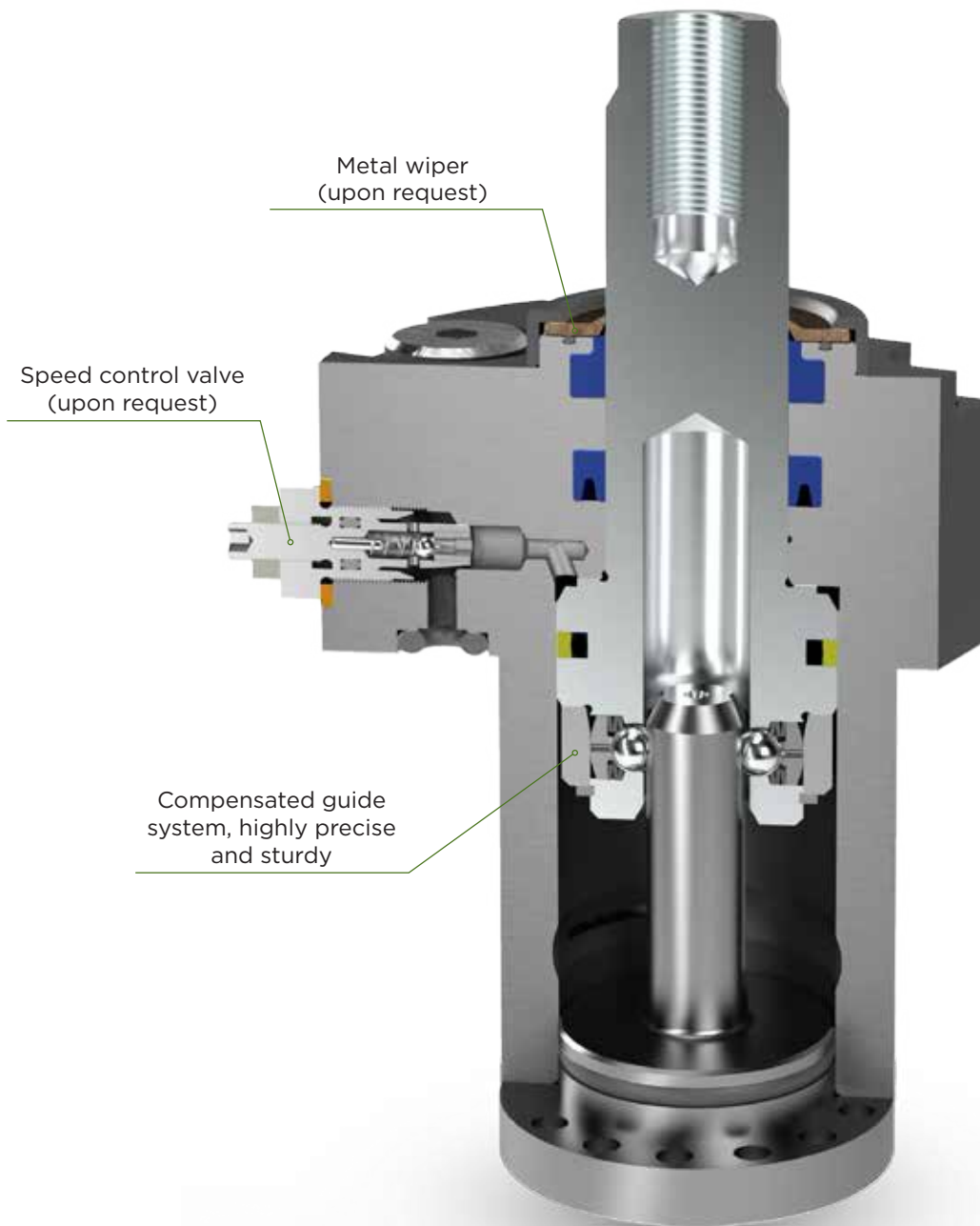


CT

PULL/PUSH CYLINDERS






The linear pull cylinders of the CT series are equipped with a clearance-compensating piston guide system designed to minimize wear. They are thus particularly suited for long operating times.

When mounting the clamp arm or accessories to this cylinder type, the piston rod **must be** fixed in order **not to expose** the compensated guide system to uncontrolled forces, as this would lead to damage or malfunctions of the equipment.



PULL/PUSH CYLINDERS

CT SERIES

CYLINDER TYPE			CT16	CT22	CT28	CT35
CYLINDER BODY TYPE	Upper flange		Yes	Yes	Yes	Yes
	Lower flange		*	*	*	*
	Cartridge		Yes	Yes	Yes	Yes
Metal wiper (option)			Yes	Yes	Yes	Yes
Maximum operating pressure (Bar)			500	500	500	500
Maximum pushing force (Kn) at 500 bar			22.1	44.4	77.9	116.5
Maximum pulling force (Kn) at 500 bar			12.3	25.8	47.4	69
Rod diameter (mm)			16	22	28	35
Piston diameter (mm)			24	34	45	55
Total cylinder stroke (mm)			22	25	28	36
Piston area/pushing (cm ²)			4.52	9.07	15.9	23.8
Piston area/pulling (cm ²)			2.51	5.27	9.75	14.1
Oil volume/pushing (cm ³)			9.9	22.6	44.5	85.7
Oil volume/pulling (cm ³)			5.5	13.2	27.3	50.8

* = Upon request



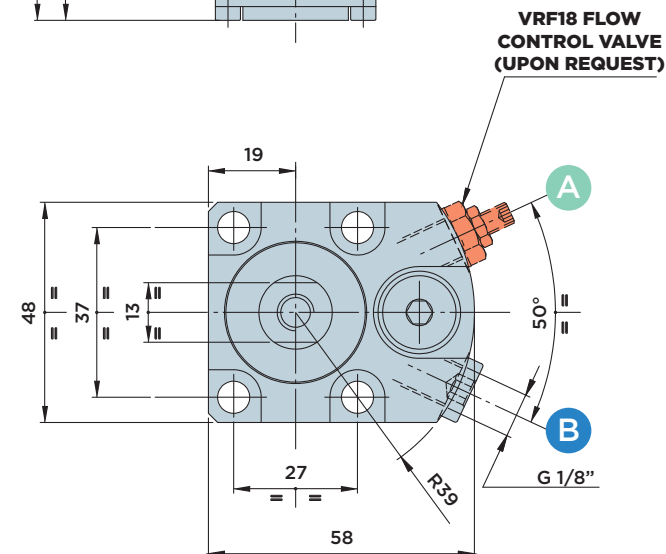
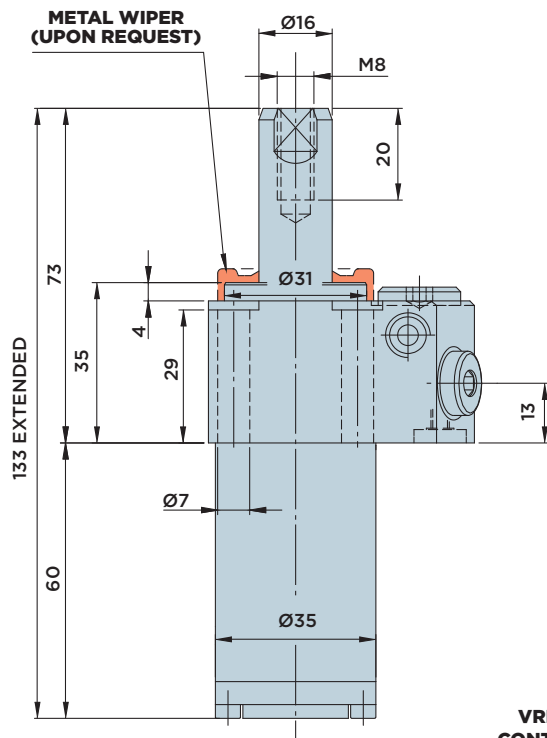
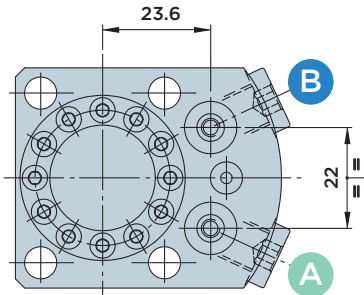
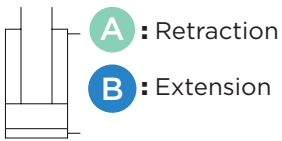
HYDROBLOCK

CT16.0 FD

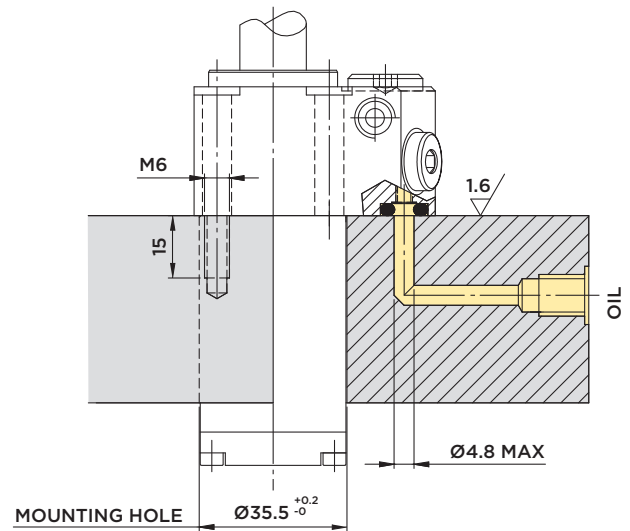


DOUBLE-ACTING PULL/PUSH CYLINDER WITH **UPPER FLANGE**
AND **ANTIROTATION DEVICE**

MAX. OPERATING PRESSURE = 500BAR



INSTALLATION DIMENSIONS WITH O-RING CONNECTION



Included in the scope of supply:

