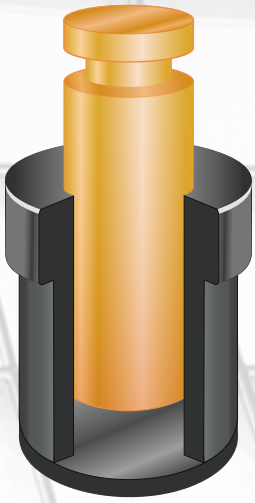
30° Anniversary



IDROTECK

COSTRUZIONI OLEODINAMICHE

SHORT STROKE COMPACT CYLINDERS

COMPACT
15 EN

INDEX

COMPANY

We are specialists in the hydraulic sector, producing cylinders and components for hydraulic systems and we boast over twenty-five years of highly consolidated expertise.

We constantly face the new challenges of the markets with the strength of an innate vocation, of an exclusive and highly specialised production, and a know-how that allows us to better meet our customers' requests in terms of delivery time and product quality.

The choice of top-quality materials and a well-stocked warehouse with pre-machined components at our disposal guarantee fast delivery within a stable time frame.

The feasibility study and the project are carried out in our in-house technical department, which is specifically responsible for designing and processing special applications; the ability to evolve and meet the needs of our customers has allowed us to develop a research and development department with modern and innovative methods and technologies for the realisation of customised cylinders.

The parts that make up the cylinders are made with the latest generation of numerically controlled machine tools.

Process management and continuous research for improvement have allowed us to supply components for applications in many production sectors with success and merit that is recognized by our customers.

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PRODUCT RANGE

RT SERIES COMPACT CYLINDERS

Double acting cylinders with solid body and anodized surface, made of light alloy, characterised by reduced dimensions. They are mainly used for the automation of thermoplastic and die-casting moulds. The multiple fastenings on the cylinder body allowing easy and versatile installation.

MT SERIES COMPACT CYLINDERS

With the same mechanical and dimensional characteristics as the RT series, a permanent magnet is inserted inside the piston which generates a magnetic field to activate sensors, positioned in special grooves on the cylinder body.

They are used in mould automations and industrial applications where the control of the sequences in the movements is required.

FT SERIES COMPACT CYLINDERS

Double acting cylinders with solid and burnished body made of carbon steel, characterised by reduced overall dimensions in relation to their hydro-mechanical characteristics. They are mainly used for the automation of thermoplastic and die-casting moulds, where higher pressures are required. The multiple fastenings on the cylinder body allowing easy and versatile installation.

XT SERIES COMPACT CYLINDERS

With the same mechanical and dimensional characteristics as the FT series, but with a stainless-steel body, a permanent magnet is inserted inside the piston which generates a magnetic field to activate sensors, positioned in special grooves on the cylinder body. They are used in mould automations where the control of the sequences in the movements is required.

MAIN CHARACTERISTICS OF THE SHORT STROKE COMPACT HYDRAULIC CYLINDERS

PISTON DIAMETERS (ø mm) 25 - 32 - 40 - 50 - 63 - 80 - 100 (upon request 125 - 160)
ROD DIAMETERS (ø mm) 18 - 22 - 28 - 36 - 45

PRESSURE
RT - MT models, working pressure 120 bar (without peaks), 160 bar tests
FT - XT models in a special construction with C45 or Stainless-steel body, working pressure 250 bar (without peaks), 320 bar tests
Minimum 8 bar

STROKE (mm) 20 - 50 - 75 - 100

SPACER added to the standard strokes, intermediate values can be obtained by inserting spacers inside the cylinder
Tolerance on the stroke 0 ÷ +1 mm

WORKING TEMPERATURE (°C)
with STANDARD seals -20 ÷ + 80
with VITON® seals (W) -20 ÷ +150

TRANSLATION SPEED (M/S)
with STANDARD seals 0.01 ÷ 0.5
with VITON® seals (W) 0.01 ÷ 0.5

FLUID USED with reference (according to ISO 6743/4 - ISO 4406 standards)
Mineral hydraulic oil
Synthetic oils and phosphoric esters

ATTACHMENTS and alignment via through holes and key

ROD END with female thread

SUPPLY PORTS model X standard cylindrical gas threaded

SUPPLY PORTS with O-Ring seal (model A - B - E)

RT - MT SERIES
Body made of solid aluminium alloy, smoothed internally H8
C45 chromed steel rod, possible hardened-tempered-stainless steel variants
Standard steel piston
Bronze rod guide with 25 - 32 - 40 - 50 diameters
Steel rod guide with 63 - 80 - 100 diameters

FT - XT SERIES* (for pressures up to 250 Bar)
Body made of internally smoothed C45 solid steel H8
C45 chrome-plated steel rod, possible hardened-tempered-stainless steel variants
Standard steel piston
Bronze rod guide with 25 - 32 - 40 - 50 diameters
Steel rod guide with 63 - 80 - 100 diameters

PN SERIES * (cylinder with pneumatic operation at 30 Bar)
Body made of internally smoothed solid aluminium alloy H8
C45 chrome-plated steel rod, possible hardened-tempered-stainless steel variants
Standard steel piston
Bronze rod guide with 25 - 32 - 40 - 50 diameters
Steel rod guide with 63 - 80 - 100 diameters

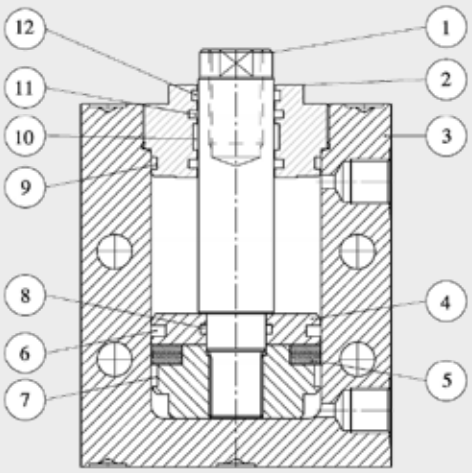
* **XT - PN** Series produced upon request

TECHNICAL CHARACTERISTICS

Series	RT	MT	FT	XT
Piston diameter	25 - 32 - 40 - 50 - 63 - 80 - 100 - (upon request 125 - 160)			
Working pressure (Bar)	120		250	
Test pressure (Bar)	160		320	
Minimum pressure (Bar)	8			
Stroke (mm)	20 - 50 - 75 - 100 (other intermediate strokes through spacers)			
Tolerance on the stroke (mm)	0 ÷ +1			
Working temperature (°C)	Standard seals -20 ÷ +80			
	VITON® seals (W) -20 ÷ +150			
Translation speed (m/s)	Standard seals 0,01 ÷ 0,5			
	VITON® seals (W) 0,01 ÷ 0,5			
Fluid	Mineral hydraulic oil – Synthetic oils and Phosphoric Esters			
	Water - Glycol (HFC) with reference to ISO 6743/4 - ISO 4406 standards			
Magnetic sensors	NO	YES	NO	YES
Body	Aluminium alloy, smoothed internally H8		C45 steel smoothed internally H8	Stainless steel smoothed internally H8
Rod	C45 chromed steel (Possible hardened-tempered-stainless steel variants)			
Piston	Steel	Stainless steel with magnetic insert	Steel	Stainless steel with magnetic insert
Rod guide	Bronze with 25 - 32 - 40 – 50 diameters Steel with 63 - 80 – 100 diameters			

COMPACT CYLINDER SERIES: RT - MT - FT - XT

STANDARD SECTION



POS.	NAME	MATERIAL			
		RT	MT	FT	XT
1	Rod	Chromed steel			
2	Guide bushing	Bronze or Steel			
3	Body	Aluminium alloy		Carbon Steel	Stainless steel
4	Piston	Steel	Stainless steel	Steel	Stainless steel
5	Magnet	NO	YES	NO	YES
6	Piston seal	P.T.F.E + O-RING			
7	Rod guide	Bronze 25 - 32 - 40 - 50			
		Phenolic resin 63 - 80 - 100			
8	OR seal	Nitrile rubber or Viton®			
9	OR seal	Nitrile rubber or Viton®			
10	Guide ring	Phenolic resin			
11	Rod seal	P.T.F.E + O-RING			
12	Scraper	P.T.F.E + O-RING			

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ORDER CODE

RT and MT (120 BAR) without peaks

Section	1	2	3	4	5	6	7
	MT	50	X	75	SJ 10	W	SX

SERIES		BORE	SUPPLY ORIENTATION		STROKE	SPACER		SEALS		SPECIAL
RT	Non-magnetic	25	X	Standard thread	20	SJ	05		Standard	Special variants
MT	Magnetic	32	A	Front O-ring	50		10	W	Viton®	
		40	B	Rear O-ring	75		15			
		50	E	Side O-ring	100		...			
		63								
		80								
		100								

FT and XT (250 BAR) without peaks

Section	1	2	3	4	5	6	*	7
	FT	50	X	75	SJ 10	W	02	SX

SERIES		BORE	SUPPLY ORIENTATION		STROKE	SPACER		SEALS		ATTACHMENT VARIANT*	SPECIAL
FT	Non-magnetic	25	X*	Standard thread	20	SJ	05		Stan-dard	-	Special variants
XT	Magnetic	32	A	Front O-ring	50		10	W	Viton®	01	
		40	B	Rear O-ring	75		15			02	
		50	E	Side O-ring	100		...			03	
		63								04	
		80								05	
		100								06	

* Only for construction series FT - XT of model “X”

NOTES:
· To compose the order code, follow the coding scheme by inserting the acronyms that identify the various construction characteristics of the cylinder in sequence, leaving out those not required.
· Each acronym has a number (above) as a reference that identifies the section in which all the technical characteristics are explained.
· The sensors for magnetic cylinders are supplied separately and must be requested separately, indicating the quantity and type. (See notes page 31)

CHARACTERISTICS AND RT OR MT CYLINDER CHOICE

1 CONSTRUCTION SERIES

RT standard and MT magnetic (120 Bar)

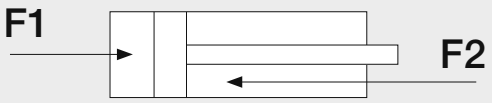
2 BORE

It is chosen in relation to the force to be developed.
Table 2.1 shows the push and pull area in the piston.

By multiplying the area (cm^2) with the working pressure (Bar – Kg/cm^2) you obtain the push (DaN - Kg) and pull force of the cylinder.

E.g. Cylinder ø50 – rod ø28 operating at 120 Bar

Push force F1 = (19,63x120)x10 = 23.556 N = 23,55 KN
Pull force F2 = (13,46x120)x10 = 16.164 N = 16,16 KN



Tab. 2.1		RT - MT						
Dimensions		Surface ratio	Surface (area)		Theoretical force		Theoretical force	
			Push	Pull	Push	Pull	Push	Pull
Bore ø Piston (mm)	ø Rod (mm)	Push area / Pull area	Push area (cm^2)	Pull area (cm^2)	100 Bar F1 (KN)	100 Bar F2 (KN)	120 Bar F1 (KN)	120 Bar F2 (KN)
25	18	2,08	4,91	2,36	4,91	2,36	5,89	2,83
32	22	1,90	8,04	4,24	8,04	4,24	9,65	5,09
40	22	1,43	12,56	8,77	12,56	8,77	15,07	10,52
50	28	1,46	19,63	13,48	19,63	13,48	23,55	16,16
63	28	1,25	31,17	25,01	31,17	25,01	37,40	30,01
80	36	1,25	50,26	40,08	50,26	40,08	60,31	48,10
100	45	1,25	78,53	62,64	78,53	62,64	94,24	75,17

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CHARACTERISTICS AND FT OR XT CHOICE

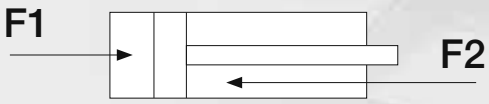
1 CONSTRUCTION SERIES
FT standard and XT magnetic (250 Bar)

2 BORE
It is chosen in relation to the force to be developed.
Table 2.1 shows the push and pull area in the piston.

By multiplying the area (cm^2) with the working pressure (Bar – Kg/cm^2) you obtain the push (DaN - Kg) and pull force of the cylinder.

