



PACKAGE INTEGRITY TESTER

INTRODUCTION

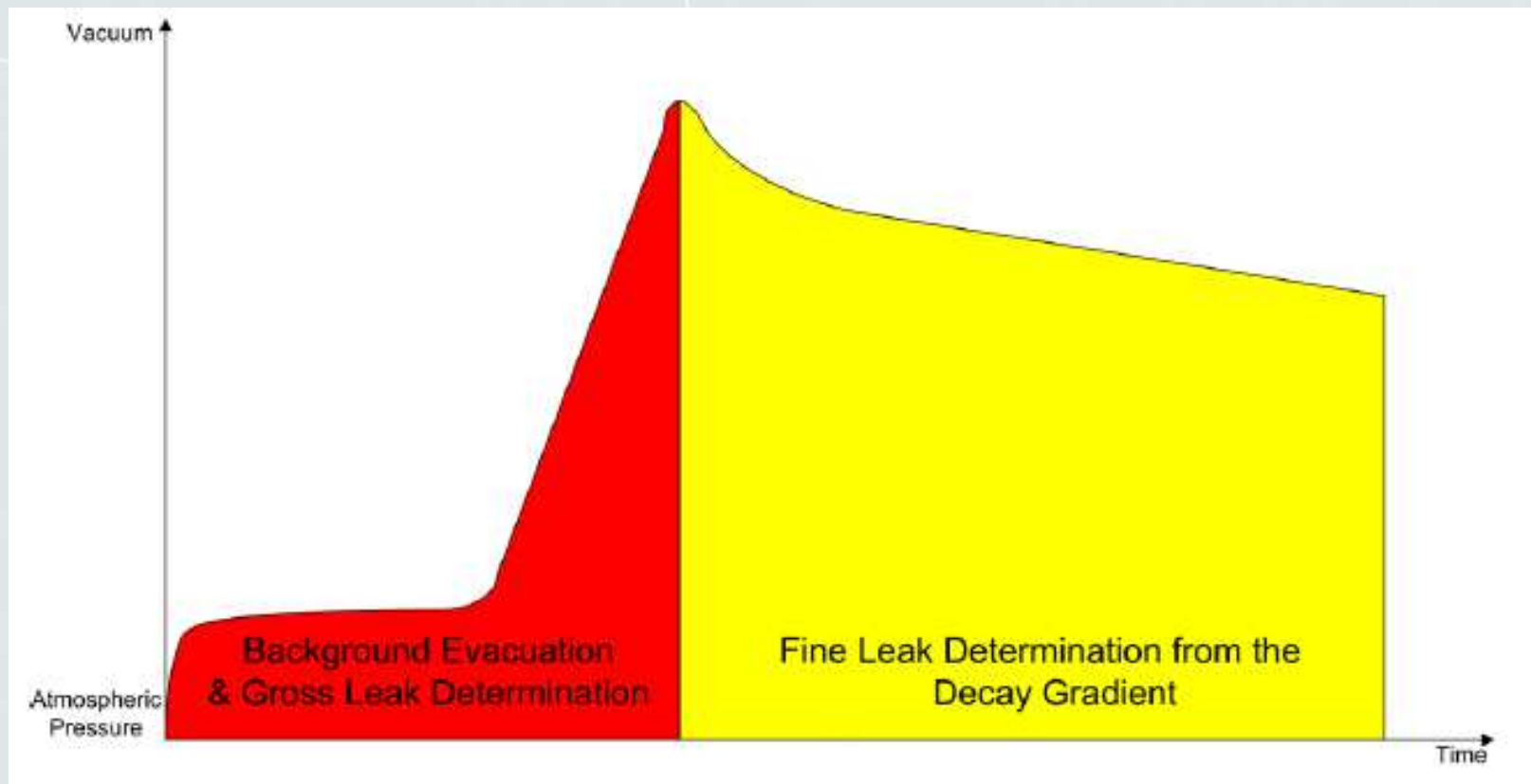
- Vacuum method to measure the gas leaking from a flexible pack
- Items are placed manually
- Handle is closed to initiate a fully automatic test sequence
- Results: PASS / FAIL + quantitative measure of the leakage rate
- Fast test – easy to use and reliable