- Mounting screws M6x40 DIN 912/12.9 grade
- O-rings Ø4.34x3.53

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Options:

- Different swinging angles available upon request (order code as for the SR series, see page 38 Example: CT16.0FDR90)
- The cylinder can also be ordered without antirotation device (order no. CT16.0FDN)

Note:

Clamping force diagram, see page 45

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	RETRAC.	EXTEN.	RETRAC.	EXTEN.	
TOTAL	22	2.51	4.52	5.5	9.9



CT16.0 CD

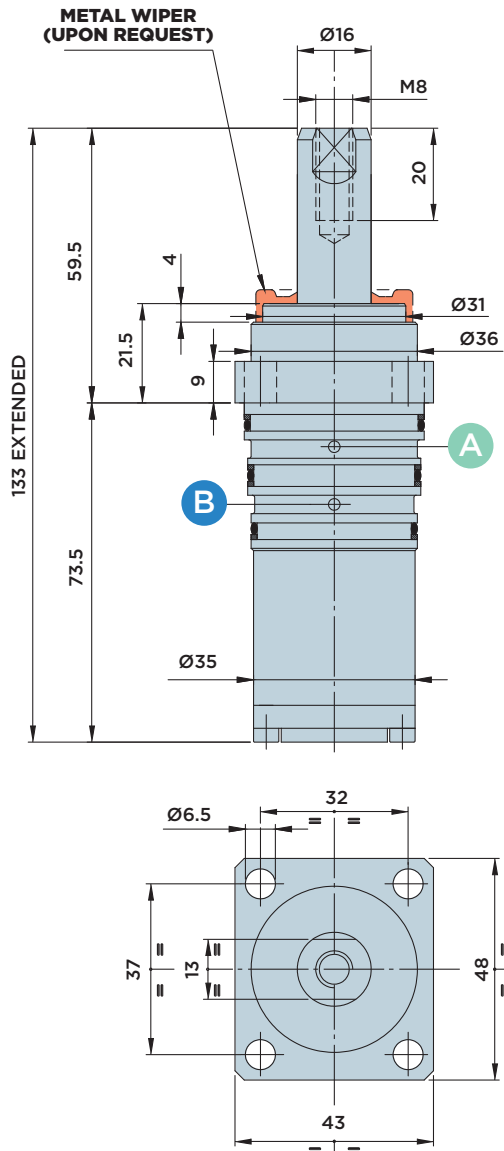


DOUBLE-ACTING PULL/PUSH CYLINDER WITH **CARTRIDGE BODY**
AND **ANTIROTATION DEVICE**

MAX. OPERATING PRESSURE = 500BAR

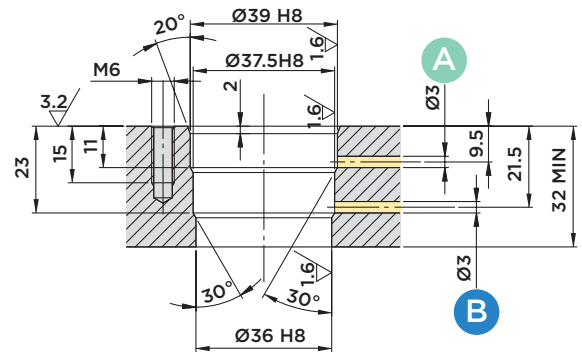
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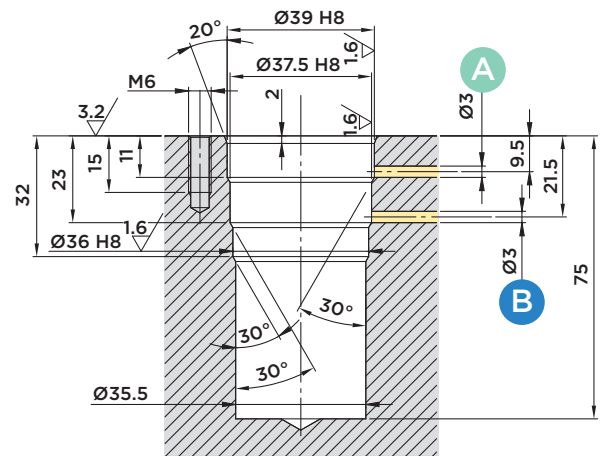


INSTALLATION DIMENSIONS

Through-hole mounting



Blind hole mounting



Options:

- Different swinging angles available upon request (order code as for the SR series, see page 38 Example: CT16.0CDR90)
- The cylinder can also be ordered without antirotation device (order no. CT16.0CDN).

Included in the scope of supply:

- Mounting screws M6x20 DIN 912/12.9 grade

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

Clamping force diagram, see page 45

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	RETRAC.	EXTEN.	RETRAC	EXTEN.	
TOTAL	22	2.51	4.52	5.5	9.9



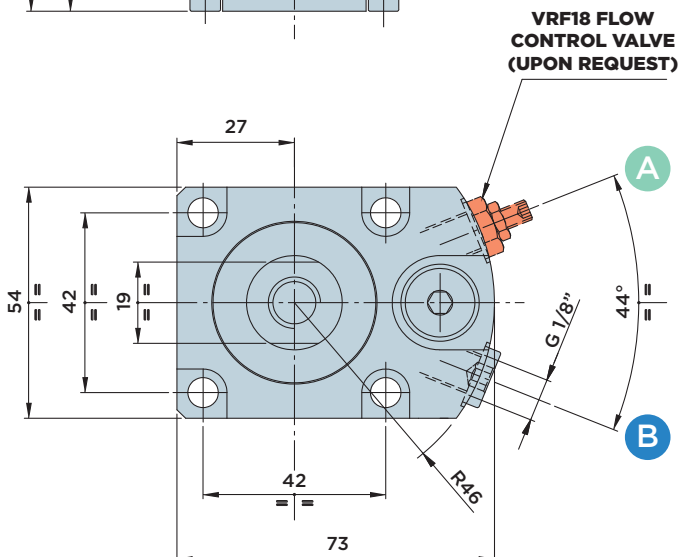
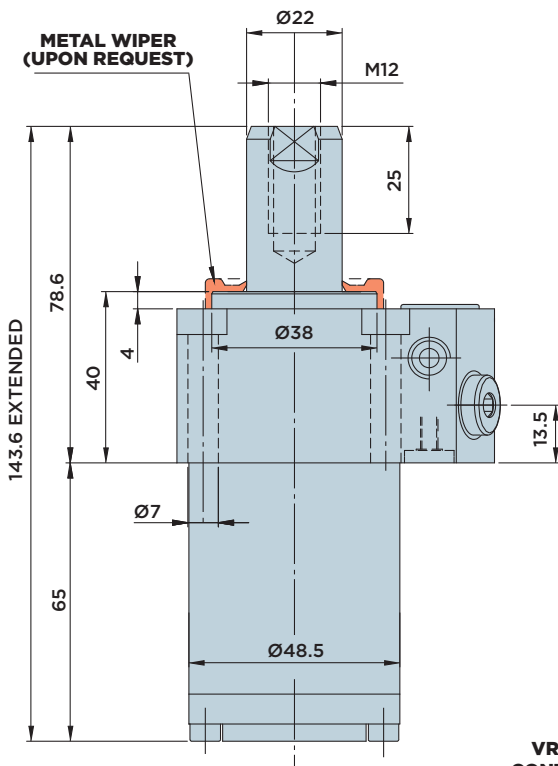
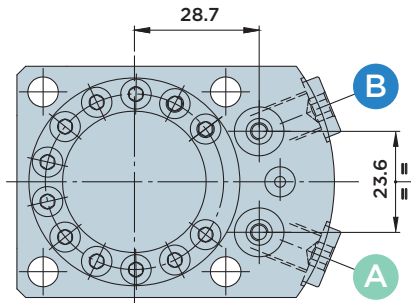
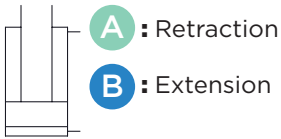
HYDROBLOCK

CT22.0 FD

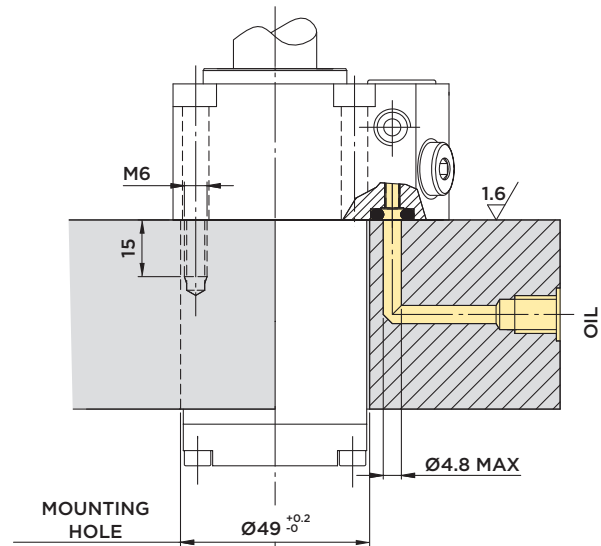


DOUBLE-ACTING PULL/PUSH CYLINDER WITH **UPPER FLANGE**
AND **ANTIROTATION DEVICE**

MAX. OPERATING PRESSURE = 500BAR



INSTALLATION DIMENSIONS WITH O-RING CONNECTION



Included in the scope of supply:

- Mounting screws M6x40 DIN 912/12.9 grade
- O-rings Ø4.34x3.53

Variant:

- Overload clutch (upon request).
- Metal wiper (upon request).

