

Industrial Brakes

Stromag PHS

Hydraulic Buffers


NEW

The hydraulic buffers of the PHS series have been designed to be used for many different technical applications.

The buffer can be used for any kind of technical application due to its self-contained system. Since there is no need for this damping device to be supplied with external energy or other external means, it is outstandingly suited to decelerate moving masses along the shortest possible path considering the company requirements.

Applications

- Steel Industry
- Port Applications
- Nuclear Cranes

Benefits

- Diameter range of 75 mm up to 175 mm
- Buffer stroke of 50mm up to 1600 mm
- Max. buffer power of up to 1000 kN
- Operating temperature of -30 up to 100°C
- Wear-resistant piston rod by means of hard-chrome plating
- Optional mounted piston rod protection
- Optimal throttle features designed for the specific requirements of the different application
- Paints according to customer requirement



Company:

Project:

Name:

Date:

General information

desired buffer size
size x stroke: _____

Fastening type

- front flange F
- back flange B

Field of application

- outdoor application
- indoor application

Definitions and calculations

- R1...R4 [kg] wheel loads resulting from deadweight and rigidly attached loads
- M_{pu} [kg] mass acting on one buffer
- v [m/s] max. travel speed
- E_{pu} [Nm] energy acting on one buffer
- F_{pu} [kN] buffer end force

Case of application

Horizontally moved mass

- a) mass without propelling force (motor switched off)
- b) mass with propelling force (motor runs)
sum of motor power per crane side _____ kW
breakdown torque factor _____ Mk/Mn

Ambient temperatures

from _____ °C to _____ °C

Determine the masses acting on the buffer m_{pu}

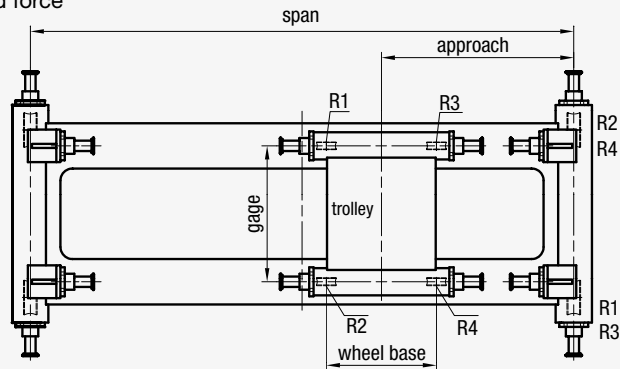
For cranes:

$$m_{pu} = R1+R2+R3+R4+...Rn \quad (1)$$

¹⁾For cranes with more than 4 wheels/side

For trolley:

$$m_{pu} = \text{max. from } (R1+R3) \text{ or } (R2+R4)$$



Impact conditions

- V1 case I Crane/trolley weight _____ kg
Crane/trolley nominal speed _____ m/min
- V1 case II pendelation
- V1 case III fixed load
- V1 case IV Crane/trolley drive switched off before buffer impact (fab=0,7)

Type of operation

- emergency-stop application
- impact at creep speed
- operational actuation
- Stroke frequency _____ 1/h

Operating conditions

- normal dry humid
- oily dusty aggressive

Information regarding buffer design

- max. perm. buffer force _____ kN
- max. perm. buffer stroke _____ mm
- max. perm. deceleration _____ m/s²

Design data of the buffer

- Impact mass per buffer m_{pu} _____ [kg]
- Impact speed v _____ [m/s]
- Propelling force F_v _____ [N]