INTRODUCTION

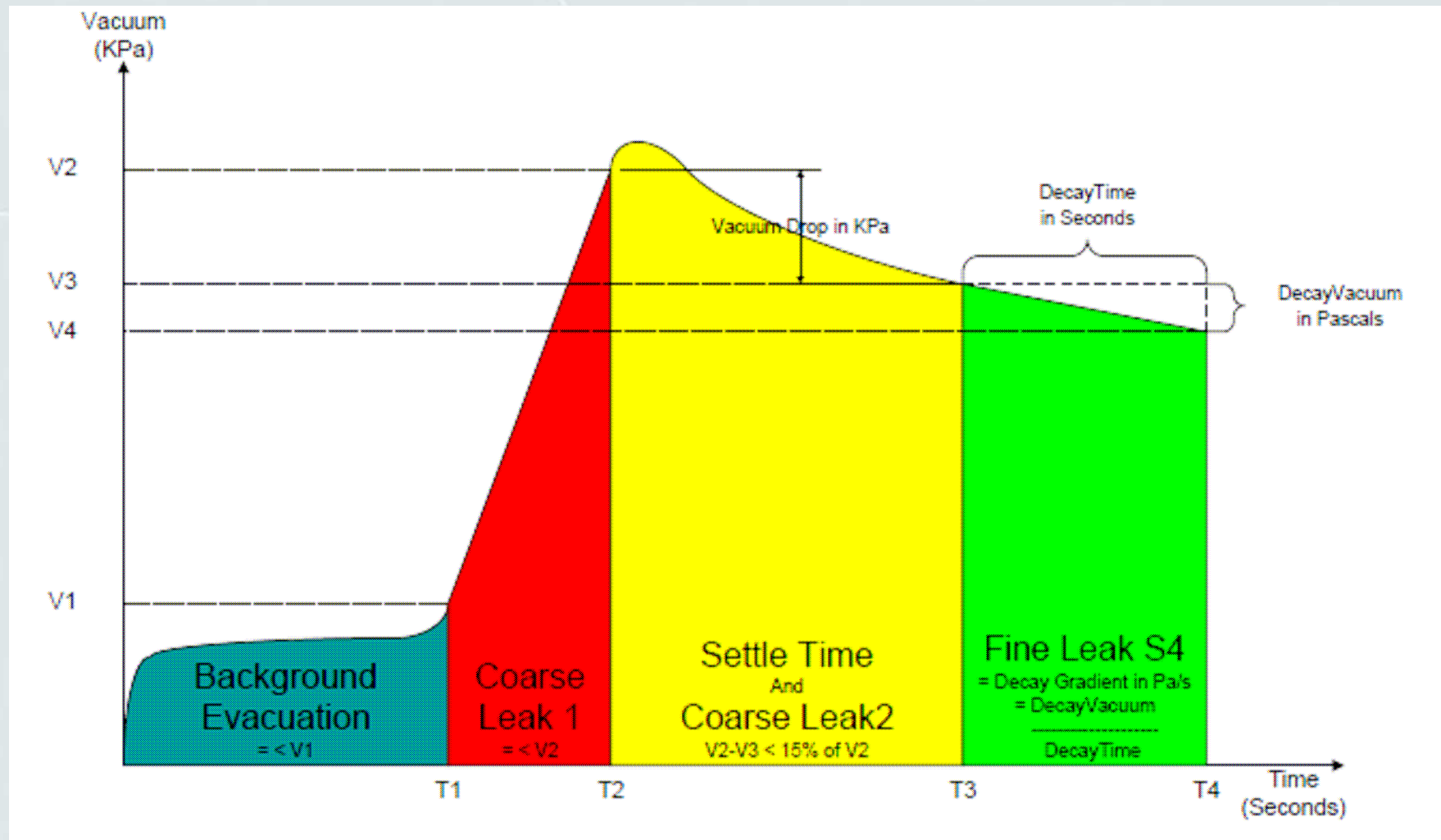


TESTING THEORY

Works on the principle of pressure decay (vacuum decay)