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Options:

- Different swinging angles available upon request (order code as for the SR series, see page 38 Example: CT22.0FDR90)
- The cylinder can also be ordered without antirotation device (order no. CT22.0FDN)

Note:

Clamping force diagram, see page 69

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	RETRAC.	EXTEN.	RETRAC.	EXTEN.	
TOTAL	25	5.27	9.07	13.2	22.6



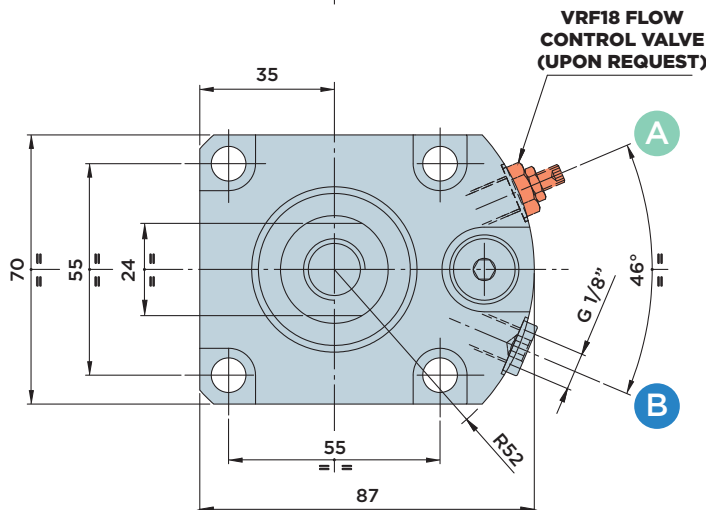
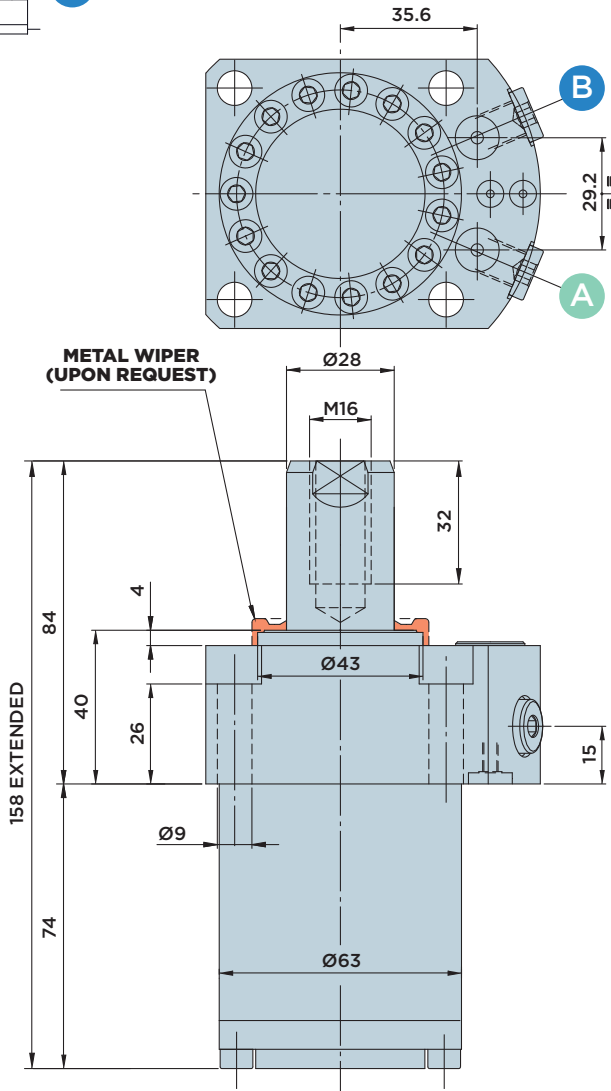
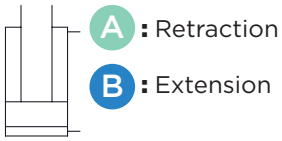
HYDROBLOCK

CT28.0 FD

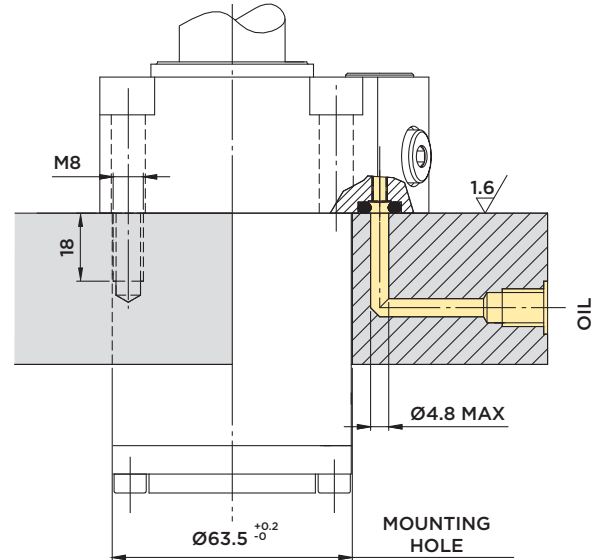


DOUBLE-ACTING PULL/PUSH CYLINDER WITH **UPPER FLANGE**
AND **ANTIROTATION DEVICE**

MAX. OPERATING PRESSURE = 500BAR



INSTALLATION DIMENSIONS WITH O-RING CONNECTION



Included in the scope of supply:

- Mounting screws M6x40 DIN 912/12.9 grade
- O-rings Ø4.34x3.53

Variants:

- Overload clutch (upon request).
- Metal wiper (upon request).

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Options:

- Different swinging angles available upon request (order code as for the SR series, see page 38 Example: CT28.OFDR90)
- The cylinder can also be ordered without antirotation device (order no. CT28.OFDN)

Note:

Clamping force diagram, see page 91

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	RETRAC.	EXTEN.	RETRAC.	EXTEN.	
TOTAL	28	9.75	15.9	27.3	44.5