E.g. Cylinder ø50 – rod ø28 operating at 250 Bar

Push force F1 = (19,63x250)x10 = 49.075 N = 49,07 KN
Pull force F2 = (13,46x250)x10 = 33.650 N = 33,65 KN



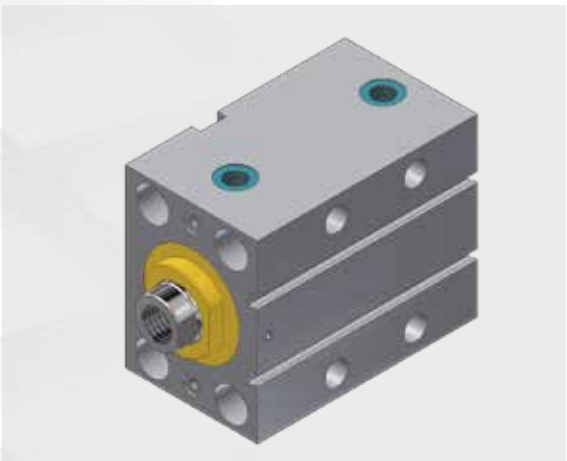
Tab. 2.1		FT - XT						
Dimensions		Surface Ratio	Surface (area)		Theoretical force		Theoretical force	
			Push	Pull	Push	Pull	Push	Pull
Bore ø Piston (mm)	ø Rod (mm)	Push area/ Pull area	Push area (cm^2)	Pull area (cm^2)	200 Bar F1 (KN)	200 Bar F2 (KN)	250 Bar F1 (KN)	250 Bar F2 (KN)
25	18	2,08	4,91	2,36	9,82	4,72	12,28	5,90
32	22	1,90	8,04	4,24	16,08	8,48	20,10	10,60
40	22	1,43	12,56	8,77	25,12	17,54	31,40	21,93
50	28	1,46	19,63	13,48	39,26	26,96	49,07	33,70
63	28	1,25	31,17	25,01	62,34	50,02	77,93	62,53
80	36	1,25	50,26	40,08	100,52	80,16	125,65	100,20
100	45	1,25	78,53	62,64	157,06	125,28	196,33	156,60

3 MODEL (it is selected depending on the position of the supply ports)

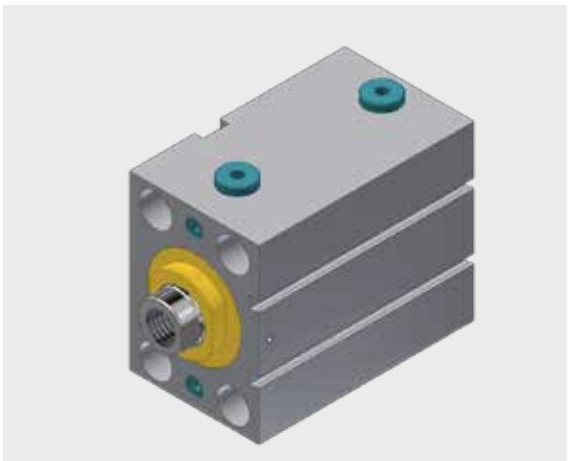
All the models (with equal bore) have a body with the same holes (fastening holes, key). The power supplies distinguish them:
“X” Side connections threaded on to body;
“A” Front supply with O-ring seal;
“B” Rear supply with O-ring seal;
“E” Side supply with O-ring seal.

A-B-E: cylinder supplied by ducts on the body of the machine which, with appropriate fastenings and O-ring seals, convey the pressurised fluid to the actuator.

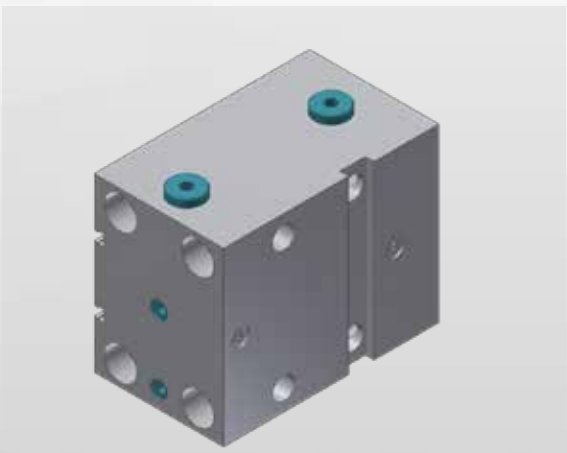
“X” Standard model



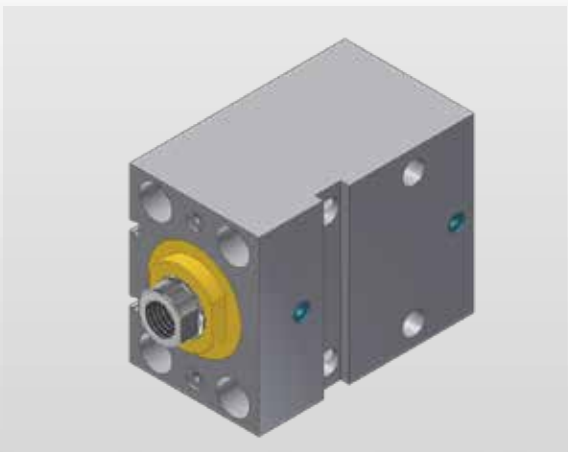
“A” Front supply



“B” Rear supply



“E” Side supply



The images are purely for illustrative purposes

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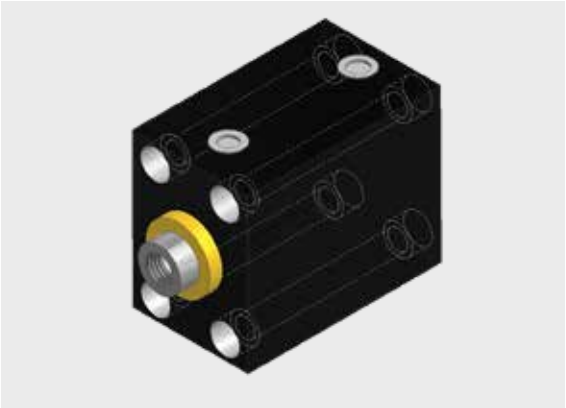
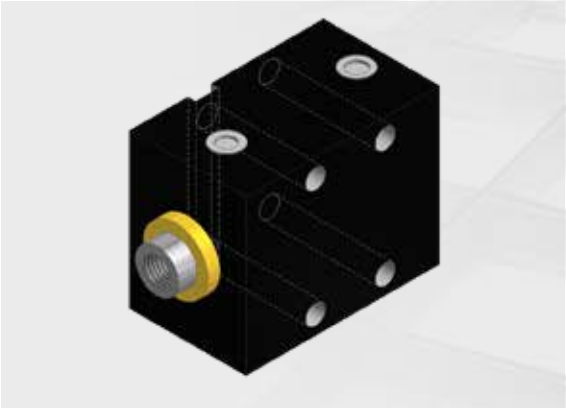
* **ATTACHMENT VARIANT (it is selected depending on the position of the fastening holes)**

Only for series FT and XT in model X.

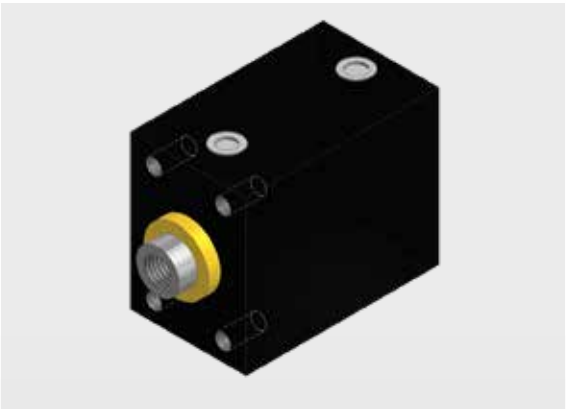
"01" Longitudinal holes - front and rear lamination



"02" Transversal holes with key

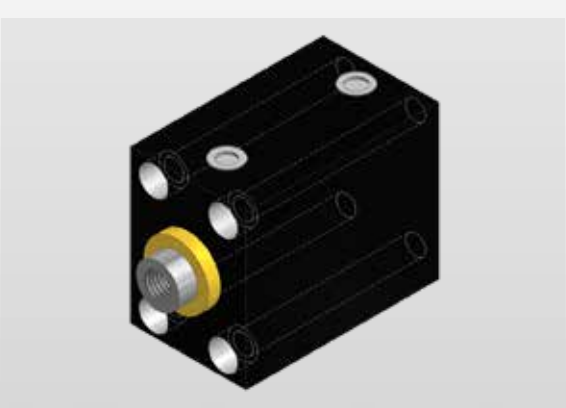


"03" Threaded front holes

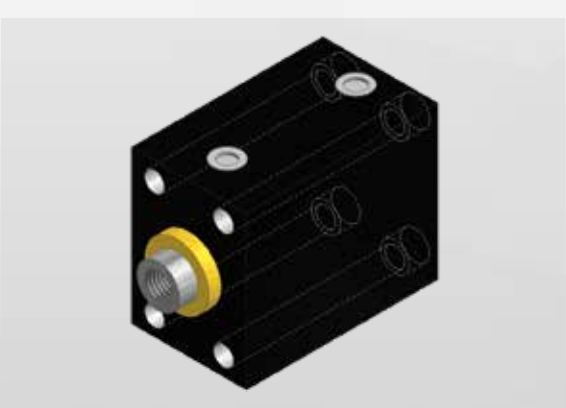


"04" Threaded rear holes

"05" Longitudinal holes – front lamination



"06" Longitudinal holes – rear lamination



The images are purely for illustrative purposes

4 STROKE
Standard stroke 20 – 50 – 75 – 100 mm

5 SPACERS
In addition to the standard strokes, intermediate values can be obtained by inserting 5, 10, 15, etc., spacers into the hydraulic cylinder. The overall dimensions of the cylinder remain binding at the standard top strokes, other strokes are carried out upon request.

E.g., MT compact cylinder, bore ø50, stroke 30 mm.
The body of an MT cylinder with ø50 bore and 50 mm stroke will be used, in which a 20 mm spacer will be inserted to obtain a 30 mm stroke.

6 SEALS
STANDARD for temperatures up to 0° C.
VITON® "W" for temperatures up to 150° C.

7 SPECIAL CONSTRUCTION SX
Each type of special construction (extended rod, rod end, fastening modifications, surface treatments, etc.) must be agreed with our Technical Department.

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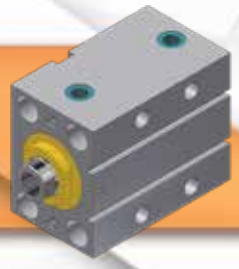
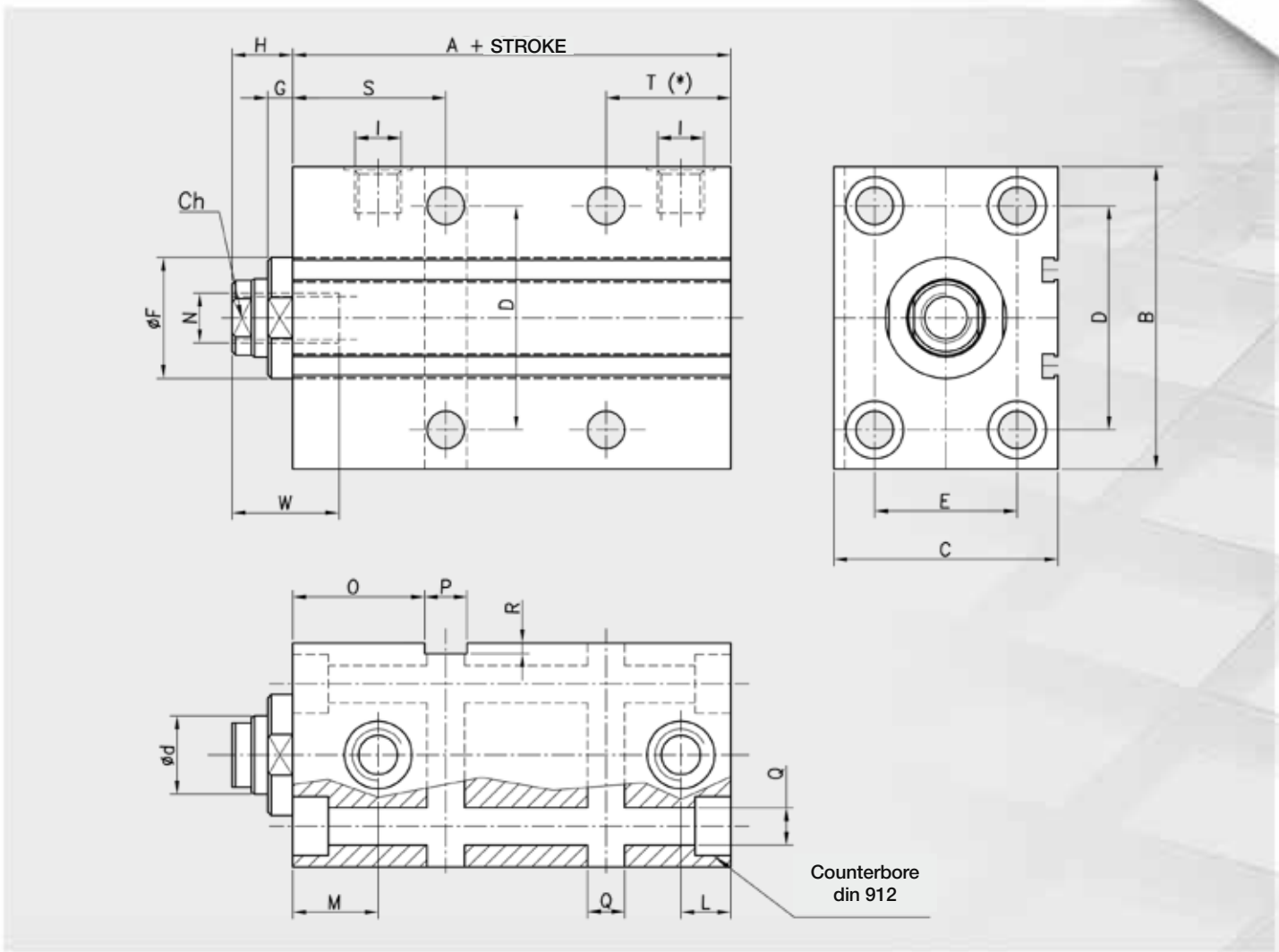
RT - MT SERIES model "X" standard cylinder

