

## ROBOTIC MILKING SYSTEM

### Task Description:

Milking of dairy cows in tie stalls, parlour and rotary milking systems is physically demanding and associated with difficult working postures and movements, and strenuous and static muscle load



Unsuitable working postures during milking in tie stalls, parlours and rotary systems

### Comments from the employee:

- ❑ *'Milking is the most physically demanding of all work tasks in the dairy barn'*
- ❑ *'Many years of milking gives aches and pains all over'*
- ❑ *'Milking is fun, but strenuous'*

### MSD risks:

- ❑ Lifting of heavy milking equipment (7.5 kg) several times during the milking shift
- ❑ Kneeling with a bended and twisted back several times during a milking shift
- ❑ Working with the arms above shoulder height
- ❑ Holding and attaching a milking cluster with a weight from 1.6 to 2.5 kg increases the work load on the upper extremities
- ❑ The milker is exposed to a static muscle load for several hours

### Exposed areas:

- ❑ Neck / Shoulder
- ❑ Arms / Elbows / Hands and Wrists
- ❑ Upper / Lower back
- ❑ Hips / Knees / Feet

### Solutions:

- ❑ Installation of a robotic milking system will replace the twice daily manual milking of dairy cows



A robotic milking system

### Comments from the employer after investing in automatic milking:

- ❑ *'Investing in a milking robot was the best I have ever done – the health problems related to the milking task is more or less eliminated'*
- ❑ *'It is a huge economic investment but it is worth it – it leaves out a very heavy work task'*
- ❑ *'It is easier to recruit workers when there is no milking task involved'*

### Comments from the ergonomist:

- ❑ *'The daily physical demanding work load of milking is eliminated. However, difficult and unsuitable working postures can occur if cows need milking-assistance in the robot. Cleaning the robot also includes demanding postures'*