

Filler Breathers

BA

TECHNICAL DATA:

Cap : Chrome plated steel.

Lock and chains : Galvanized steel.

Pressure valve : on request.

Working temperature : -25 to +110C

seals : Rubberized cork.

FILTRATION :

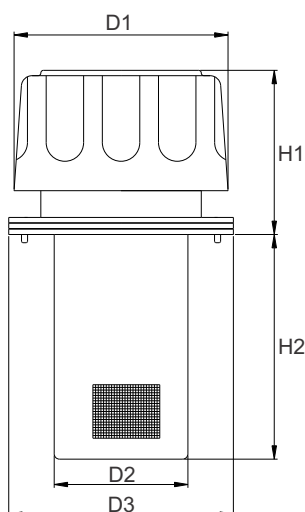
Basket : Powder coated steel.

Filtration : 40 microns foam.

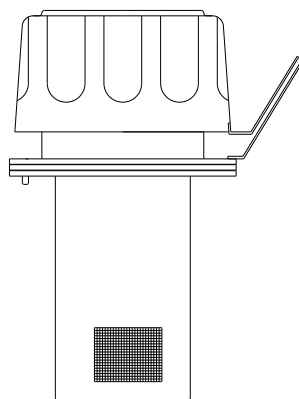
Celulose media : on request.

AIR FLOW RATES :

5 CFM & 25CFM.

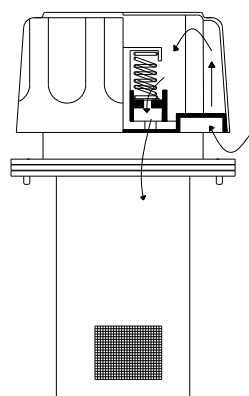


DIMENSIONS



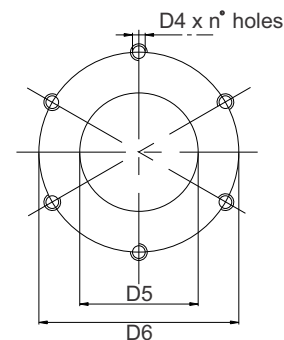
OPTION 'L'

Padlock holder version



OPTION 'P'

Pressurization valve (0.35 bar)



MOUNTING HOLES

HYDRAULIC ACCESSORIES

Part No.	Filtr. μ	Flow rate (l/min)	D1	D2	D3	D4	holes n°	D5	D6	H1	H2
ITA-BA-5F40	40	150	47	29	52	M5	3	31	41	48	64
ITA-BA-5F10	10	300	47	29	52	M5	3	31	41	48	64
ITA-BA-25F40	40	450	80	50	83	M5	6	52	73	57	78
ITA-BA-25F10	10	750	80	50	83	M5	6	52	73	57	78
ITA-BA-25F40L148	40	450	80	50	83	M5	6	52	73	57	148
ITA-BA-25F10L148	10	750	80	50	83	M5	6	52	73	57	148
ITA-BA-25F40L100	40	450	80	40	83	M5	6	52	73	57	100
ITA-BA-25F10L100	10	750	80	40	83	M5	6	52	73	57	100

All dimensions are in mm or otherwise stated

Air Breathers

ITA-H

TECHNICAL DATA:

Cap : Chrome plated steel.

Connector : Galvanized steel.

Pressure valve : on request.

Working temperature : -25 to +110C

Seals : Nitrile (buna N).

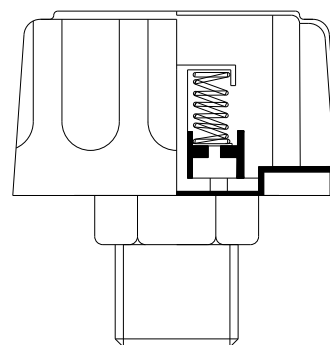
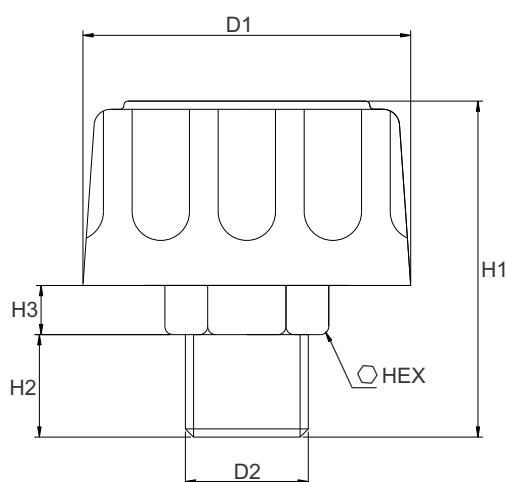
FILTRATION :

Filtration : 40 microns foam.

Celulose media : on request.

AIR FLOW RATES :

5 CFM & 25CFM.



**PRESSURIZED VERSION
ADD 'P' AT END OF PART NO**

HYDRAULIC ACCESSORIES

Part No.	Filtr. μ	Flow rate (l/min)	D1	D2	HEX	H1	H2	H3	kg	Spare element
ITA-H 6	10	150	47	1/4" BSP	19	45	12	7	-	-
ITA-H 8	10	300	47	3/8" BSP	19	45	12	7	-	-
ITA-H 10	10	450	76	1/2" BSP	35	66	12	7	-	-
ITA-H 12	10	750	76	3/4" BSP	35	66	16	7	-	-
ITA-H 16	10	850	76	1" BSP	38	66	16	7	-	-
ITA-H 6N	10	150	47	1/4" NPT	19	45	12	7	-	-
ITA-H 8N	10	300	47	3/8" NPT	19	45	12	7	-	-
ITA-H 10N	10	450	76	1/2" NPT	35	66	12	7	-	-
ITA-H 12 N	10	750	76	3/4" NPT	35	66	16	7	-	-
ITA-H 16N	10	850	76	1" NPT	38	66	16	7	-	-

All dimensions are in mm or otherwise stated

Tank connector for Air Beathers with Spin on Cartridge TB

MATERIAL :

Mild Steel Zinc plated

Cartridge can:

Mild Steel

Filter media:

CL =Cellulose

IF = Inorganic fiber

Filtration degree (in air): 3µm

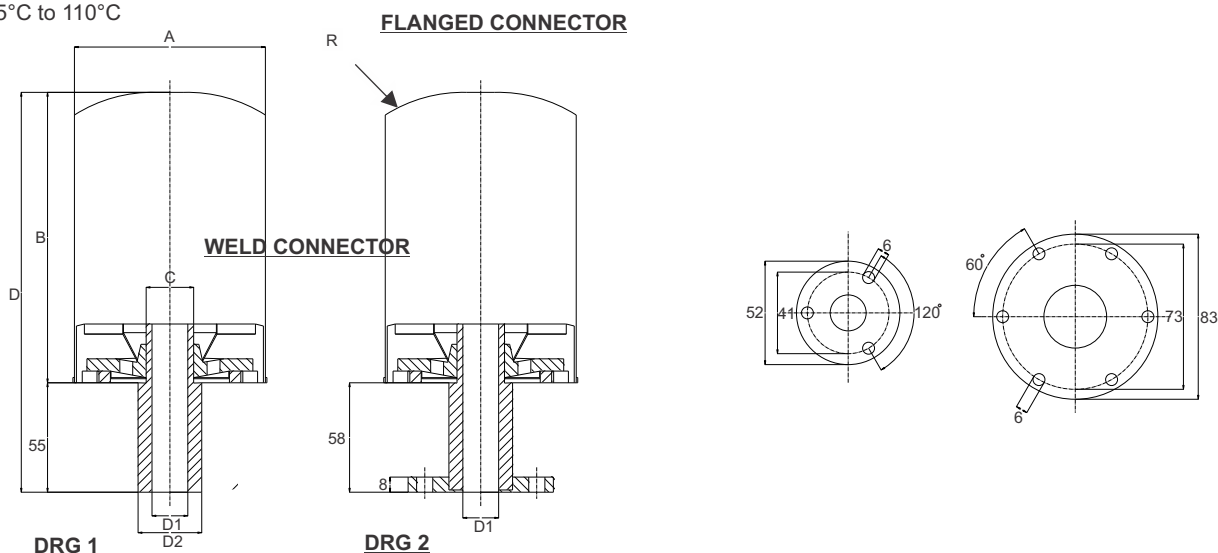
COMPATIBILITY :

Full with fluids HH - HL - HM - HR - HV - HG

(according to ISO 6743/4).

WORKING TEMPERATURE

From -25°C to 110°C



HYDRAULIC ACCESSORIES

Part No.	Cellulose = CL Inorganic fiber = IF	Dwg.	Flow rate (l/min)	A	B	D	C	D1	D2	R	Spare cartridge	All dimensions are in mm or otherwise stated
ITA-TB01FFC	□□	1	1.800	96	146	201	3/4" BSP	18	32	40	ITA-SE01N □	
ITA-TB02FFC	□□	1	1.800	96	191	246	3/4" BSP	18	32	40	ITA-SE02N □	
ITA-TB03FFC	□□	1	2.800	129	181	236	1 1/4" BSP	32	48	40	ITA-SE03N □	
ITA-TB04FFC	□□	1	2.800	129	226	281	1 1/4" BSP	32	48	40	ITA-SE04N □	
ITA-TB01FFW	□□	2	1.800	96	146	204	3/4" BSP	18	-	40	ITA-SE01N □	
ITA-TB02FFW	□□	2	1.800	96	191	249	3/4" BSP	18	-	40	ITA-SE02N □	
ITA-TB03FFW	□□	2	2.800	129	181	239	1 1/4" BSP	32	-	40	ITA-SE03N □	
ITA-TB04FFW	□□	2	2.800	129	226	284	1 1/4" BSP	32	-	40	ITA-SE04N □	

Air Breathers with Spin on Cartridge

TS

MATERIALS

Adaptor: zinc plated steel

Basket: zinc plated steel

Cartridge can: steel

Filter media:

CL =Cellulose

IF = Inorganic fiber

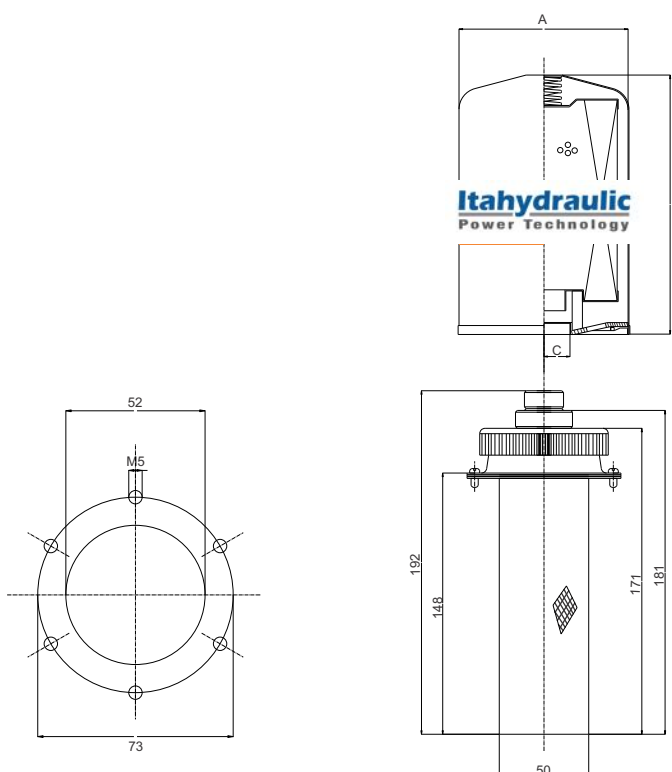
Filtration degree (in air): 3µm

COMPATIBILITY

Full with fluids HH - HL - HM - HR - HV - HG
(according to ISO 6743/4).

