Halton PTS

Single-Blade Damper

- Shut-off, adjustment, balancing or control damper
- Casing leakage classification: EN 1751, Class C
- Casing and damper blade made of galvanised steel
- Tightness classification of shut-off damper: EN 1751, Class 4

Product models and Accessories

- Shut-off, adjustment, balancing or control damper
- Adjustment, balancing or control damper
- Adjustment, balancing or control damper with perforated blade
- Several actuator options

MATERIAL

PART	MATERIAL	NOTE
Casing	Galvanised steel	
Blade and shaft	Galvanised steel	
Operating mechanism	Galvanised steel	
Blade gasket	EPDM rubber	Used only in PTS/A model
Duct gaskets	1C-polyurethane hybrid	
Actuator platform	Galvanised steel	

QUICK SELECTION

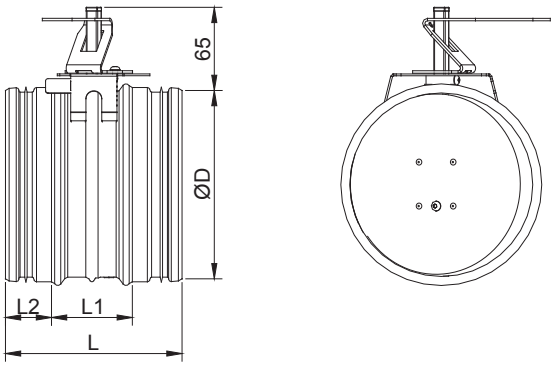
D [mm]	qmin [l/s]	qmin [m³/h]	qmax [l/s]	qmax [m³/h]
100	8	28	47	170
125	12	44	74	265
160	20	72	121	434
200	31	113	188	679
250	49	177	295	1060
315	78	281	468	1683
400	126	452	754	2714
500	196	707	1178	4241

qmin 1 m/s duct velocity

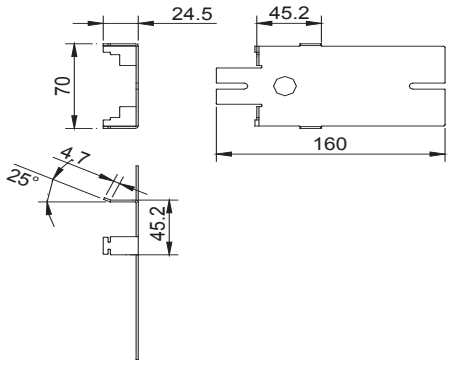
qmax 6 m/s duct velocity - recommended maximum airflow for comfort applications

DIMENSIONS

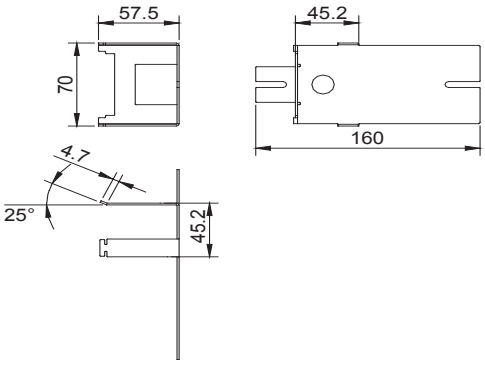
NS	L	L1	L2	ØD
100	145	70	36	99
125	145	70	36	124
160	145	70	36	159
200	145	70	36	199
250	145	70	36	249
315	145	70	36	314
400	245	175	35	399
500	245	175	35	499



Actuator platform, low (ML)



Actuator platform, high (MH)



Product models and Accessories

There are three different product models, for different purposes:

- Shut-off, adjustment, balancing or control damper, PTS/A

Tightness classification: EN 1751, Class 4

- Adjustment, balancing or control damper, PTS/B
- Adjustment, balancing or control damper with perforated blade, PTS/C

Minimum torque	4 Nm	10 Nm
PTS/A 100...250	x	
PTS/A 315...500		x
PTS/B 100...500	x	
PTS/C 100...500	x	

Manual operation

Handle for manual operation with blade position locking.

Actuator options

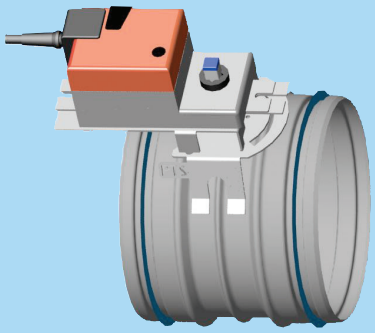
Standard actuators

Belimo LM24A / LM230A / LM24A-SR (5 Nm), NM24A / NM230A / NM24A-SR (10 Nm) and LF24 / LF230 (4 Nm)

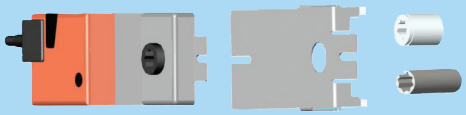
For technical data for available actuators, consult the list below.

After sales installation of the actuator

Actuator installation on the site is possible with the help of an actuator bed and extension shaft. This enables installation of a universal actuator type. The actuator bed selected can be of standard type when the ductwork is not insulated or of high type if the ductwork is insulated.



