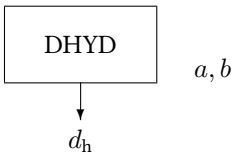
Block DHYD

The DHYD block calculates the hydraulic diameter of a rectangular channel.





Name	DHYD
Function	st0016
Inputs	0
Outputs	1
Parameters	2
Strings	0
Group	C

Inputs

None

Outputs

1	Hydraulic diameter d_h / m

Parameters

1	Channel width a / m
2	Channel height b / m

Strings

None

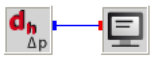
Description

The hydraulic diameter d_h is defined as the diameter of a concentric tube which has the same pressure drop per length as a channel with rectangular cross section when the velocity of the air flux is equal to the velocity in the channel with rectangular cross section. The hydraulic diameter is calculated by

$$d_\mathrm{h} = \frac{2ab}{a+b}$$

The side ratio of the rectangle should not exceed 1:5.

dhyd.vseit



The DHYD block calculates the hydraulic diameter for a channel width of 0.3 m and a height of 0.2 m. The SCREEN block displays the result

```
0.240000
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