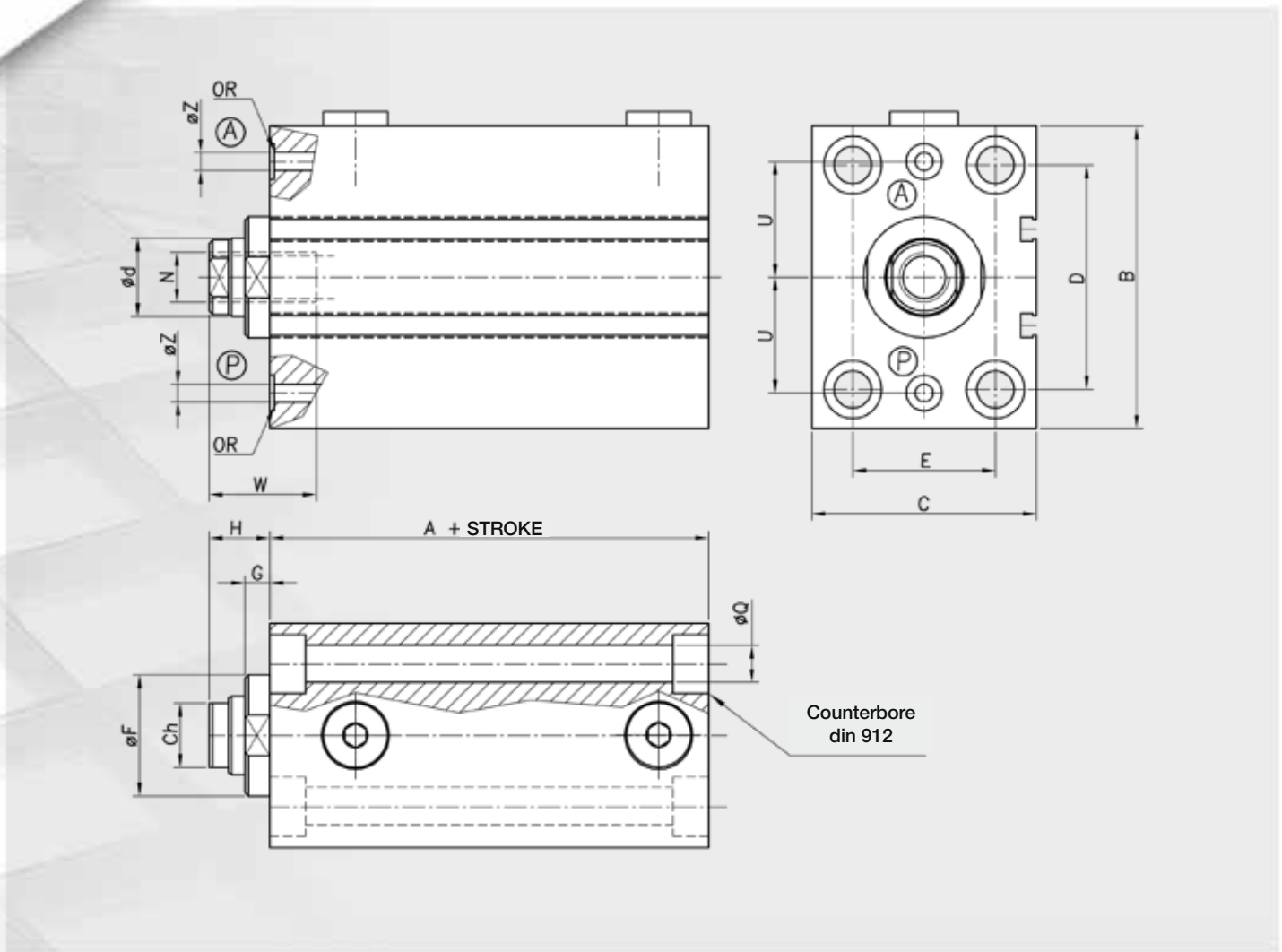




AL.	d	A+	B	C	Ch	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	W
25	18	57	65	45	14	50	30	30	6,5	14	G1/4"	14	22	M10	32	10	8,5	2	37	30	24
32	22	60	75	55	18	55	35	34	8	15	G 1/4"	13	22	M12	34	12	10,5	3	40	30	24
40	22	73	85	63	18	63	40	34	7	17	G 1/4"	16	24	M14	37	12	10,5	3	43	35	30
50	28	75	100	75	24	76	45	42	8	20	G 1/4"	17	25	M20	37,5	15	13	5	45	35	35
63	28	85	115	90	24	90	55	50	7	20	G 3/8"	21	29	M20	47,5	15	13	5	55	40	35
80	36	100	140	110	32	110	75	60	7	20	G 1/2"	25	35	M27	50	20	17	5	60	50	45
100	45	110	170	140	40	135	95	72	8	25	G 1/2"	28	37	M33	60	20	17	5	70	60	55

Standard strokes: 20 – 50 – 75 – 100mm.
T (*) 20mm stroke without holes
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.

SERIE RT - MT model “A” front supply



“A” Front supply
“P” Rear supply

AL.	d	A+	B	C	Ch	D	E	F	G	H	N	Q	U	W	Z	OR
25	18	57	65	45	14	50	30	30	6,5	14	M10	8,5	25,5	24	4	610 (106)
32	22	60	75	55	18	55	35	34	8	15	M12	10,5	30	24	4	610 (106)
40	22	73	85	63	18	63	40	34	7	17	M14	10,5	32,5	30	5	610 (106)
50	28	75	100	75	24	76	45	42	8	20	M20	13	40	35	5	610 (106)
63	28	85	115	90	24	90	55	50	7	20	M20	13	47,5	35	7	013 (2043)
80	36	100	140	110	32	110	75	60	7	20	M27	17	59	45	7	013 (2043)
100	45	110	170	140	40	135	95	72	8	25	M33	17	70	55	7	013 (2043)

Standard strokes: 20 – 50 – 75 – 100mm.
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.

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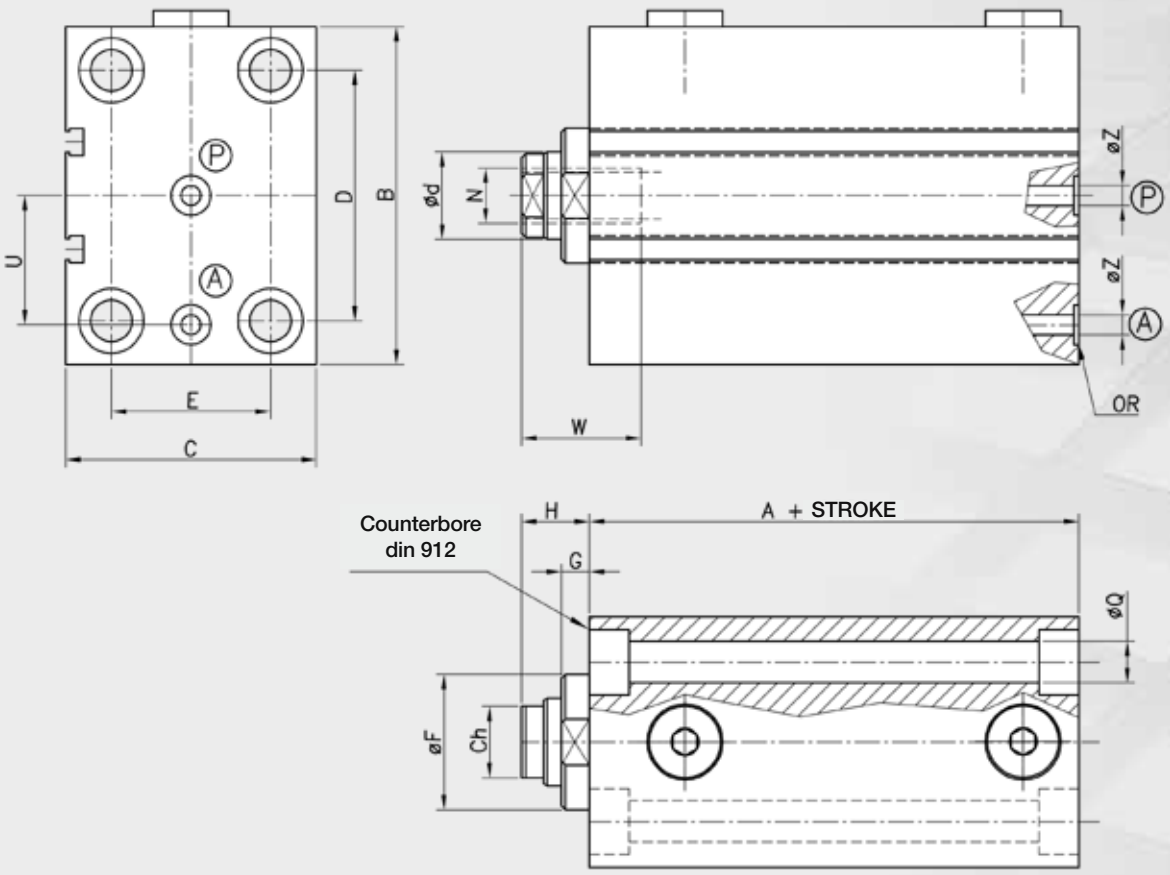
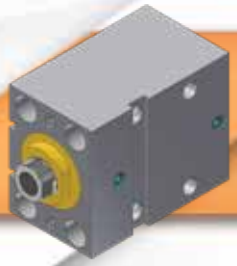
RT - MT SERIES model “B” rear supply



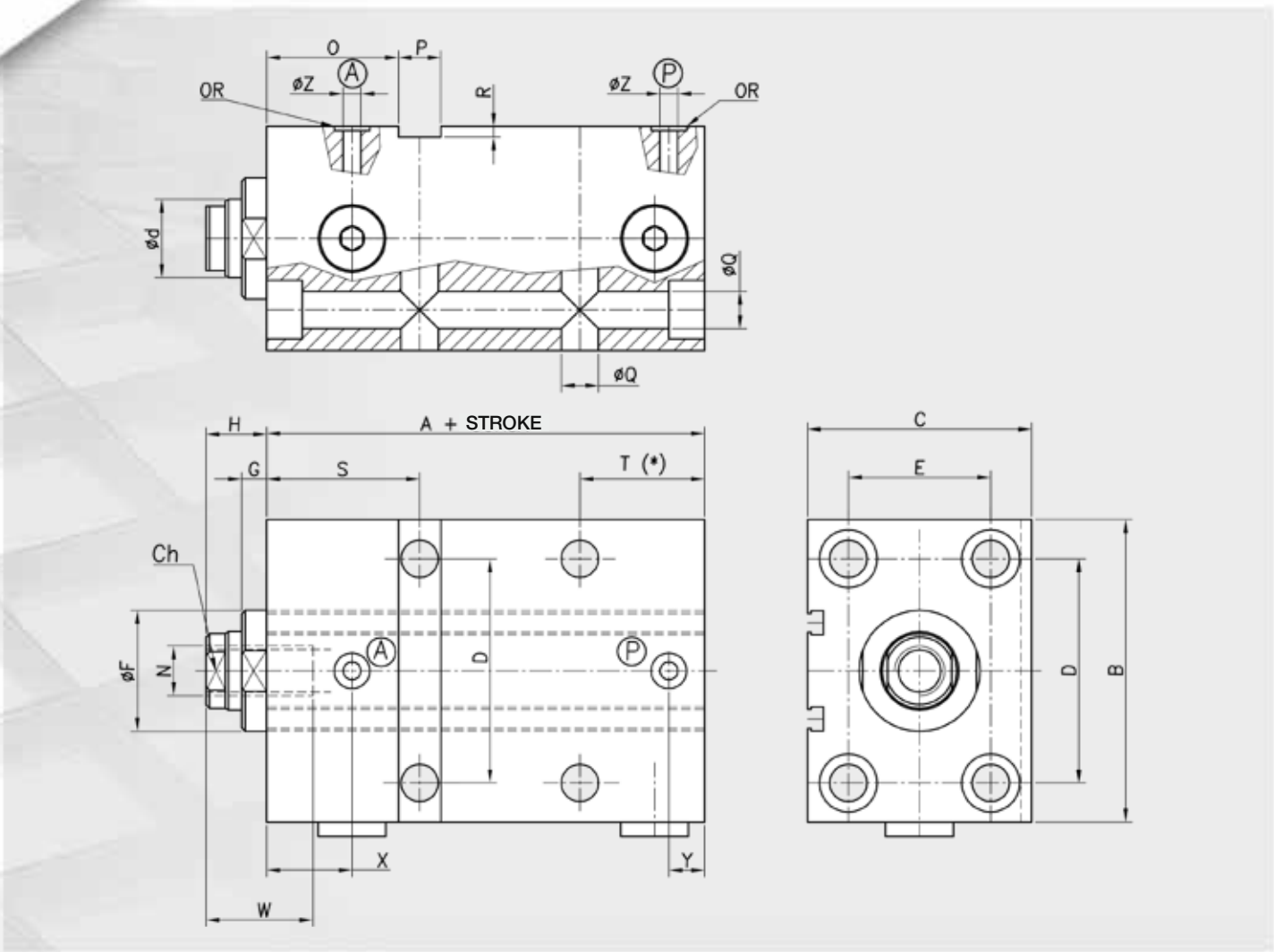
“A” Front supply
“P” Rear supply

AL.	d	A+	B	C	Ch	D	E	F	G	H	N	Q	U	W	Z	OR
25	18	57	65	45	14	50	30	30	6,5	14	M10	8,5	25,5	24	4	610 (106)
32	22	60	75	55	18	55	35	34	8	15	M12	10,5	30	24	4	610 (106)
40	22	73	85	63	18	63	40	34	7	17	M14	10,5	32,5	30	5	610 (106)
50	28	75	100	75	24	76	45	42	8	20	M20	13	40	35	5	610 (106)
63	28	85	115	90	24	90	55	50	7	20	M20	13	47,5	35	7	013 (2043)
80	36	100	140	110	32	110	75	60	7	20	M27	17	59	45	7	013 (2043)
100	45	110	170	140	40	135	95	72	8	25	M33	17	70	55	7	013 (2043)

Standard strokes: 20 – 50 – 75 – 100mm.
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.