PTS/A with actuator (B4)

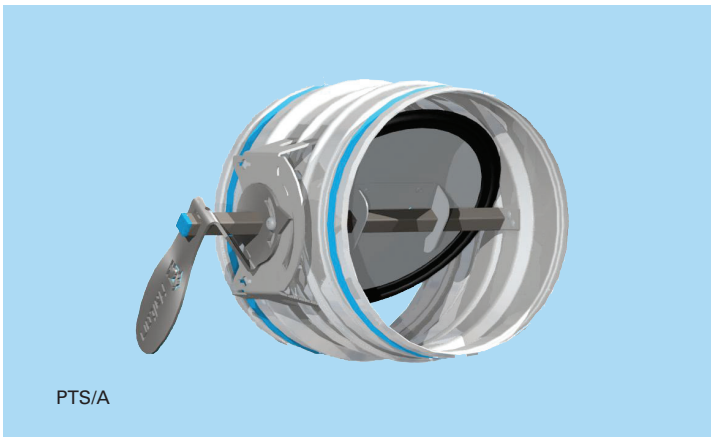


Actuator IL / IH PTS

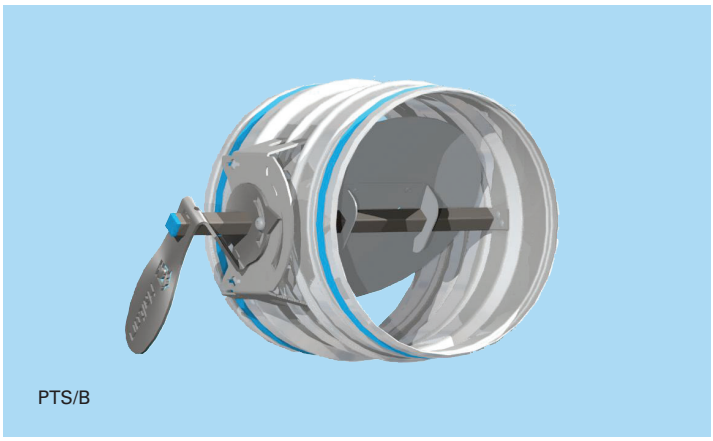
Electrical actuator: specific data

If other actuator types are required, consult Halton in order to specify the type and manufacturer.

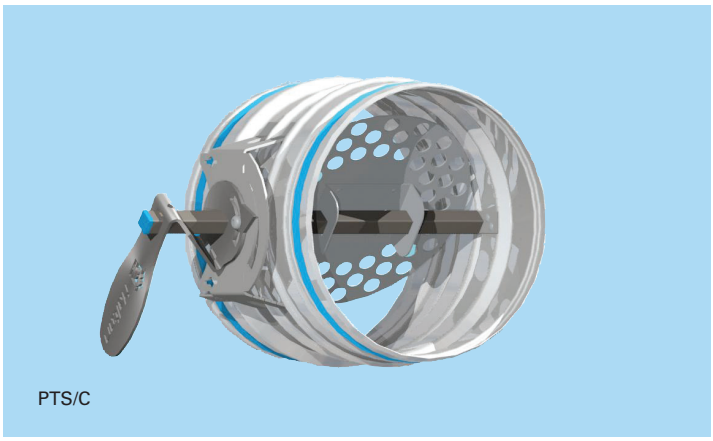
CODE	NAME	MANUFACTURER	TORQUE Nm	POWER SUPPLY	CONTROL TYPE	POWER CONSUMPTION
B1	LM24A	Belimo	5	24 VAC/VDC	On-off, 2-wire	3 VA / 2 W
B2	LM230A	Belimo	5	230 VAC	On-off, 2-wire	12 VA / 1 W
B3	LM24A-SR	Belimo	5	24 VAC/VDC	Modulating 0...10 VDC	4 VA / 2 W
B4	NM24A	Belimo	10	24 VAC/VDC	On-off, 2-wire	3.5 VA / 2 W
B5	NM230A	Belimo	10	230 VAC	On-off, 2-wire	18 VA / 2 W
B6	NM24A-SR	Belimo	10	24 VAC	Modulating 0...10 VDC	3 VA / 1.5 W
B7	LF24	Belimo	4	24 VAC	On-off, spring return	7 VA / 5 W
B8	LF230	Belimo	4	230 VAC	On-off, spring return	8 VA / 5 W



PTS/A



PTS/B



PTS/C

Function

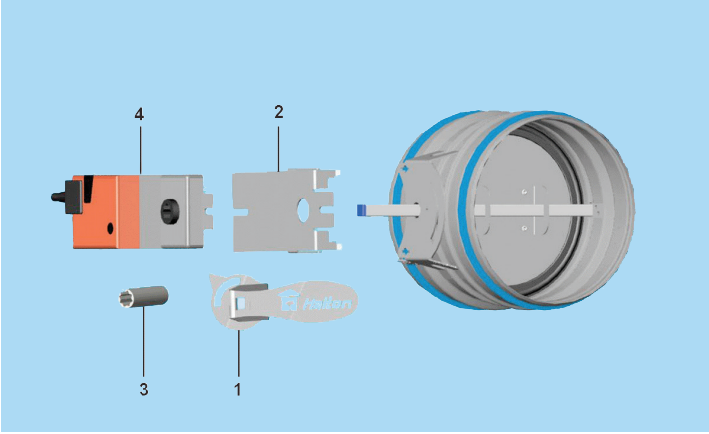
The PTS unit can operate as a shut-off, control or adjustment damper depending on the product model. This damper is available for circular standard duct sizes 100 mm to 500 mm. Damper position is visually indicated below the operating mechanism.

The PTS/A is a shut-off damper of leakage class 4 according to the EN 1751 standard. It includes rubber gaskets to ensure low leakage flow when the damper is in closed position. The PTS/A is available with a handle for manual operation or with an electric actuator for on-off control or for modulating control using a 0...10 VDC control signal.

The PTS/B can be used for airflow control or adjustment of airflow rates in the ductwork. It includes a steel blade without gasket. The PTS/B is available with a handle for manual operation or with an electric actuator for on-off control or for modulating control using a 0…10 VDC control signal.

