	G	W	S	K	T	V	A
Z	L	A	B	U	A	D	P	R	I	E	O	O	Q
U	V	P	N	Q	D	C	V	R	N	O	F	R	S
D	J	N	E	E	L	E	U	M	K	F	P	Q	O
B	E	N	R	G	O	S	L	C	I	L	I	W	C
R	V	H	U	T	A	P	P	I	N	G	T	P	H
U	Y	X	E	S	D	P	X	R	G	L	I	C	E

Find the words

driller tapping countersinking reaming


Time Spent : 0:17 1 of 4 found

Find the words

EDU-VET-EN-Drilling 9-Drilling Process-Find the words

Find the words from the grid

F	J	N	Y	X	B	C	F	T	F	A	H	S	D	E	E	F	A	P	Q
L	A	T	H	E	C	H	U	C	K	N	U	I	E	U	V	U	S	L	D
J	C	H	I	P	T	R	A	Y	X	R	N	A	E	M	V	F	J	V	U
G	T	A	I	L	S	T	O	C	K	O	C	I	P	B	R	K	T	Q	Q
B	P	Z	M	A	S	K	W	H	X	T	A	Q	S	D	L	H	V	S	P
O	Y	G	U	A	R	D	X	T	R	A	T	D	R	E	P	D	C	U	F
H	K	F	I	I	U	F	A	F	K	C	W	E	O	F	J	N	W	W	G
X	B	Z	U	O	V	B	Y	X	X	I	S	F	F	F	F	D	E	Z	N
B	Y	K	V	O	Z	U	B	O	O	D	N	R	R	X	U	X	R	K	X
D	O	V	J	S	B	N	I	L	B	N	T	K	E	J	Q	U	Q	E	H
N	T	T	K	D	M	F	X	X	R	I	A	S	V	W	A	S	L	V	I
E	E	I	O	N	P	Z	M	A	A	N	R	P	E	G	R	F	H	A	Y
X	T	O	O	L	S	L	I	D	E	O	J	M	L	V	M	T	S	N	E
N	A	Y	U	E	C	S	U	Z	G	I	B	I	L	F	P	T	S	U	I
L	E	S	Z	E	U	V	H	I	D	T	T	T	O	A	T	F	S	I	E
I	V	B	B	K	Z	M	G	A	E	I	Q	W	R	F	J	K	H	O	H
Q	W	F	F	U	A	G	Y	F	E	S	W	L	T	P	N	M	X	D	N
J	O	H	C	T	I	W	S	F	F	O	Y	C	N	E	G	R	E	M	E
S	J	T	H	T	J	E	K	I	P	P	N	O	O	I	R	M	I	A	J
T	U	N	Z	J	H	E	J	G	A	J	G	X	C	L	W	X	I	N	Q

 Find the words

Find the hotspot

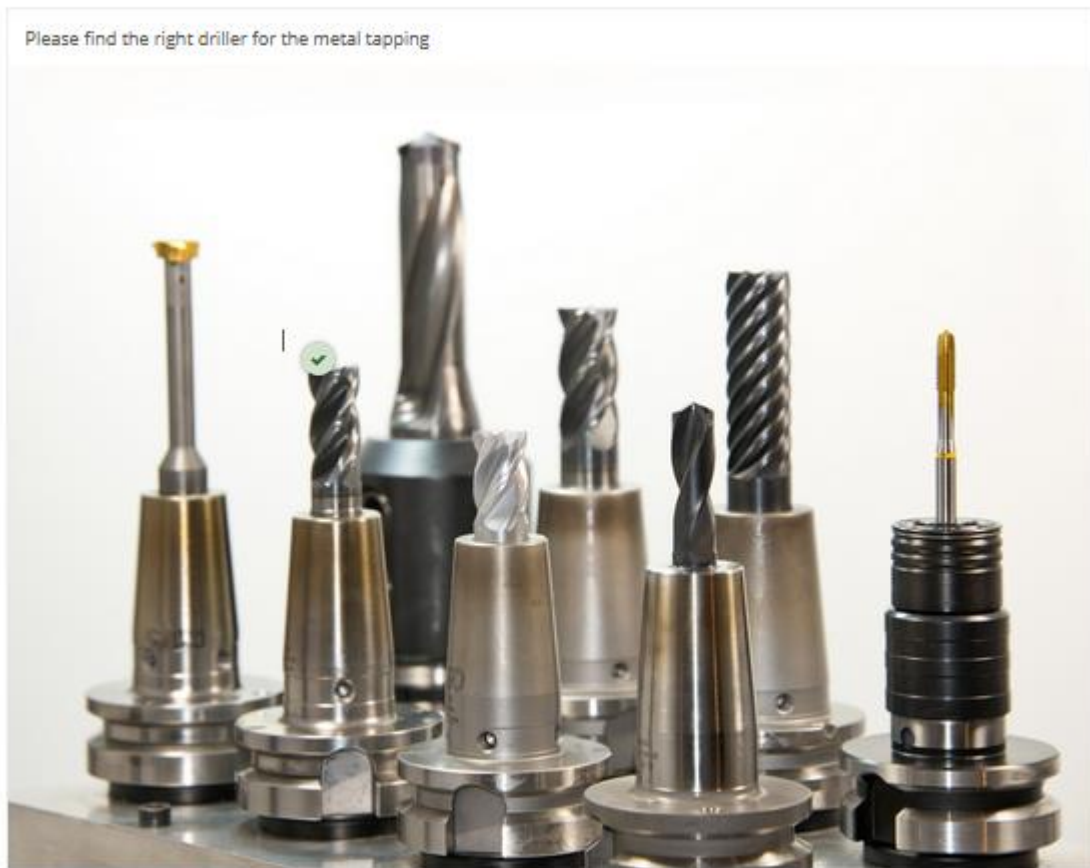
EDU-VET-EN-Drilling 10-Metal Driller-Find the hotspot

[View](#) [Edit](#)

[Clone content](#)

Submitted by EDUVET on Wed, 12/11/2019 - 14:12

Please find the right driller for the metal tapping



You are right! Good job! 1 of 1 Where is the right driller for metal tapping?.