HYDROBLOCK

CT28.0 CD

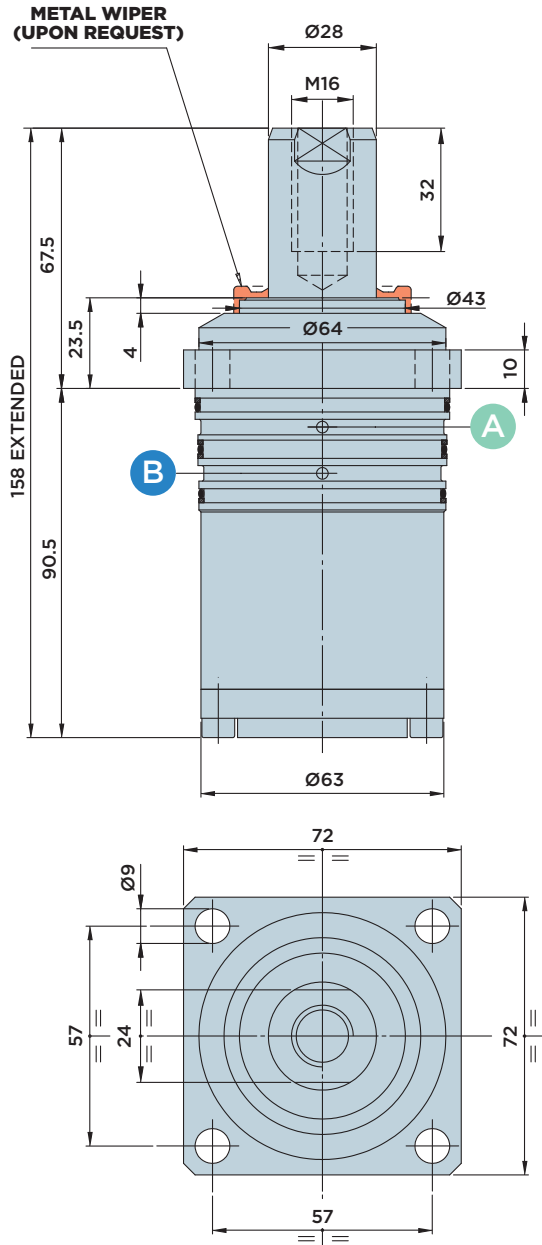


DOUBLE-ACTING PULL/PUSH CYLINDER WITH **CARTRIDGE BODY**
AND **ANTIROTATION DEVICE**

MAX. OPERATING PRESSURE = 500BAR

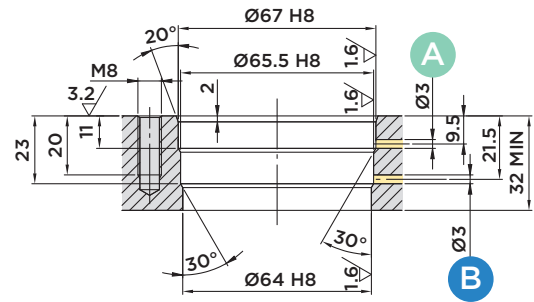
A : Retraction

B : Extension

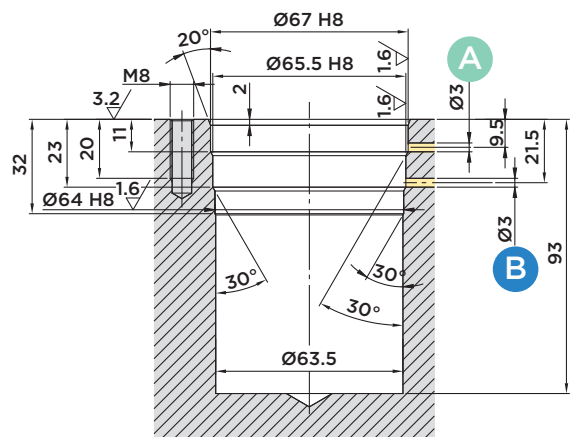


INSTALLATION DIMENSIONS

Through-hole mounting



Blind hole mounting



Options:

- Different swinging angles available upon request
(order code as for the SR series, see page 38
Example: CT28.0CDR90)
- The cylinder can also be ordered without antirotation device (order no. CT28.0CDN)

Included in the scope of supply:

- Mounting screws M8x25 DIN 912/12.9 grade

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

Clamping force diagram, see page 91

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	RETRAC.	EXTEN.	RETRAZ.	RETRAC.	
TOTAL	28	9.75	15.9	27.3	44.5



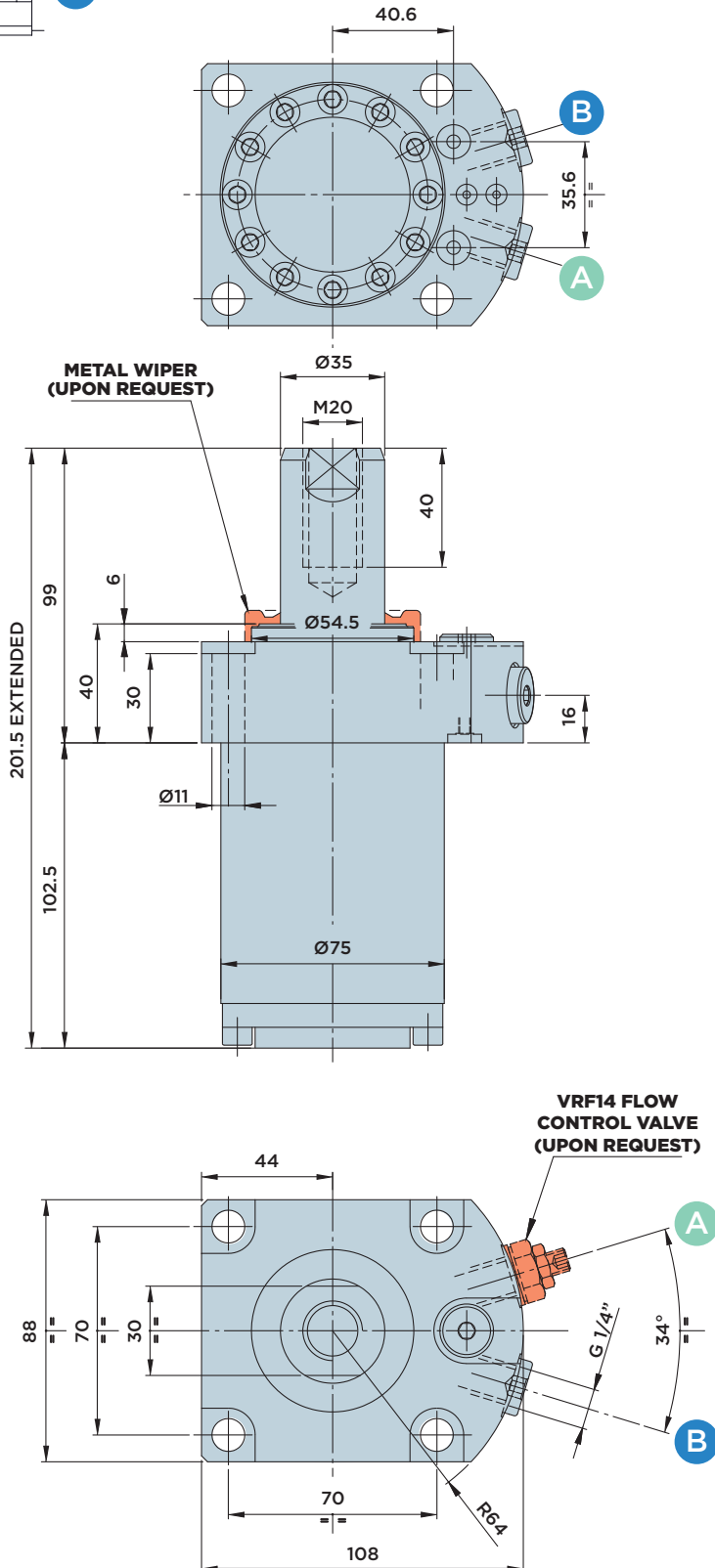
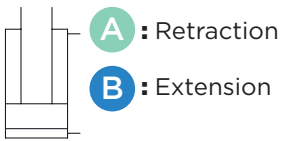
HYDROBLOCK

CT35.0 FD

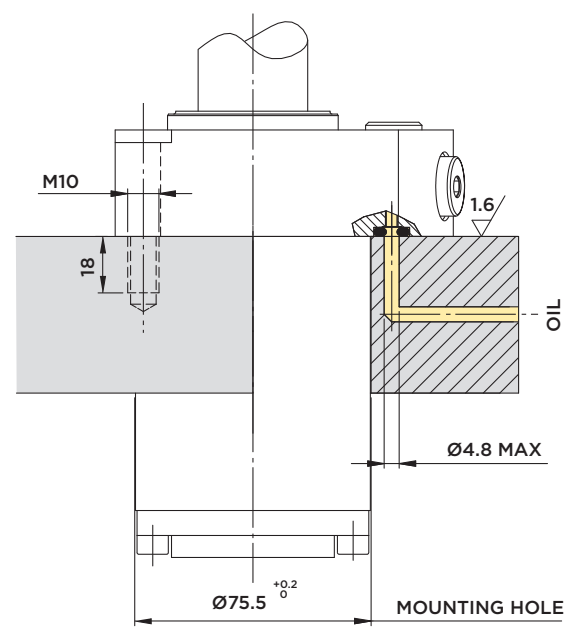


DOUBLE-ACTING PULL/PUSH CYLINDER WITH **UPPER FLANGE**
AND **ANTIROTATION DEVICE**

MAX. OPERATING PRESSURE = 500BAR



INSTALLATION DIMENSIONS WITH O-RING CONNECTION



Included in the scope of supply:

- Mounting screws M10x45 DIN 912/12.9 grade
- O-rings Ø4.34x3.53

Variants:

- Overload clutch (upon request).
- Metal wiper (upon request).

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Options:

- Different swinging angles available upon request (order code as for the SR series, see page 38 Example: CT35.OFDR90)
- The cylinder can also be ordered without antirotation device (order no. CT35.OFDN)

Note:

Clamping force diagram, see page 101

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	RETRAC.	EXTEN.	RETRAC.	EXTEN.	
TOTAL	36	14.1	23.8	50.8	85.7