The PTS/C is an airflow adjustment damper. The damper blade is a perforated blade that is acoustically and operationally designed for balancing of airflow rates.

The electric actuator is normally installed in the factory on the actuator platform with screws. On-site actuator installation is possible with the help of an actuator installation kit. The actuator installation kit, available as an accessory, includes an actuator platform and extension shaft for universal actuator fixing. The actuator platform and actuator can be installed easily using standard hand tools.



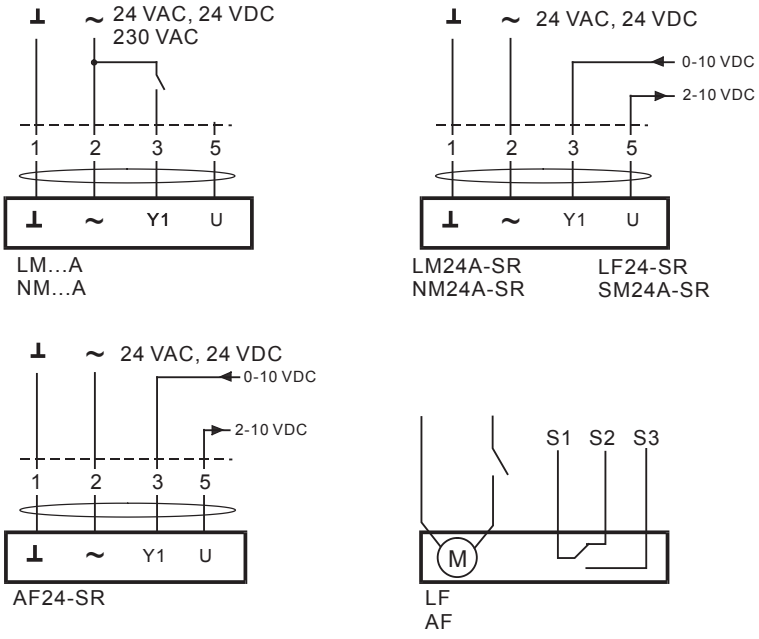
Installation

Fasten the damper to the ductwork with, e.g., rivets. Ensure that the rivets do not prevent the operation of the damper. The position of each rivet must be at least 10 mm from the duct end.
External duct gaskets ensure an airtight joint when the damper has been mechanically fastened to the duct with rivets or screws.
The electric actuator (where applicable) is to be connected to the power supply and control signal wires according to the wiring diagram. Examples of connections for the standard actuators are shown in a separate diagram.

The electric actuator can also be installed, when necessary, in an on-site procedure with the help of an actuator platform and universal shaft fitting, available as an accessory:
Remove the operating mechanism (1) by opening the locking screw.
Assemble the actuator platform in the location of the operation mechanism (2) and ensure its stability mechanically by bending the legs of the actuator platform with a hand tool.
The universal actuator fitting enables connection of most actuator types to the shaft (3) (4).
Wire connections are to be performed according to the instruction for the actuator installed.