[Reuse](#) [Embed](#) 16-P



Find Multiple Hotspot

EDU-VET-EN-Drilling 11-Driller Function-Find Multiple Hotspot




Flashcards

EDU-VET-EN-Drilling 12-Grinding shapes for twist drills-Flashcards

Grinding shapes for twist drills

1 / 1



What are the four grinding shapes for twist drills?

Your answer

Check


Revise Embed H-P

Guess the Answer

EDU-VET-EN-Drilling 13-Grinding errors-Guess the Answer

Partnerwork!

Please describe the four grinding errors on twist drills to your partner!



[Reuse](#) [Embed](#) H5P

New to H5P? Read the [installation guide](#) to get H5P on your own site.

Tab to see the answer

Partnerwork!

Please describe the four grinding errors on twist drills to your partner!

1. Clearance angle too small 2. Clearance angle too large 3. Cutting edge of unequal length 4. Uneven angle

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New to H5P? Read the [installation guide](#) to get H5P on your own site.

Image Hotspots

EDU-VET-EN-Drilling 14-Countersinking-Image Hotspot

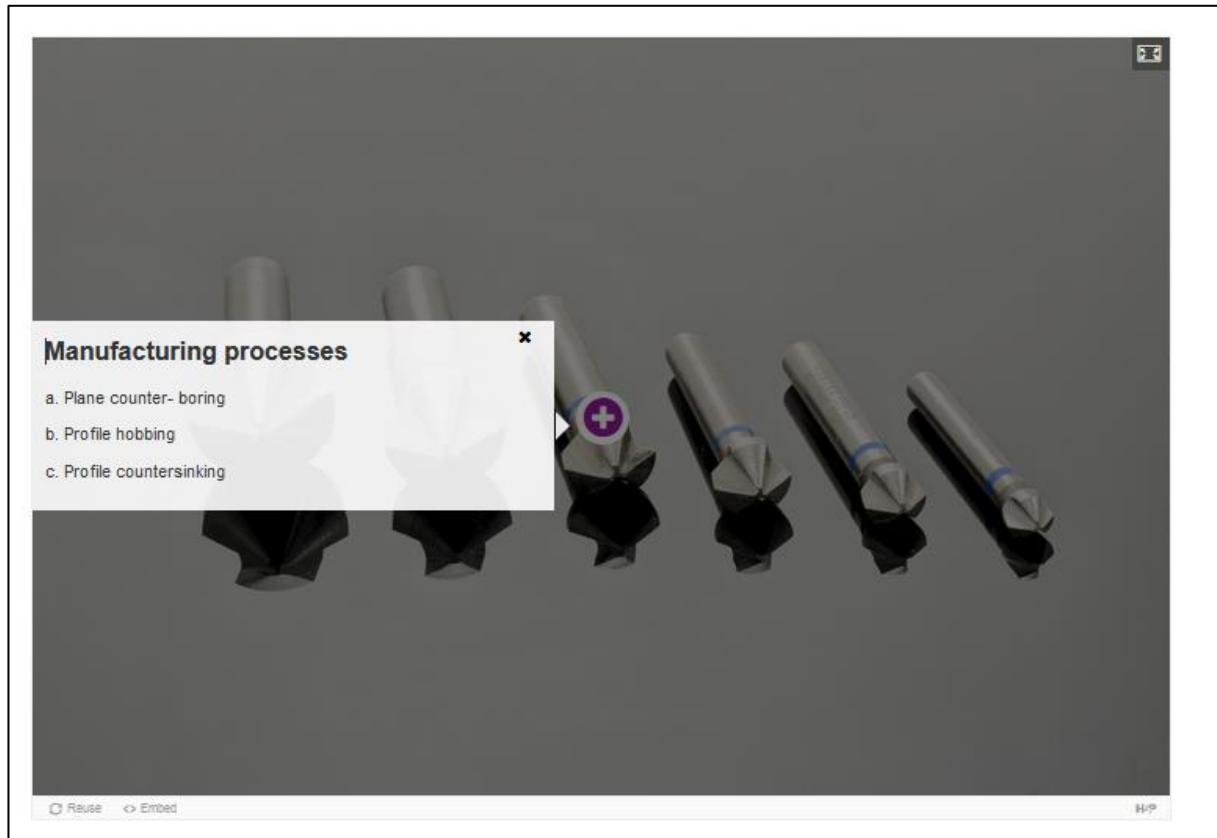


Image Juxtaposition

EDU-VET-EN-Drilling 15-Drill Selections-Image Juxtaposition



You can swap from one image to the next and back. Moreover, you can add more than two images and description.