TESTING THEORY



TESTING THEORY

Symbol	Name	Description
-	Product Name	A descriptive name for the method or product (13 characters maximum)
V1	Collapse Vacuum	The vacuum level reached once excess air is removed from the bag - triggers the start of coarse leak measurement.
T1	Collapse Timeout	Time1, the maximum time allowed to reach V1 (before the test is aborted).
V2	Test Vacuum	The peak vacuum that must be reached between T1 and T2.
T2	EvacTime Coarse Limit	The allowed maximum time to evacuate from V1 to V2. Otherwise called RiseTime, and used to identify Coarse Leaks. A package with a large hole will provide extra air for evacuation, which slows the evacuation time.
T3	Settling Time	The time to delay after V2 is reached to ensure a stable leak rate is achieved. This value can be increased to delay the measurement of fine leak rate (vacuum decay gradient).
T4	Fine Leak Time	The time required to measure a stable fine leak rate. Will depend on the size of leaks being investigated (longer for smaller leaks – refer to section 7, Developing a Test Method).
S4	Fine Leak Rate Limit	The maximum vacuum decay rate allowed before a Fine Leak is identified.

TIPS & TRICKS

- Compressed air supply must be absolutely stable! For a test it is best to have no other equipment connected to the same supply.

We can offer small silent compressors as an option so that customer gets a total solution.

- Avoid 'false air' inclusions : pouches or pet food package

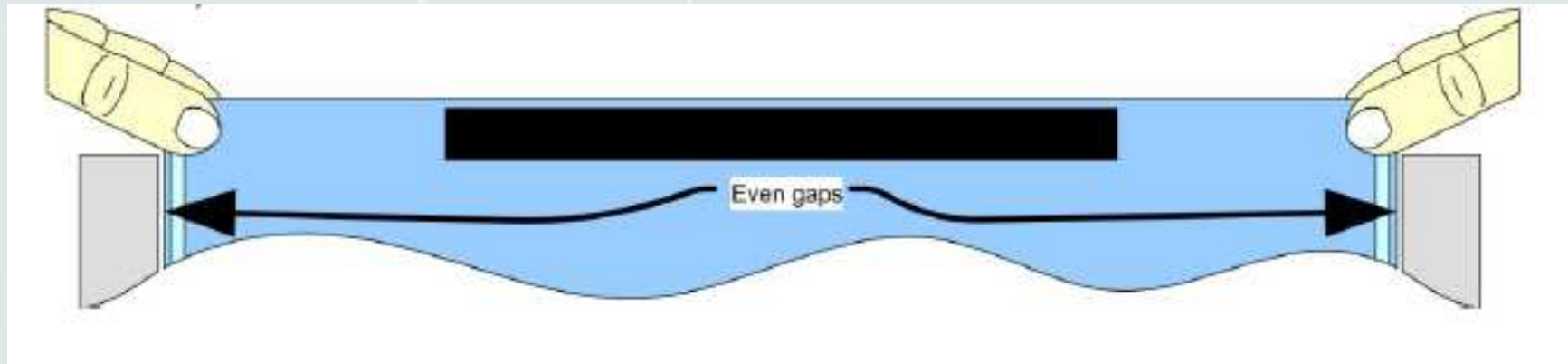


TIPS & TRICKS

- Use of calibrated “leaks”
- Calibrated leak apertures: 20 – 30 -50-100 μ
- Make a hole in the package
- Apply the calibrated aperture on the opening with tape

INSTALLING/REPLACING A TEST BAG

- Remove old bag
 - Holding bag and velcro strip together and gently peeling away from the frame
- Install new bag