WORKING TEMPERATURE

From -25°C to 110°C



HYDRAULIC ACCESSORIES						
Cellulose = CL Inorganic fiber = IF		Flow rate (l/min)	A	B	C	Spare cartridge
ITA-TS01FWC	☐ ☐	1.800	95	145	3/4" BSP	ITA-SE01N ☐ ☐
ITA-TS03FWC	☐ ☐	2.800	129	181	1 1/4" BSP	ITA-SE03N ☐ ☐

All dimensions are in mm or otherwise stated

Air Breathers with Splash Gaurd PB

MATERIALS

Body: Polyamide 66

Basket: Powder Coated Steel

Filter media:

CL =Cellulose

IF = Inorganic fiber

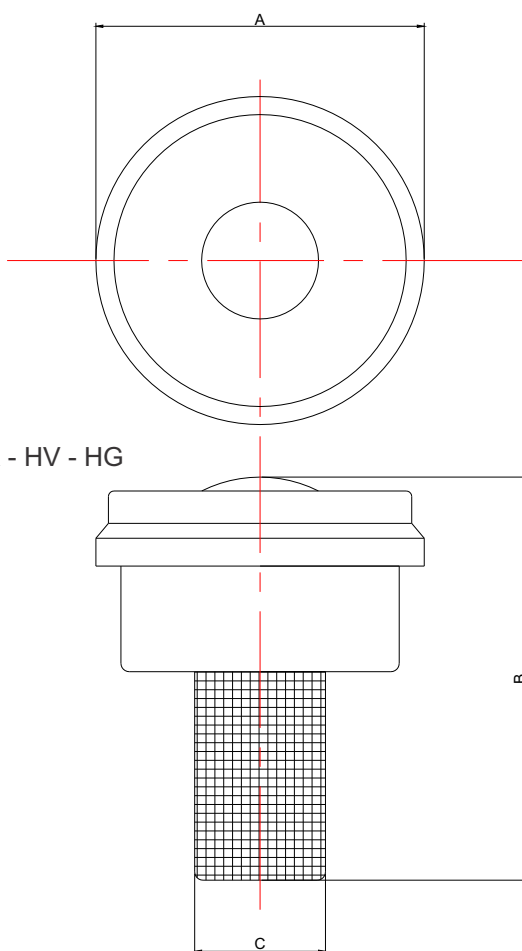
Filtration degree (in air): 25µm

COMPATIBILITY

Full with fluids HH - HL - HM - HR - HV - HG
(according to ISO 6743/4).

WORKING TEMPERATURE

From -25°C to 110°C



HYDRAULIC ACCESSORIES						
Part No	Filteration	Flow rate (CFM)	A	B	C	Spare cartridge
ITA-PBA2510	10µ	50	118	145	47	ITA-PBA25E10
ITA-PBA2525	25µ	50	118	145	47	ITA-PBA25E25

All dimensions are in mm or otherwise stated

Level Gauges LP

TECHNICAL DATA:

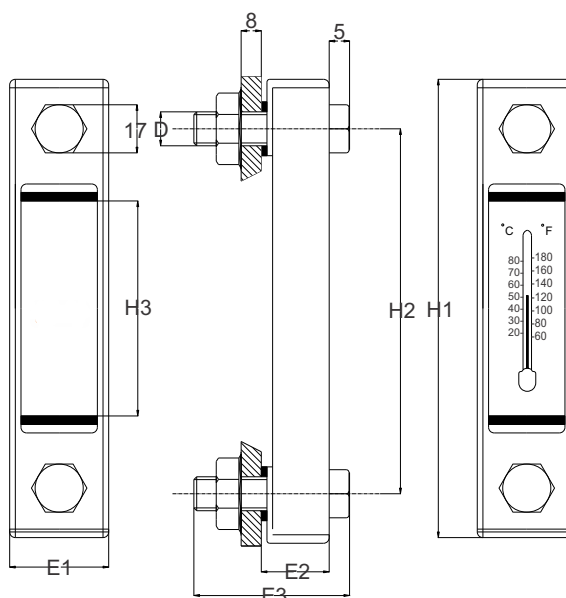
Cover : Powder coated steel.
Tube : Transparent poly carbonate.
Bolts & nuts : Galvanized steel.
Working temperature : -25 to +100C
Max. Tightening torque : 10 Nm.
Seals : Nitrile (buna N).

OPTIONAL :

Black screen : for white liquid.
Bolt Size : 10 mm & 12 mm.
Thermometer : 0 to 100 C
Red float : for transparent liquid.

STOCK SIZES :

3", 5" & 10" C to C..



HYDRAULIC ACCESSORIES							
Part No.	H1	H2	H3	D	E1	E2	E3
ITA-LP3	108	76	32	M10	35	24	50
ITA-LP3T	108	76	32	M10	35	24	50
ITA-LP5	160	127	78	M12	35	24	50
ITA-LP5T	160	127	78	M12	35	24	50
ITA-LP10	286	254	202	M12	35	24	50
ITA-LP10T	286	254	202	M12	35	24	50

All dimensions are in mm or otherwise stated

Suction Strainers

SS

TECHNICAL DATA:

End cap : galvanized steel.
Center tube : galvanized steel.
Head : Die cast aluminium.
Head (optional) : galvanized steel
By-pass : on request.
Permanent magnet : on request
Working temperature : -25 to +110 C

FILTRATION :

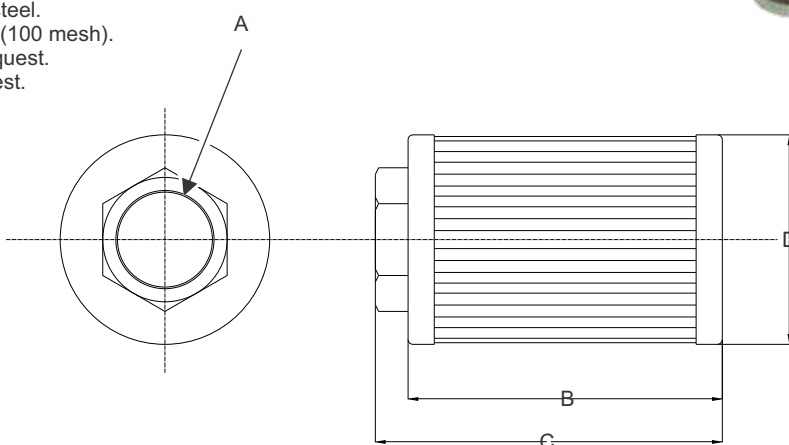
Wire mesh : Stainless steel.
Filtration : 149 microns (100 mesh).
Celulose media : on request.
Other ratings : on request.

STOCK SIZES :

3/8" BSP TO 3" BSP.

FLOW RATES :

12 L/min to 600 L/min.



MODEL NO.	FLOW LPM	THREAD IN. BSP A	LENGTH B	OVERALL LENGTH C	DIA D	SCREEN AREA (SQ. CMS.)	
ITA-SS - 003	12	3/8"	78	90	46	190	All dimensions are in mm or otherwise stated
ITA-SS - 005	20	1/2"	93	105	46	258	
ITA-SS - 007	28	3/4"	97	109	64	105	
ITA-SS - 010	40	1"	127	139	64	545	
ITA-SS - 015	60	1 1/4"	127	139	84	930	
ITA-SS - 020	80	1 1/2"	156	168	84	1170	
ITA-SS - 030	120	1 1/2"	188	200	84	1450	
ITA-SS - 040	160	2"	223	235	100	1935	
ITA-SS - 050	200	2"	248	260	100	2195	
ITA-SS - 075	300	2 1/2"	199	211	145	2790	
ITA-SS - 100	400	3"	260	272	145	3700	
ITA-SS - 150	600	3"	333	345	145	5900	

Oil Level Indicators

LA

TECHNICAL DATA:

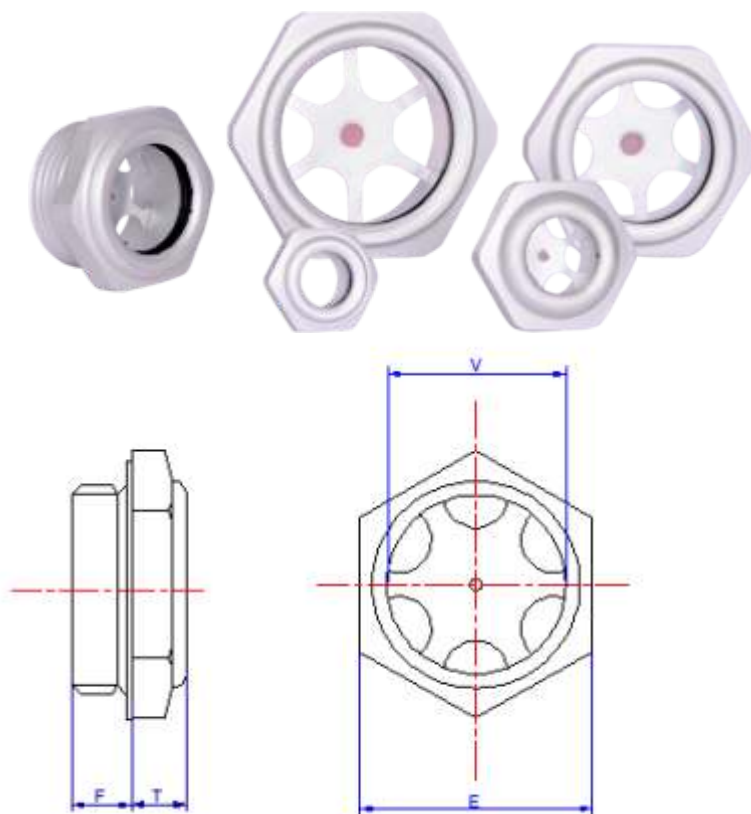
M.O.C : Extruded aluminium.
Glass/Polycarbonate,
Reflector : Anodized Aluminium.
Seals : NBR
Max pressure : 1.5 Bar

OPTIONAL :

High Pressure.
Threads on request.