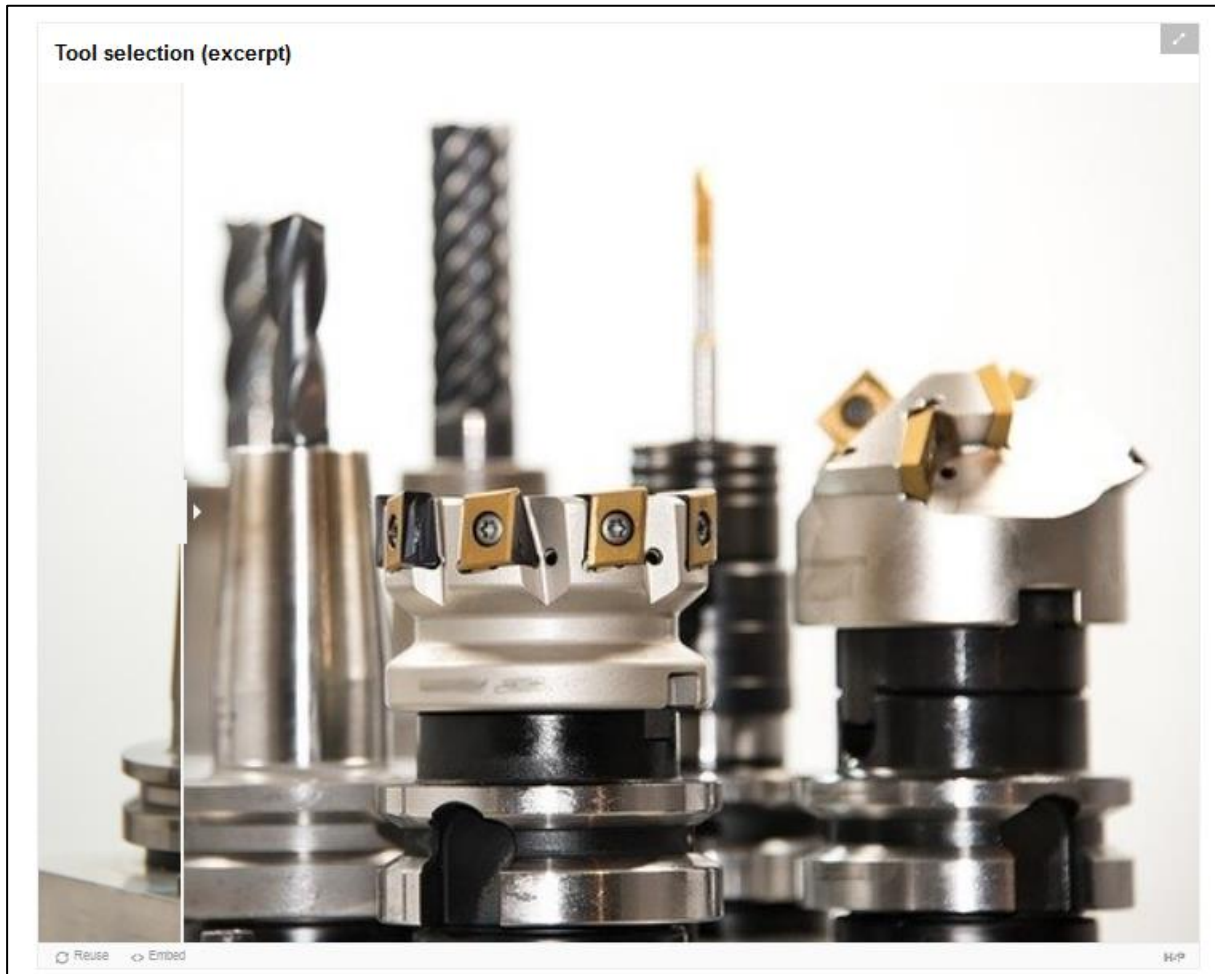
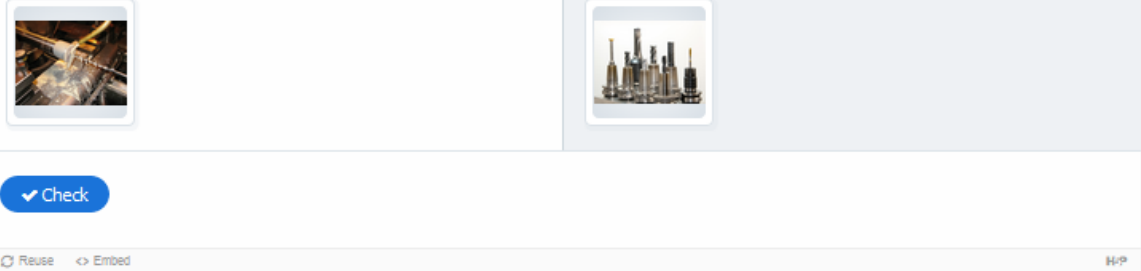


Image pairing

EDU-VET-EN-Drilling 16-Drilling Process-Image Pair

Great tool to demonstrate processes in images as well as to explain familiar topics to students.

Drag images from the left to match them with corresponding images on the right

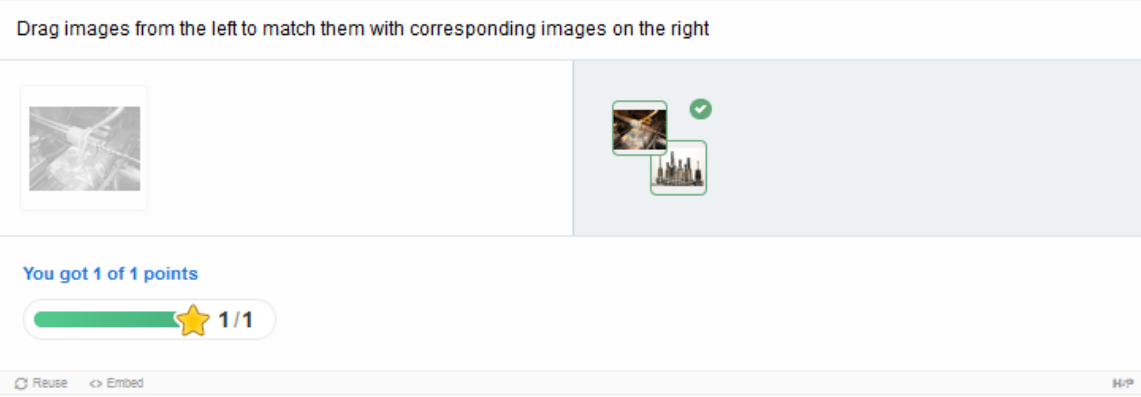


✓ Check

Reuse Embed H/P

Submitted by EDUVET on Wed, 12/11/2019 - 15:42

Drag images from the left to match them with corresponding images on the right



You got 1 of 1 points


Reuse Embed H/P

Image Sequencing


EDU-VET-EN-Drilling 17-machinery manufacturing processes-Image Sequencing

Nice tool to demonstrate and illustrate working processes as well as different types of drilling.


Drag to arrange the images in the correct sequence



Work preparation



Operation



Complete the job_...