CT35.0 CD

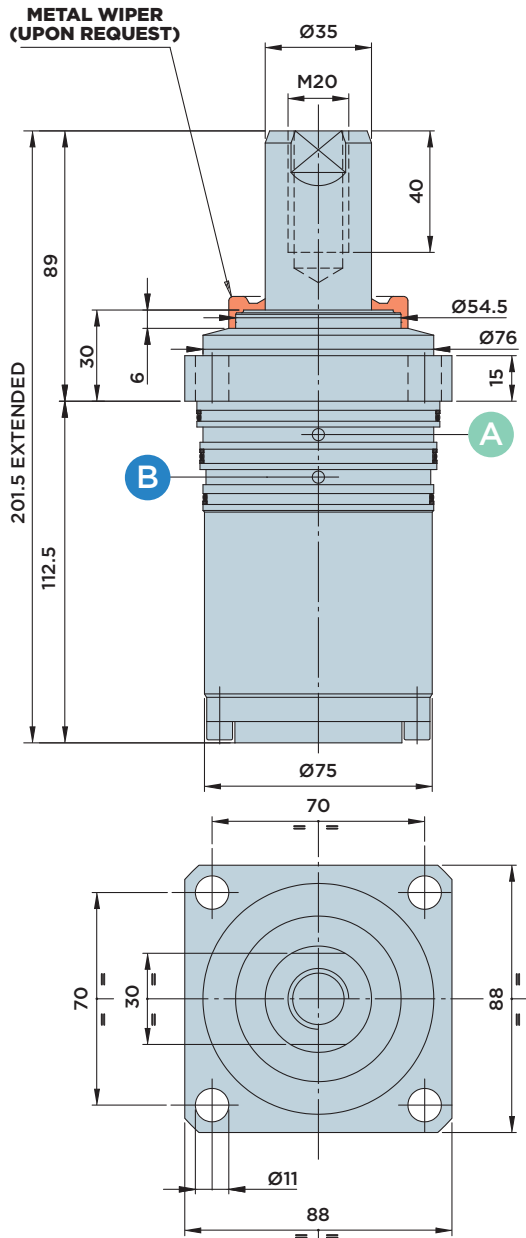


DOUBLE-ACTING PULL/PUSH CYLINDER WITH **CARTRIDGE BODY**
AND **ANTIROTATION DEVICE**

MAX. OPERATING PRESSURE = 500BAR

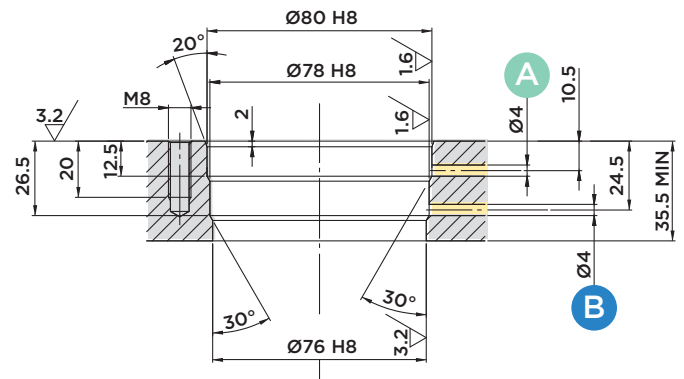
A : Retraction

B : Extension

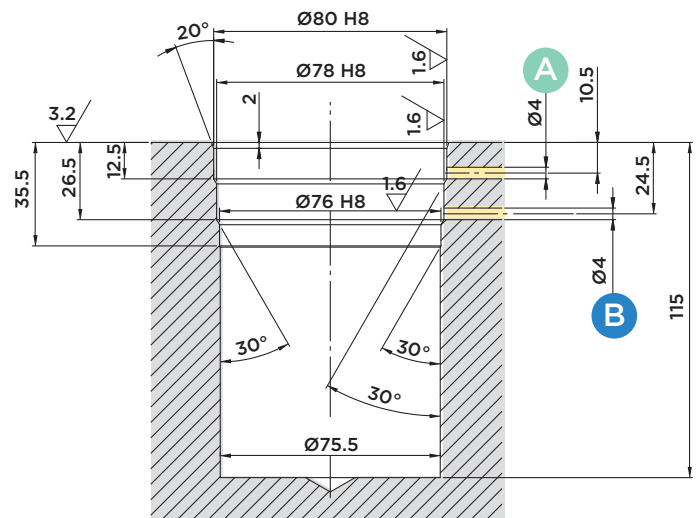


INSTALLATION DIMENSIONS

Through-hole mounting



Blind hole mounting



Options:

- Different swinging angles available upon request
(order code as for the SR series, see page 38
Example: CT35.0CDR90)
- The cylinder can also be ordered without antirotation device (order no. CT35.0CDN)

Included in the scope of supply:

- Mounting screws M10x30 DIN 912/12.9 grade

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

Clamping force diagram, see page 101

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	RETRAC.	EXTEN.	RETRAC.	EXTEN.	
TOTAL	36	14.1	23.8	50.8	85.7



HYDROBLOCK

BS

LINEAR BLOCK CYLINDERS



HYDROBLOCK

BS

LINEAR BLOCK CYLINDERS

CYLINDER TYPE	BS10	BS12	BS16	BS20	BS25	BS32	BS36
Metal wiper (option)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Maximum operating pressure (Bar)	500	500	500	500	500	500	500
Maximum pushing force (Kn) at 500 bar	98.6	15.3	24	39.4	61.5	96.2	162.5
Maximum pulling force (Kn) at 500 bar	59.8	9.8	14.2	24	37.5	56.8	112.7
Rod diameter (mm)	10	12	16	20	25	32	36
Piston diameter (mm)	16	20	25	32	40	50	65
Total cylinder stroke (mm)	16	16	20	25 / 50	50	50	25
Piston area/pushing (cm ²)	2.01	3.14	4.91	8.04	12.57	19.63	33.18
Piston area/pulling (cm ²)	1.22	2.01	2.9	4.9	7.66	11.6	23
Oil volume/ pushing (cm ³)	3.2	5	9.8	20.1 / 40.2	62.9	98.2	83
Oil volume /pulling (cm ³)	2	3.2	5.8	12.3 / 24.5	38.3	58	57.5

In the standard version, linear BS block cylinders of HYDROBLOCK are not equipped with a piston rod guide system. For this reason, no particular measures are required when mounting accessories to this cylinder type. We recommend, however, fixing the piston rod when screwing in the mounting screw.

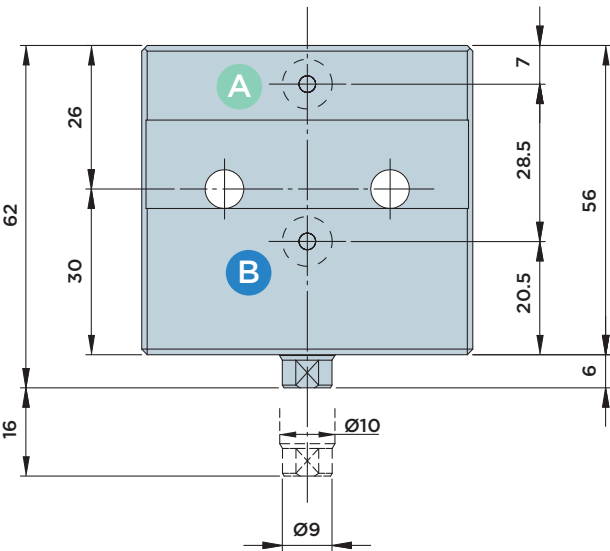
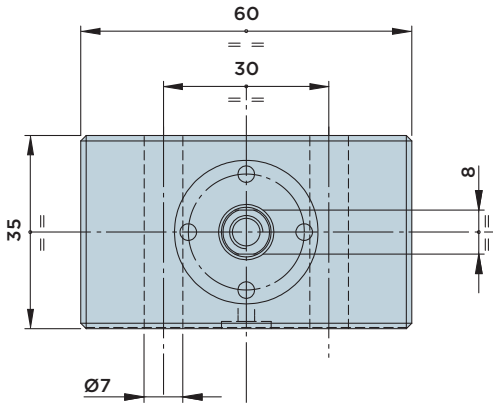
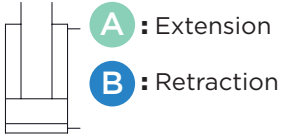
NOTE: In addition, a stop should be provided on the mounting support behind the cylinder in order to prevent resulting shear forces from acting exclusively on the mounting screws.



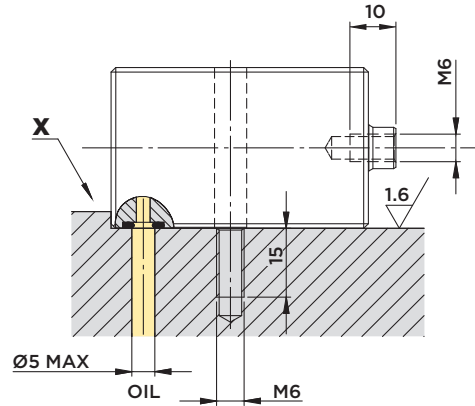
BS10.16

DOUBLE-ACTING BLOCK CYLINDER WITH **FLANGE**

MAX. OPERATING PRESSURE = 500BAR



INSTALLATION DIMENSIONS



Attention:

We recommend providing a stop ("X" in the figure) on the cylinder mounting support in order to prevent resulting shear forces from acting exclusively on the mounting screws.

Included in the scope of supply:

- Mounting screws M6x45 DIN 912/12.9 grade
- O-Rings Ø6.07x1.78

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

Customized versions are available upon request. Please contact HYDROBLOCK if you have special requirements in terms of stroke or mounting conditions.

