





## Opening torque of a flat cap

### 1. Definition: Machine and Criterion

The torque is a relevant criterion of sealing machines.  
For all actions the relevant safety instructions must be strictly adhered to.

#### Further related documents:

- User manual of used measuring device

### 2. Inspection

#### 2.1 Scope

Detection of the opening torque of closed bottles with a synthetic cap.

#### 2.2 Apparatus

Torque tester. The recommended accuracy of measurement instruments is 1 in-lb or 0.1 Nm.  
A visual inspection of the used measurement devices by a person is necessary.

#### 2.3 Procedure

Check the opening torque of the closed bottles with an adequate device and fill the results in the data sheet.

### 3. Sampling

To check torque, samples of closed packages are needed. Samples have to be taken after 15 minutes of production in standard operation and at nominal capacity.

Quantity of sample bottles: Quantity of 1 capper round.

Each of these caps has to be tested and the results have to be filled in on the following data sheet. Each different cap shape should have its own special opening aid.

#### 3.1 Calculation

Check if the measured result of torque is in the warranted range for the torque.

#### 3.2 Results and data sheets

##### 3.2.1 Data sheet

Number n:	$x_i$ [in-lbs]	Number n:	$x_i$ [in-lbs]
1		21	
2		22	
3		23	
4		24	
5		25	
6		26	
7		27	
8		28	
9		29	
10		30	
11		31	
12		32	
13		33	
14		34	
15		35	
16		36	
17		37	
18		38	
19		39	
20		40	

Fill in the results from measuring in inch-pounds [in-lbs].

Date: \_\_\_\_\_

Site: \_\_\_\_\_

Product: \_\_\_\_\_

Line: \_\_\_\_\_

Type of capping: \_\_\_\_\_

Conversion of units: \_\_\_\_\_

• 1 Nm = 8.851 in-lbs

• 1[in-lbs] • 0,1129 = 1[Nm]



**4. Evaluation and Documentation**

4.1 Evaluation

Torque measured (max): \_\_\_\_\_ in lbs

Torque measured (min): \_\_\_\_\_ in lbs

Torque set: \_\_\_\_\_ in lbs

Torque (Range (+)): \_\_\_\_\_ in lbs

Torque (Range (-)): \_\_\_\_\_ in lbs

Torque (Range (-)) \_\_\_\_\_ in lbs    Torque (measured) \_\_\_\_\_ in lbs    Torque (Range (+)) \_\_\_\_\_ in lbs

4.2 Documentation

Torque accuracy is o.k.

Torque accuracy is not o.k.

Name and signature of inspector: \_\_\_\_\_