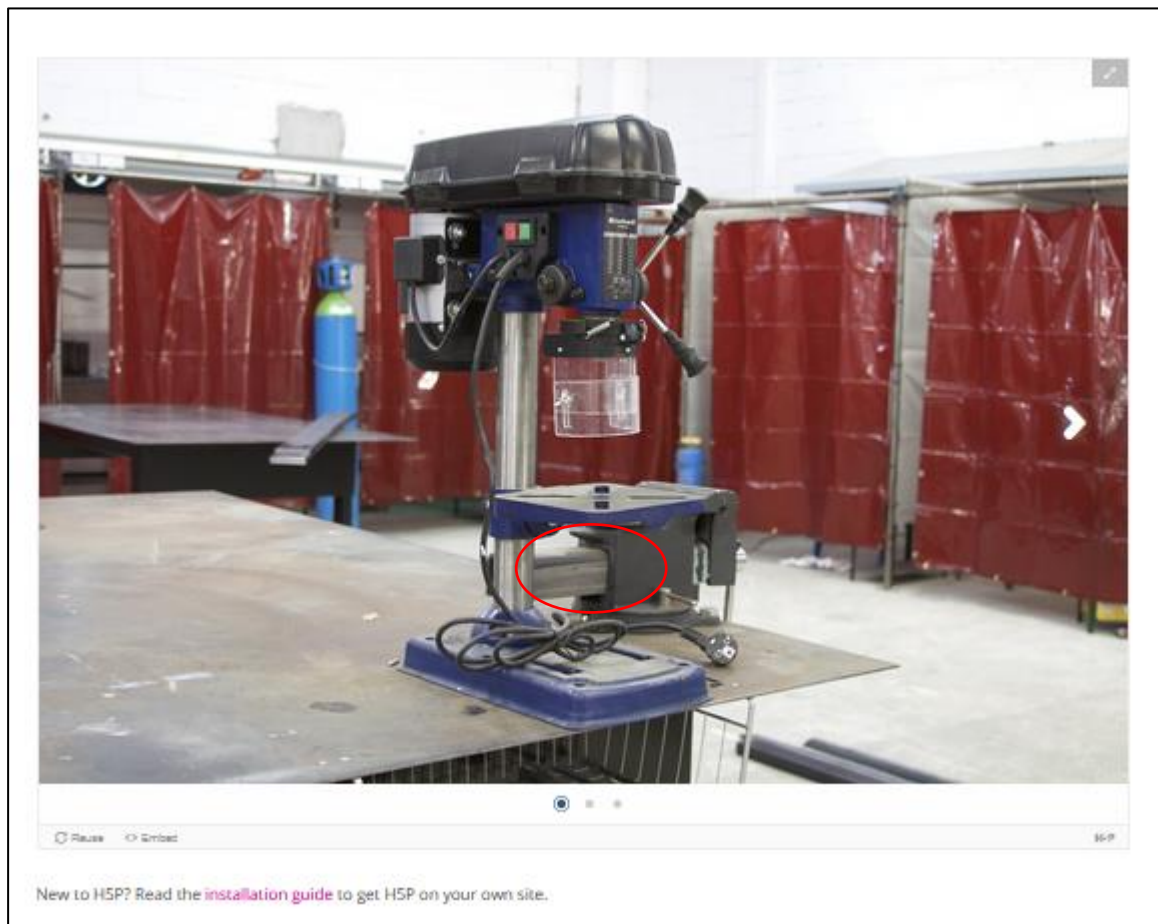
Time spent
0:03
Total Moves
1
You got 3 of 3 points

Reuse Embed

Image Slider

EDU-VET-EN-Drilling 18-Drilling Process-Image Slider

You can swip from one slide, picture or image two another and back. Therefore, H5P offers the opportunity to use so many pictures as necessary to explain the process, activity or learning material.