USP

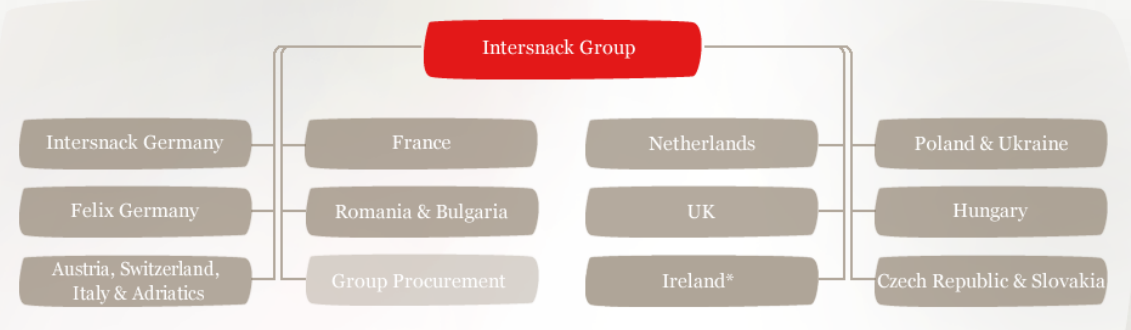
- Faster
- Non destructive testing
- No consumables required
- No operator influence
- Smaller leaks can be detected.
- Reproducible testing

CASE STUDY AS ILLUSTRATION



Intersnack
 Leading company in snacks

Country Overview of the 12 Intersnack Management Units



* Participation

TEST MADE ON CHIPS

Packed with N2 and O2



For internal use only

LEAK TEST



0 ml/s

3ml/s

6ml/s

9ml/s

- Value of 5ml/s is still ok.
- Value of more than 5ml/s require operator to check the production line (clean seal bar,..)
- 10ml/s is absolute alarm and need immediate action from the operator.

REASON WHY INTERSNACK DECIDED FOR BESTECH

- 40 times faster : 5 seconds Vs 200 seconds
- Non destructive testing
- No consumables required (no septum to be used)
- No risk on operator influence
 - With punching operator can damage back side of package, different angle of punching the package can influence the result,...
- Smaller leaks can be detected.
 - Better reproducibility with Bestech

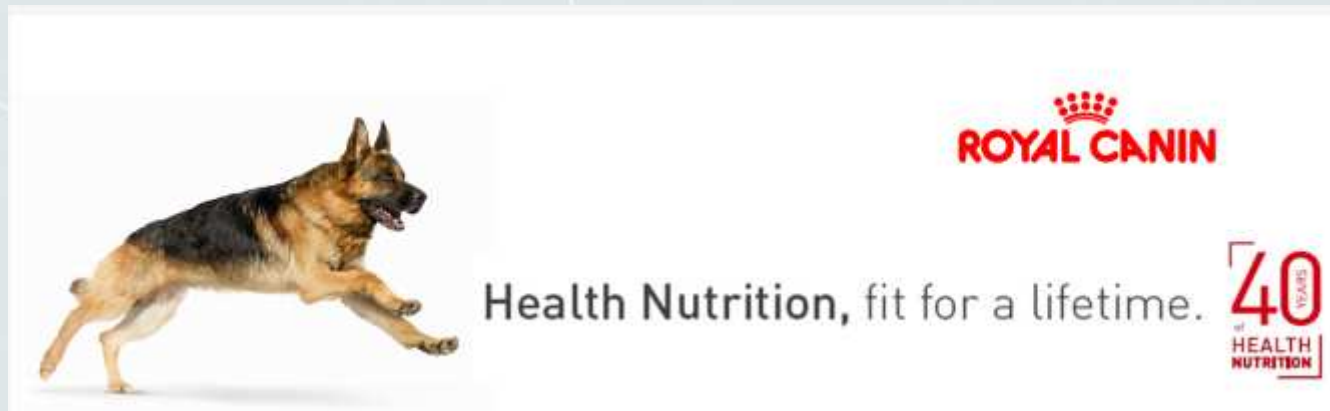
INTRODUCTION @ INTERSNACK

- Intersnack introduced this as an at-line measurement in 7 different facilities (5 in Germany, 1 in France, 1 in The Netherlands)