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	PUSHING	PULLING	PUSHING	PULLING	
TOTAL	16	2.01	1.22	3.2	2

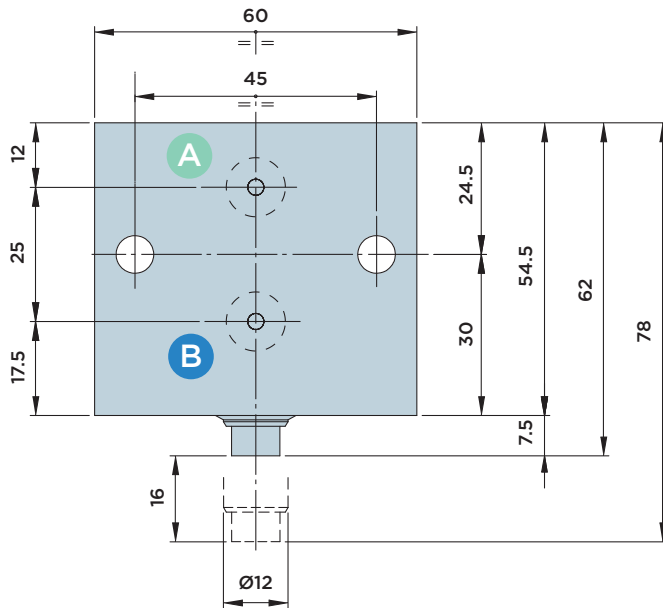
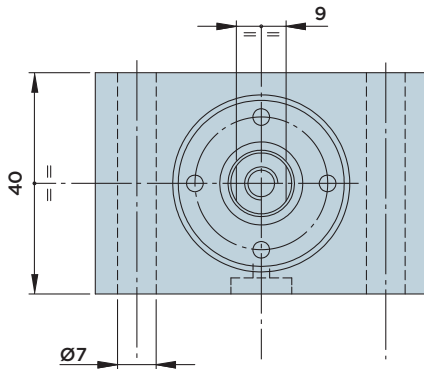
BS12.16

DOUBLE-ACTING BLOCK CYLINDER WITH **FLANGE**

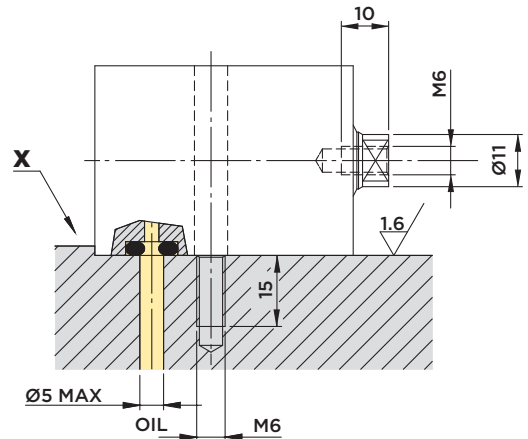
MAX. OPERATING PRESSURE = 500BAR

A : Extension

B : Retraction



INSTALLATION DIMENSIONS



Attention:

We recommend providing a stop ("X" in the figure) on the cylinder mounting support in order to prevent resulting shear forces from acting exclusively on the mounting screws.

Included in the scope of supply:

- Mounting screws M6x50 DIN 912/12.9 grade
- O-Rings Ø4.34x3.53

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

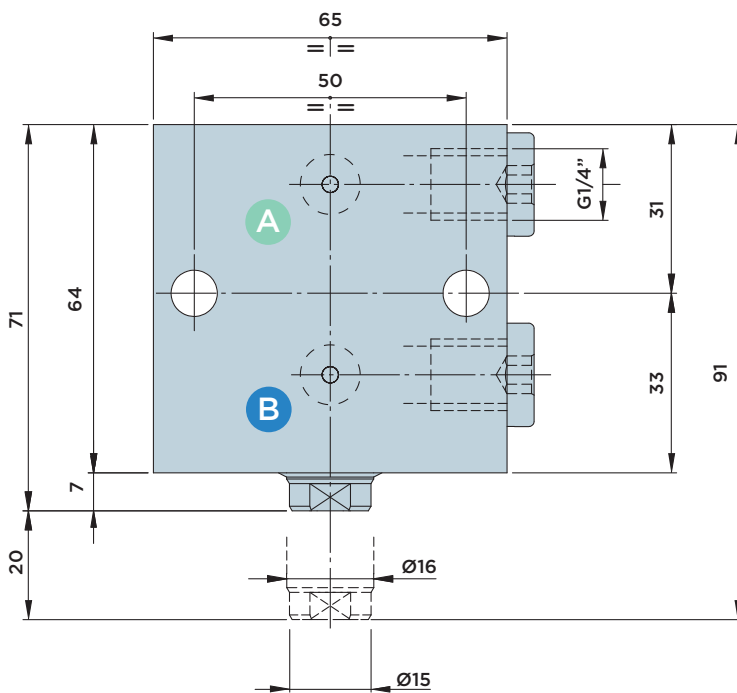
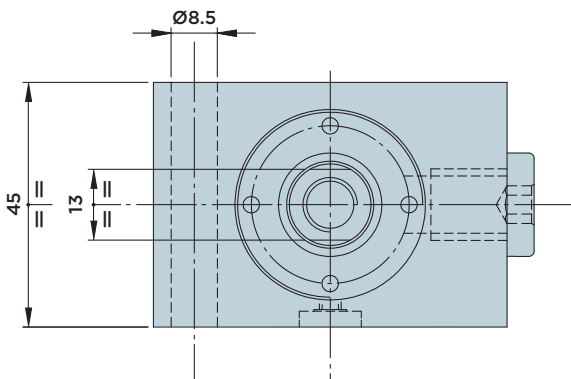
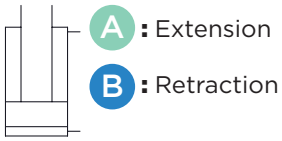
Customized versions are available upon request. Please contact HYDROBLOCK if you have special requirements in terms of stroke or mounting conditions.

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	PUSHING	PULLING	PUSHING	PULLING	
TOTAL	16	3.14	2.01	5	3.2

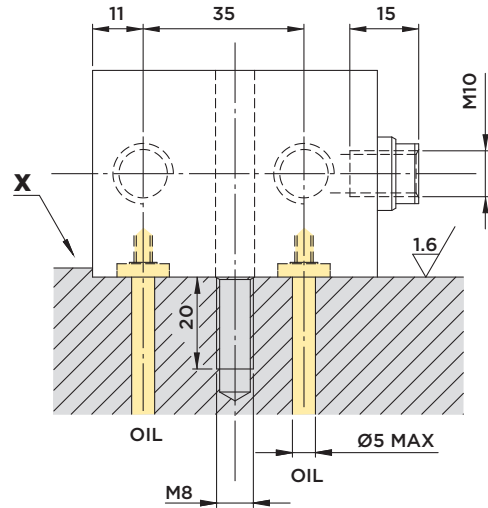
BS16.20

DOUBLE-ACTING BLOCK CYLINDER WITH **FLANGE** AND **IN-LINE PORTS**

MAX. OPERATING PRESSURE = 500BAR



INSTALLATION DIMENSIONS



Attention:

We recommend providing a stop ("X" in the figure) on the cylinder mounting support in order to prevent resulting shear forces from acting exclusively on the mounting screws.

Included in the scope of supply:

- Mounting screws M8x60 DIN 912/12.9 grade
- O-Rings Ø4.34x3.53

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

Customized versions are available upon request. Please contact HYDROBLOCK if you have special requirements in terms of stroke or mounting conditions.

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	PUSHING	PULLING	PUSHING	PULLING	
TOTAL	20	4.91	2.9	9.8	5.8



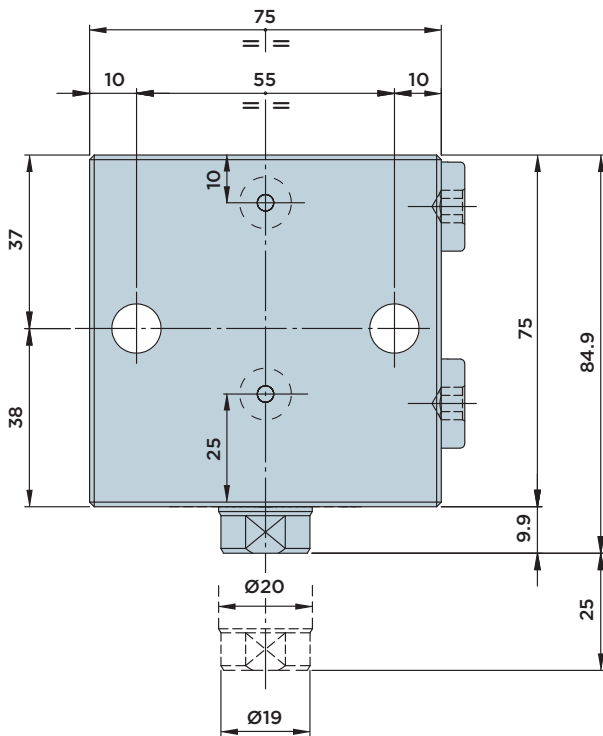
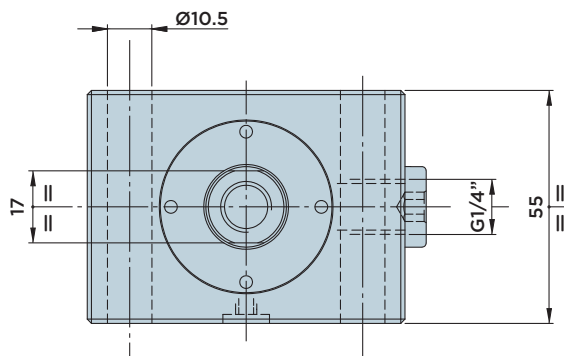
BS20.25