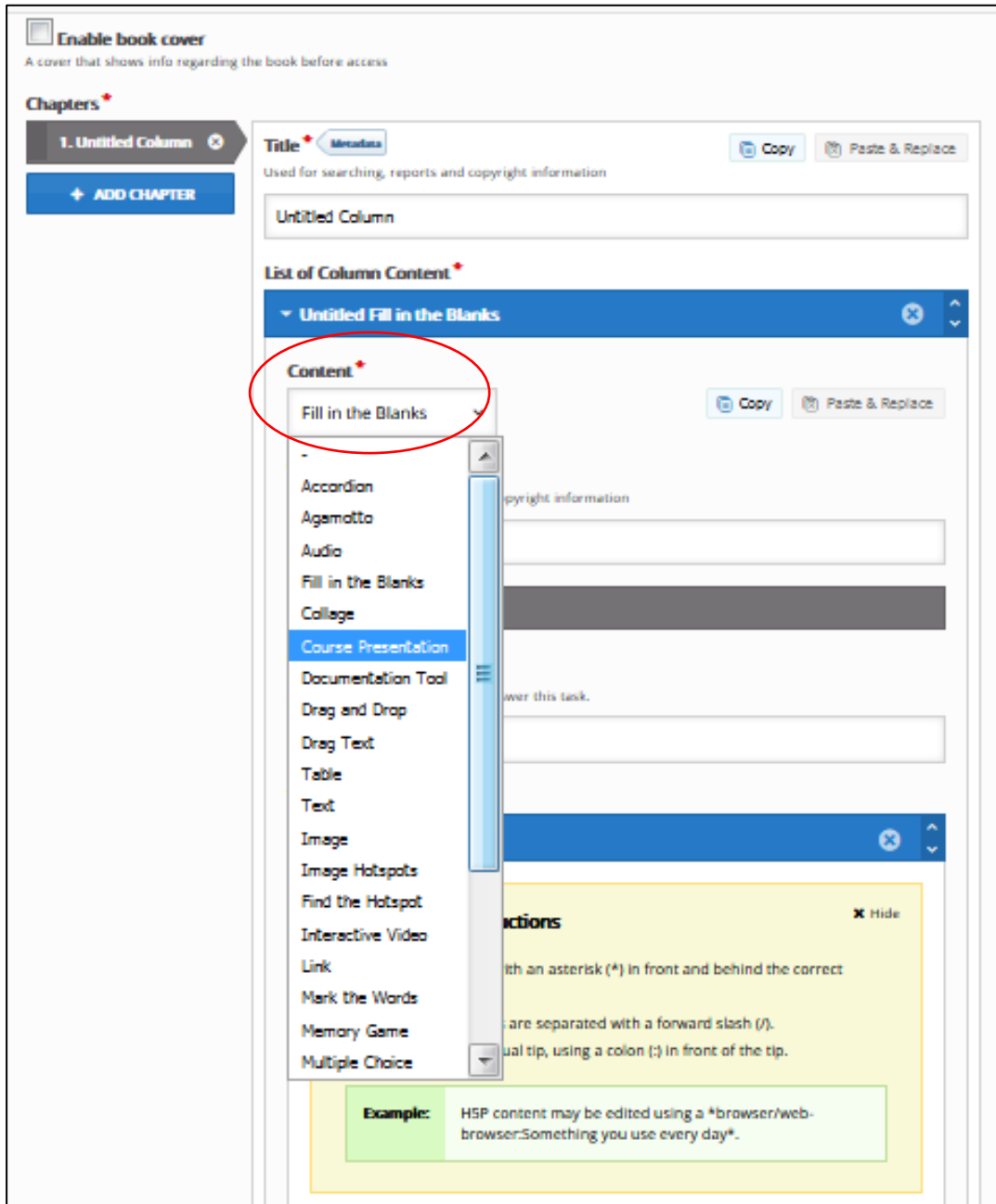




Interactive Book (alpha)

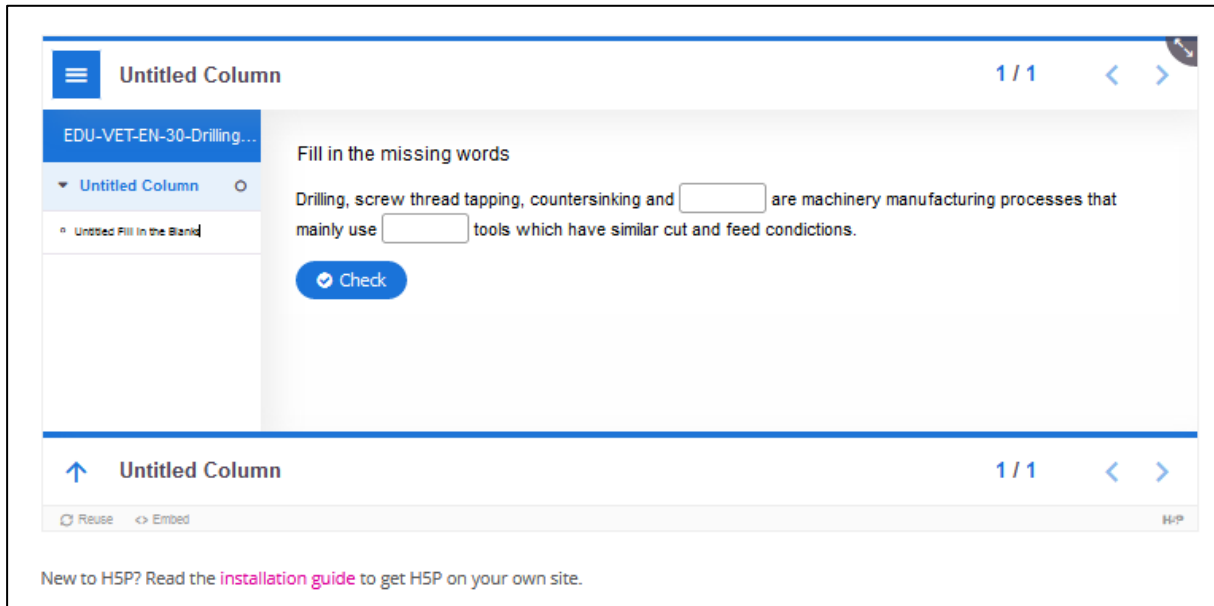
EDU-VET-EN-Drilling 19-Drilling Process-Interactive Book

The content type „Interactive book“ offers the opportunity to create an interactive online book. Therefore the creator can chose form several content types (see red hotspot).



The screenshot displays the editor interface for an interactive book. On the left, there is a sidebar with a toggle for "Enable book cover" and a "Chapters" section containing "1. Untitled Column" and an "ADD CHAPTER" button. The main area shows a "Title" field with "Untitled Column" and a "List of Column Content" section. A dropdown menu is open under "Content", listing various content types: "Fill in the Blanks", "Accordion", "Agemotto", "Audio", "Fill in the Blanks", "Collage", "Course Presentation", "Documentation Tool", "Drag and Drop", "Drag Text", "Table", "Text", "Image", "Image Hotspots", "Find the Hotspot", "Interactive Video", "Link", "Mark the Words", "Memory Game", and "Multiple Choice". The "Fill in the Blanks" option is circled in red. Below the menu, there is an "Example" box with text: "Example: HSP content may be edited using a *browser/web-browser:Something you use every day*." The interface also includes "Copy" and "Paste & Replace" buttons for the title and content fields.

Surface of the interactive book



The screenshot displays a digital interface for an interactive book. At the top, there is a navigation bar with a hamburger menu icon, the text "Untitled Column", and a page indicator "1 / 1" with left and right arrow icons. Below this, a sidebar on the left shows a list of items: "EDU-VET-EN-30-Drilling...", "Untitled Column", and "Untitled Fill in the Blank". The main content area features a "Fill in the missing words" exercise. The text reads: "Drilling, screw thread tapping, countersinking and are machinery manufacturing processes that mainly use tools which have similar cut and feed conditions." Below the text is a blue "Check" button with a checkmark icon. At the bottom of the interface, there is another navigation bar with an upward arrow, "Untitled Column", "1 / 1", and arrow icons. Below the navigation bar are "Reuse" and "Embed" icons, and an "H5P" label. A footer message states: "New to H5P? Read the [installation guide](#) to get H5P on your own site."



Mark the letters

EDU-VET-EN-Drilling 20-machinery manufacturing processes-Mark the letters

Submitted by EDUVET on Fri, 12/13/2019 - 17:33

Which Is The Correct Word In This Statement?