STOCK SIZES :

1/4" BSP/NPT TO 2" BSP/NPT
M12 TO M48



PART NO	THREADS	f	t	v	e	PART NO	THREADS	f	t	v	e
ITA-LAN1G	1/4"	8	7	10	17	ITA-LAN1M	M14 x 1.5	8	7	10	17
ITA-LA2G	3/8"	9	7	13	22	ITA-LA2M	M16 x 1.5	9	7	13	22
ITA-LA3G	1/2"	10	9	16	27	ITA-LA3M	M18 x 1.5	9	7	13	22
ITA-LA4G	3/4"	11	9	21	32	ITA-LA4M	M20 x 1.5	10	7	16	24
ITA-LA5G	1"	14	10	27	40	ITA-LA5M	M22 x 1.5	10	9	16	27
ITA-LA6G	1.1/4"	15	10	37	50	ITA-LA6M	M24 x 1.5	11	9	16	30
ITA-LA7G	1.1/2"	15	10	40	55	ITA-LA7M	M24 x 2	11	9	16	30
ITA-LA8G	2"	17	14	50	70	ITA-LA8M	M25 x 1.5	11	9	21	32
						ITA-LA9M	M27x 1.5	11	9	21	32
						ITA-LA10M	M30 x 1.5	11	9	21	36
						ITA-LA11M	M30 x 2	11	9	21	36
						ITA-LA12M	M33 x 1.5	14	10	27	40
						ITA-LA13M	M33 x 2	14	10	27	40
						ITA-LA14M	M35 x 1.5	14	10	27	40
						ITA-LA15M	M40 x 1.5	12	10	37	50
						ITA-LA16M	M42 x 3	15	10	37	50
						ITA-LA17M	M48 x 3	15	10	40	55
						ITA-LA18M	M60 x 2	17	14	50	70
						ITA-LA19M	M60 x 4	17	14	50	70

DRAIN PLUGS

HA

FTCEM SERIES DRAIN PLUG

SPECIFICATION

Tampered, Hardened alloy.
Permanent magnet insert of special alloy.
Available with metal washers only.

APPLICATION

For high tight sealing.
For high rpm machinery.



PART NO	THREADS	e	g	h	f	t	d
FTCEM0G	1/8"	5	5	4	8	3	14
FTCEM1G	1/4"	6	5	5	12	3	18
FTCEM2G	3/8"	8	5	5	12	3	22
FTCEM3G	1/2"	10	6	5	14	4	26
FTCEM4G	3/4"	12	10	6	16	4	32
FTCEM5G	1"	17	10	6	16	5	40
FTCEM6G	1.1/4"	22	15	10	16	5	49
FTCEM7G	1.1/2"	24	15	10	16	5	55
FTCEM8G	2"	32	15	15	20	5	68
FTCEM0M	M10 x 1	5	5	4	8	3	14
FTCEM1M	M12 x 1.5	6	5	4	12	3	17
FTCEM2M	M14 x 1.5	6	5	5	12	3	19
FTCEM3M	M16 x 1.5	8	5	5	12	3	21
FTCEM4M	M18 x 1.5	8	6	5	12	3	23
FTCEM5M	M20 x 1.5	10	6	5	14	4	25
FTCEM6M	M22 x 1.5	10	6	5	14	4	27
FTCEM7M	M24 x 1.5	12	6	5	14	4	29
FTCEM8M	M24 x 2	12	6	5	14	4	29
FTCEM9M	M26 x 1.5	12	10	6	16	4	32
FTCEM10M	M27 x 2	12	10	6	16	4	32
FTCEM11M	M30 x 1.5	17	10	6	16	4	36
FTCEM12M	M30 x 2	17	10	6	16	4	36
FTCEM13M	M33 x 2	17	10	6	16	5	40

FTSC/F SERIES DRAIN PLUG

SPECIFICATION

Threaded plug with Flanged head for extra tight tightening.
Head milling produces crown for extra tight sealing.

APPLICATION

For application requiring extral tight sealing.
For use in dusty enviroment and hydraulic units.
Resistance to twisting and overheated atmosphere.



PART NO	THREADS	d	t	f	e
FTC/F0G	1/8"	14	7	8	10
FTC/F1G	1/4"	20	8	8	17
FTC/F2G	3/8"	22	8	9	18
FTC/F3G	1/2"	28	9	11	22
FTC/F4G	3/4"	32	10.5	12	27
FTC/F5G	1"	40	10.5	12.5	34
FTC/F0M	M10 x 1	14	7	8	10
FTC/F1M	M14 x 1.5	20	8	8	17
FTC/F2M	M16 x 1.5	22	8	9	18
FTC/F3M	M18 x 1.5	26	8	9	20
FTC/F4M	M20 x 1.5	28	9	10	22
FTC/F5M	M22 x 1.5	28	9	11	22

SPIN -ON FILTERS

PF



MATERIALS

Head:
Aluminium alloy

Spin-on cartridge:
Steel

Bypass valve:
Polyamide

Seals:
NBR Nitrile

Indicator housing:
Brass

PRESSURE (ISO 10771-1:2002)

Max working:
1,2 MPa (12 bar)

Test:
1,5 MPa (15 bar)

Bursting:
2,5 MPa (25 bar)

Collapse, differential
for the filter element (ISO 2941):
400 kPa (4 bar)

BYPASS VALVE

Setting:
35 kPa (0,35 bar) $\pm$ 10%

WORKING TEMPERATURE

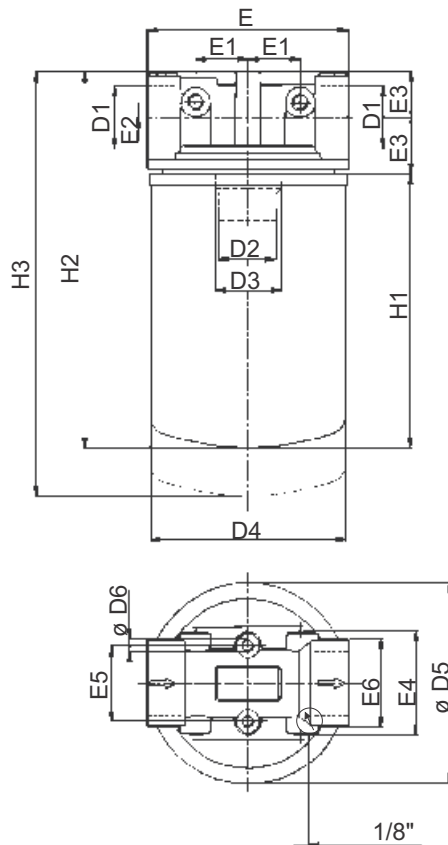
From -25° to +110° C

COMPATIBILITY (ISO 2943:1999)

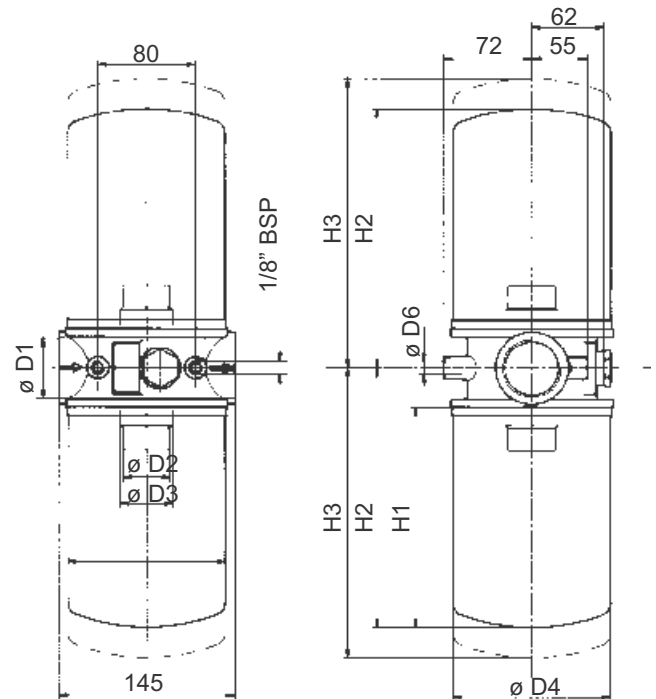
Full with fluids: HH-HL-HM-HV-HTG
(according to ISO 6743/4)