RT - MT SERIES model "E" side supply



"A" Front supply
"P" Rear supply

AL.	d	A+	B	C	Ch	D	E	F	G	H	N	O	P	Q	R	S	T	W	X	Y	Z	OR
25	18	57	65	45	14	50	30	30	6,5	14	M10	32	10	8,5	2	37	30	24	22	7	4	610 (106)
32	22	60	75	55	18	55	35	34	8	15	M12	34	12	10,5	3	40	30	24	22	7	4	610 (106)
40	22	73	85	63	18	63	40	34	7	17	M14	37	12	10,5	3	43	35	30	24	10	5	610 (106)
50	28	75	100	75	24	76	45	42	8	20	M20	37,5	15	13	5	45	35	35	25	10	5	610 (106)
63	28	85	115	90	24	90	55	50	7	20	M20	47,5	15	13	5	55	40	35	29	15	7	013 (2043)
80	36	100	140	110	32	110	75	60	7	20	M27	50	20	17	5	60	50	45	35	17	7	013 (2043)
100	45	110	170	140	40	135	95	72	8	25	M33	60	20	17	5	70	60	55	37	20	7	013 (2043)

Standard strokes: 20 – 50 – 75 – 100mm.
T (*) Stroke 20 mm without holes
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.

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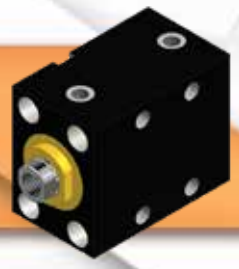
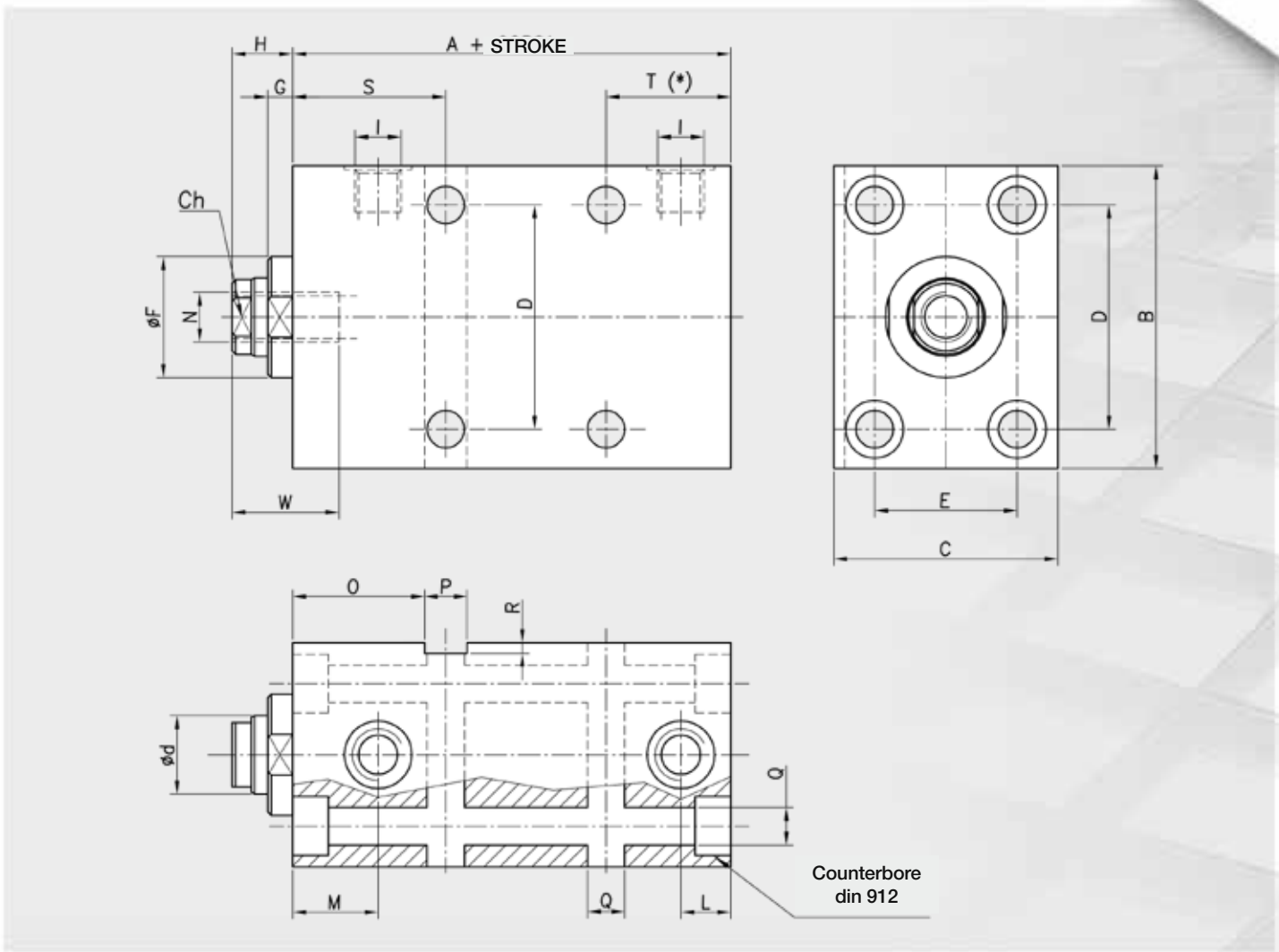
FT - XT SERIES model "X"
standard cylinder



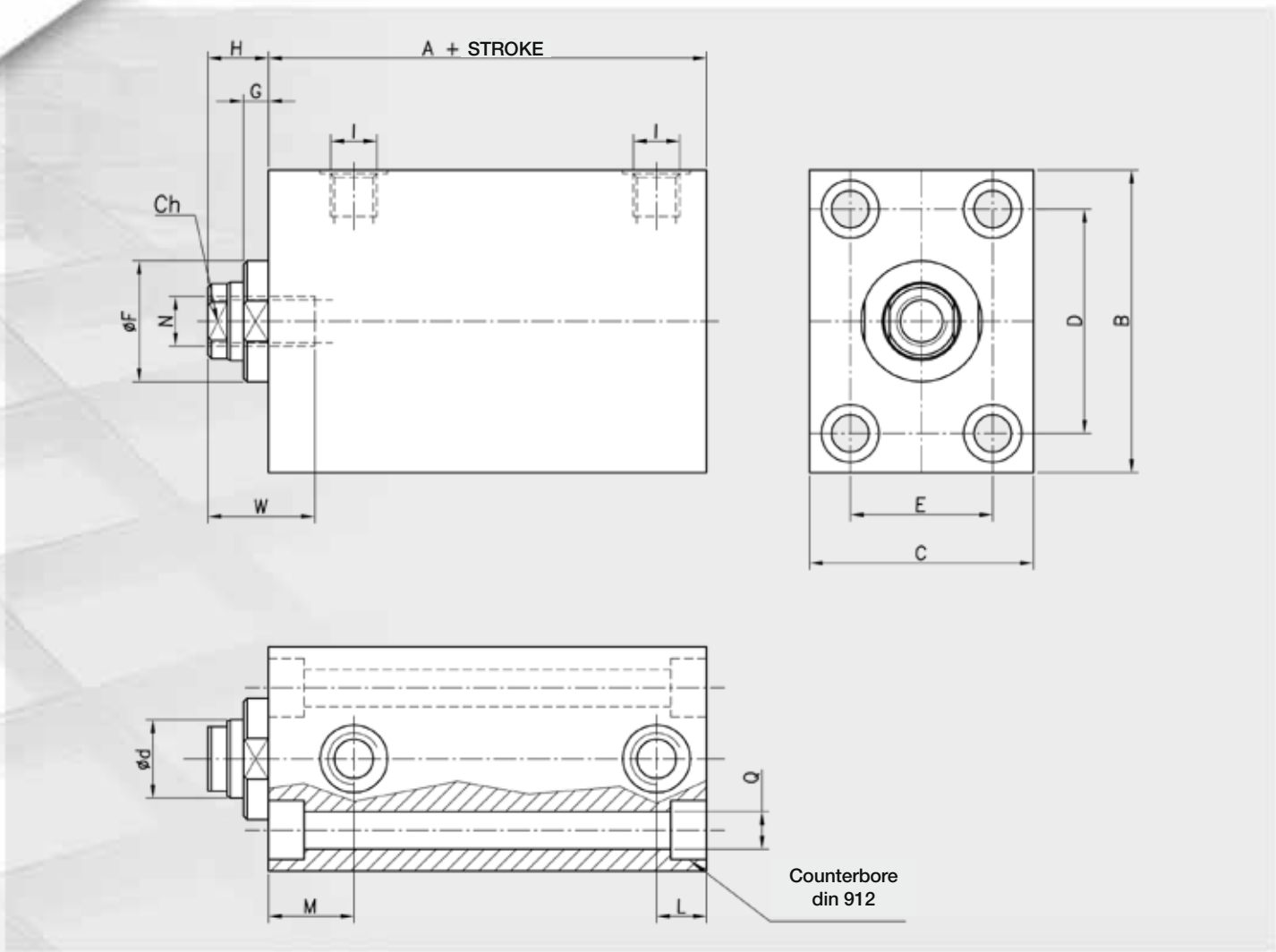


The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	W
25	18	57	65	45	14	50	30	30	6,5	14	G 1/4"	14	22	M10	32	10	8,5	2	37	30	24
32	22	60	75	55	18	55	35	34	8	15	G 1/4"	13	22	M12	34	12	10,5	3	40	30	24
40	22	73	85	63	18	63	40	34	7	17	G 1/4"	16	24	M14	37	12	10,5	3	43	35	30
50	28	75	100	75	24	76	45	42	8	20	G 1/4"	17	25	M20	37,5	15	13	5	45	35	35
63	28	85	115	90	24	90	55	50	7	20	G 3/8"	21	29	M20	47,5	15	13	5	55	40	35
80	36	100	140	110	32	110	75	60	7	20	G 1/2"	25	35	M27	50	20	17	5	60	50	45
100	45	110	170	140	40	135	95	72	8	25	G 1/2"	28	37	M33	60	20	17	5	70	60	55

Standard strokes: 20 – 50 – 75 – 100mm.
T (*) Stroke 20 mm without holes
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.
It is recommended to use high-strength screws for fastening.

FT - XT SERIES model "X"
standard cylinder attachment variant 01



The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	E	F	G	H	I	L	M	N	Q	W
25	18	57	65	45	14	50	30	30	6,5	14	G 1/4"	14	22	M10	8,5	24
32	22	60	75	55	18	55	35	34	8	15	G 1/4"	13	22	M12	10,5	24
40	22	73	85	63	18	63	40	34	7	17	G 1/4"	16	24	M14	10,5	30
50	28	75	100	75	24	76	45	42	8	20	G 1/4"	17	25	M20	13	35
63	28	85	115	90	24	90	55	50	7	20	G 3/8"	21	29	M20	13	35
80	36	100	140	110	32	110	75	60	7	20	G 1/2"	25	35	M27	17	45
100	45	110	170	140	40	135	95	72	8	25	G 1/2"	28	37	M33	17	55

Standard strokes: 20 – 50 – 75 – 100mm.
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.
It is recommended to use high-strength screws for fastening.

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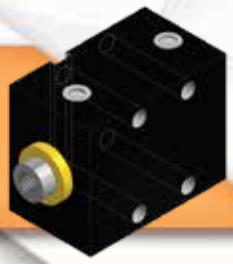
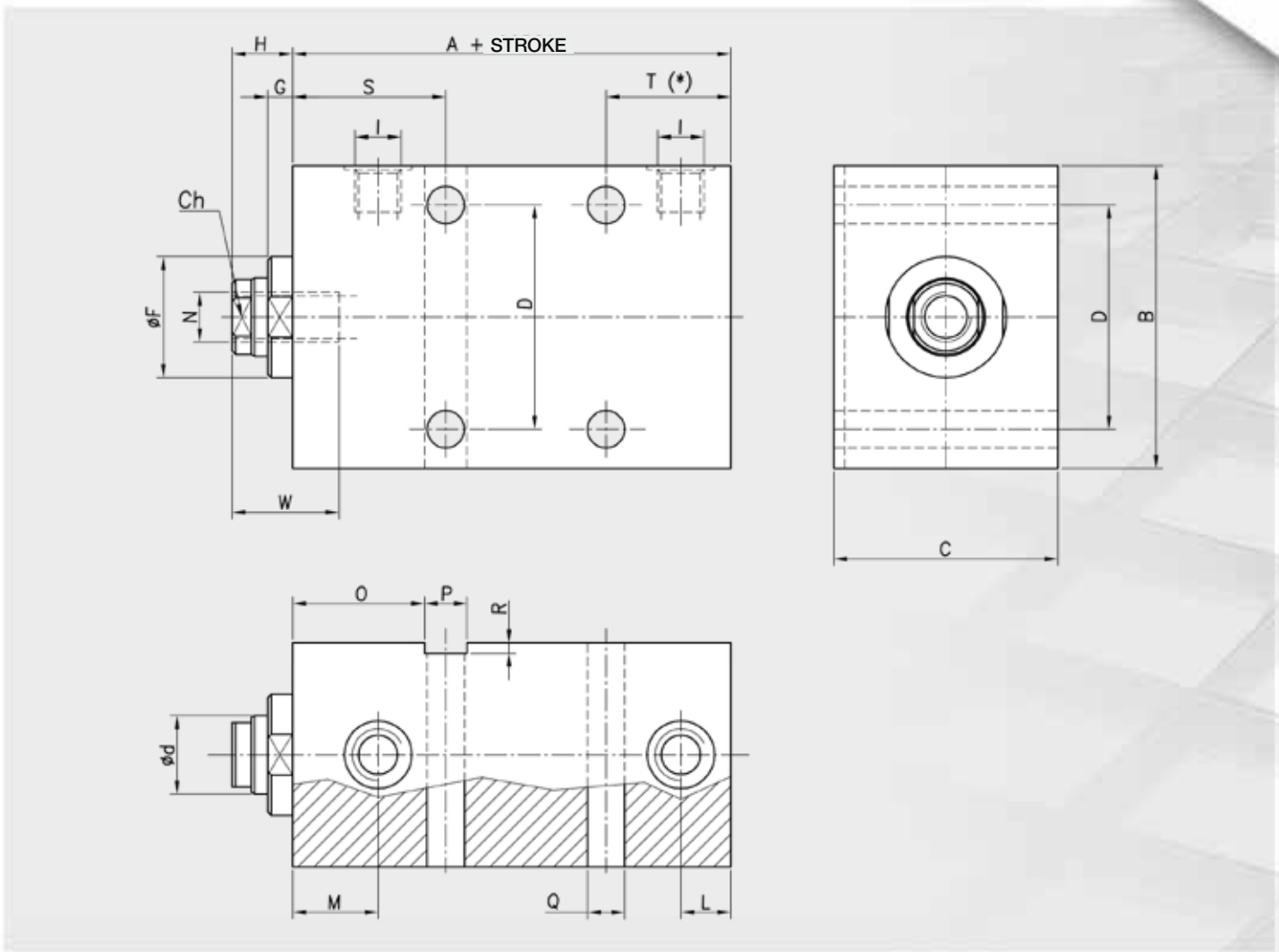
FT - XT SERIES model "X"
standard cylinder attachment variant 02