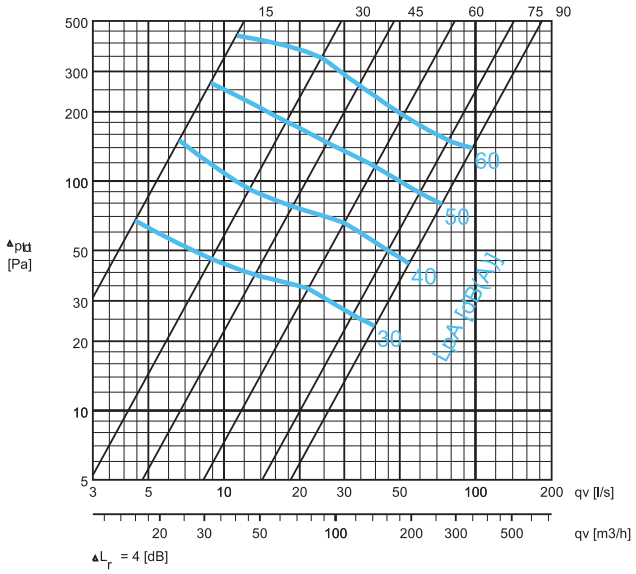
Electric wire connections

Belimo



Pressure drop and sound data

PTS/A-100



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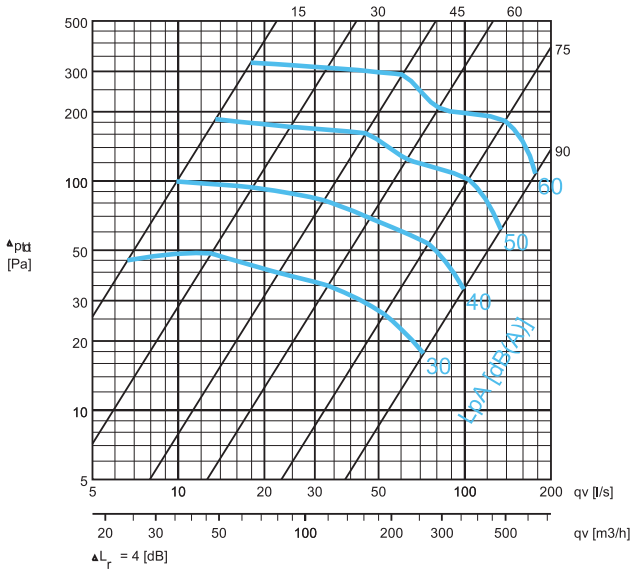
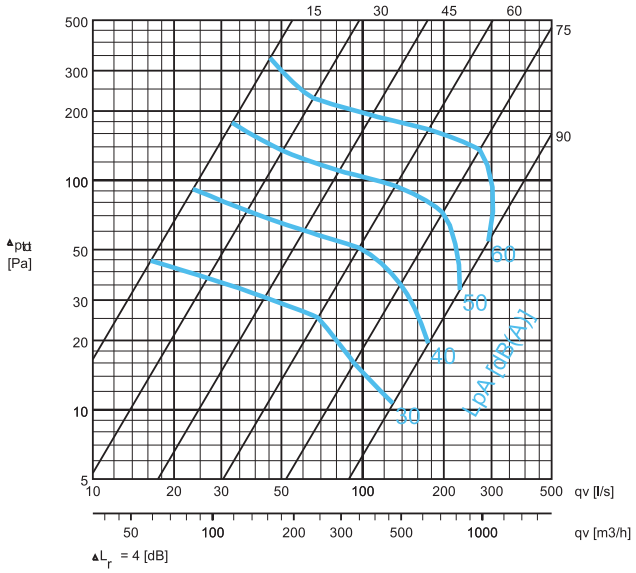
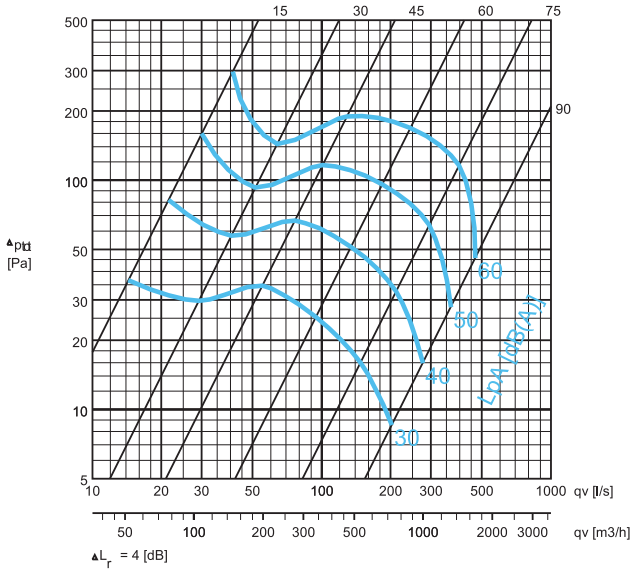


PTS/A-160

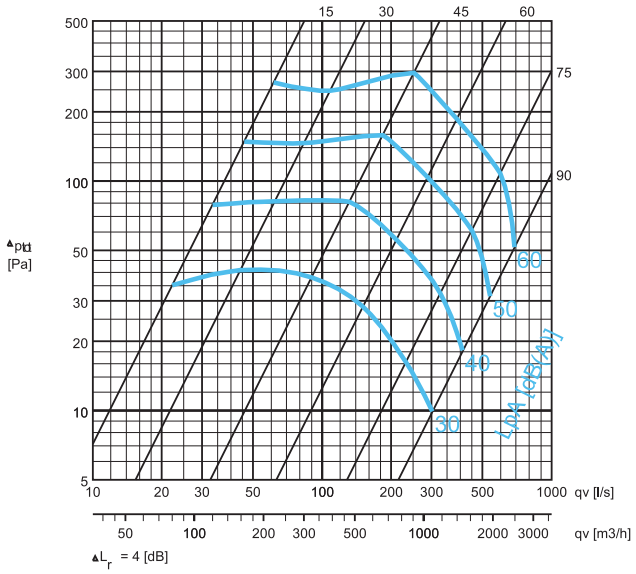


PTS/A-200



Pressure drop and sound data

PTS/A-250



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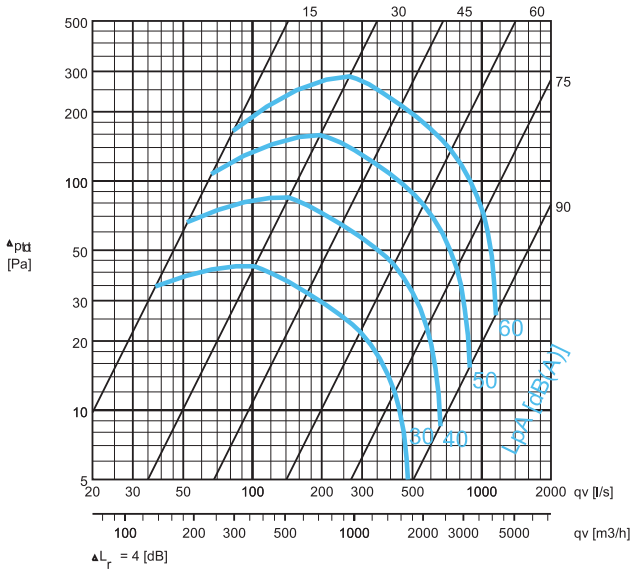

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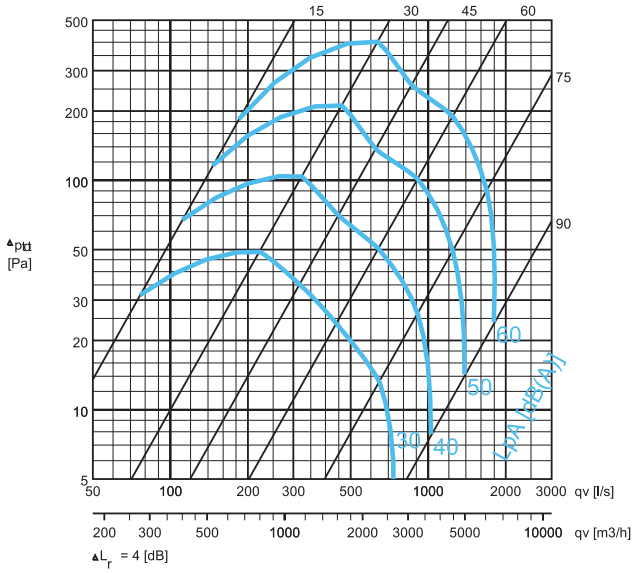

