

DIN ISO 6690:2010-04 (E)

Milking machine installations - Mechanical tests (ISO 6690:2007)

Contents		Page
National foreword		3
1	Scope	4
2	Normative references	4
3	Definitions	4
4	Test equipment	4
4.1	General	4
4.2	Measurement of vacuum	5
4.3	Measurement of a vacuum changing over time	5
4.4	Measurement of atmospheric pressure	5
4.5	Measurement of back pressure	5
4.6	Measurement of airflow	6
4.7	Measurement of pulsation characteristics	6
4.8	Measurement of pump rotational frequency	6
4.9	Teatcup plugs	6
5	Vacuum system	7
5.1	General requirements and preparation	7
5.2	Vacuum regulation	8
5.3	Vacuum pumps	11
5.4	Vacuum regulator leakage	13
5.5	Vacuum gauge error	14
5.6	Vacuum drop in air line	14
5.7	Effective volume of interceptor	14
5.8	Effective volume of the sanitary trap	15
5.9	Leakage in vacuum system	15
5.10	Vacuum drop across vacuum taps for bucket milking units	15
6	Pulsation system	16
6.1	Airflow at stall taps	16
6.2	Pulsation rate, pulsator ratio, pulsation chamber vacuum phases and vacuum drop in pulsator air line	16
7	Milk system	17
7.1	Slope of milkline	17
7.2	Milk system leakage	17
7.3	Effective volume of receiver	17
7.4	Leakage in releaser	18
8	Milking unit	18
8.1	Mouthpiece depth and effective length of liner	18
8.2	Teatcup or cluster fall-off air inlet	20
8.3	Leakage through shut-off valves of milking units	20
8.4	Air vent and leakage into teatcup or cluster	20
8.5	Effective volume of buckets, transport cans and recorder jars	20
8.6	Measuring the vacuum in the cluster	21
8.7	Measurement of the vacuum drop from accessories attached in the long milk tube	21
8.8	Airflow at the end of the long milk tube	21

Annex A (normative) Laboratory tests of vacuum in the milking unit	23
Annex B (informative) Alternative method for the measurement of air inlet and leakages in clusters	28
Annex C (informative) Examples of test procedure to reduce the test work	30