DOUBLE-ACTING BLOCK CYLINDER WITH **FLANGE** AND **IN-LINE PORTS**

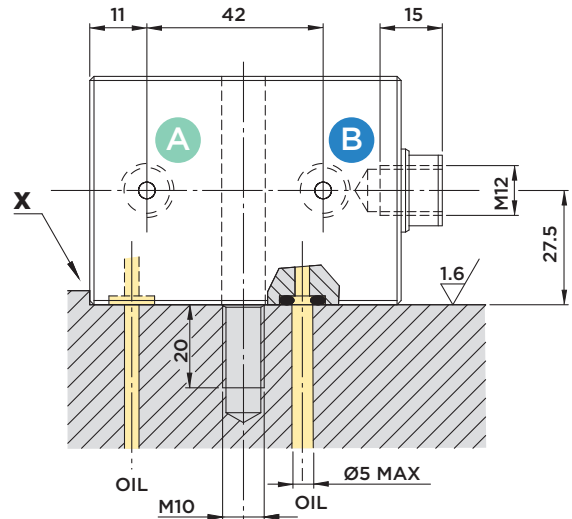
MAX. OPERATING PRESSURE = 500BAR

A : Extension

B : Retraction



INSTALLATION DIMENSIONS



Attention:

We recommend providing a stop ("X" in the figure) on the cylinder mounting support in order to prevent resulting shear forces from acting exclusively on the mounting screws.

Included in the scope of supply:

- Mounting screws M10x70 DIN 912/12.9 grade
- O-Rings Ø6.02x2.62

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized

Note:

Customized versions are available upon request. Please contact HYDROBLOCK if you have special requirements in terms of stroke or mounting conditions.

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	PUSHING	PULLING	PUSHING	PULLING	
TOTAL	25	8.04	4.9	20.1	12.3

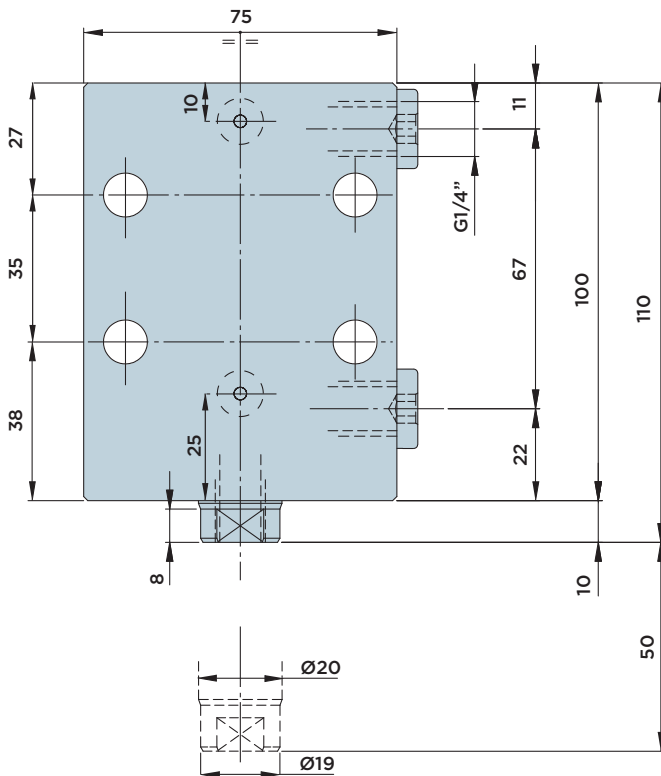
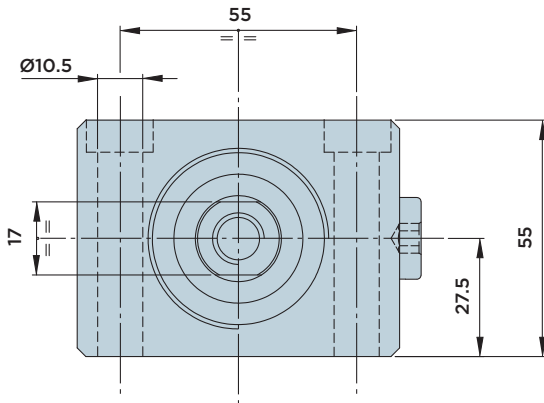
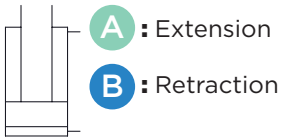


HYDROBLOCK

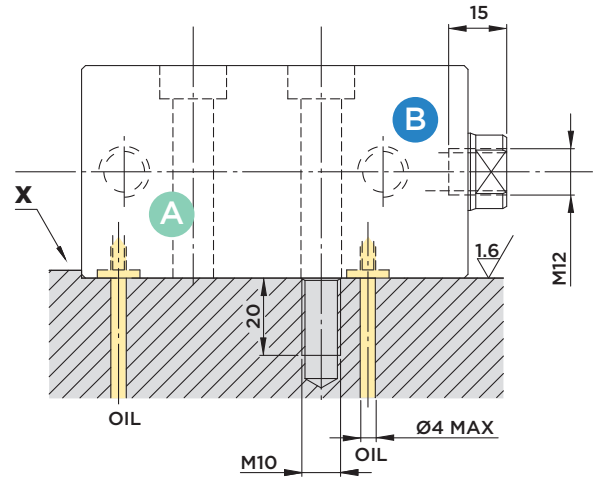
BS20.50

DOUBLE-ACTING BLOCK CYLINDER WITH **FLANGE** AND **IN-LINE PORTS**

MAX. OPERATING PRESSURE = 500BAR



INSTALLATION DIMENSIONS



Attention:

We recommend providing a stop ("X" in the figure) on the cylinder mounting support in order to prevent resulting shear forces from acting exclusively on the mounting screws.

Included in the scope of supply:

- Mounting screws M10x70 DIN 912/12.9 grade
- O-Rings Ø6.02x2.62

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

Customized versions are available upon request. Please contact HYDROBLOCK if you have special requirements in terms of stroke or mounting conditions.

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME	
	Cm ²		Cm ³	
	PUSHING	PULLING	PUSHING	PULLING
TOTAL	50	8.04	40.2	24.5

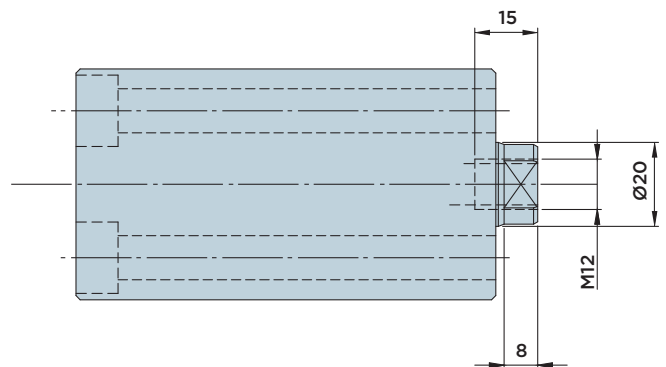
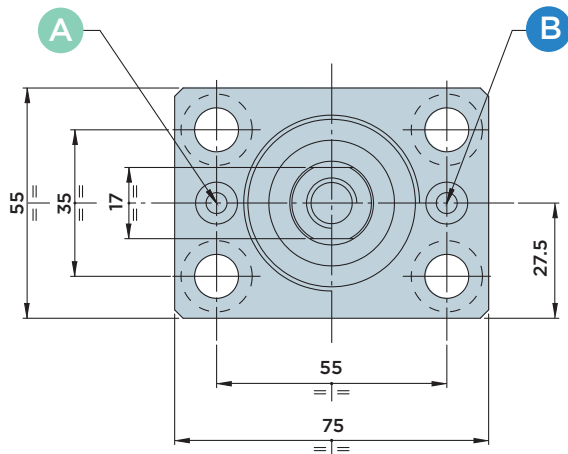
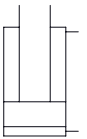
BS20.50 F

DOUBLE-ACTING BLOCK CYLINDER WITH **FRONT FLANGE**

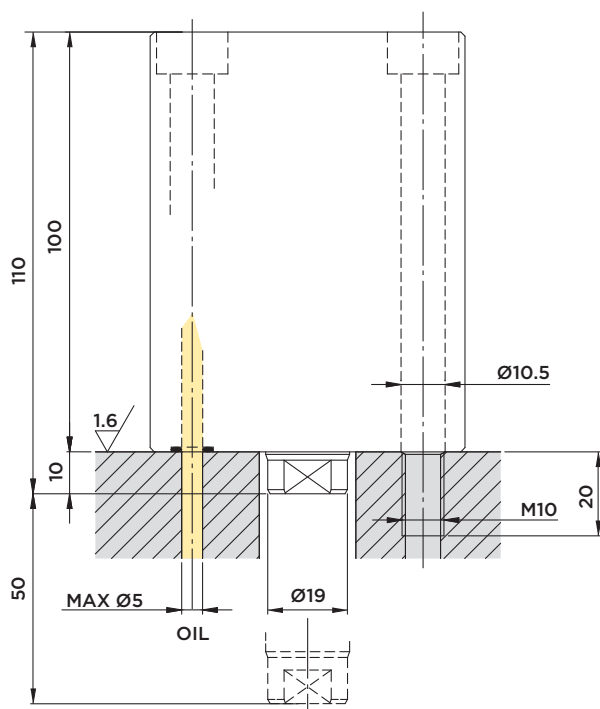
MAX. OPERATING PRESSURE = 500BAR

A : Extension

B : Retraction



INSTALLATION DIMENSIONS



Included in the scope of supply:

- O-Rings Ø6.75x1.78

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

Customized versions are available upon request. Please contact HYDROBLOCK if you have special requirements in terms of stroke or mounting conditions.