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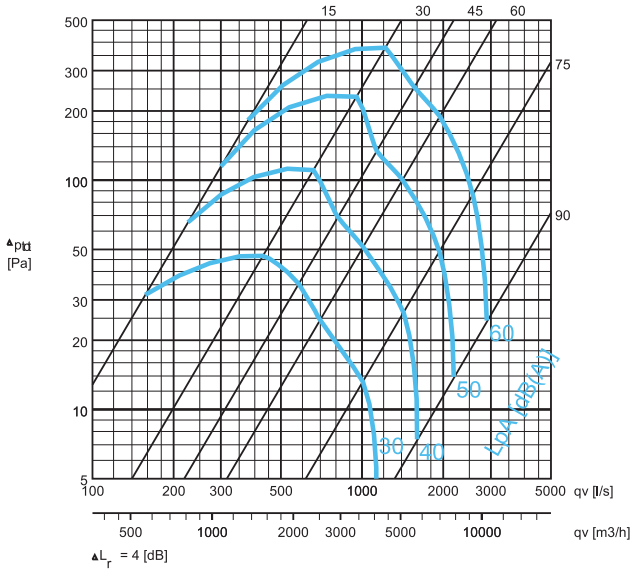
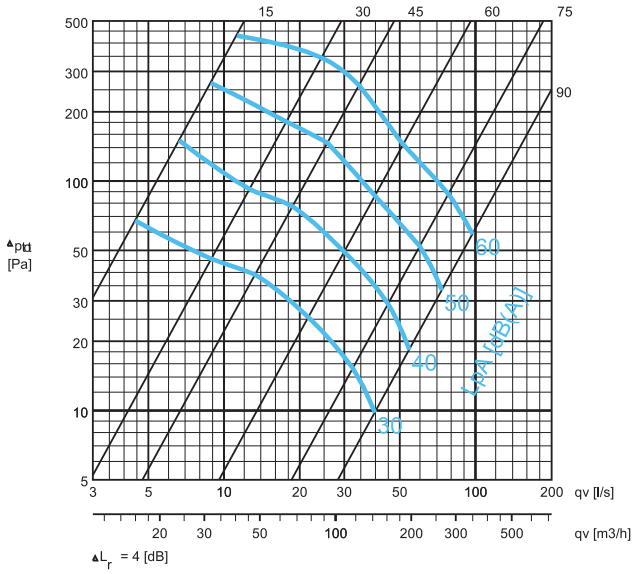


Pressure drop and sound data

PTS/B-100



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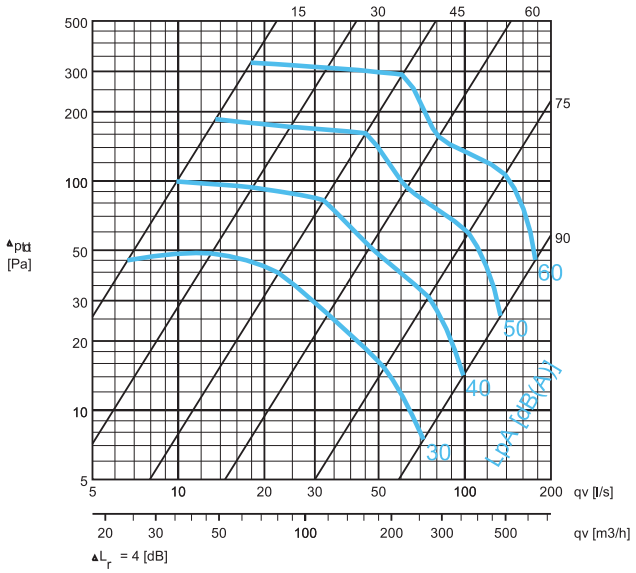

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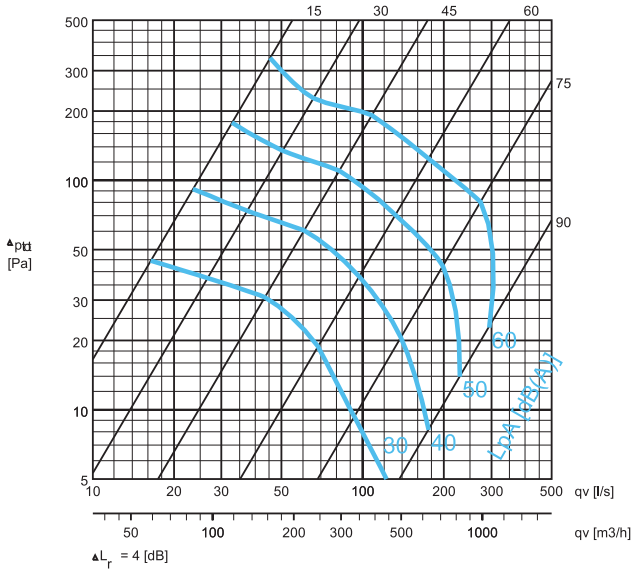