SPIN -ON FILTERS

PF



ITA-FPF-11 & ITA-FPF-12



ITA-FPF-21 & ITA-FPF-31

SPIN ON FILTER HOUSING

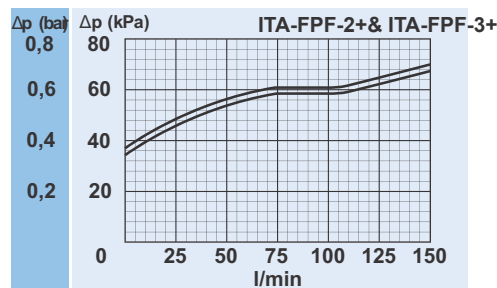
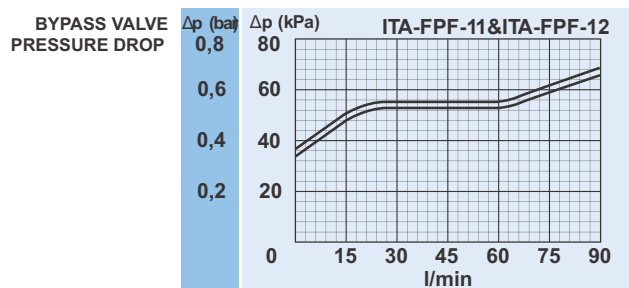
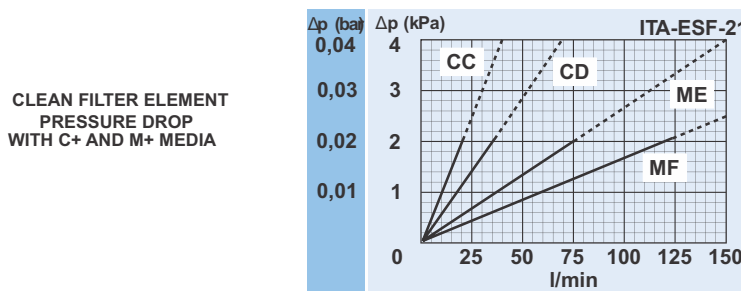
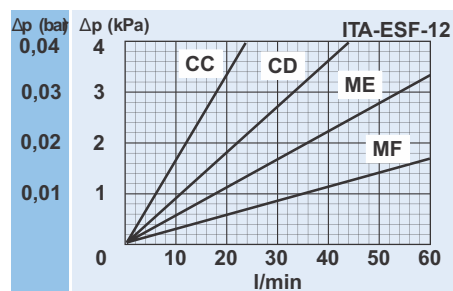
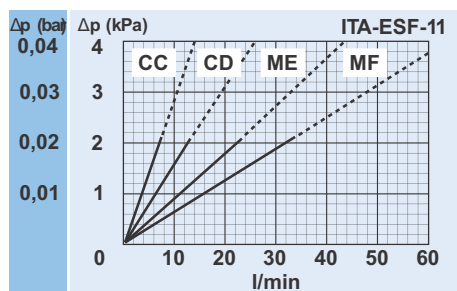
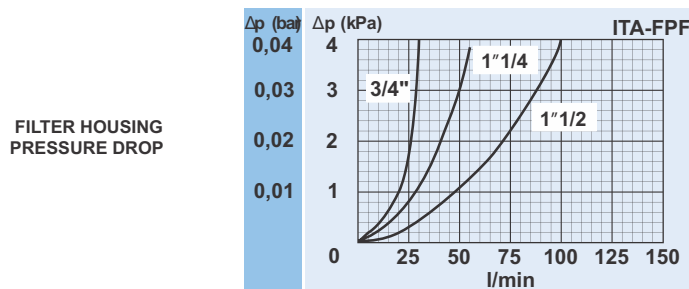
	D1	D2	D3	D4	D5	D6	E	E1	E2	E3	E4	E5	E6	H1	H2	H3	kg
ITAFPF11	3/4"	3/4" BSP	-	96	96	M8	95	20,5	7	20	49	38	37	145	188	208	1.2
ITAFPF12	3/4"	3/4" BSP	-	96	96	M8	95	20,5	7	20	49	38	37	191	234	254	1.5
ITAFPF21	1" 1/4	1" 1/2 16-UN	1" 1/4 BSP	129	134	M8	133	35	10	30	64	50	57	181	248	278	1.9
ITAFPF31	1" 1/2	1" 1/2 16-UN	1" 1/4 BSP	129	-	M10	-	-	-	-	-	-	-	181	216	246	3.5

SPIN -ON FILTERS

PF

PRESSURE DROP CURVES (Δp)

The "Assembly Pressure Drop (Δp)" is obtained by adding the pressure drop values of the Filter Housing and of the Clean Filter Element corresponding to the considered Flow Rate and it must be lower than 3 kPa (0,03 bar).

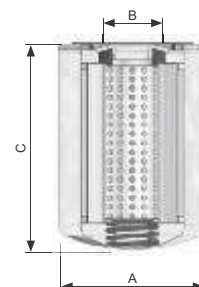


N.B. All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,9 kg/dm³; for fluids with different features,

SPIN -ON FILTERS

PF

FILTER ELEMENT						
PART NO	A	B	C	kg	Area (cm ²)	
					Media M+	Media C+
ITA-ESF-11	96,5	3/4" BSP	146	0,70	980	3.305
ITA-ESF-12	96,5	3/4" BSP	191	0,80	1.390	4.745
ITA-ESF-21	129	1" 1/4 BSP	181	1,20	1.940	5.560
ITA-ESF-22	129	1" 1/4 BSP	226	1,40	2.570	7.360



TYPE							
F = FILTER COMPLETE		F	F	F	F	ELEMENT	
B = FILTER HOUSING		B	B	B	B		
P	F	FAMILY				ITA-E	
		NOMINAL SIZE & LENGTH					
		11	12	21	31	FAMILY SIZE & LENGTH	
		PORT TYPE					
		B = BSP thread					
		F = SAE flange 3000 psi, metric screws					
		PORT SIZE (quote "D1")					
		06 = 3/4	06	-	-		
		10 = 1" 1/4	-	10	-		
		12 = 1" 1/2	-	-	12		
		BYPASS VALVE					
		W = without					
		A = 35 kPa (0,35 bar)					
		SEALS				SEALS	
		N = NBR Nitrile				N = NBR	
		F = FKM Fluoroelastomer				F = FKM	
		FILTER MEDIA				FILTER MEDIA	
		CC = cellulose 10µm β>2				CC = cell. 10µm	
		CD = cellulose 25µm β>2				CD = cell. 25µm	
		ME = metal wire mesh 60µm				ME = w. mesh µ60m	
		MF = metal wire mesh 90µm				MF = w. mesh µ90 m	
		CLOGGING INDICATOR					
		06 = 1/8" seat, plugged					
		10 = vacuum gauge, bottom connection					
		91 = SPDT, vacuum switch					

Return line filters

RC

MATERIALS

Head :
Die cast alluminum alloy

Spin-on-cartridge :
Steel

Seals:
Nitrile (buna n)

Indicator housing:
Brass

Bypass valve :
Polyamide 66

PRESSURE

Max working:
700 kPa (7 bar)

Test:
1 MPa (10 bar)

Bursting:
2.1 MPa (21 bar)

Collapse, differential
for the filter element : 300 kPa

BYPASS VALVE
170 kPa (1.7 bar)+/- 10%

WORKING TEMPERATURE

From -25° to +110° C

COMPATIBILITY

Full with fluids:
HH-HL-HM-HR-HV-HG



VISUAL CLOGGING INDICATOR

A visual clogging indicator allows monitoring of the element condition and provides maximum element life by indicating the exact time for the element replacement.

QUICK MAINTENANCE

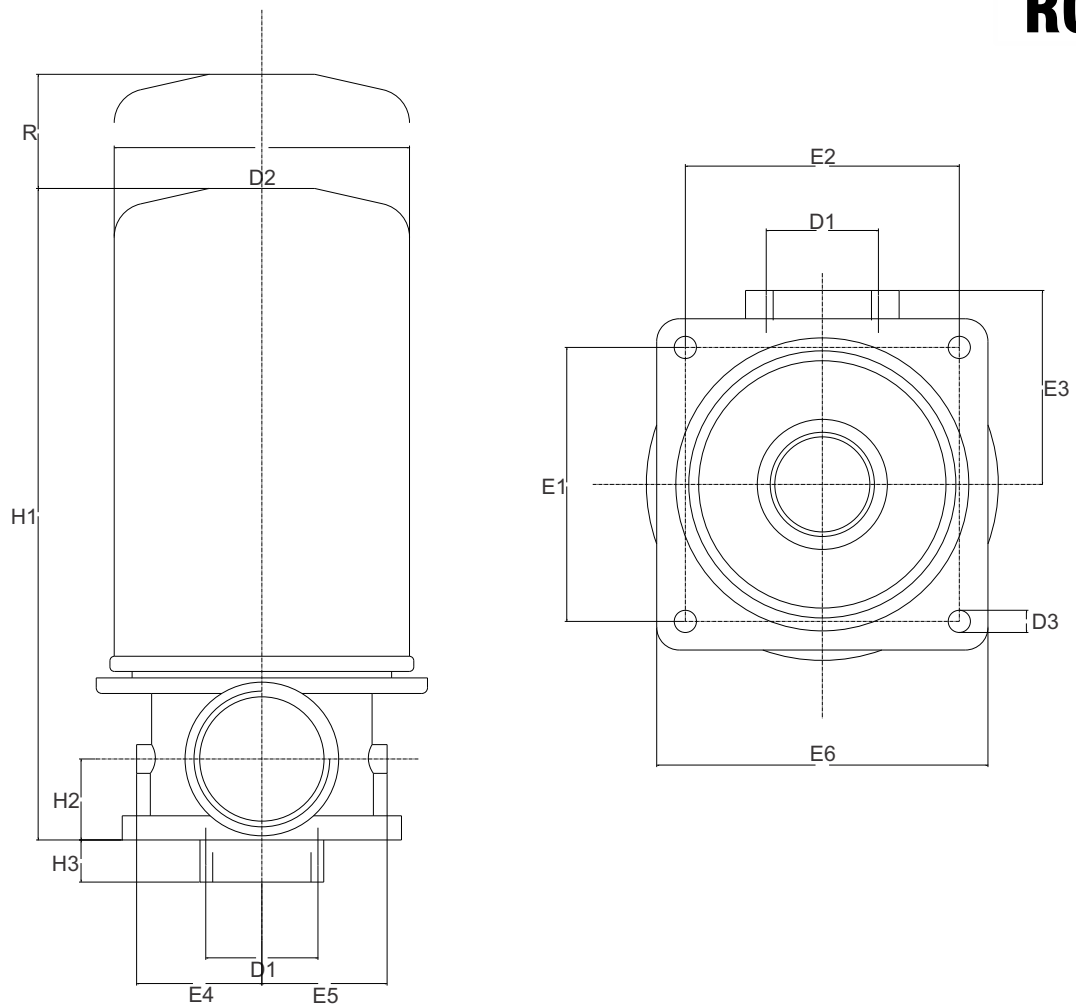
The filter comes with a threaded cap, thus no tool is required while replacing the element.

EASY REPLACEMENT

The top end cap includes a handle allowing an easy removal of the element and a complete cleaning of the bowl.

