

Uddeholms offer in

BABY AND FEMCARE

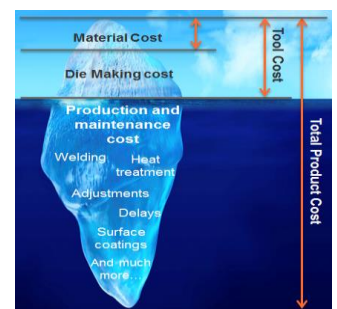
ROTARY CUTTING AND EMBOSSING DIES



Uddeholm benefits

1. Best Total Economy

The cost of the material in a die is a very small portion of the total cost- Top of the iceberg. All other costs adding up in the long run - Bottom of the iceberg.



At **Uddeholm** we offer you the **Best Total Economy**.

2. Global Presence and Customer Experience



3. Unique Product Portfolio

- **Uddeholm** Vanadis 4 Extra
- **Uddeholm** Vanadis 8
- **Uddeholm** Sleipner

Uddeholm material selection guide

SELECT CUTTING DIES MATERIAL

Three factors:

- | | |
|-------------------------|--|
| 1. *Speed of production | = Higher speed -> more advanced steel |
| 2. Non-woven material | = Determines the wear the tool will be exposed to |
| 3. End product finish | = Sharp edges, edge retention over time depends on quality of cutting edge |

***Speed of production**



MATERIAL PROPERTIES REQUIRED FOR CUTTING DIES

Five factors:

1. Long product life cycle
2. High reliability
3. Excellent cutting ability/edge retention
4. Good machinability/grindability
5. Etchability

Uddeholm can offer the perfect combination between high wear/chipping resistance and machinability!

Uddeholm material solution for

ROTARY CUTTING DIES

Uddeholm can offer the perfect combination between high wear and chipping resistance!

Highest wear + Good chipping resistance
Uddeholm Vanadis 8



Highest chipping resistance+ Easy machining
Uddeholm Vanadis 4 Extra

ANVIL ROLLS

Uddeholm can offer an upgrade from the traditional D2/M2, so you achieve better total life cycle.

If you are using Rotary dies made of Carbide it's very demanding on the anvil roll, use a Premium Steel.

*Rotary cutting die of PM-steel;
Wear + Chipping resistance*
Uddeholm Sleipner

*Rotary die made of Carbide;
Highest wear + Good chipping resistance*
Uddeholm Vanadis 8



EMBOSSING DIES

Uddeholm can offer an upgrade from the traditional D2/M2, so you achieve better total life cycle.

Wear + Chipping resistance
Uddeholm Sleipner

Highest wear + Good chipping resistance
Uddeholm Vanadis 8



Uddeholm customer experience

Lifetime and Maintenance of Rotary Cutting Dies

Uddeholm Vanadis 8



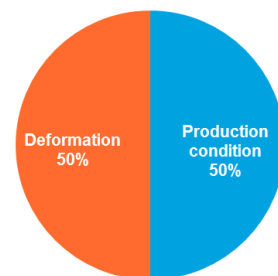
4 years



**15 re-cuts
0,1mm / per re-cut**

Common failures of Rotary Cutting Die

50% of the problems are caused by the production conditions and/or operation errors.



One other big problem is deformation of the tool. It occurs when the end-user/operator increases the pressure to much in the operation.

Another common failure is micro-chipping of cutting edges.

Uddeholm size program

Uddeholm Vanadis 8 and Uddeholm Vanadis 4 Extra

ROUND BAR

Soft annealed/Rough machined

mm	12,7	16	18	20	23,5	25,4	28	32	35	38	40	46	50,8	57,2	60	63,5	65
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
70	76,2	80	85	90	95	102	110	115	120	127	130	140	153	160	180	190	
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
mm	203	225	230	250	280	300	330	407	450	500							
	●	●	●	●	●	●	●	●	●	●							

Uddeholm Sleipner

Round bar

Soft annealed/Unmachined ○

Soft annealed/Machined ●

mm	13	16	20	22	25,4	28	32	35	38	43	48	50	50,8	55	60	63,5	70	76,2	80
	○	○	○	○	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●
mm	90	95	100	108	120	127	140	150	160	170	180	200	203	225	250	270	280	290	
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
mm	300	320	330	356	380	400	460												
	●	●	●	●	●	●	●												