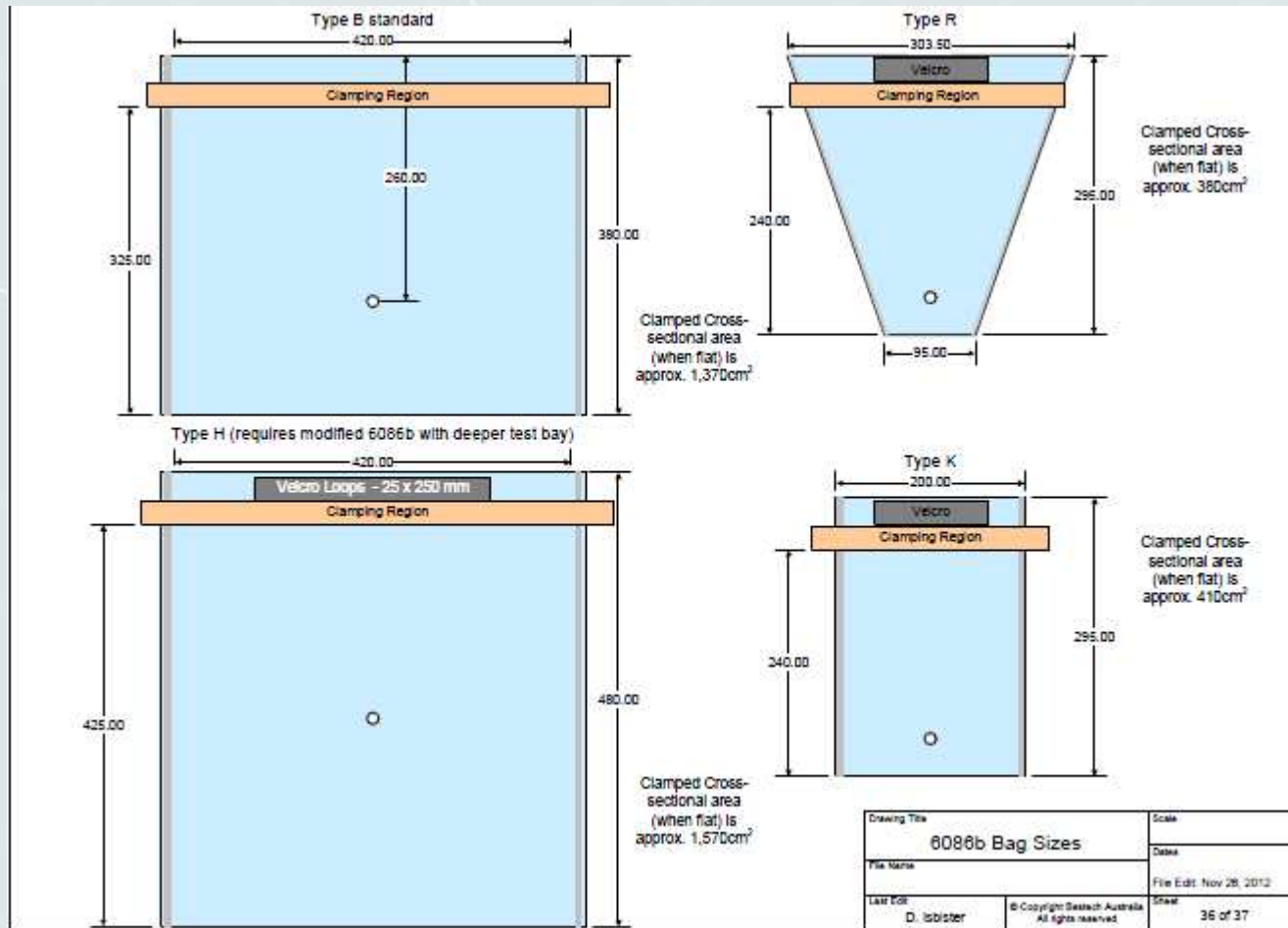


CASE STUDY AS ILLUSTRATION

Royal Canin (France):