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	PUSHING	PULLING	PUSHING	PULLING	
TOTAL	50	8.04	4.9	40.2	24.5

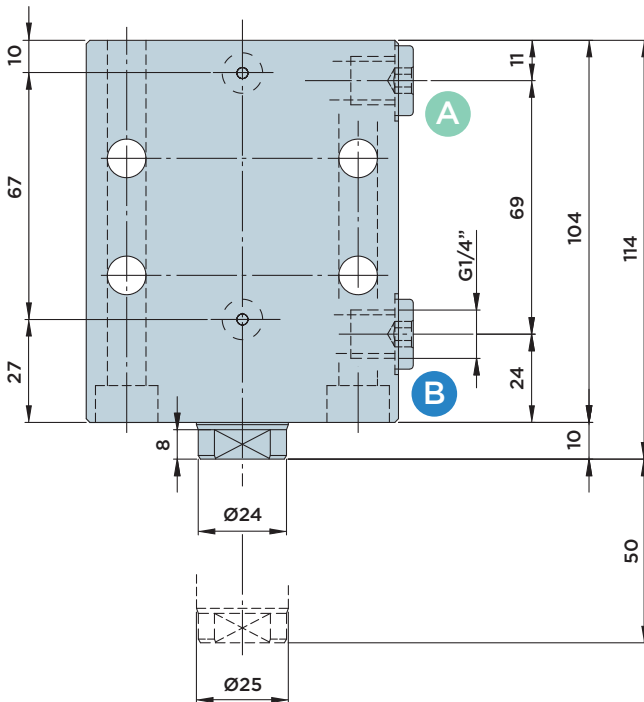
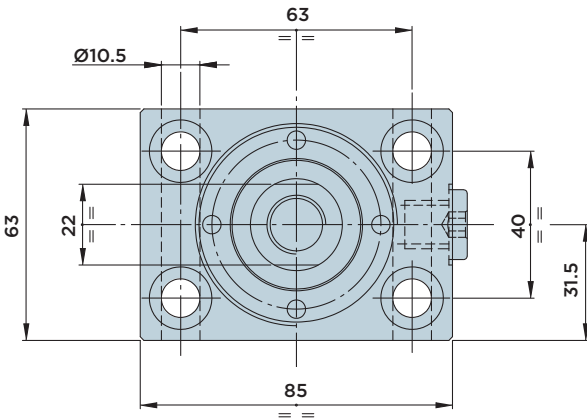
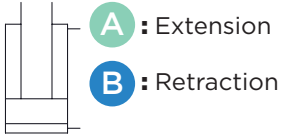


HYDROBLOCK

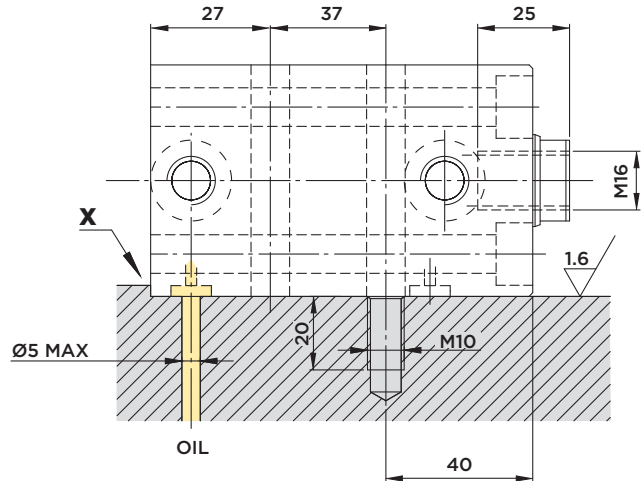
BS25.50

DOUBLE-ACTING BLOCK CYLINDER WITH IN **FLANGE** AND **IN-LINE PORTS**

MAX. OPERATING PRESSURE = 500BAR



INSTALLATION DIMENSIONS WITH FLANGED CONNECTION



Attention:

We recommend providing a stop ("X" in the figure) on the cylinder mounting support in order to prevent resulting shear forces from acting exclusively on the mounting screws.

Included in the scope of supply:

- O-Rings Ø4.34x3.53

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

Customized versions are available upon request. Please contact HYDROBLOCK if you have special requirements in terms of stroke or mounting conditions.

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	PUSHING	PULLING	PUSHING	PULLING	
TOTAL	50	12.57	7.66	62.9	38.3

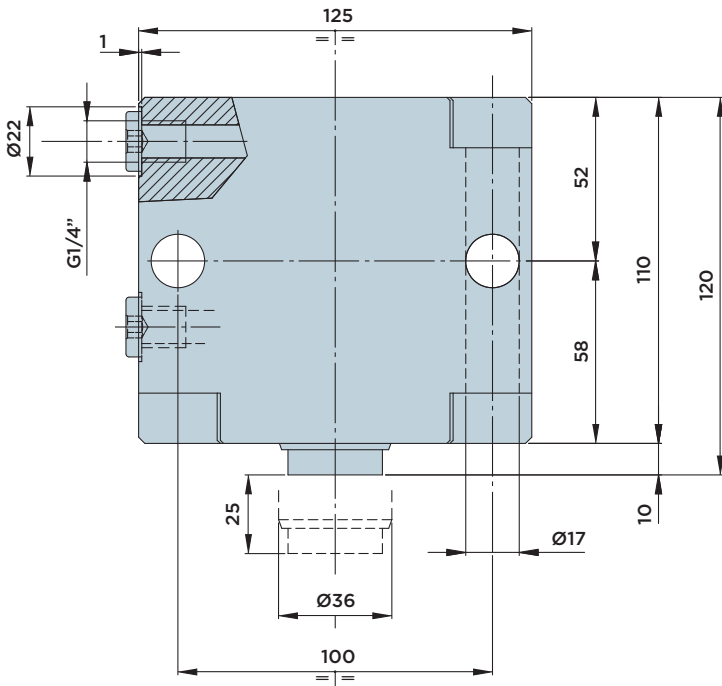
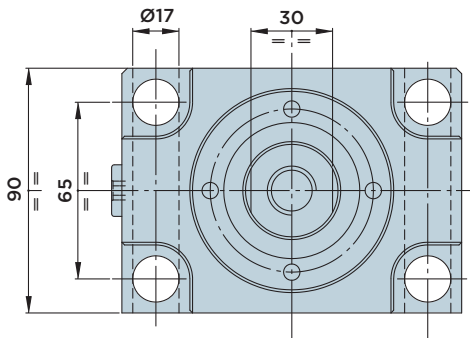
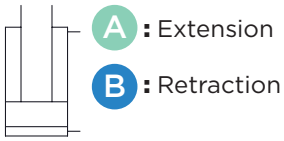


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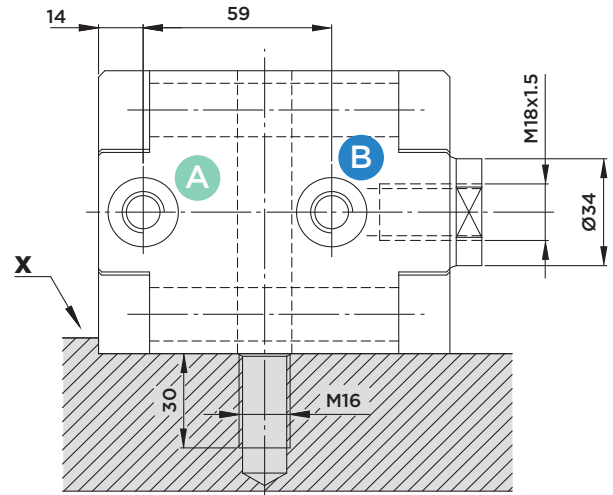
BS36.0

DOUBLE-ACTING BLOCK CYLINDER WITH **FLANGE**

MAX. OPERATING PRESSURE = 500BAR



INSTALLATION DIMENSIONS



Attention:

We recommend providing a stop ("X" in the figure) on the cylinder mounting support in order to prevent resulting shear forces from acting exclusively on the mounting screws.

Material:

- Piston/rod: Case-hardened steel, ground.
- Body: Free machining steel, nitrocarburized.

Note:

Customized versions are available upon request. Please contact HYDROBLOCK if you have special requirements in terms of stroke or mounting conditions.

STROKE mm	EFFECTIVE PISTON AREA		TOTAL OIL VOLUME		
	Cm ²		Cm ³		
	PUSHING	PULLING	PUSHING	PULLING	
TOTAL	25	33.18	23	83	57.5

