



# iCR

## INTELLIGENT CLUSTER REMOVER

iCR offers features previously only available with high-end automation systems at an affordable price. Designed for simplicity, the system is easily fitted, easily commissioned and is made easy to operate thanks to the pull start initiation and innovative product design.

With iCR the operator is in full control of the milking point. The LED's and warning strobe lamps located in the head of the ram indicate the mode of control and if a problem occurred during milking.

iCR is a highly intelligent cluster remover.

### REMOTE CONTROLLER

- Remote control system downloads / programs system parameters
- Controls iCR drop down system
- Allows operator to initiate units into auto milking at cups on
- Automatically initiates unit into wash mode
- Can be set for fixed point take off



### OPERATOR FEEDBACK AT MILKING TIME

iCR has a red warning strobe lamp in the head of the ram along with a green milking status LED and blue washing status LED

#### RED STROBE

- Intermittent flashing – low milk alert
- Rapid flashing – kick off alert
- Green and red on – milking timed out alert
- Pulsing - manual mode

#### BLUE LED

- Solid – wash standby
- Short pulse – wash mode
- Rapid flash – end of milking cluster will be removed
- Pulsing - end of initial milk time

#### GREEN LED

- Green on – standby mode
- Short flash – let down phase

### KEY FEATURES

- Automated cluster remover with 'Pull Start' initiation for reduced operator workload
- Heavy duty, powerful ram with high visibility indicators located in the head
- Kick off sensor shuts off vacuum to the claw and retains the cow on the platform if fitted with bail restraint system
- Flexible software to customise the product to each specific installation
- Performance reporting for rotary parlours using iCR Intelligence software

### iCR INTEGRATED RAM & CONTROLLER

- Powerful 100mm cylinder
- Retraction speed control for gentle cluster removal and minimal cluster swing
- Multiple rope configurations / ratios (1:1, 1.5:1, 2:1)
- In-built probes for "Pull Start" initiation
- Quick venting system makes pulling the cord from ram effortless
- Lamps and warning strobe lights on the iCR control board indicates mode of control



iHDR100 RAM

### iCRS BAIL RESTRAINT SYSTEM (see 7.3.2)

- Bail restraint system retains cow on platform and is controlled by the iCR system independent of the main ACR ram
- Special software keeps the cow on the platform if she is still milking or has alerts (options of low milk, kick off, time out or combination of any of the above)
- Specially designed restraint arms and flexible strap designed to be fitted to any platform type
- Operated by an independent ram



BAIL RESTRAINT

### iCR INTELLIGENCE

Designed specifically for rotaries, Milfos iCR intelligence collects milking data from each milking point and reports on your milking performance including;

- Milking start & finish time
- Average rotation time
- Fastest, slowest and average milking times
- Number of drop alerts
- Number of low milk alerts
- Cows going around for second rotation



iCR INTELLIGENCE



## PUSH BUTTON

- Large functional push button
- Simple user interface with single push button control for the operator
- Different combinations of button presses allows operator to change modes



PUSH BUTTON

## iCR SHUT OFF VALVE / SENSOR

- Integrated valve and sensor for quick, simple installation
- Full flow valve, no restrictions
- Unique "soft shut off" action due to smart valve seat design



iCR VALVE/SENSOR

## SYSTEM FEATURES

**LETDOWN TIMER** – allows cow to let her milk down before sensor takes over control of the milking (50-300 seconds)

**FINAL INTERVAL TIMER** – allows cows to be milked out completely (5-30 seconds)

**ADJUSTABLE END OF MILKING SENSITIVITY** – controls take off set point for milking cows wetter or dryer

**DROP ALERT** – red strobe light in head of cylinder warns operator of cluster being kicked off

**CLUSTER VENT TIME** – ensures the cluster is slow vented prior to retraction from cow (1-5 seconds)

**MILK SWEEP** – clears milky residue from cluster after milking. Options include delay (0-10 seconds), number of sweep pulses (0-10) sweep time (1-5 seconds)

**DROP DOWN SYSTEM** – lowers cluster under bridge for improved cow flow and less tangles on rotaries

**BAIL RESTRAINT SYSTEM OUTPUT** – controls cow retention arm to retain the cow on the platform if she is still milking or has alerts (options of low milk, kick off, time out or combination of any of the above)

**ALERT STANDBY** – lowers cluster on ram cord to warn operator of problem during milking in herringbone situations

**MANUAL MODE** – overrides the sensor and timers

**TOTAL MILKING TIMER** – removes cluster once set time has been reached (4-20 minutes)

**SLEEP MODE** – de-energises coils and goes into energy save mode (30-120 minutes)

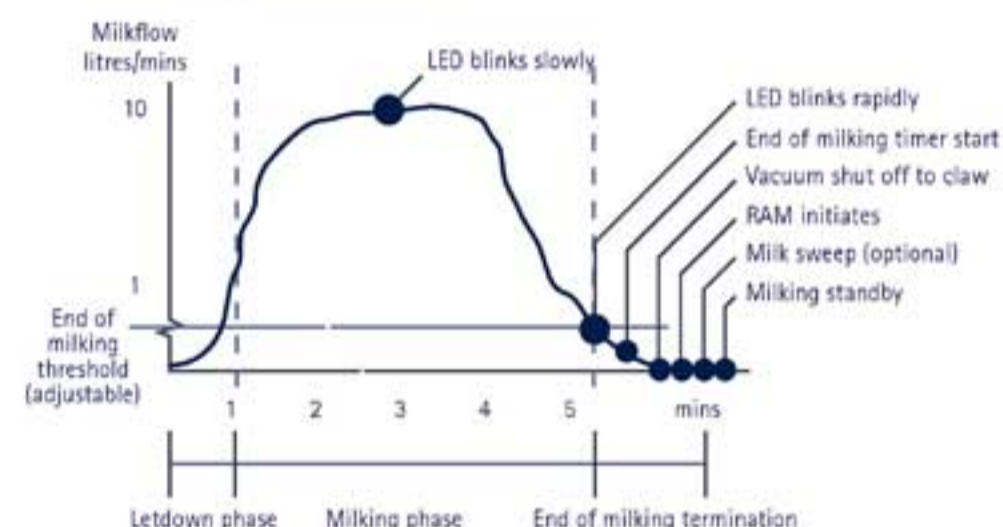
**FIXED POINT TAKE OFF** – remote take off regardless of mode on rotary applications