Return line filters

RC

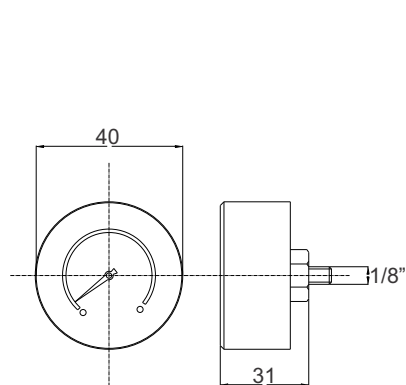


Tank cut out for FRC11 & 12 is 63 mm dia and dia 94 mm for FRC21 & 22

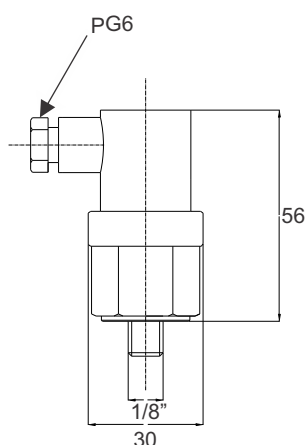
FILTER HOUSING														
Part No.	D1	D2	D3	H1	H2	H3	E1	E2	E3	E4	E5	E6	R	kg
ITA-RC11	3/4"	95	7	196	25	18	70	70	50	38	38	90	15	0,3+1,0
ITA-RC12	3/4"	95	7	241	25	18	70	70	50	38	38	90	15	0,3+1,3
ITA-RC21	1 1/2"	130	9	252	36	18	100	100	72	56	56	124	30	0,8+1,3
ITA-RC22	1 1/2"	130	9	297	36	18	100	100	72	56	56	124	30	0,8+1,4

Clogging Indicators

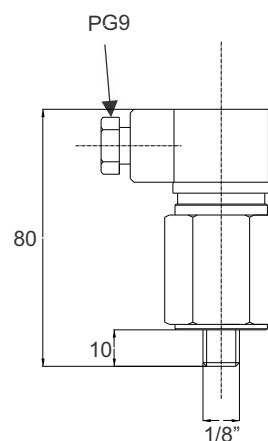
RC



Series F30 (rear connection):
pressure gauge,
scale 0 - 600 kPa (0 - 6 bar)

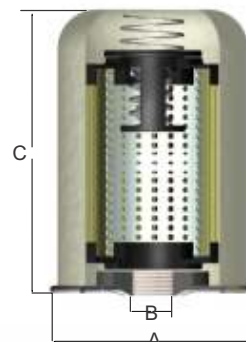


**Series F80 (N.O. contacts)
& series F81 (N.C. contacts):**
pressure switch,
max voltage 220 Vca 50-60 Hz
max current 0,5A resistive, 0,25A inductive
switching power 100 VA,
setting 150 kPa (1,5 bar) for F80 & F81
protection IP65.



Series FP1 :
SPDT, pressure switch
max voltage 250V - 50Hz
max current 6A resistive, 1A inductive
protection IP65
setting 150 kPa (1,5 bar) for FP1

Part No.	FILTER ELEMENT				Area (cm²)	
	A	B	C	Kg	Media F+	Media C+
ITA-ERC11	96,5	3/4" BSP	146	1.00	2.140	3.305
ITA-ERC12	96,5	3/4" BSP	191	1.20	3.630	4.745
ITA-ERC21	129	1"1/4" BSP	181	1.40	4.450	5.560
ITA-ERC22	129	1"1/4" BSP	226	1.50	5.890	7.360

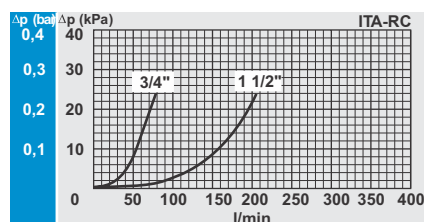


Pressure drop curves

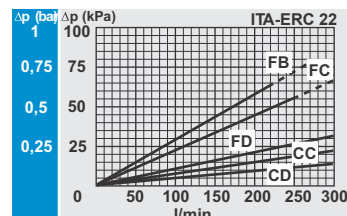
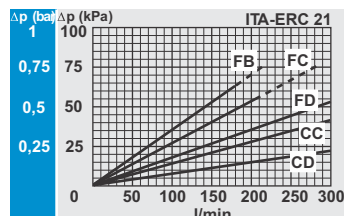
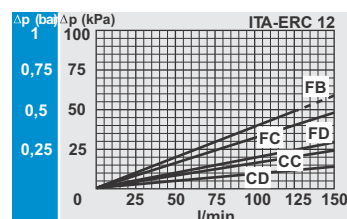
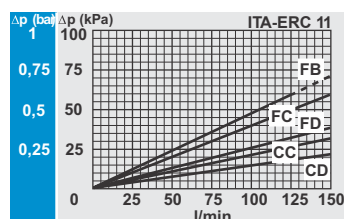
RC

The assembly Pressure drop(Δp) is obtained by adding the pressure drop values of the filter housing and the clean filter element corresponding to the considered flow rate lower than 50 kPa (0.5 bar).

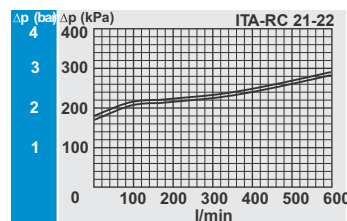
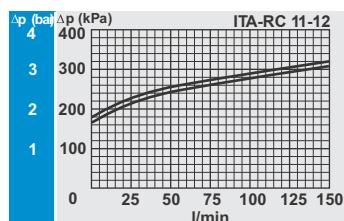
FILTER HOUSING PRESSURE DROP
(mainly depending on the port size)



CLEAN FILTER ELEMENT PRESSURE DROP
WITH F+ AND C+ MEDIA



BYPASS VALVE PRESSURE DROP



Disclaimer : All the curves obtained are with mineral oil of kinematic viscosity of 30 cSt and specific gravity of 0.9 kg/dm³.
All curves are obtained at test done at ITAHYDRAULIC FILTERS DIVISION.

Ordering Information

RC

		TYPE							
		F= FILTER COMPLETE				F	F	F	F
		B= FILTER HOUSING				B	B	B	B
R	C	FAMILY SIZE & LENGTH				11	12	21	22
		PORT TYPE							
		B = BSP THREAD				B	B	B	B
		PORT SIZE							
		06 = 3/4"				06	06		
		12 = 1.1/2"						12	12
		BY PASS VALVE							
		B = 170 kPa (1.7 bar)				B	B	B	B
		SEALS							
		N = NBR NITRILE				N	N	N	N
		F = FKM FLUROELASTOMER				F	F	F	F
		FILTER MEDIA							
		FB = fiber 7 μ m _(c) β >1.000				FB	FB	FB	FB
		FC = fiber 12 μ m _(c) β >1.000				FC	FC	FC	FC
		FD = fiber 21 μ m _(c) β >1.000				FD	FD	FD	FD
		CC = cellulose 10 μ m β >2				CC	CC	CC	CC
		CD = cellulose 25 μ m β >2				CD	CD	CD	CD
		CLOGGING INDICATOR							
		05 = nr. 2 x 1/8" ports, plugged				05	05	05	05
		F30= pressure gauge, rear connection				30	30	30	30
		F80= press. switch, N.O.				80	80	80	80
		F81= press. switch, N.C.				81	81	81	81
		Fp1= SPDT, Pressure switch				P1	P1	P1	P1
		ACCESSORIES							
		X = NO ACCESSORIES				X	X	X	X

Return line filters

ITA

RA



MATERIALS

Head & cover:
Die cast alluminum alloy

Bowl:
Polyamide 66

Seals:
Nitrile (buna n)

Indicator housing:
Brass



PRESSURE

Max working:
300 kPa (3 bar)

Test:
500 kPa (5 bar)

Bursting:
1 MPa (10 bar)

Collapse, differential
for the filter element : 300 kPa (3 bar)

BYPASS VALVE

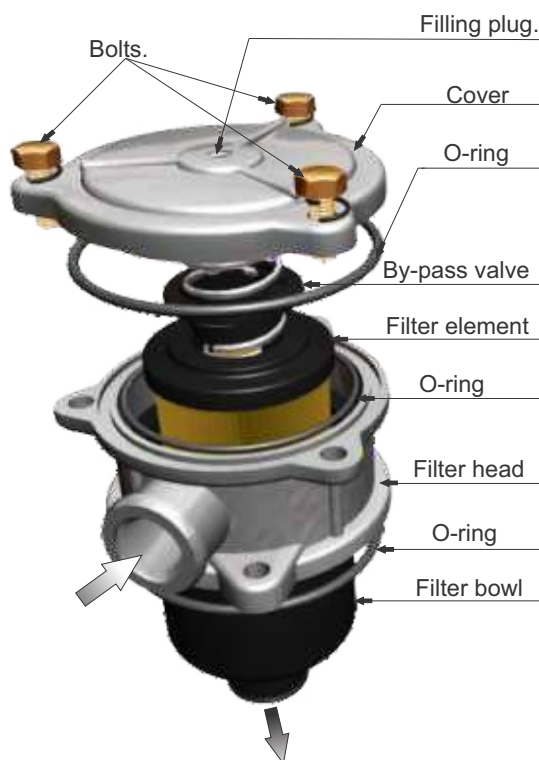
170 kPa (1.7 bar) +/- 10%

WORKING TEMPERATURE

From -25° to +110° C

COMPATIBILITY

Full with fluids:
HH-HL-HM-HR-HV-HG



VISUAL CLOGGING INDICATOR

A visual clogging indicator allows monitoring of the element condition and provides maximum element life by indicating the exact time for the element replacement.

FILLING PLUG

The Filling plug option gives the possibility of easily and efficiently Filtering the oil from the tank.