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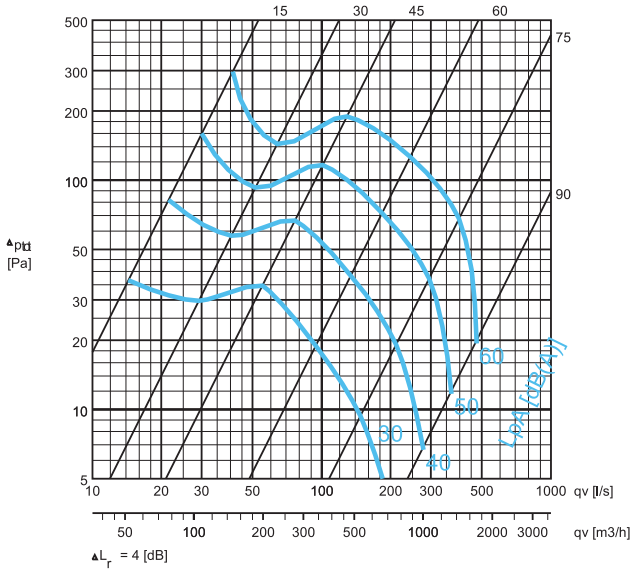
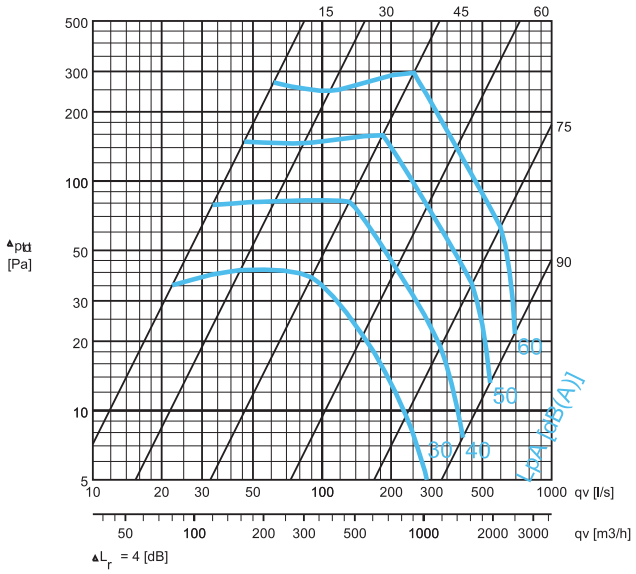


Pressure drop and sound data

PTS/B-250



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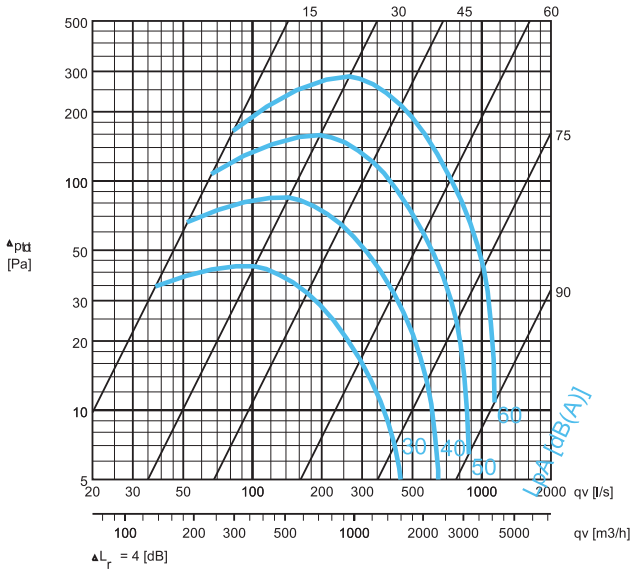

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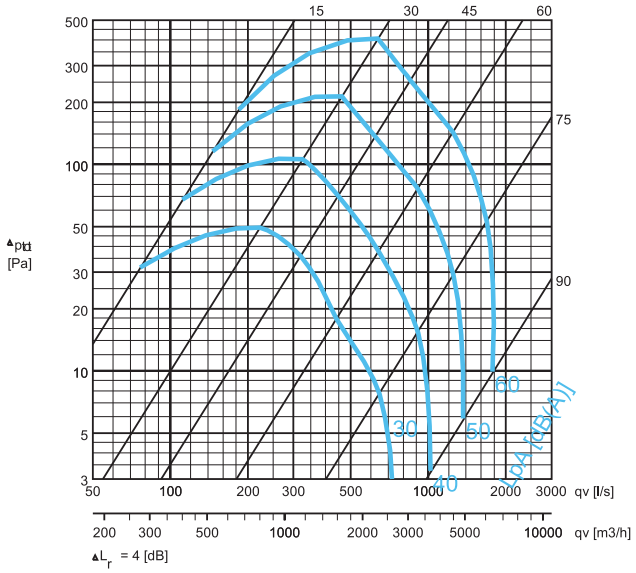

