

SUPPORT ARM

Task Description:

In the parlour / rotary milking systems the milker is holding the milking cluster (weight 1.6-2.5 kg) in one hand, while attaching it to the cow's udder with the other hand. The arm is held in an extended position, lifting the milking cluster forward-upwards above the height of the elbow, and almost in shoulder height



Holding and attaching a milking cluster

Comments of the employee:

- ❑ *'I have to lift the milking cluster to attach the teat cups, it is heavy, especially after milking 300 dairy cows'*
- ❑ *'After a 3 hour milking shift, my neck and shoulder hurts in the evening'*

MSD risks:

- ❑ Holding and attaching a milking cluster involves working with the arms above shoulder height
- ❑ The milking cluster weighs from 1.6 to 2.5 kg and this increases the work load on the upper extremities
- ❑ The posture complicates a correct working angle of 90° between the joints of the shoulder and the elbow

Exposed areas:

- ❑ Neck / Shoulder
- ❑ Arm
- ❑ Hand / Wrist

Solutions:

- ❑ Installation of a support arm in the parlour / rotary milking systems to avoid a demanding work task - holding and attaching the milking cluster



Different support arms for placing of the milking cluster

Comments of the employer after installation of the support arm:

- ❑ *'The milkers complain less about milking being a heavy work task'*
- ❑ *'The rate of work pace is more calm, and so are also the milker and the dairy cows'*
- ❑ *'The milker have more time for preventive caretaking of the dairy cows'*

Comments from the ergonomist:

- ❑ *'The support arm will decrease the work load and the risk for hand / wrist injuries of the milkers'*

Research references:

Stål M, Pinzke S, Hansson G-Å. 2003. The effect on workload by using a support arm in parlour milking. International Journal of Industrial Ergonomics 32, 121-132.