The Basic Shape Of The Drill Cutting Edge Is The

A) "Rake"
B) "Wedge" Or
C) "Frame"

Click Below On A, B Or C!

a b c

Check

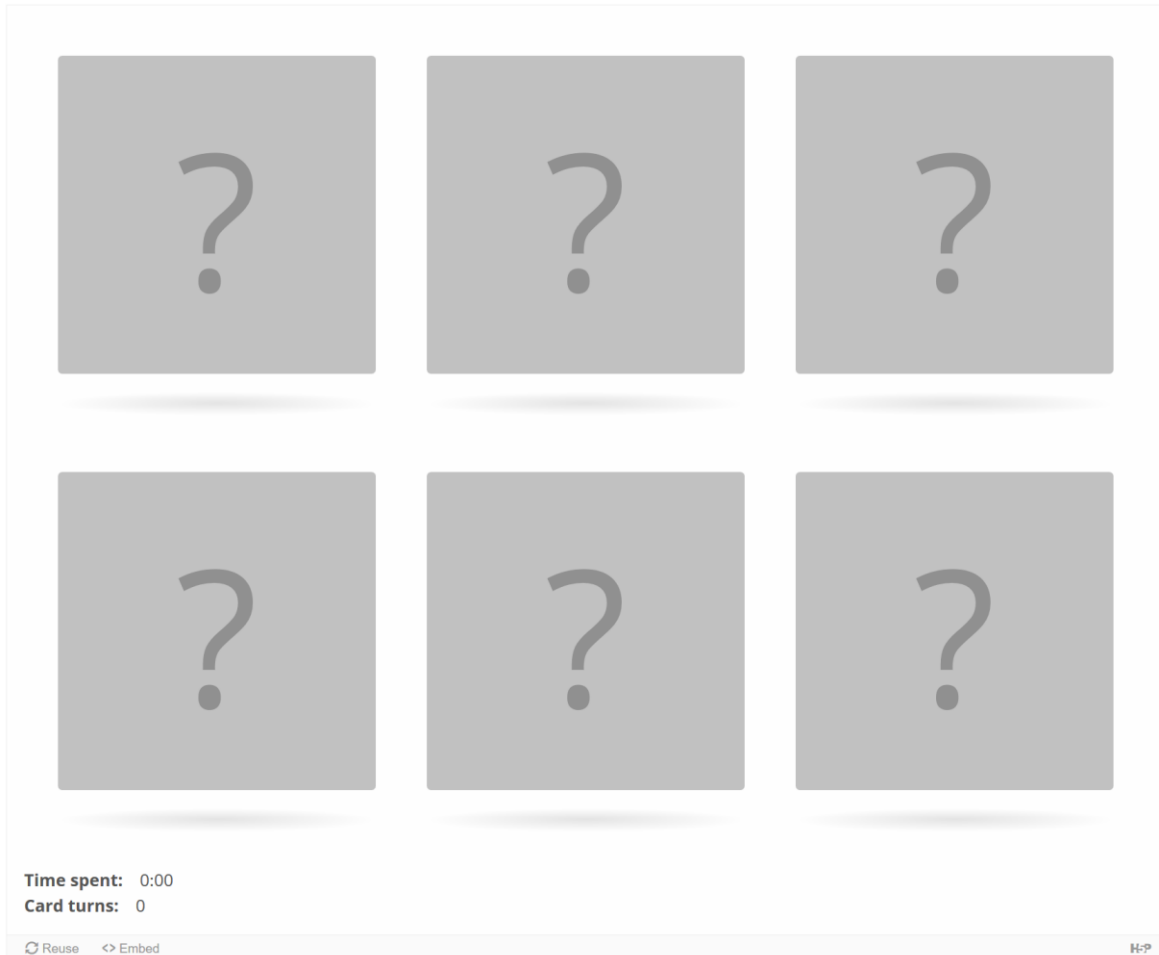
[Reuse](#) [Embed](#) H:P

It is possible to select a letter with a right solution.
Or you can do a concentration game where you let find all same letters in a text.

Memory Game

EDU-VET-EN-Drilling 21-drilling memory-memory game

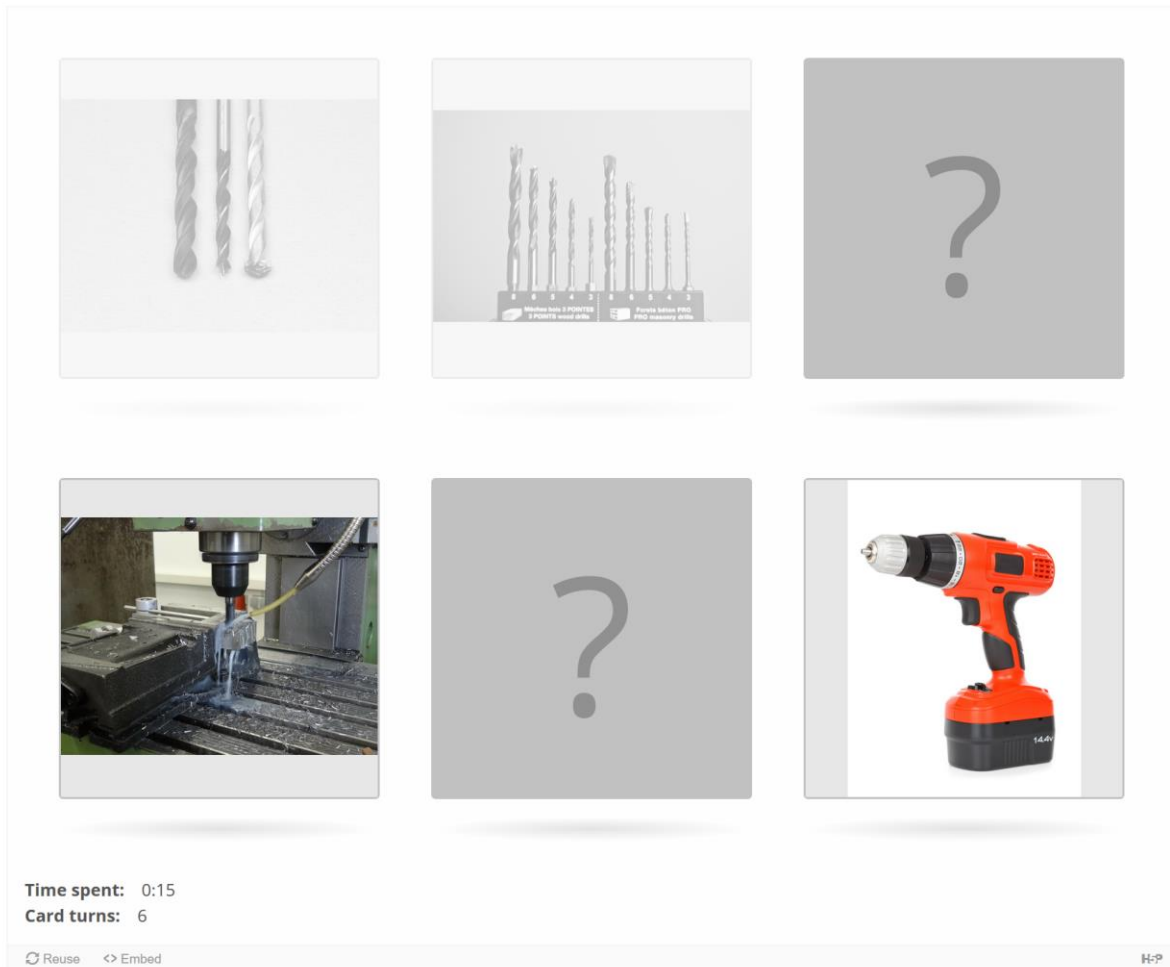
Submitted by EDUVET on Fri, 12/13/2019 - 17:59