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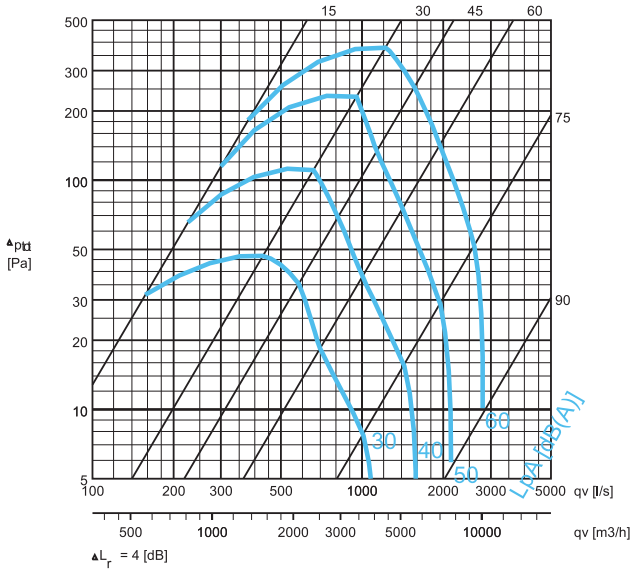
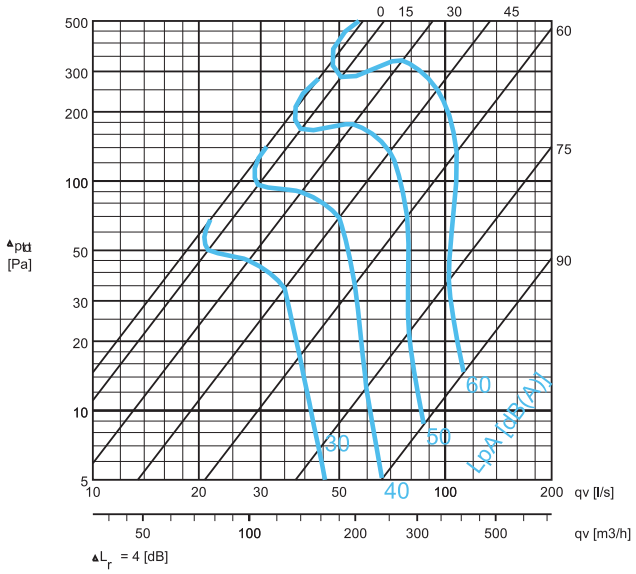


Pressure drop and sound data

PTS/C-100



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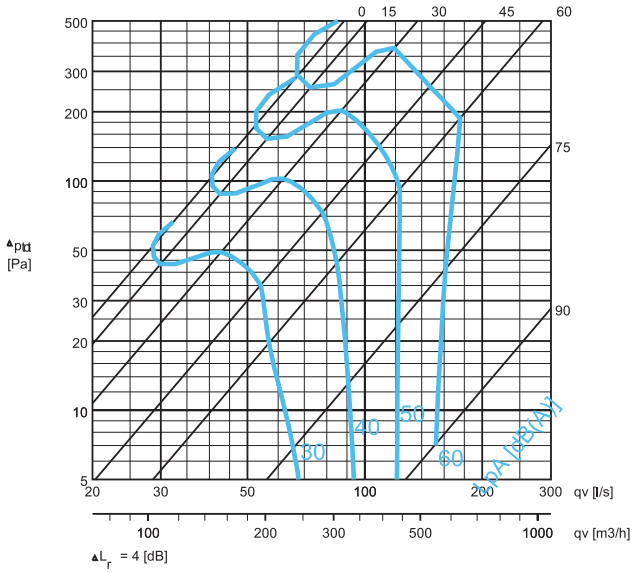

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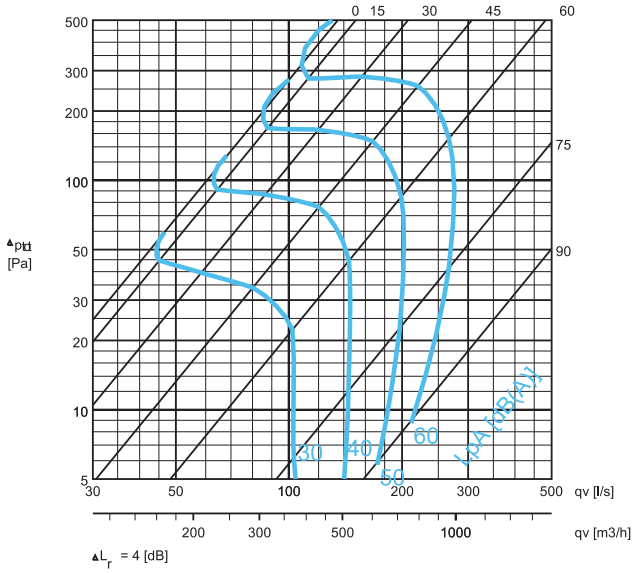

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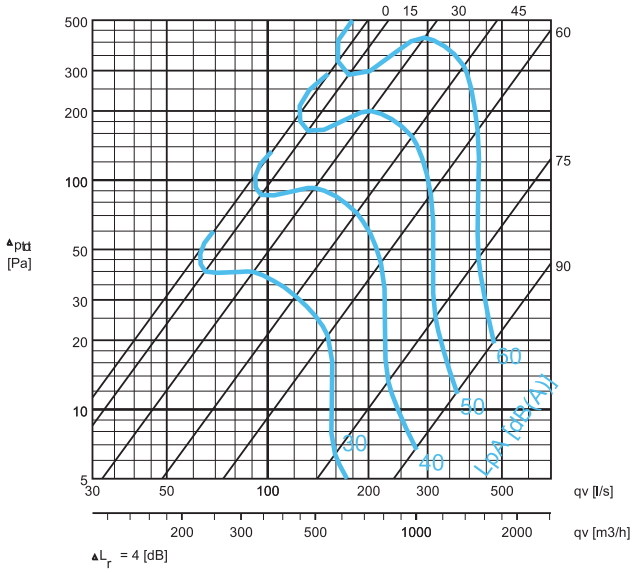

Pressure drop and sound data

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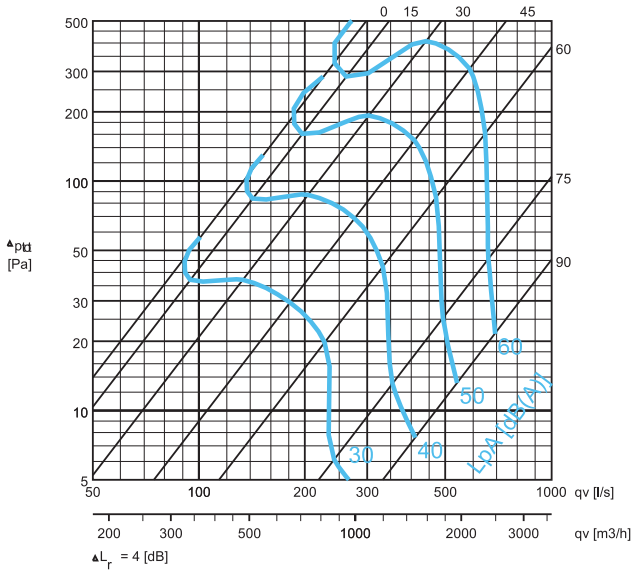