EASY REPLACEMENT

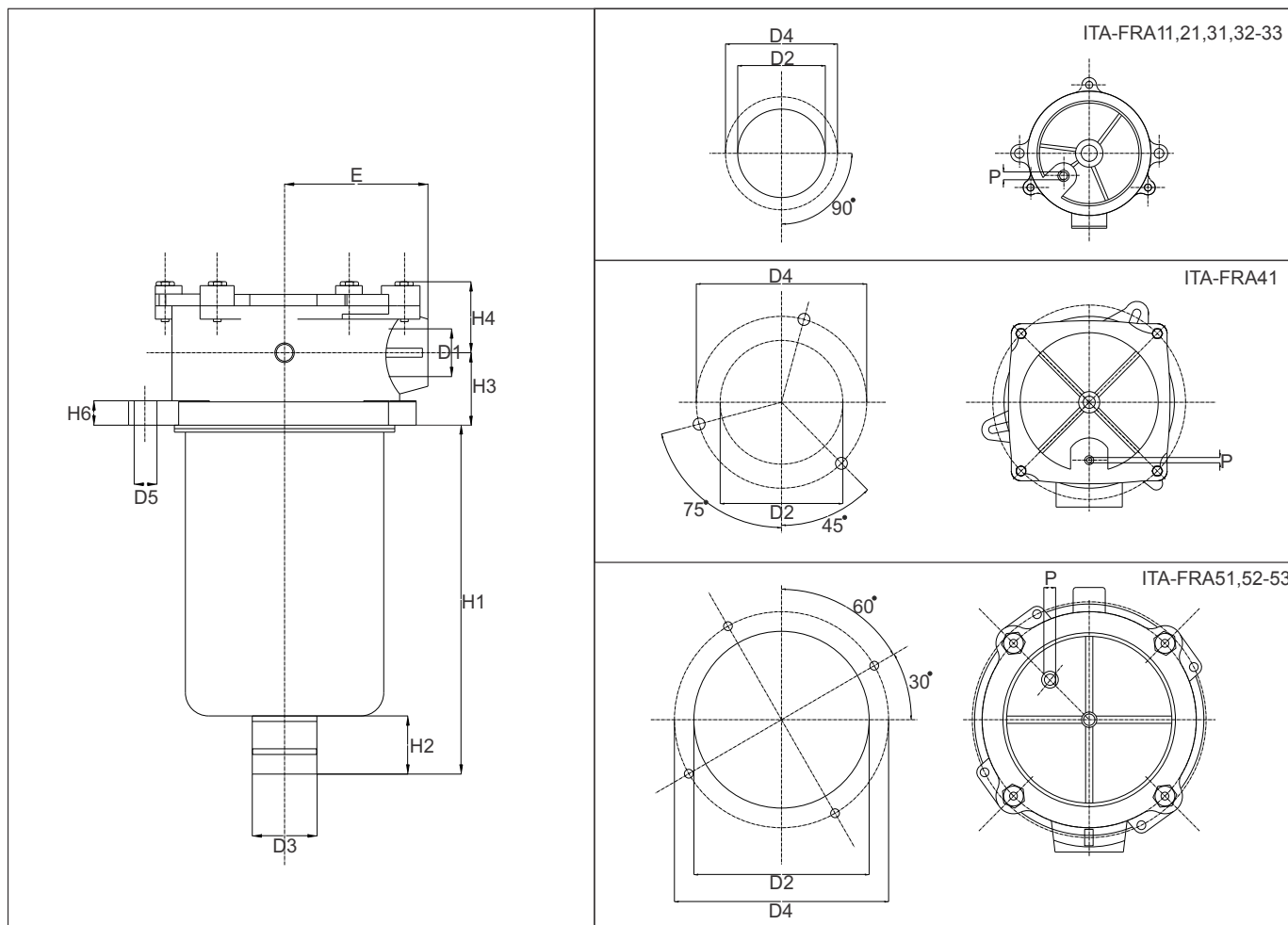
The top end cap includes a handle allowing an easy removal of the element and a complete cleaning of the bowl.

NO LEAKS

The end cap with captive O-ring ensures a perfect seal between filter element and the bowl.

Return line filters

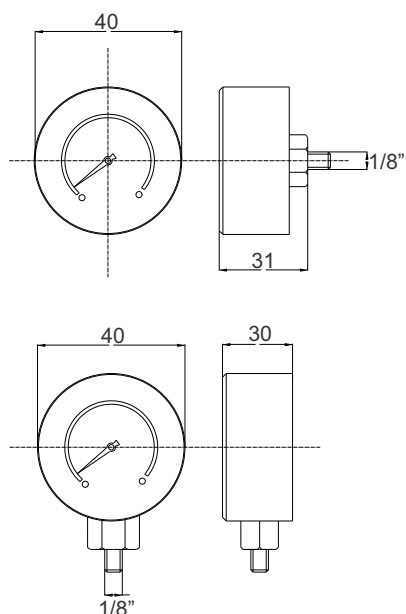
ITA RA



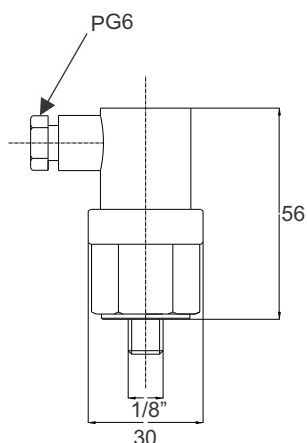
FILTER HOUSING															
Part No	D1	min D2	max D2	D3	D4	D5	E	H1	H2	H3	H4	H6	P	R	weight in kg
ITA-FRA11	3/8"	50	50	12	80	6.5	40	59	16	12	33	9	1/8"	90	0.30
ITA-FRA21	1/2"	67	68	24	90	6.5	50	80	20	22	33	9	3/8"	120	0.45
ITA-FRA31	1/2" - 3/4"	89	90	28	115	9	67	102	25	28	47	10	3/8"	150	0.80
ITA-FRA32	3/4" - 1"	89	90	28	115	9	67	150	25	28	47	10	3/8"	190	0.95
ITA-FRA33	3/4" - 1"	89	90	40	115	9	67	234	30	28	47	10	3/8"	270	1.10
ITA-FRA41	1" - 1 1/2"	126	131	40	175	10.5	95	248	50	35	56	13	1/2"	289	2.10
ITA-FRA51	1 1/4" - 1 1/2"	174	180	50	220	10.5	115	178	50	55	69	13	1/2"	250	3.10
ITA-FRA52	1 1/2" - 2" - 2 1/2"	174	180	63.5	220	10.5	115	240	50	55	69	13	1/2"	315	3.60
ITA-FRA53	1 1/2" - 2" - 2 1/2"	174	180	63.5	220	10.5	115	285	50	55	69	13	1/2"	355	4.10

Clogging Indicators

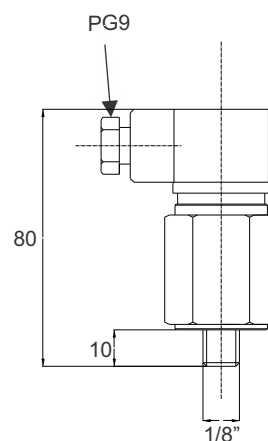
ITA RA



**Series F30 (rear connection)
& series F32 (bottom connection):**
pressure gauge,
scale 0 - 600 kPa (0 - 6 bar)

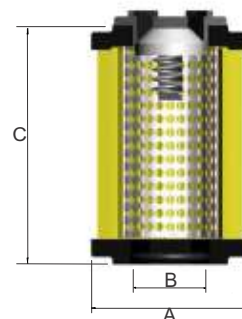


**Series F80 (N.O. contacts)
& series F81 (N.C. contacts):**
pressure switch,
max voltage 220 Vca 50-60 Hz
max current 0,5A resistive, 0,25A inductive
switching power 100 VA,
setting 150 kPa (1,5 bar)
protection IP65.



Series FP1:
SPDT, pressure switch
max voltage 250V - 50Hz
max current 6A resistive, 1A inductive
protection IP65
setting 150 kPa (1,5 bar)

FILTER ELEMENT						
Part No	A	B	C	Kg	Area (cm ²)	
					Media F+	Media C+
ITA-ERA11	38	13	50	0.05	270	345
ITA-ERA21	52	24	70	0.10	310	380
ITA-ERA31	70	28	85	0.20	620	990
ITA-ERA32	70	28	130	0.25	1.000	1.600
ITA-ERA33	70	40	210	0.40	1.660	2.670
ITA-ERA41	99	40	211	0.75	3.800	4.280
ITA-ERA51	130	51	140	1.00	4.140	4.360
ITA-ERA52	130	63	200	1.35	6.190	6.520
ITA-ERA53	130	63	251	1.50	7.930	8.350

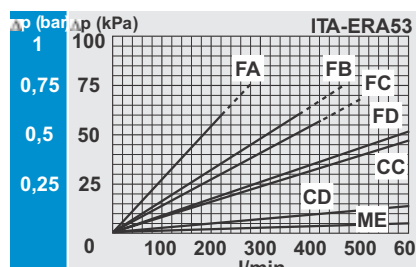
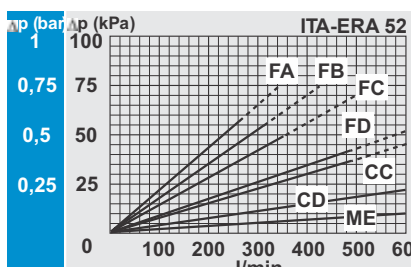
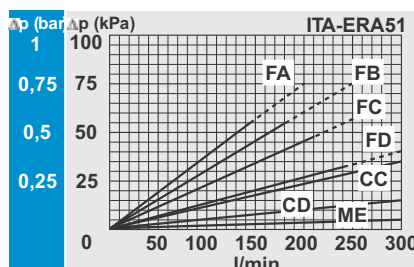
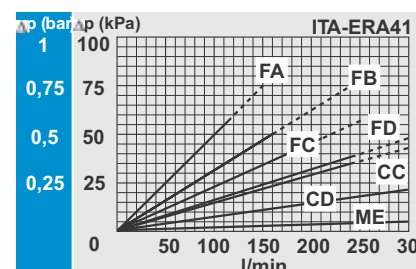
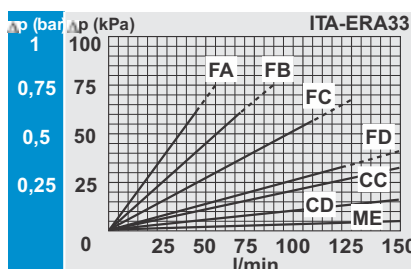
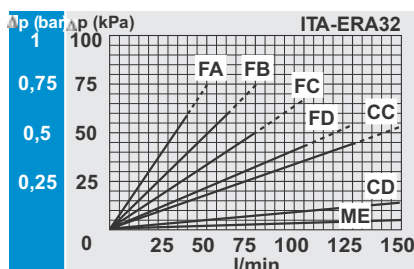
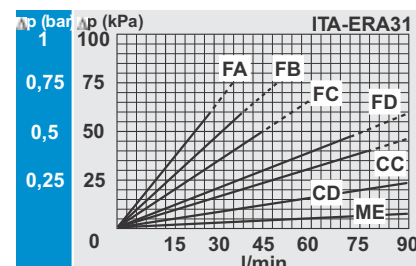
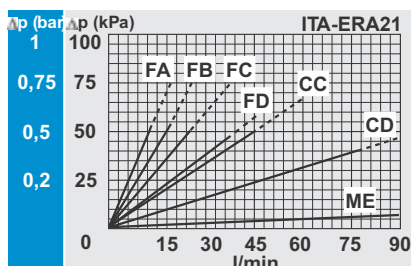
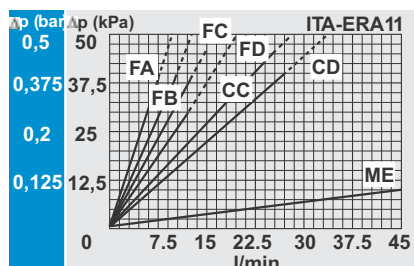


Pressure drop curves

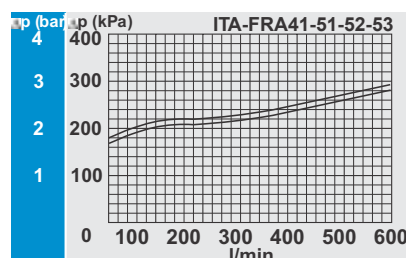
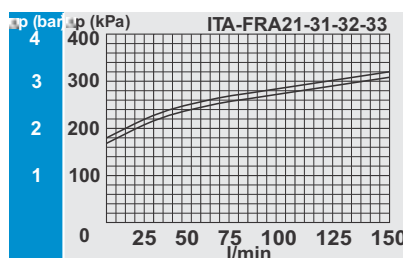
ITA RA

The assembly Pressure drop(Δp) is obtained by adding the pressure drop values of the filter housing and the clean filter element corresponding to the considered flow rate lower than 50 kPa (0.5 bar).