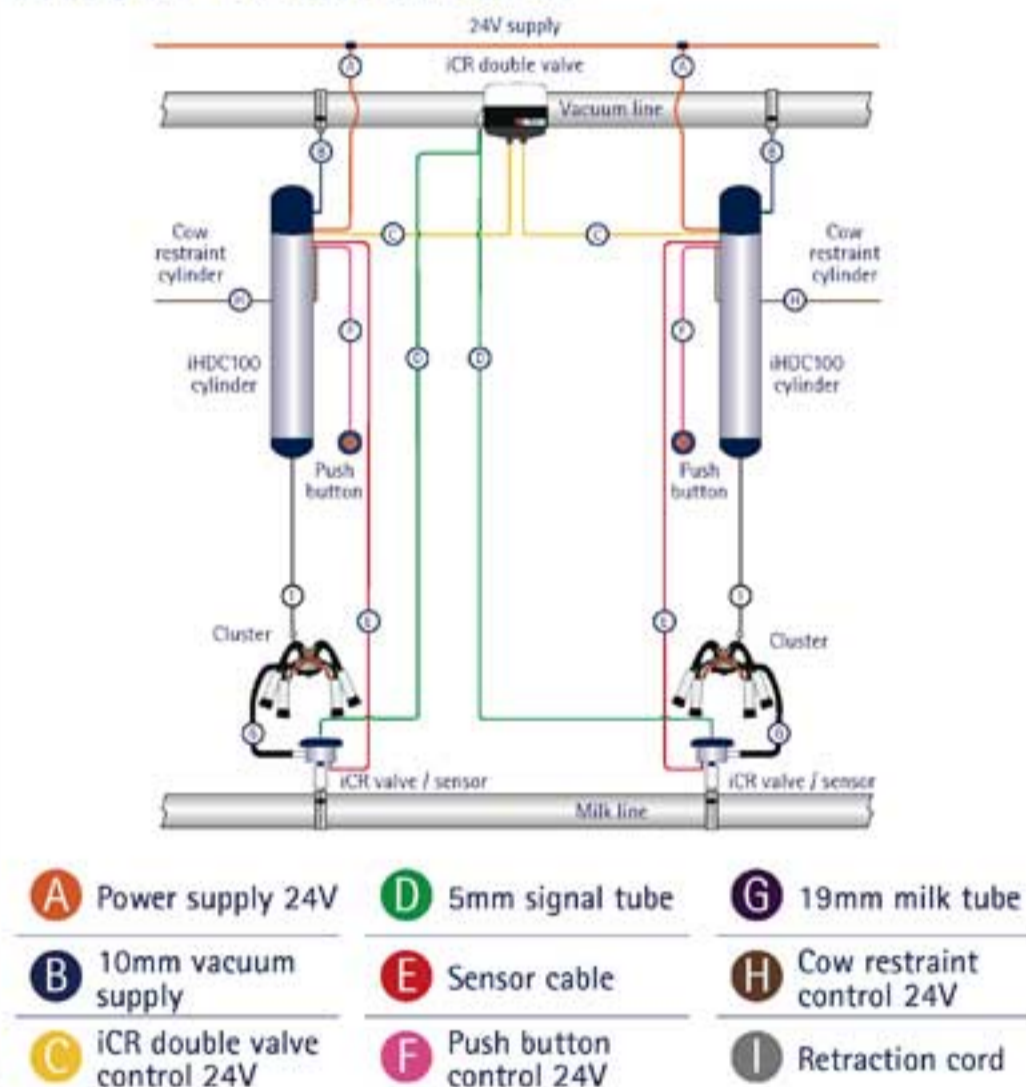
PROGRAMMER

## TYPICAL MILKING CHARACTERISTICS

- At a kick off event the system initiates the end of milking sequence and flashes LED's to warn operator.



## LAYOUT OF iCR SYSTEM



## SPECIFICATIONS

RAM
24V DC
Stroke length – 3 ratios
• 1:1 = 1000mm retraction length
• 1.5:1 = 1500 mm retraction length
• 2:1 = 2000 mm retraction length
Self lubricating plastics
Quick venting system
10mm vacuum connection
Vacuum 38-50kpa
Internal dust filter

iCR CONTROLLER
24V DC supply
0.25 amps @ 24V DC (incl iCR & ram valve)
3 inputs, 3 outputs
1 red warning strobe, 2 x function LED's
Infrared communication I/O port
Sensor input

iCR DOUBLE VALVE
24V DC
0.2 amps @24V DC
Vacuum 38-50kpa
iCR PUSH BUTTON
12-24V DC
N/O contact 0.5 amps rating
IP68

INTELPPOWER
Switch mode type
Input 80-250V A.C
Output regulated 24V DC @ 42 amps
Maximum number of clusters
Without cow restraint 66 clusters
With cow restraint 54 clusters
Note: Specifications may change without notice