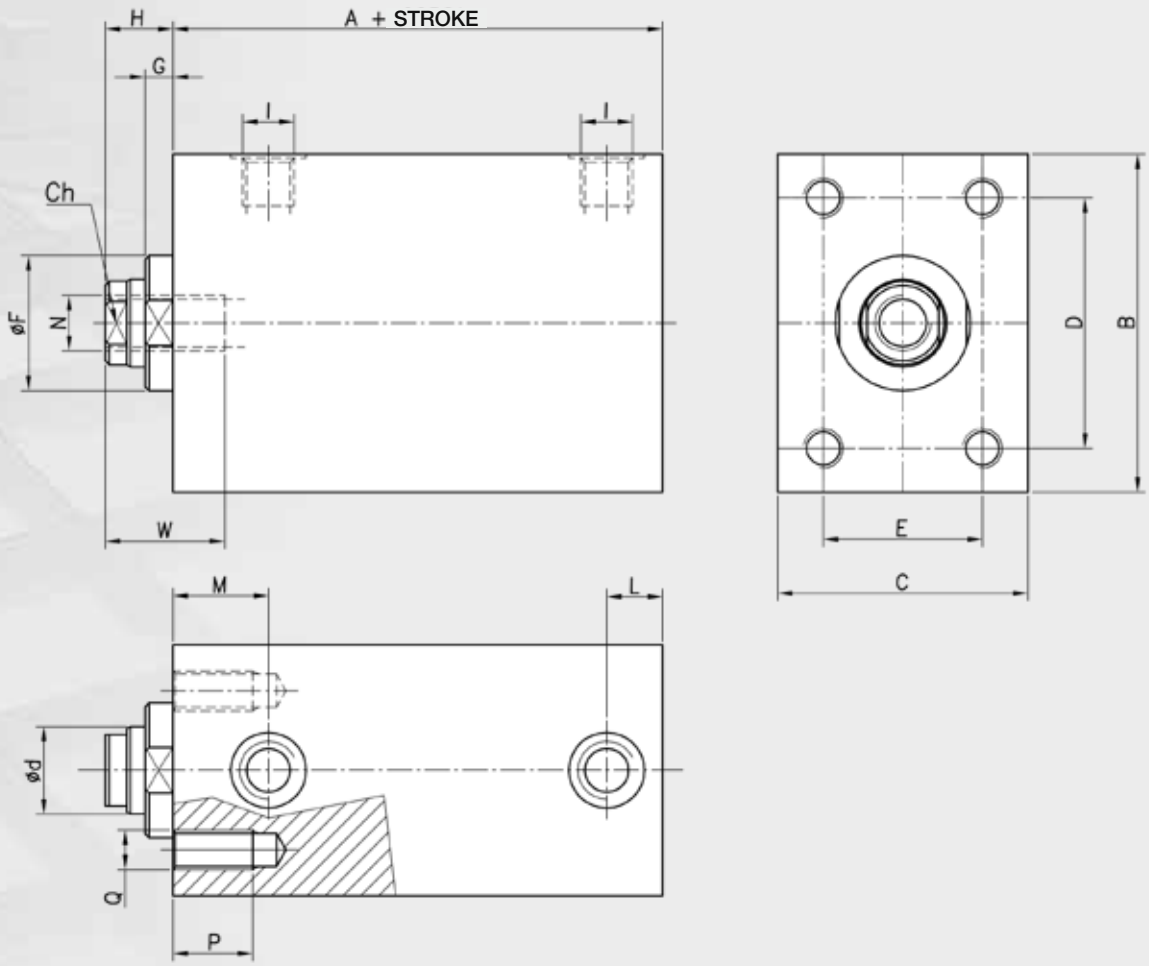


The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	F	G	H	I	L	M	N	O	P	Q	R	S	T	W
25	18	57	65	45	14	50	30	6,5	14	G 1/4"	14	22	M10	32	10	8,5	2	37	30	24
32	22	60	75	55	18	55	34	8	15	G 1/4"	13	22	M12	34	12	10,5	3	40	30	24
40	22	73	85	63	18	63	34	7	17	G 1/4"	16	24	M14	37	12	10,5	3	43	35	30
50	28	75	100	75	24	76	42	8	20	G 1/4"	17	25	M20	37,5	15	13	5	45	35	35
63	28	85	115	90	24	90	50	7	20	G 3/8"	21	29	M20	47,5	15	13	5	55	40	35
80	36	100	140	110	32	110	60	7	20	G 1/2"	25	35	M27	50	20	17	5	60	50	45
100	45	110	170	140	40	135	72	8	25	G 1/2"	28	37	M33	60	20	17	5	70	60	55

Standard strokes: 20 – 50 – 75 – 100mm.
T (*) Stroke 20 mm without holes
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.
It is recommended to use high-strength screws for fastening.

FT - XT SERIES model "X"
standard cylinder attachment variant 03



The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	E	F	G	H	I	L	M	N	P	Q	W
25	18	57	65	45	14	50	30	30	6,5	14	G 1/4"	14	22	M10	16	M8	24
32	22	60	75	55	18	55	35	34	8	15	G 1/4"	13	22	M12	18	M10	24
40	22	73	85	63	18	63	40	34	7	17	G 1/4"	16	24	M14	18	M10	30
50	28	75	100	75	24	76	45	42	8	20	G 1/4"	17	25	M20	20	M12	35
63	28	85	115	90	24	90	55	50	7	20	G 3/8"	21	29	M20	20	M12	35
80	36	100	140	110	32	110	75	60	7	20	G 1/2"	25	35	M27	24	M16	45
100	45	110	170	140	40	135	95	72	8	25	G 1/2"	28	37	M33	24	M16	55

Standard strokes: 20 – 50 – 75 – 100mm.
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side
It is recommended to use high-strength screws for fastening.

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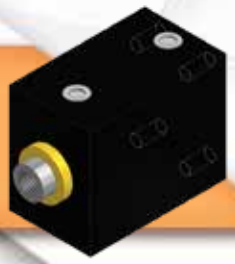
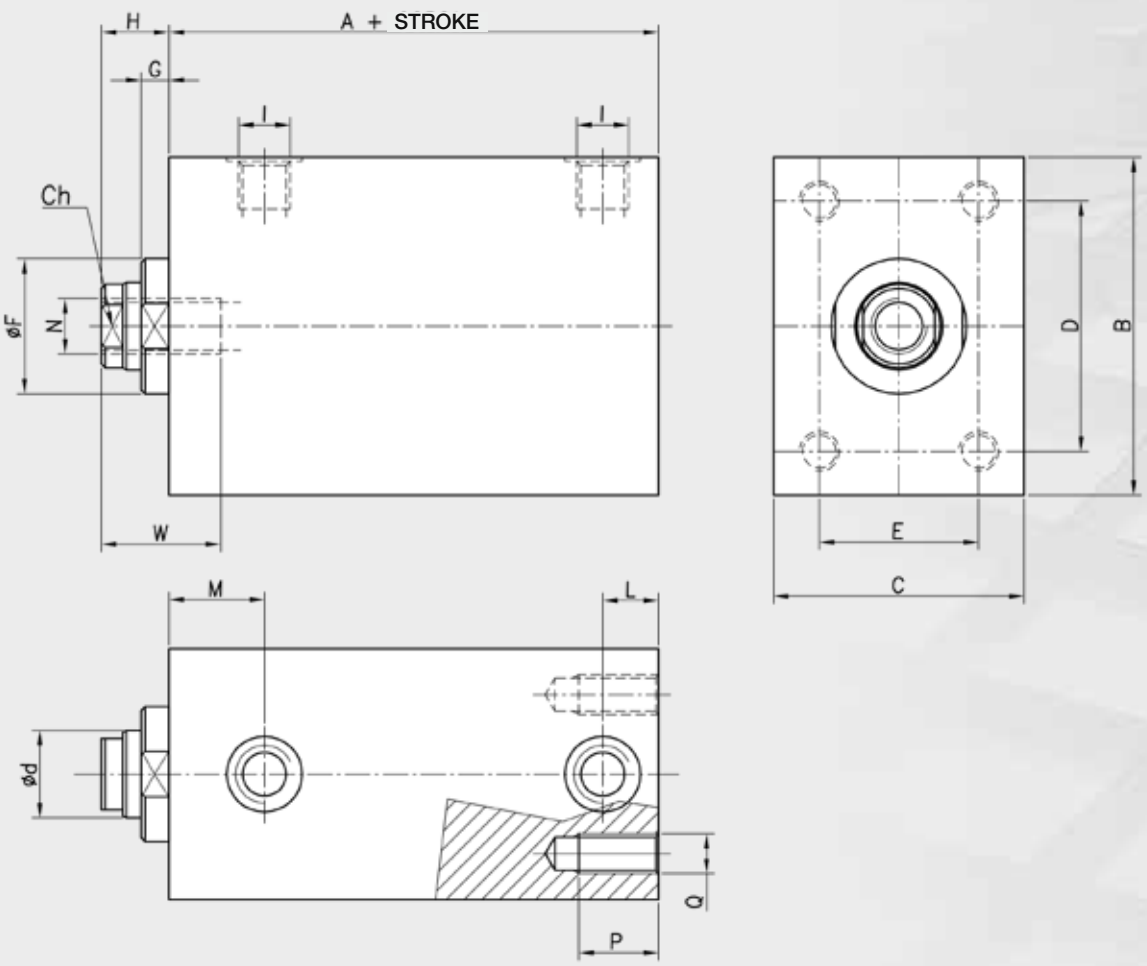
FT - XT SERIES model "X"
Standard cylinder attachment variant 04



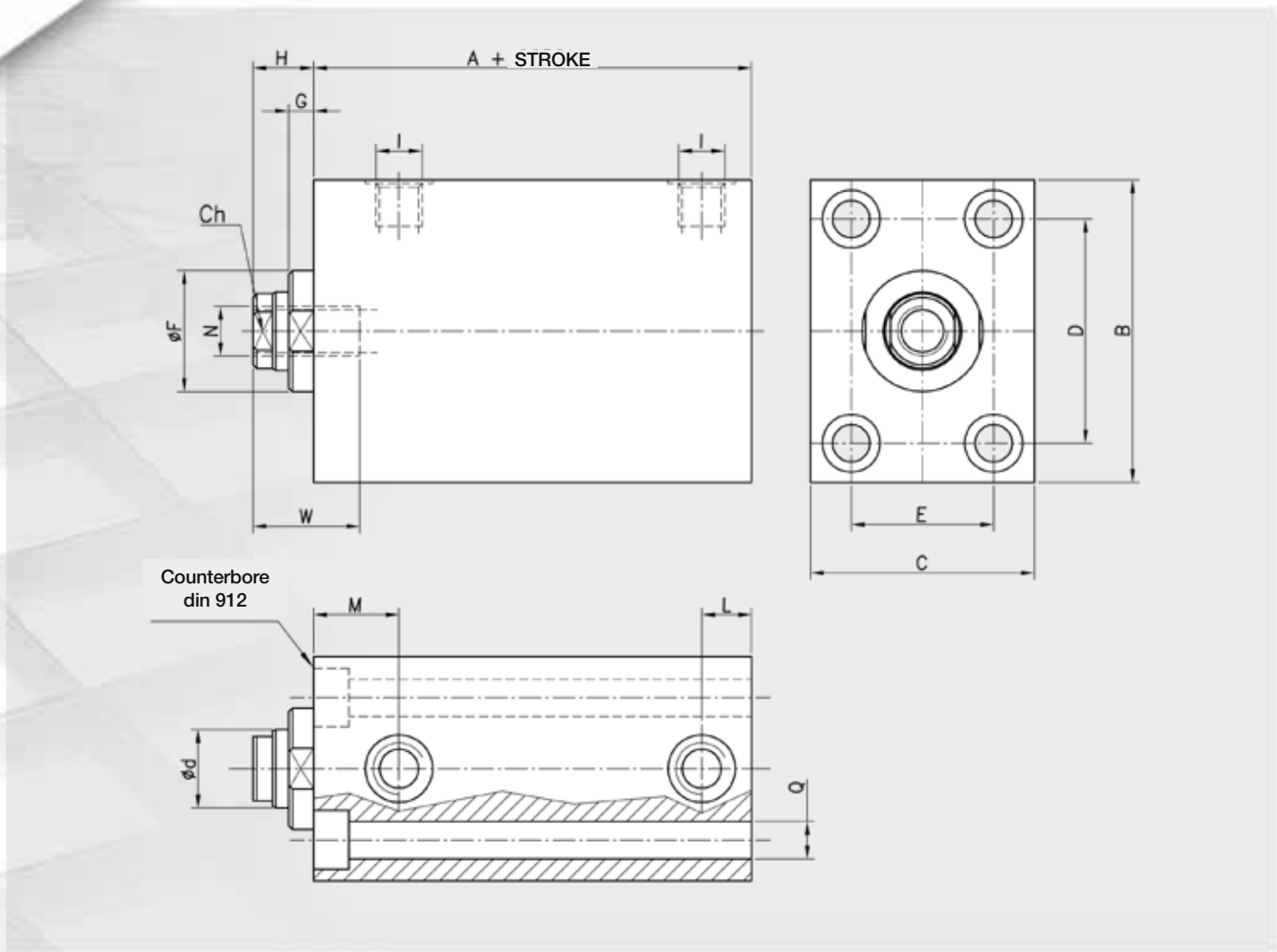


The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	E	F	G	H	I	L	M	N	P	Q	W
25	18	57	65	45	14	50	30	30	6,5	14	G 1/4"	14	22	M10	16	M8	24
32	22	60	75	55	18	55	35	34	8	15	G 1/4"	13	22	M12	18	M10	24
40	22	73	85	63	18	63	40	34	7	17	G 1/4"	16	24	M14	18	M10	30
50	28	75	100	75	24	76	45	42	8	20	G 1/4"	17	25	M20	20	M12	35
63	28	85	115	90	24	90	55	50	7	20	G 3/8"	21	29	M20	20	M12	35
80	36	100	140	110	32	110	75	60	7	20	G 1/2"	25	35	M27	24	M16	45
100	45	110	170	140	40	135	95	72	8	25	G 1/2"	28	37	M33	24	M16	55