Time spent: 0:00
Card turns: 0

[Reuse](#) [Embed](#) H-P

Submitted by EDUVET on Fri, 12/13/2019 - 17:59



Time spent: 0:15
Card turns: 6


Reuse Embed H-P


A classical memory game


Multiple Choice


EDU-VET-EN-Drilling 22-machinery manufacturing processes-Multiple Choice

What are the correct machinery manufacturing processes?
More than one answer could be correct.

drilling 

screwing 

reaming 

countersinking 

[Reuse](#) [Embed](#) H:P

Choose one or more correct answers and get feedback.



Personality Quiz

EDU-VET-EN-Drilling 23-Different types of work-Personality Quiz

Different types of workers

Start

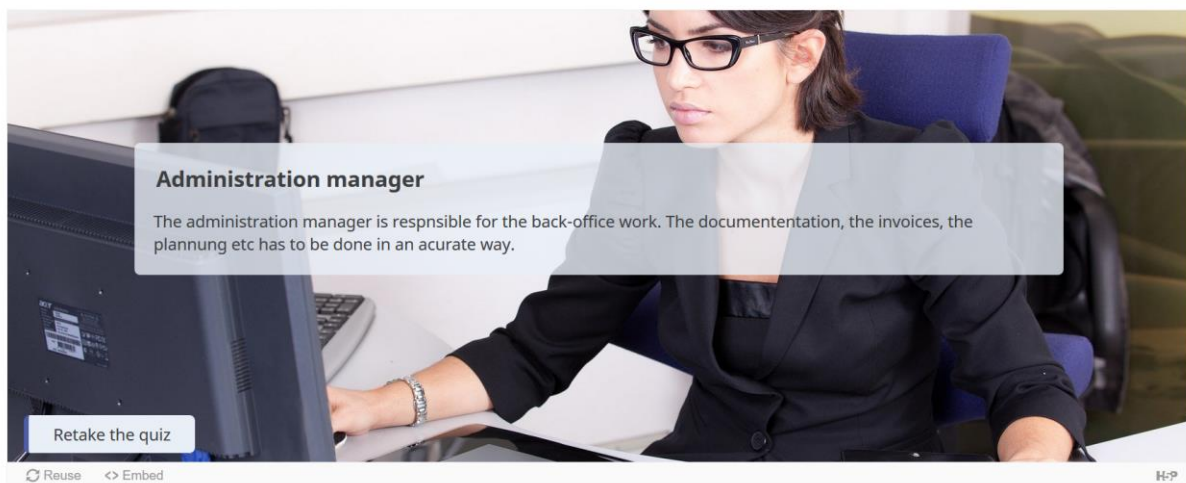
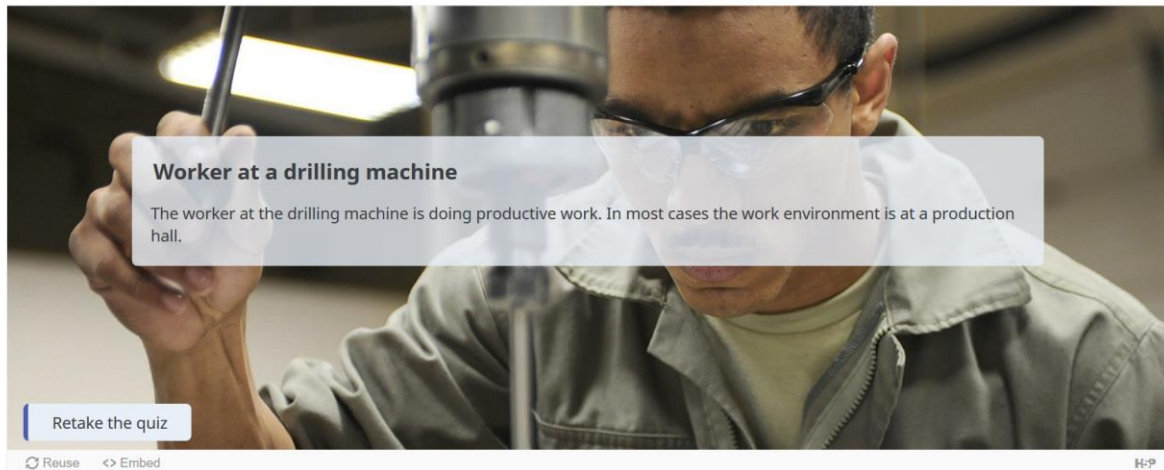
Reuse Embed H-P

1 of 1

How do they work?