CLEAN FILTER ELEMENT PRESSURE DROP WITH F+,C+ & ME MEDIA



BYPASS VALVE PRESSURE DROP

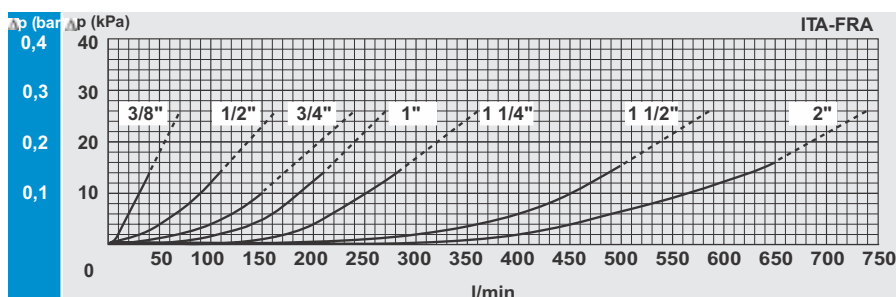


Disclaimer : All the curves obtained are with mineral oil of kinematic viscosity of 30 cSt and specific gravity of 0.9 kg/dm³.
All curves are obtained at test done at ITAHYDRAULIC FILTERS DIVISION

Ordering information

ITA RA

FILTER HOUSING PRESSURE DROP
DEPENDENT ON THE PORT SIZE

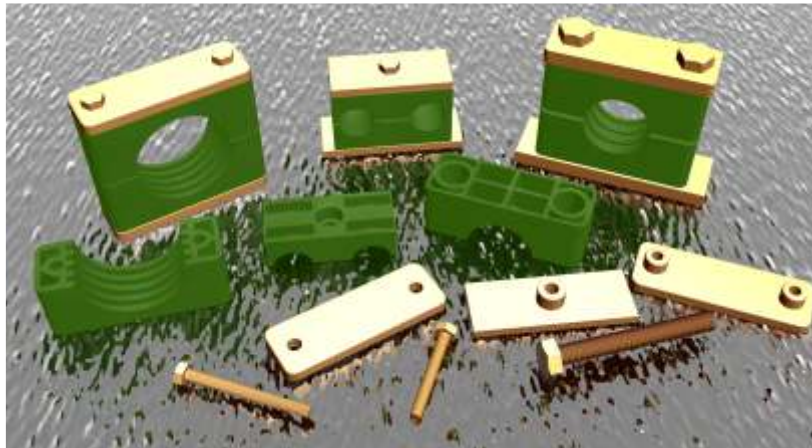


TYPE		T	T	T	T	T	T	T	T	
F = FILTER COMPLETE		B	B	B	B	B	B	B	B	
B = FILTER HOUSING										
R A FAMILY, NOMINAL SIZE & LENGTH		11	21	31	32	33	41	51	52	53
PORT TYPE		B	B	B	B	B	B	B	B	B
B = BSP thread		N	N	N	N	N	N	N	N	N
N = NPT thread		S	S	S	S	S	S	S	S	S
S = SAE thread		-	-	-	-	-	-	F	F	F
F = SAE flange 3000 psi										
PORT SIZE		03	-	-	-	-	-	-	-	-
03 = 3/8"		-	04	04	-	-	-	-	-	-
04 = 1/2"		-	-	06	06	-	-	-	-	-
06 = 3/4"		-	-	-	08	08	08	-	-	-
08 = 1"		-	-	-	-	10	10	10	-	-
10 = 1 1/4"		-	-	-	-	-	12	12	-	-
12 = 1 1/2"		-	-	-	-	-	16	16	16	16
16 = 2"		-	-	-	-	-	20	20	20	20
20 = 2 1/2"										
BYPASS		X	B	B	B	B	B	B	B	B
B = 170 kPa (1.7 bar)										
SEALS		N	N	N	N	N	N	N	N	N
N = NBR Nitrile		F	F	F	F	F	F	F	F	F
F = FKM Fluoroelastomer										
FILTER MEDIA		FA	FA	FA	FA	FA	FA	FA	FA	FA
FA = fiber 5μm β>1.000		FB	FB	FB	FB	FB	FB	FB	FB	FB
FB = fiber 7μm β>1.000		FC	FC	FC	FC	FC	FC	FC	FC	FC
FC = fiber 12μm β>1.000		FD	FD	FD	FD	FD	FD	FD	FD	FD
FD = fiber 21μm β>1.000		CC	CC	CC	CC	CC	CC	CC	CC	CC
CC = cellulose 10μm β>2		CD	CD	CD	CD	CD	CD	CD	CD	CD
CD = cellulose 25μm β>2		ME	ME	ME	ME	ME	ME	ME	ME	ME
ME = wire mesh 60μm										
CLOGGING INDICATOR		01	01	01	01	01	01	01	01	01
01 = 1/8" port, plugged		30	30	30	30	30	30	30	30	30
30 = Pressure gauge, rear connection		32	32	32	32	32	32	32	32	32
32 = Pressure gauge, bottom connection		80	80	80	80	80	80	80	80	80
80 = press. switch, N.O.Contacts		81	81	81	81	81	81	81	81	81
81 = press. switch, N.C.Contacts		P1	P1	P1	P1	P1	P1	P1	P1	P1
P1 = SPDT, press switch										
ACCESSORIES		W	W	W	W	W	W	W	W	W
W = without		P	P	P	P	P	P	P	P	P
P = with filling plug										

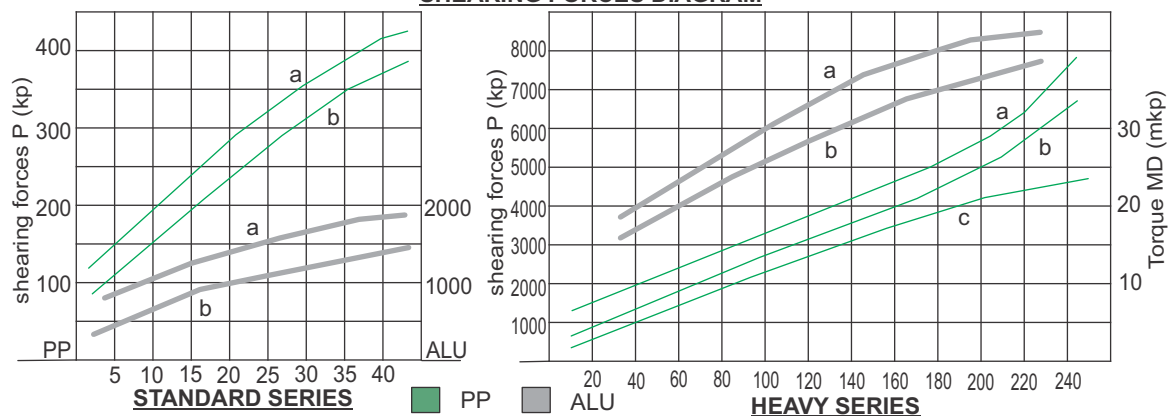
Pipe Clamps

C

The design of pipe clamps and the choice of standard or Heavy duty pipe clamps body material, vary according to the loading, the shearing forces and the torque so as to provide for rigid installation. Shearing forces diagrams for various tube sizes are given below for standard and heavy duty pipe clamps for polypropylene, polyamide and aluminium.