Standard strokes: 20 – 50 – 75 – 100mm.
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.
It is recommended to use high-strength screws for fastening.

FT - XT SERIES model "X"
standard cylinder attachment variant 05



The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	E	F	G	H	I	L	M	N	Q	W
25	18	57	65	45	14	50	30	30	6,5	14	G 1/4"	14	22	M10	8,5	24
32	22	60	75	55	18	55	35	34	8	15	G 1/4"	13	22	M12	10,5	24
40	22	73	85	63	18	63	40	34	7	17	G 1/4"	16	24	M14	10,5	30
50	28	75	100	75	24	76	45	42	8	20	G 1/4"	17	25	M20	13	35
63	28	85	115	90	24	90	55	50	7	20	G 3/8"	21	29	M20	13	35
80	36	100	140	110	32	110	75	60	7	20	G 1/2"	25	35	M27	17	45
100	45	110	170	140	40	135	95	72	8	25	G 1/2"	28	37	M33	17	55

Standard strokes: 20 – 50 – 75 – 100mm.
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.
It is recommended to use high-strength screws for fastening.

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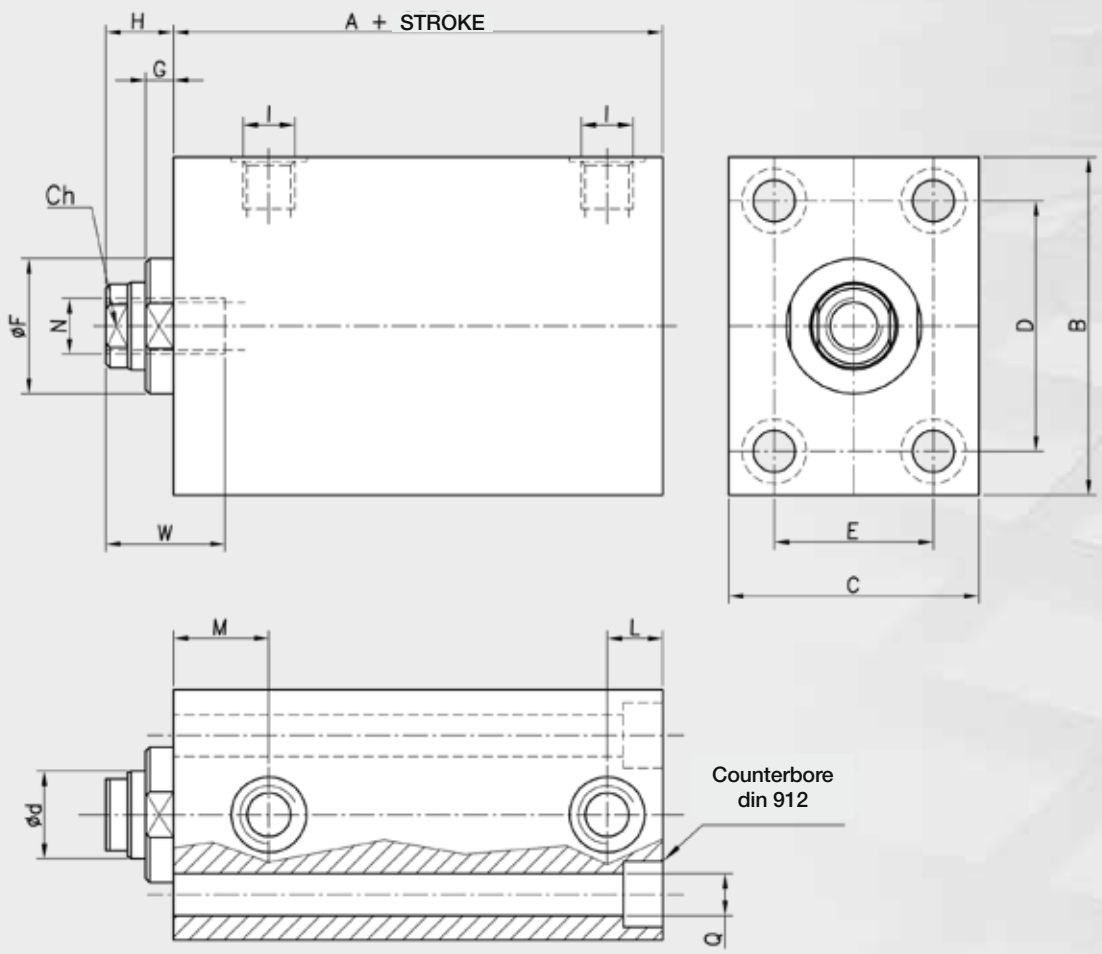
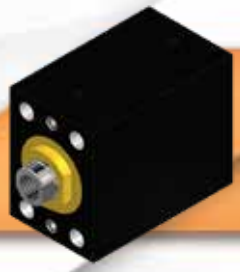
FT - XT SERIES model "X"
standard cylinder attachment variant 06



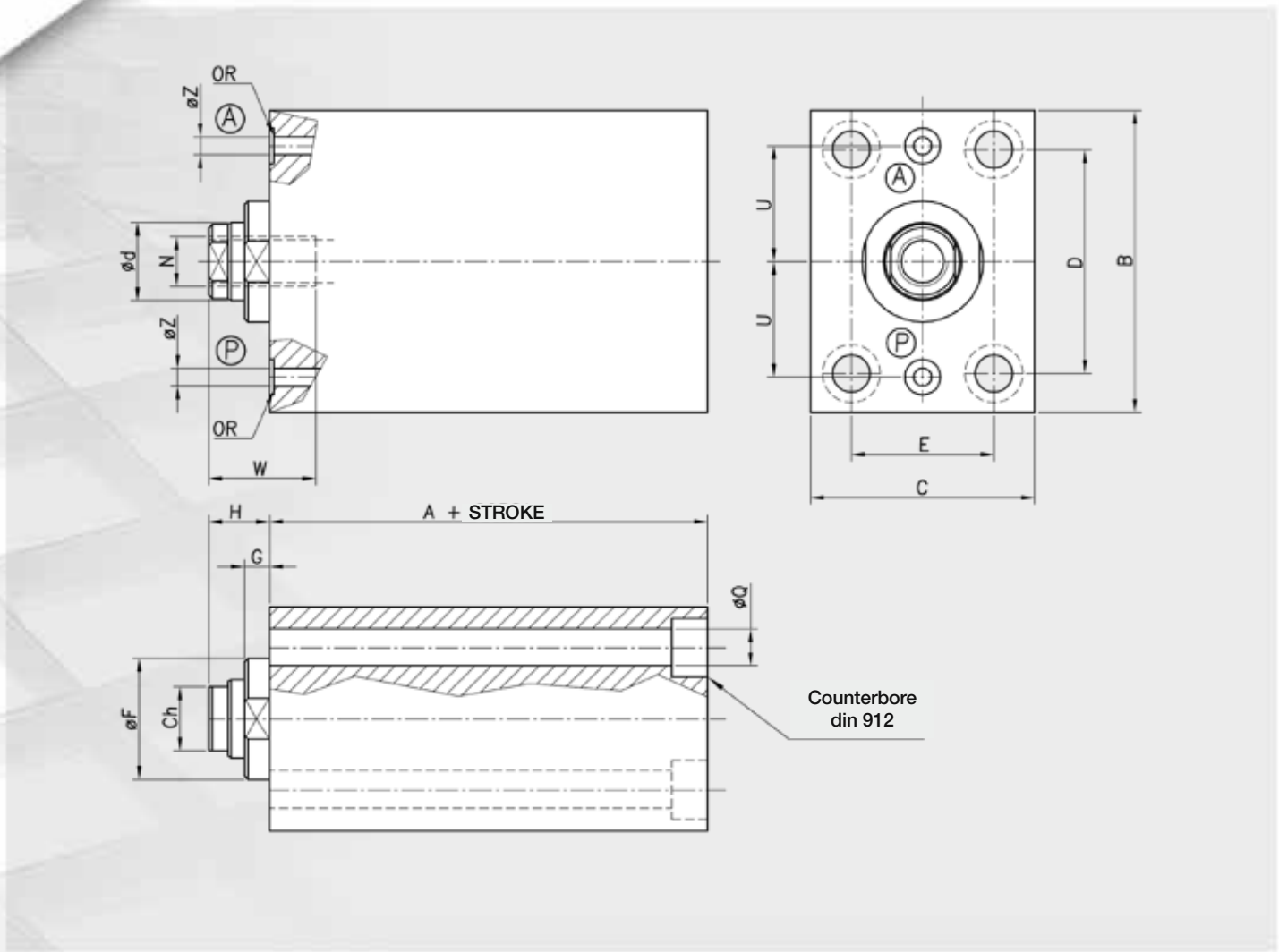
The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	E	F	G	H	I	L	M	N	Q	W
25	18	57	65	45	14	50	30	30	6,5	14	G 1/4"	14	22	M10	8,5	24
32	22	60	75	55	18	55	35	34	8	15	G 1/4"	13	22	M12	10,5	24
40	22	73	85	63	18	63	40	34	7	17	G 1/4"	16	24	M14	10,5	30
50	28	75	100	75	24	76	45	42	8	20	G 1/4"	17	25	M20	13	35
63	28	85	115	90	24	90	55	50	7	20	G 3/8"	21	29	M20	13	35
80	36	100	140	110	32	110	75	60	7	20	G 1/2"	25	35	M27	17	45
100	45	110	170	140	40	135	95	72	8	25	G 1/2"	28	37	M33	17	55

Standard strokes: 20 – 50 – 75 – 100mm.
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.
It is recommended to use high-strength screws for fastening.



FT - XT SERIES model "A" front supply



"A" Front supply
"P" Rear supply

The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	E	F	G	H	N	Q	U	W	Z	OR
25	18	57	65	45	14	50	30	30	6,5	14	M10	8,5	25,5	24	4	610 (106)
32	22	60	75	55	18	55	35	34	8	15	M12	10,5	30	24	4	610 (106)
40	22	73	85	63	18	63	40	34	7	17	M14	10,5	32,5	30	5	610 (106)
50	28	75	100	75	24	76	45	42	8	20	M20	13	40	35	5	610 (106)
63	28	85	115	90	24	90	55	50	7	20	M20	13	47,5	35	7	013 (2043)
80	36	100	140	110	32	110	75	60	7	20	M27	17	59	45	7	013 (2043)
100	45	110	170	140	40	135	95	72	8	25	M33	17	70	55	7	013 (2043)

Standard strokes: 20 – 50 – 75 – 100mm.
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.
It is recommended to use high-strength screws for fastening.