- The work has to be precise with regard to planning and documentation.
- The work has to save to ensure that there wont be injuries.
- The work can be physically demanding.
- The work can be in cooperation within a team of people who organise work.
- The work includes a lot of paper work or with data and documents.

Reuse Embed H-P



Select fitting answers with regard to different personalities.

Questionnaire

EDU-VET-EN-Drilling 24-Materials for twist drills-Questionnaire

What are causes of wear problems with CC drills? 1/2

- The formation of built-up cutting can be a problem if the cutting speed is too low.
- The formation of built-up cutting can be a problem if the cutting speed is too high.
- There can be a problem of chamfer wear if there is a lack of cooling.
- There can be a problem of chamfer wear if there is a lack of heating.

[CONTINUE](#)

Reuse Embed H-P

Which statements are correct? 2/2

- HSS means high-speed steel.
- HSS twist drills offer bad surface quality.
- The wear reducing coating is in most cases of titanium nitride (TiN).

[BACK](#) [CONTINUE](#)

Reuse Embed H-P

Which statements are correct? 2/2

- HSS means high-speed steel.
Brilliant.
- HSS twist drills offer bad surface quality.
Yes, HSS ensures a good surface quality and not a bad one.
- The wear reducing coating is in most cases of titanium nitride (TiN).
Sorry, but TiN is in fact in most cases the material used for the coating.

[BACK](#) [NEXT](#)

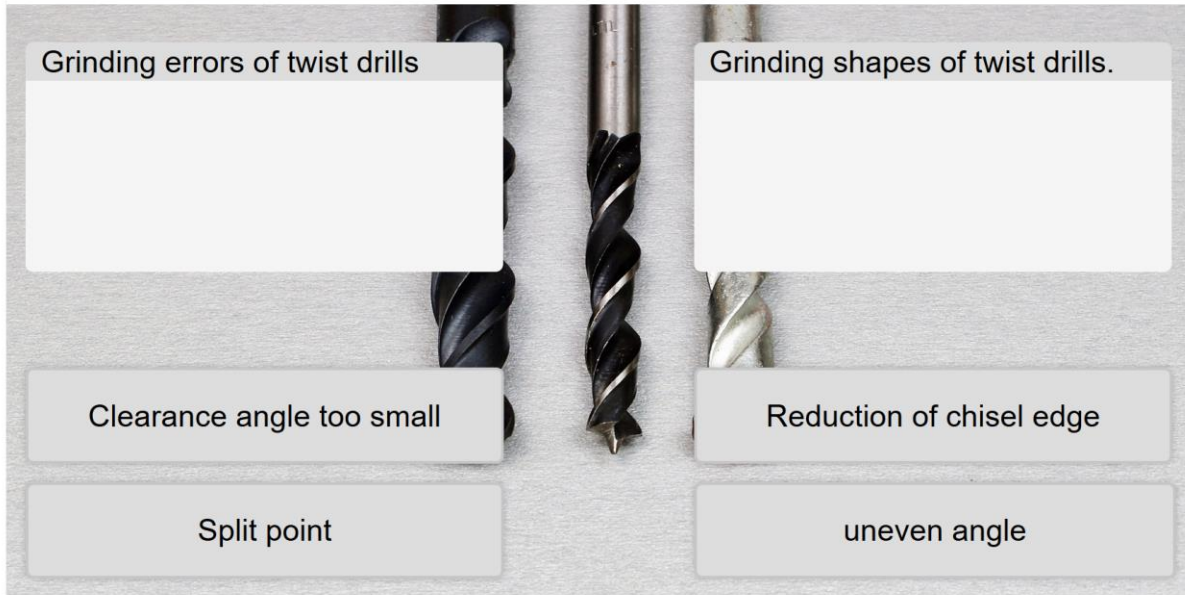
Reuse Embed H-P

You can create a questionnaire with multiple choice or open questions as well as feedback options.

Question Set

EDU-VET-EN-Drilling 25-Question set for drilling-Question set

Grinding and twist drills



Grinding errors of twist drills

Grinding shapes of twist drills.

Clearance angle too small

Reduction of chisel edge

Split point

uneven angle

Check ➔

Reuse < Embed H-P

The angle between the major cutting edge is usually referred to as the drill bit angle.

True False

Check ⏪ ⏩

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Fill in the missing words

The simplest change which can be made to a normal grinding shape is the pointing of the edge.

Check ⏪


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A question set combines different question types.






Single Choice Set


EDU-VET-EN-Drilling 26-Question set for drilling-Single Choice Set

Which statement is correct? 

There are two opposing helical chip grooves which form similar edges as well as the guide chamfers.




There are two opposing helical chip grooves which form the major and the minor edges as well as the guide chamfers.

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Normal drilling conditons are ... 

a straight surface and sufficient cooling.

a straight surface, an irregular surface and an inclined drill bit entry.

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Several Questions with two alternatives.

True False

EDU-VET-EN-Drilling 27-Rotation Speed-True False

The rotation speed depends on the selected cutting speed as well as on the drill diameter.

True False

Check

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Just a statement which can be right or wrong.

Summary

EDU-VET-EN-Drilling 28-feed rate and feed speed-Summary

Choose the correct statement.

✓ Progress: 0/2

The feed rate influences the drill type as well as the feed speed and the power requirement.

The feed rate f in mm per rotation primarily depends on (a) the material, (b) the cutting material, (c) the diameter of the drill, (d) the drilling depth and (e) the whole drilling process.

The feed rate is connected to the feed rate force as well as to the coating and tapping.

The feed rate penetrates the material horizontal movement.

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The feed rate f in mm per rotation primarily depends on (a) the material, (b) the cutting material, (c) the diameter of the drill, (d) the drilling depth and (e) the whole drilling process. ✓

Choose the correct statement.

✓ Progress: 1/2

The feed speed is calculated from the rotational speed and the feed rate.

The feed speed in mm is the length between the material and the drill handle.

The feed speed is a quality measure which ensures excellent service life.

The feed speed f is influenced by the drill process p .

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