SHEARING FORCES DIAGRAM

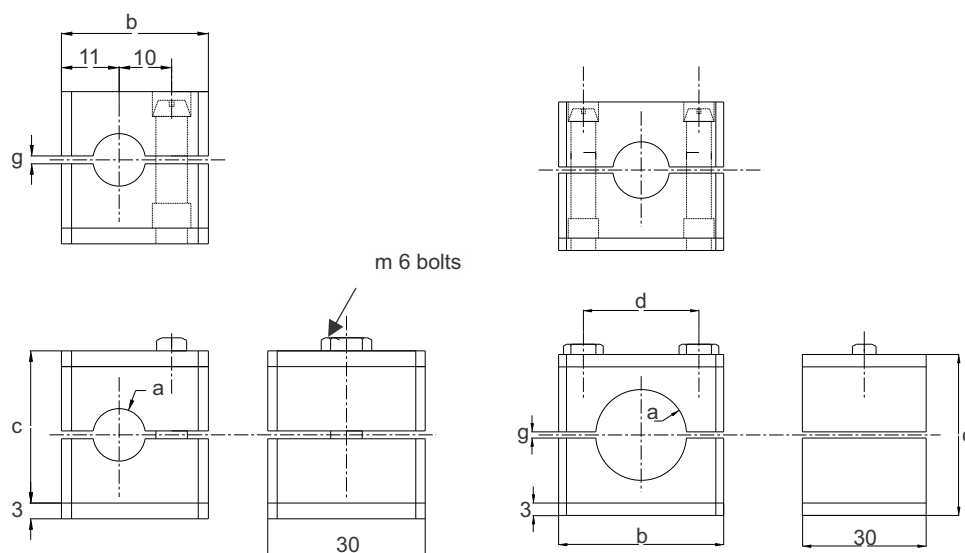


MATERIAL SPECIFICATION

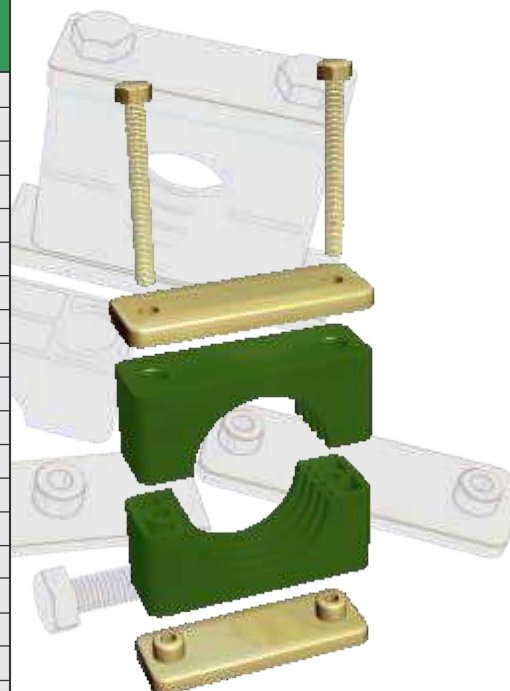
Clamp Body Properties	Polypropylene (PP) Density: 0.906gm/cm ³	Polyamide	Aluminium Density : 2.65gm/cm ³
Tensile yeild stress ASTM D 638	370 Kg/cm	750 Kg/cm	3,300 Kg/cm
Flexural module ASTM D 790	16,000 Kg/cm		Yield 3,100 Kg/cm
Izod impact strength ASTM D 256	7.5 Kg.cm/cm	4.5 Kg.cm/cm	@ 12 % elongation
Hardness	R70	R120	
Melting point	160 C	220 C	
Vicat softening point	150 C	210 C	
Max. temp resistance	-30 C to 90 C	-40 C to 180 C	upto 400 C
Weak acids, solvents Benzene,mineral oils alcohol,other oils, sea water	cond. consistent cond consistent consistent	cond consistent cond consistent cond consistent	

Standard Clamps

CS

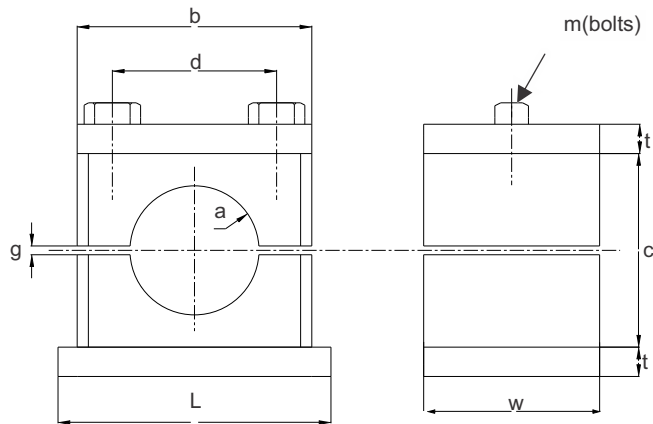


GROUP	PIPE SIZE (a)			b	c	d	g	ASSEMBLY WITH SCREW PART NO.	TOP PLATE AND HEX. BOLT ASSY. PART NO.
	mm OD	INCH OD	INCH NB						
1	6			28	26	-	1	FCS.06	ITA-CS.1.06
	8	1/2						FCS.08	ITA-CS.1.08
	10	3/8	1/8					FCS.10	ITA-CS.1.10
1A	6	1/4		34	26	20	13	FCS.06-1A	ITA-CS.1.06-1A
	8							FCS.08-1A	ITA-CS.1.08-1A
	10	3/8	1/8					FCS.10-1A	ITA-CS.1.10-1A
2	12	1/2		40	33	26	1	FCS.12	ITA-CS.1.12
	14		1/4					FCS.14	ITA-CS.1.14
	15							FCS.15	ITA-CS.1.15
	16	5/8	3/8					FCS.16	ITA-CS.1.16
	18							FCS.18	ITA-CS.1.18
3	19	3/4		43	35	33	1	FCS.19	ITA-CS.1.19
	20							FCS.20	ITA-CS.1.20
	22		1/2					FCS.22	ITA-CS.1.22
4	25	1		57	42	40	2	FCS.25	ITA-CS.1.25
	28		3/4					FCS.28	ITA-CS.1.28
	30							FCS.30	ITA-CS.1.30
5	32	1 1/4		70	60	52	2	FCS.32	ITA-CS.1.32
	35		1					FCS.35	ITA-CS.1.35
	38	1 1/2						FCS.38	ITA-CS.1.38
	42		1 1/4					FCS.42	ITA-CS.1.42
6	48		1 1/2	86	69	66	3	FCS.48	ITA-CS.1.48
	50	2						FCS.50	ITA-CS.1.50

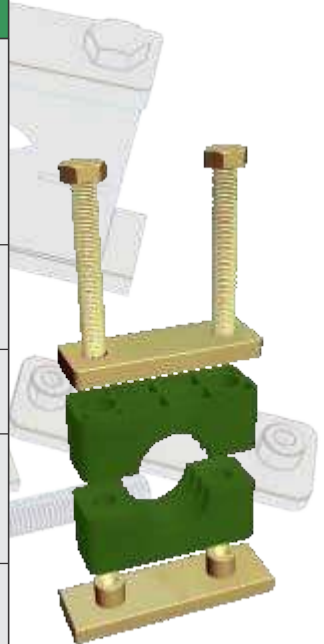


Heavy Clamps

CH

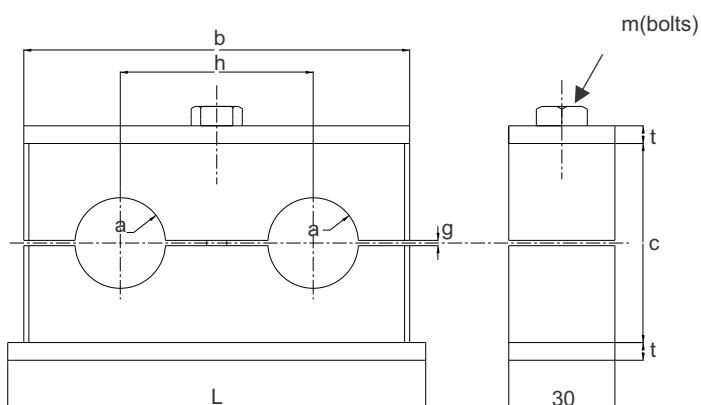


GROUP	PIPE SIZE (a)			b	c	w	L	t	d	m	g	TOP PLATE & HEX, BOLT ASSY. PART NO.	WU/PIEC KG.
	MM OD.	INCH O.D.	MM N.B.										
7	6	1/4		56	32	30	73	8	33	M10	2	FCH.1.06	0.35
	8											FCH 1.08	
	10	3/8	1/2									FCH 1.10	
	12	1/2										FCH 1.12	
	14		1/4									FCH 1.14	
	15											FCH 1.15	
	16	5/8	3/8									FCH 1.16	
8	18			70	48	30	85	8	45	M10	2	FCH 1.18	0.46
	20	3/4										FCH 1.20	
	22	7/8	1/2									FCH 1.22	
	25	1										FCH 1.25	
9	28		3/4	84	60	30	100	8	60	M10	2	FCH 1.28	0.53
	30	1 1/4										FCH 1.30	
	35		1									FCH 1.33	
10	38	1 1/2		115	90	45	140	10	90.5	M12	3	FCH 1.38	1.80
	42		1 1/4									FCH 1.42	
	50	2	1 1/2									FCH 1.48	
	60		2									FCH 1.60	
		2 1/2										FCH 1.63	
11	65			152	120	60	180	10	122	M16	3	FCH 1.65	3.00
	70											FCH 1.70	
			2 1/2									FCH 1.73	
	75	3										FCH 1.75	
		3 1/2	3									FCH 1.89	
12	90			205	170	80	225	15	168	M20	4	FCH 1.90	8.00
	100	4	3 1/2									FCH 1.100	
13		4 1/2	4	250	200	90	270	15	205	M24	4	FCH 1.114	11.00
		5 1/2	5									FCH 1.141	
	150	6										FCH 1.150	
	168	6 1/2	6									FCH 1.168	
14	493		8	330	270	125	340	25	265	M30	4	FCH.1.219	24.00

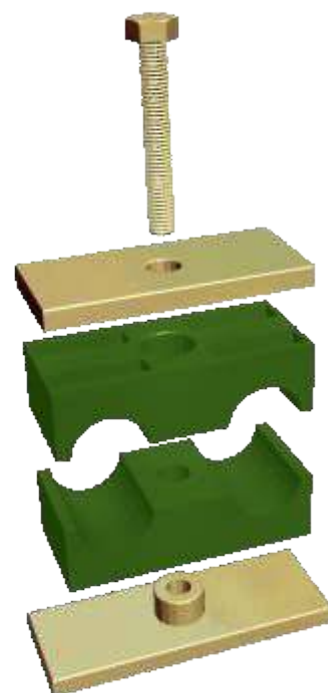


Twin Clamps

CT

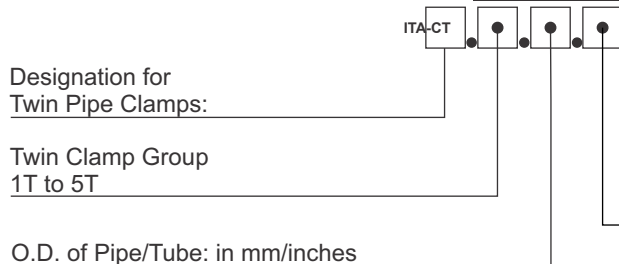


Group	Pipe size a	b	c	g	L	t	m	Part No.
1T	6 to 12 mm 1/4" to 1/2"	36	27	0.6	37	3	M6	ITA-CT.IT.xxx
2T	12.7 to 18mm 1/2" to 5/8"	53	27	0.7	55	5	M8	ITA-CT.2T.xxx
3T	19 to 25.4 mm 3/4" to 1"	67	37	0.7	70	5	M8	ITA-CT.3T.xxx
4T	26.9 to 30 mm 1 1/16" to 1 3/16"	80	40	0.7	85	5	M8	ITA-CT.4T.xxx
5T	32 to 42 mm 1 1/4" to 1 5/8"	106	53	0.7	110	5	M8	ITA-CT.5T.xxx



(A) For Twin Clamps

HOW TO ORDER TWIN CLAMPS



Material
Polypropylene:
Polyamide UL:
Aluminium Al Si 12:

NO SYMBOL
PA
ALU