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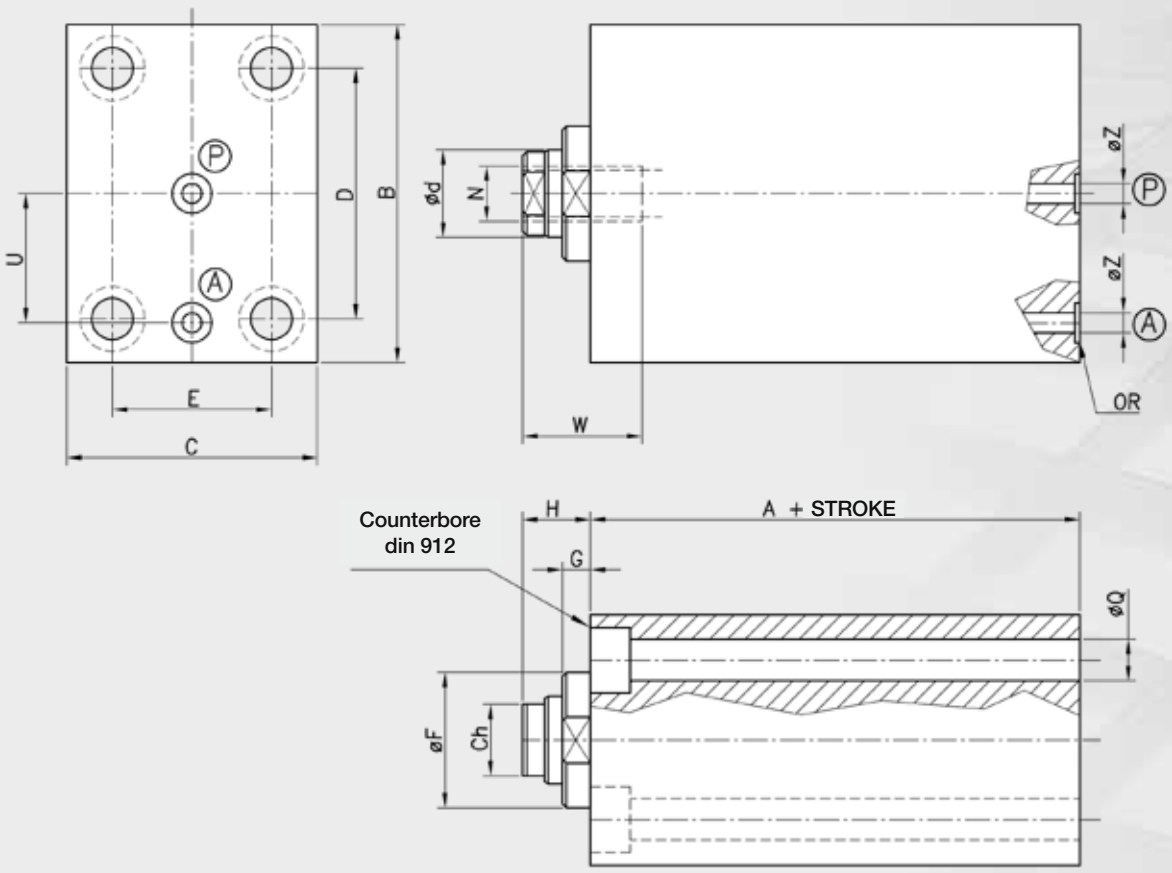
FT - XT SERIES model “B”
rear supply

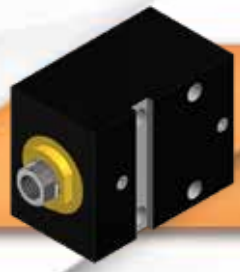


“A” Front supply
“P” Rear supply

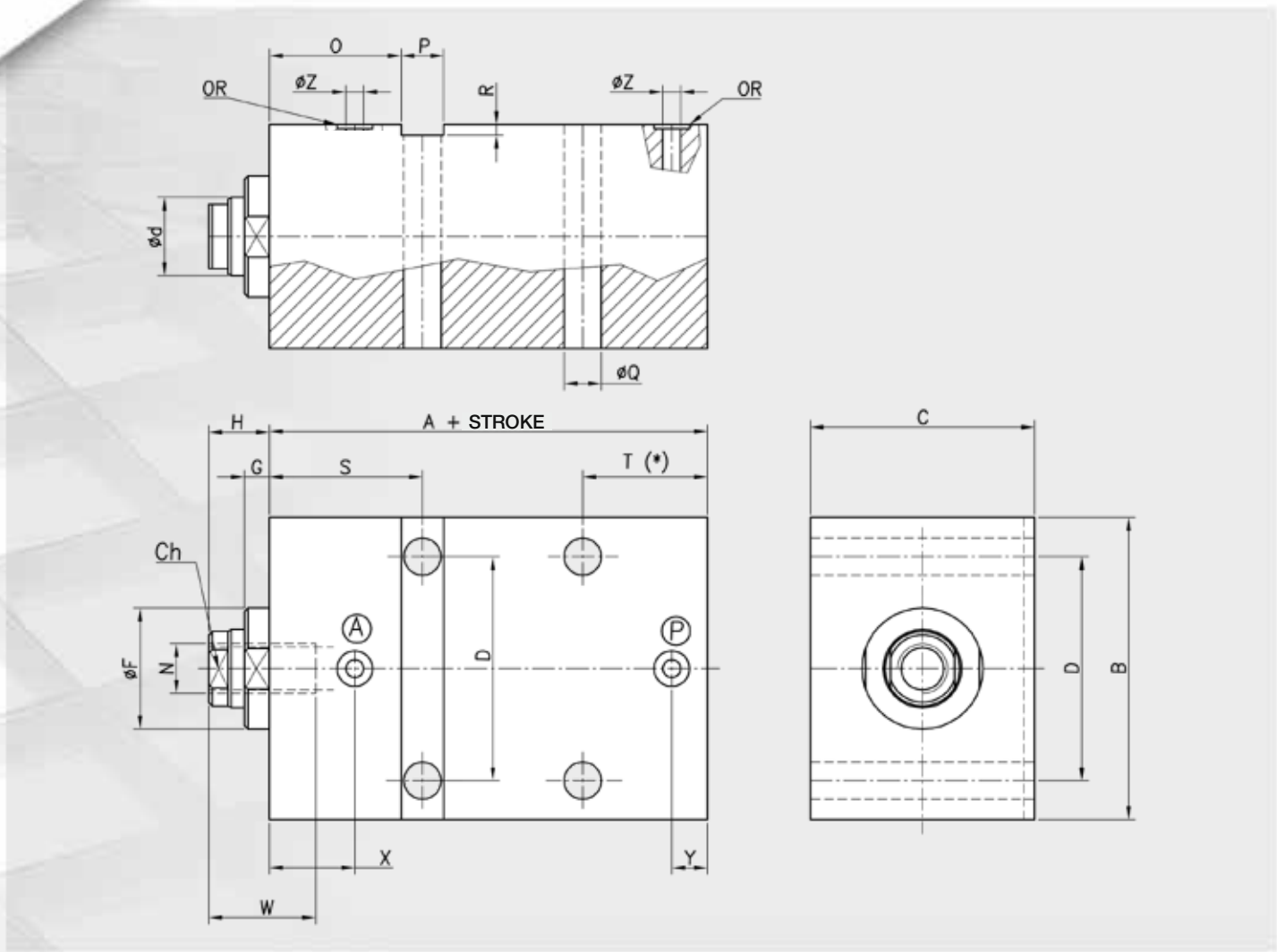
The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	E	F	G	H	N	Q	U	W	Z	OR
25	18	57	65	45	14	50	30	30	6,5	14	M10	8,5	25,5	24	4	610 (106)
32	22	60	75	55	18	55	35	34	8	15	M12	10,5	30	24	4	610 (106)
40	22	73	85	63	18	63	40	34	7	17	M14	10,5	32,5	30	5	610 (106)
50	28	75	100	75	24	76	45	42	8	20	M20	13	40	35	5	610 (106)
63	28	85	115	90	24	90	55	50	7	20	M20	13	47,5	35	7	013 (2043)
80	36	100	140	110	32	110	75	60	7	20	M27	17	59	45	7	013 (2043)
100	45	110	170	140	40	135	95	72	8	25	M33	17	70	55	7	013 (2043)

Standard strokes: 20 – 50 – 75 – 100mm.
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.
It is recommended to use high-strength screws for fastening.



FT - XT SERIES model "E" side supply



"A" Front supply
"P" Rear supply

The XT version includes slots for sensors (page 31)

AL.	d	A+	B	C	Ch	D	F	G	H	N	O	P	Q	R	S	T	W	X	Y	Z	OR
25	18	57	65	45	14	50	30	6,5	14	M10	32	10	8,5	2	37	30	24	22	7	4	610 (106)
32	22	60	75	55	18	55	34	8	15	M12	34	12	10,5	3	40	30	24	22	7	4	610 (106)
40	22	73	85	63	18	63	34	7	17	M14	37	12	10,5	3	43	35	30	24	10	5	610 (106)
50	28	75	100	75	24	76	42	8	20	M20	37,5	15	13	5	45	35	35	25	10	5	610 (106)
63	28	85	115	90	24	90	50	7	20	M20	47,5	15	13	5	55	40	35	29	15	7	013 (2043)
80	36	100	140	110	32	110	60	7	20	M27	50	20	17	5	60	50	45	35	17	7	013 (2043)
100	45	110	170	140	40	135	72	8	25	M33	60	20	17	5	70	60	55	37	20	7	013 (2043)

Standard strokes: 20 – 50 – 75 – 100mm.
T (*) Stroke 20mm. without holes
In ø25 bore cylinders the grooves for the sensors are not through the entire length of the body, but blind on the rod side.
It is recommended to use high-strength screws for fastening.

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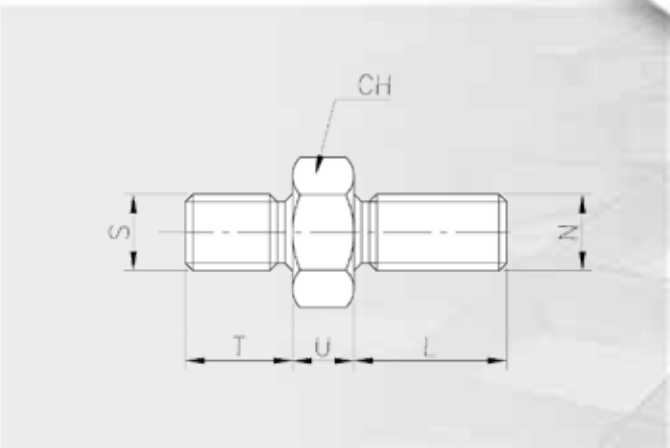
ACCESSORIES

“EM” MALE THREADED ROD END

EM

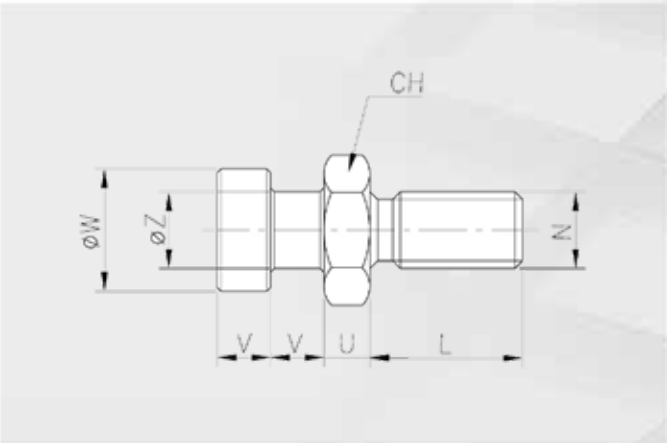
W	CH	L	N	S	T	U
EM10	17	20	M10	M10X1,25	14	6
EM12	19	20	M12	M12X1,25	16	7
EM14	22	25	M14	M14X1,5	18	8
EM20	30	30	M20	M20X1,5	28	9
EM27	36	40	M27	M27X2	36	12
EM33	46	50	M33	M33X2	45	14



“ET” FLOATING JOINT END

ET

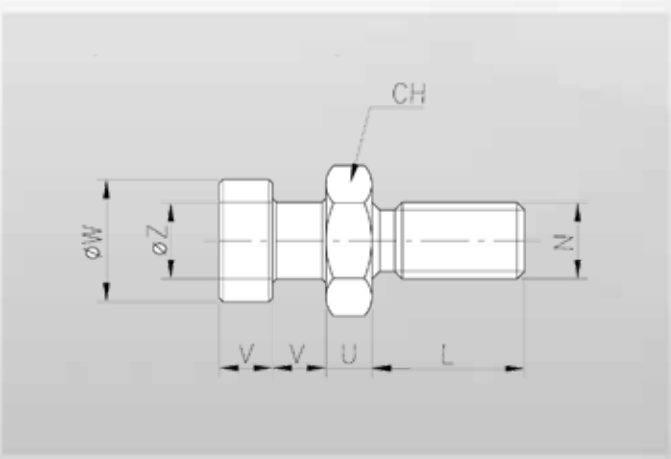
Type	CH	L	N	U	V	W	Z
ET10	17	20	M10	6	7	16	10
ET12	19	20	M12	7	8	18	11
ET14	22	25	M14	8	8	18	11
ET20	30	30	M20	9	10	22	14
ET27	36	40	M27	12	12,5	28	18
ET33	46	50	M33	14	16	35	22



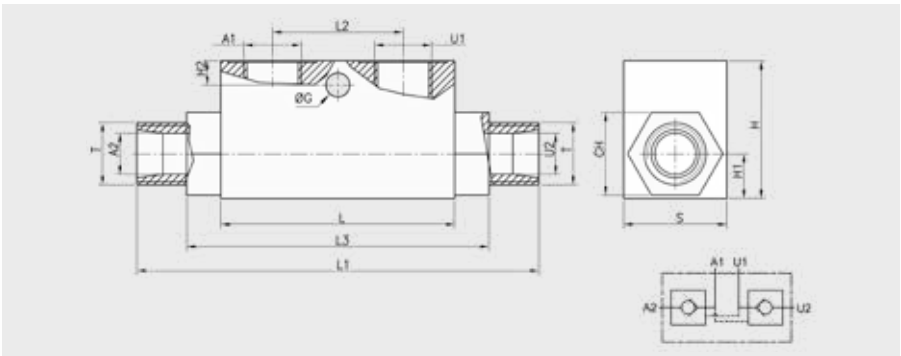
“BT” FLOATING JOINT END (HARDENED AND TEMPERED STEEL)

BT

Type	CH	L	N	U	V	W	Z
BT10	17	20	M10	6	7	16	10
BT12	19	20	M12	7	8	18	11
BT14	22	25	M14	8	8	18	11
BT20	30	30	M20	9	10	22	14
BT27	36	40	M27	12	12,5	28	18
BT33	46	50	M33	14	16	35	22