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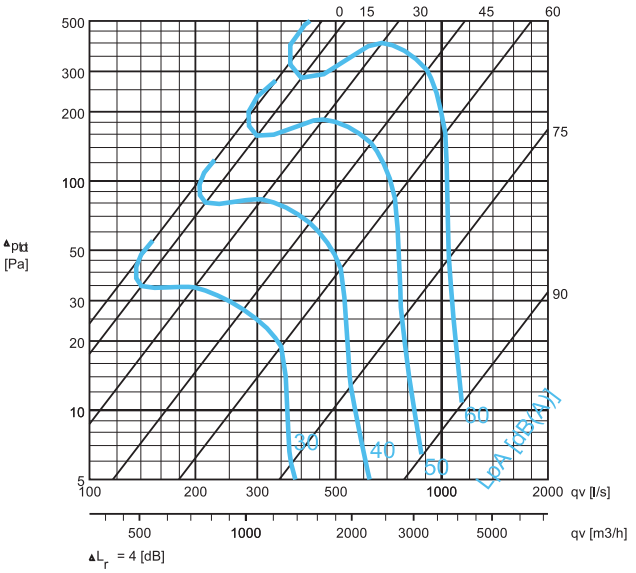

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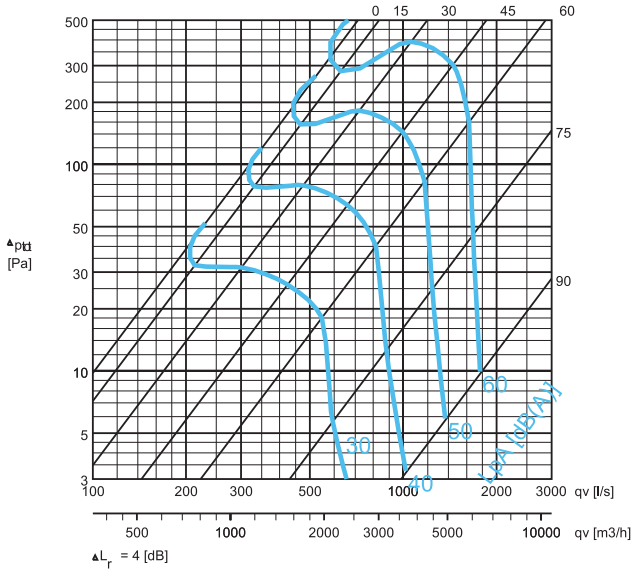

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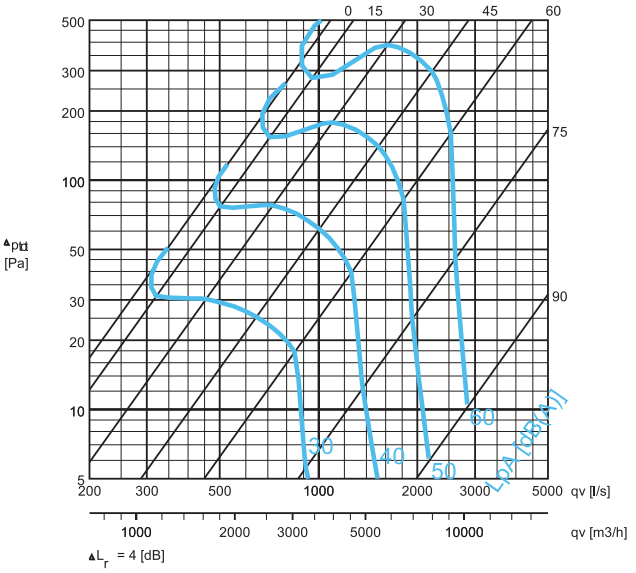

Suggested specifications

The casing and circular (perforated) blade of the shut-off / adjustment / control damper shall be made of galvanised steel.
The shut-off damper shall meet EN 1751, Class 4 tightness requirements.
External rubber gaskets on the spigot shall provide an airtight connection to circular ductwork.

Product code

PTS/S-D

S = Version

A	Damper with blade gasket
B	Damper without blade gasket
C	Damper with perforated blade

D = Diameter of duct connection

100, 125, 160, 200, 250, 315, 400, 500

Specifics and accessories

MA = Material

CS	Steel

MO = Actuator type

NA	Manual=default
B1	LM24A, 5 Nm, 24 VAC/VDC, on-off
B2	LM230A, 5 Nm, 230 VAC, on-off
B3	LM24A-SR, 5 Nm, 24 VAC/VDC, modulating
B4	NM24A, 10 Nm, 24 VAC/VDC, on-off
B5	NM230A, 10 Nm, 230 VAC, on-off
B6	NM24A-SR, 10 Nm, 24 VAC/VDC, modulating
B7	LF24, 4 Nm, 24 VAC/VDC, on-off, spring return
B8	LF230, 4 Nm, 230 VAC, on-off, spring return

AC = Accessories

BA	Handle for manual operation
ML	Actuator platform, low
MH	Actuator platform, high
IL	Installation kit for actuator, low
IH	Installation kit for actuator, high
IJ	Actuator platform; low for LF actuator

Code example

PTS/A-100, MA=CS,MO=NA