APPLICATIONS & REFERENCES

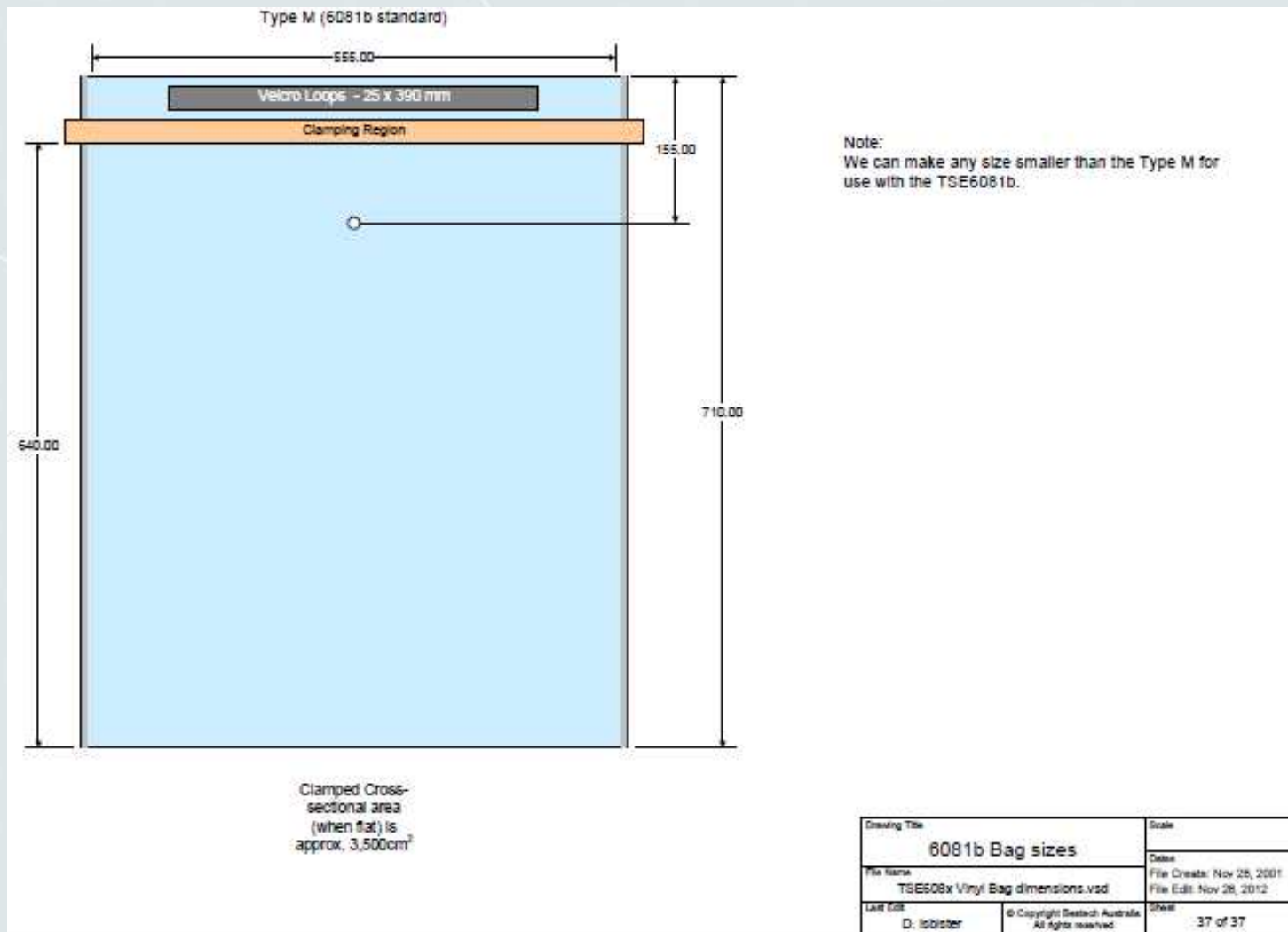


SPECIAL VERSION

- Bigger packages
- Cans



SPECIAL VERSION



SPECIAL VERSION FOR CANS