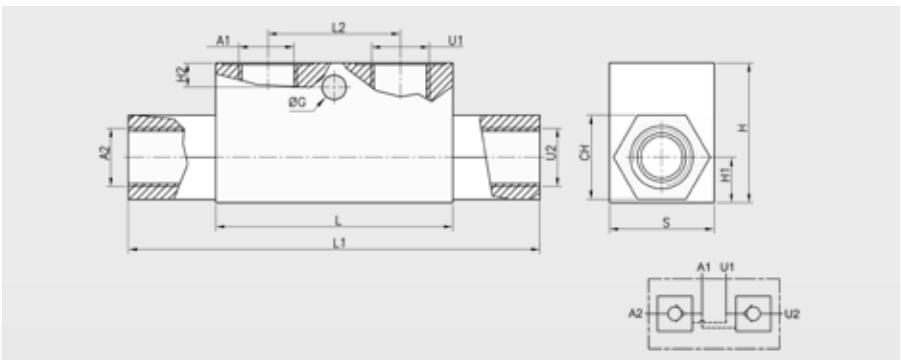


VRDE-AZ___FF



Type	A1- U1 BSP	A2 - U2	T	Q MAX L / min	P MAX bar	PILOT RATIO	L max	L1	L2	L3	∅ G	H2	CH	H1	H	S	kg
VRDE-AZ 010 FF	1/4”	Ø12	M18x1,5	30	350	1:4,5	68	138	38	86	7	7	24	13	40	30	0,67
VRDE-AZ 015 FF	3/8”	Ø12	M18x1,5	30	350	1:4,5	68	138	38	86	7	7	24	13	40	30	0,66
VRDE-AZ 020 FF	3/8”	Ø15	M22x1,5	50	300	1:4	80	166	40	108	8,5	15	27	16	50	30	0,97
VRDE-AZ 025 FF	1/2”	Ø15	M22x1,5	50	300	1:4	80	166	40	108	8,5	15	27	16	50	30	0,91
VRDE-AZ 030 FF	1/2”	Ø18	M26x1,5	80	300	1:4	90	180	40	133	8,5	15	30	20	60	40	1,67

VRDE-F___FF

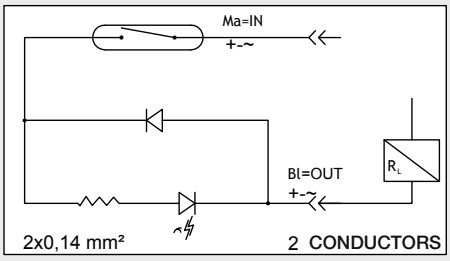


Type	A1- U1 BSP	A2 - U2 BSP	Q MAX L / min	P MAX bar	PILOT RATIO	L max	L1	L2	∅ G	H2	CH	H1	H	S	kg
VRDE-F 005 FF	1/8”	1/8”	20	350	1:4	53	86	20	-	-	17	11	30	20	0,3
VRDE-F 010 FF	1/4”	1/4”	30	350	1:4,5	68	118	38	7	7	24	13	40	30	0,69
VRDE-F 015 FF	3/8”	3/8”	30	350	1:4,5	68	118	38	7	7	24	13	40	30	0,64
VRDE-F 020 FF	3/8”	3/8”	50	300	1:4	80	144	40	8,5	15	27	16	50	30	0,98
VRDE-F 025 FF	1/2”	1/2”	50	300	1:4	80	144	40	8,5	15	27	16	50	30	0,91
VRDE-F 030 FF	1/2”	1/2”	80	300	1:4	90	171	40	8,5	15	30	20	60	40	1,72
VRDE-F 040 FF	3/4”	3/4”	120	300	1:4	107	196	60	8,5	16	41	23	70	50	3,11

REED SENSORS:

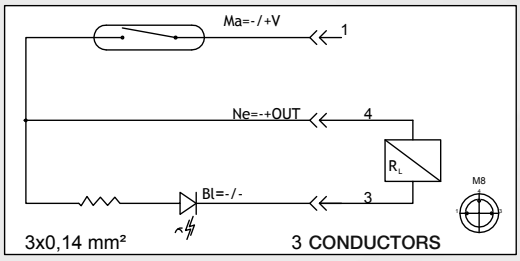
SCTW REED contact for temperatures up to 120°C - 2 wires
SCT REED contact for temperatures up to 85°C - 2 wires
SCTM8 REED contact for temperatures up to 85°C - 3 wires

SCTW - SCT



Ma=Brown
Ne=Black
Bl=Blue
R_L=Load

SCTM8



MAGNETIC SENSORS

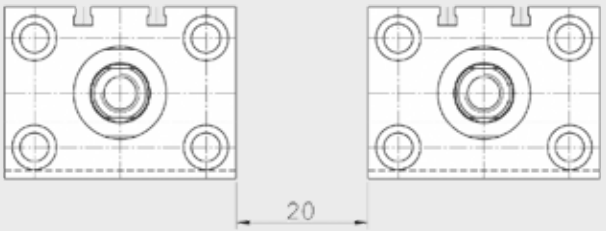
Technical Characteristics			
Sensor	SCTW	SCT	SCTM8
Working voltage	0 - 30 V AC/DC	10 - 230V AC/DC	5 - 30V DC
Current (max) REED	500 mA	250 mA	250 mA
Power (max) REED	10 W 10VA	10 W 8VA	10W 8VA
Led indicator light	None	Yellow	Yellow
Cable	PUR 2x0,14 mm²	PVC / PUR 3x0,14 mm²	PVC / PUR 3x0,14 mm²
Cable length	2,5 m	2 m	0,15 m
Connection	-	-	M8 Male connector
Temperature	-40 °C / +120 °C	-20 °C / +85 °C	-20 °C / +85 °C
Degree of protection	IP67	IP67	IP67
Cable terminal	2 wires	2 wires	3 wires with connector

CABLE WITH CONNECTORS FOR SCTM8 SENSORS

	CONN	CONN5
Cable length	2,5 m	5 m
Connection	M8 Female	M8 Female
No. poles	3	3

WARNINGS FOR USING MAGNETIC CYLINDERS

The magnetic field measured outside the cylinder sleeve extends for about 5 mm in length, so care must be taken with the mechanical positioning of the sensor to have the signal as close as possible to the desired position. In case of close mounting of magnetic cylinders with relative limit switches, the distance between them must be at least 20 mm.



If the magnetic cylinder is positioned in the cavity of a ferrous magnetic absorption system, maintain a minimum distance of at least 20 mm between the external dimensions of the cylinder and the nearest metal wall (excluding the fastening wall), in order to avoid the deformation of the magnetic field and the consequent lack of sensor activation.
It is advisable not to use cylinders with magnetic limit switches in the vicinity of strong magnetic fields (e.g. resistance welders).
Under no circumstances should the maximum current, the working voltage and the maximum switching power of the contact be exceeded.
In case of inductive loads, a high voltage peak is produced when disconnecting (see solenoid valve coils); for this reason, it is necessary to provide a suitable protection circuit (R-C) or varistor to protect the sensor. The same effects can also occur when the sensor wires exceed 5 m in length.
The inrush power (relay-fuse-filament lamp) is considerably higher (8-10 times) than the operating power, so it is necessary to rely on the inrush value when selecting the sensor.
The use of an ohmically set tester is recommended for bench-top adjustment of the position of the sensors.

CONNECTING SENSORS IN SERIES

The SCT (two-wire) and SCTW reed sensors allow connection in series, bearing in mind that for each sensor there is a voltage drop of about 4V, so a maximum number of 2 sensors can be connected and the supply voltage is not less than 24VDC. If it is necessary to connect 3 or more sensors in series, use the SCTM8 3-wire type.

WARNINGS

Totally avoid using the end-of-stroke cylinder: the moved load must stop on an external support. Otherwise, damage to the hydraulic unit could quickly occur with the risk of damaging things and/or people.

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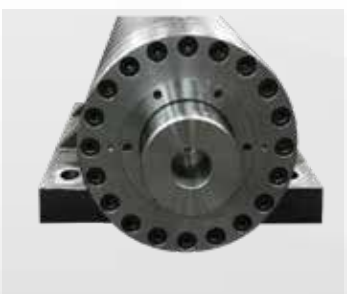
TIE-ROD CYLINDERS ISO 6020/2

HYDRAULIC CYLINDERS ISO 6022

SPECIAL CUSTOM HYDRAULIC CYLINDERS

PRESSURE MULTIPLIER



HYDRAULIC CYLINDER WITH WELDED BOTTOM

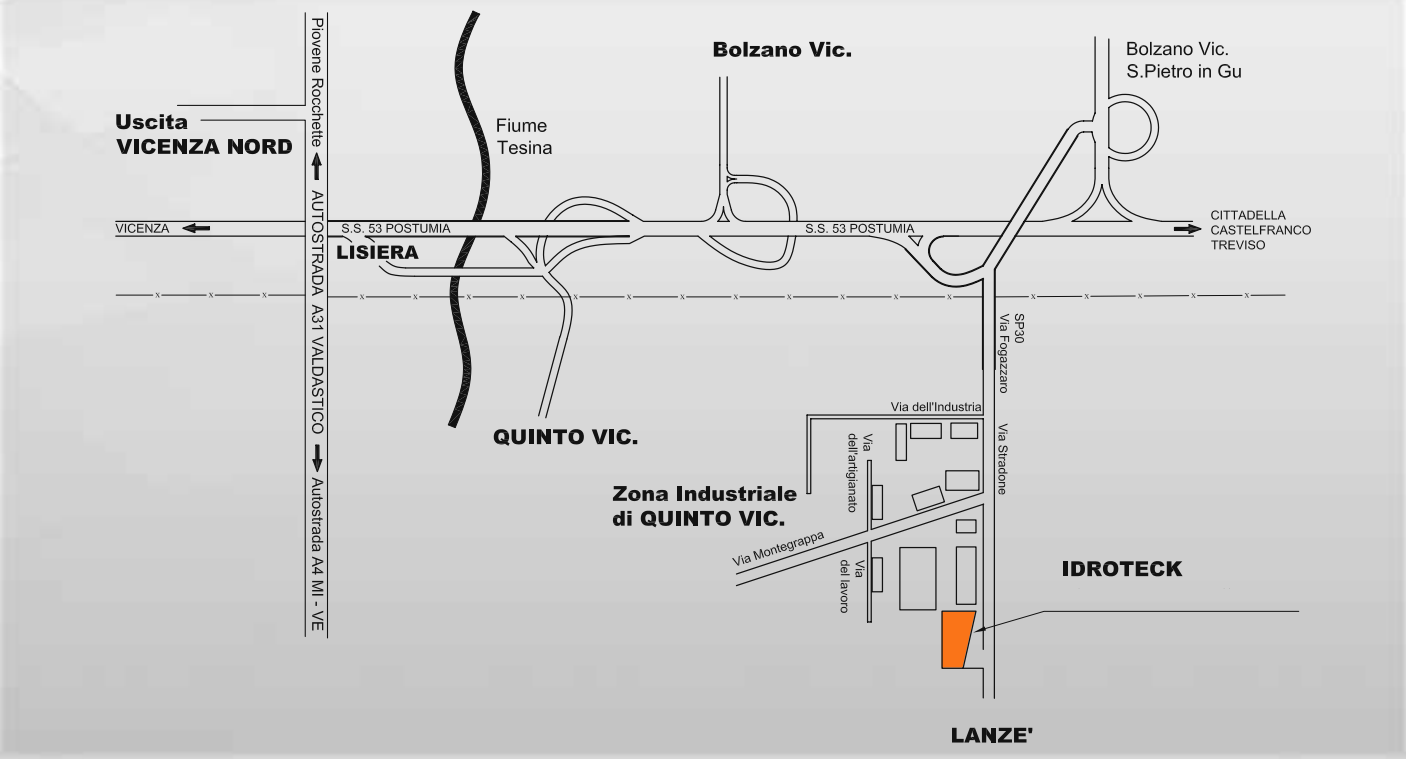
WARRANTY AND LIMITS OF LIABILITY

The product has a 12 (twelve) month warranty from the date of shipment from the factory. The warranty is intended for material or workmanship defects that occur during:
- Correct use
- Normal conditions of use
- Technically suitable installation

The warranty is limited to the repair or replacement, at IDROTECK Srl's discretion, of any item or part of it whose defect has been ascertained with the above-mentioned criteria. Any replacement will be made only with carriage forward. IDROTECK reserves the right to inspect the product at its choice, both at the purchaser's premises and at its own premises, requesting that the item be sent carriage paid.The above warranty does not extend to items damaged after shipment from the factory, nor to those modified or repaired by anyone not expressly authorised by IDROTECK Srl. There are no other forms of warranty than the one mentioned above. Any description of the sold products, including the characteristics expressly requested by the purchaser, as well as those appearing in the catalogues and other material published by IDROTECK Srl for the sole purpose of identifying the product, does not create the explicit conformity guarantee of the product to the given description. The conformity of the purchased items to the use that the purchaser intends to make of them is the sole responsibility of the purchaser. In no case shall IDROTECK Srl be held liable for damages related to the improper use of parts it has sold, such as incorrect installation, use or operation. In any case, IDROTECK Srl shall not be liable for damages, accidents, or consequential damages unless they are within the limits of the consideration received for the items for which liability is proven.

IDROTECK Srl reserves the right to discontinue, modify or revise the products described or their characteristics. All details are approximated and may vary depending on the installation. For any dispute, the competent court is Vicenza.

In line with the constant development of product improvement, IDROTECK Srl reserves the right to modify this catalogue and the technical specifications contained in it without prior notice.



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