



Filtration Solutions for Gold Mining

Manufacturing high quality filtration systems for the past 30 years , YAMIT'S filters are installed and operating in hundred of locations worldwide in the most challenging environments.

Understanding the market needs, the specific design and construction materials used, enables Yamit to offer its solutions to the mining sector. These solutions ensure continuous and clogging free flow through the irrigation emitters in the leaching process.

YAMIT offers specialized solutions for both copper and gold mining, using different technologies for each case.

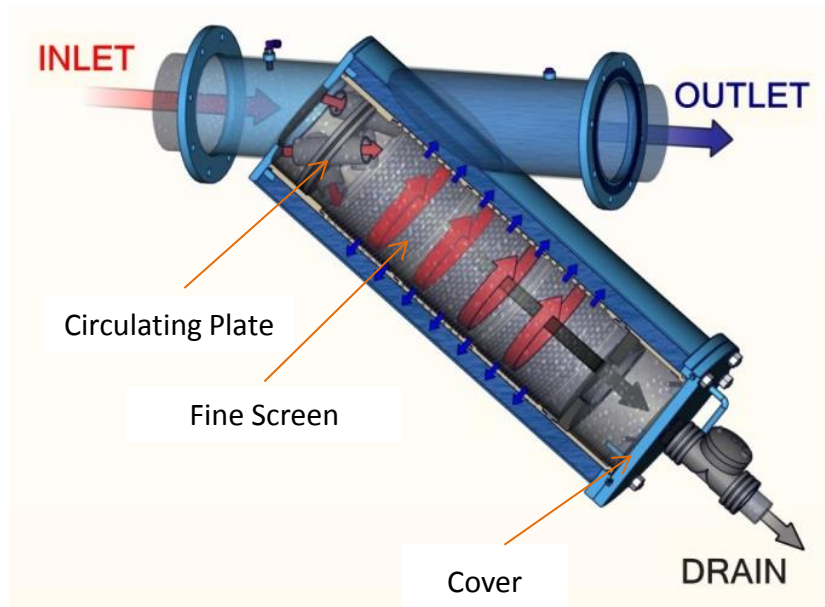
Coal Separation

During the gold extraction process, activated carbon particles are returned to the irrigation system.

Our goal is to retain these particles for better leaching process performance.

The Solution

* Circulating filters with automatic self cleaning - Series F400GLA



The water enters the filter through a plate with four or six (4 ó 6) angular holes, directing the water in a circular pattern along the length of the screen. The water flows through the screen, while the activated carbon particles are retained in the lower section of the filter. These particles can be easily removed by opening the drain valve.

CYANIDE SOLUTION – Typical Characteristics

DESCRIPTION	SOLUTION
Carbonates Max.	2000 ppm
Chlorides	100 ppm
Calcium Max.	4000 ppm
Cyanide	700 ppm
Density	1.05 ton / m3
Viscosity	1.24 x 10 ⁻⁶ m2/s
pH	10.5-11.5
Temperature	2-14 °C

F400GLA

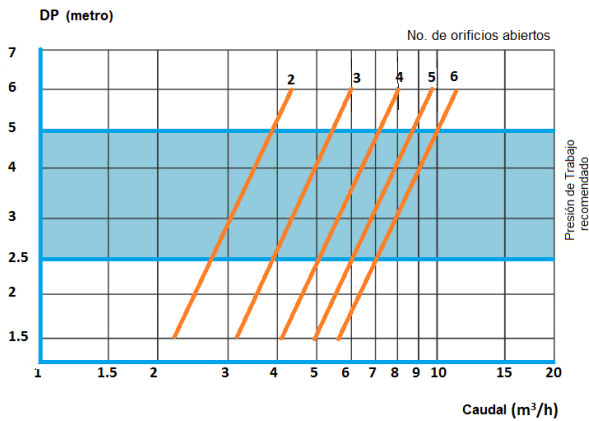
ENGINEERING DATA	
Filtering element	Stainless Steel 316L PVC supporting base
Filtration degree	From 80 - 200 microns
Body	Carbon steel ST37.2
Welding	Double welding with high penetration
Pre-treatment	Sand blasting up to Sa 2.5
Interior and exterior coating	Two layered polyester-epoxy powder coating with a thickness of 150-200 microns.
Available connections	VIC, Threaded, Flange (female)
Joints	NBR
Drain valve	Configuration Globe, GRP (reinforced plastic with glass)
Controller	Filtrón 1-10 with industrial pressostat
Solenoid	GALSOL DC Latch

DESIGN DATA

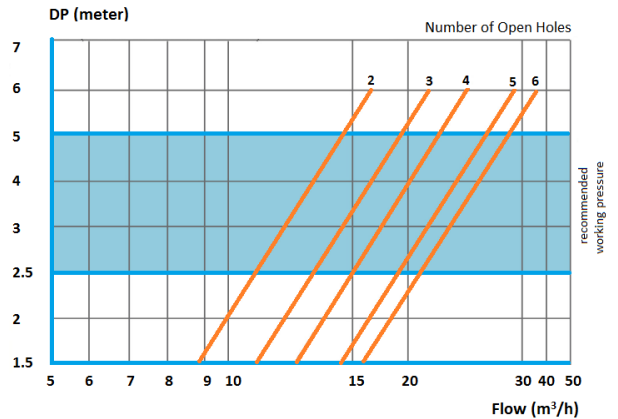
Model	D Inlet/Outlet (mm) (in)		Maximum Flow Rate (m ³ /h) (GPM)	
	F415	1.5	30	3-10
F420	2	50	11-28	48-123
F430	3	75	12-39	53-172
F440	4	100	18-70	80-308
F460	6	150	31-210	136-925
F480	8	200	163-299	720-1320
F410	10	250	270-500	1189-2202

* Maximum recommended flow rate - 120 micron in good quality water

Model 415 – Pressure loss at 120 micron

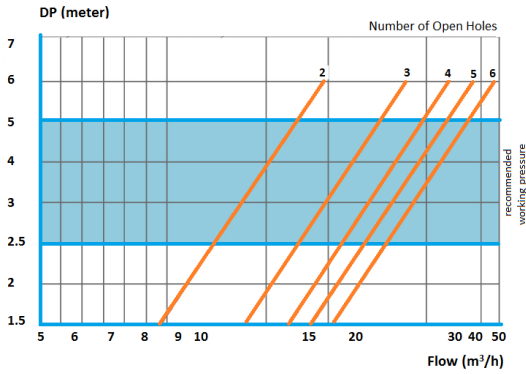


Model 420 – Pressure loss at 120 micron

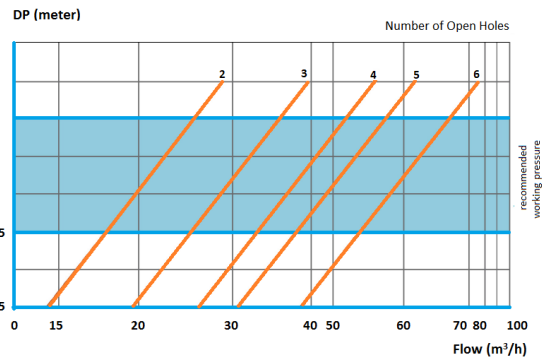


DESIGN DATA

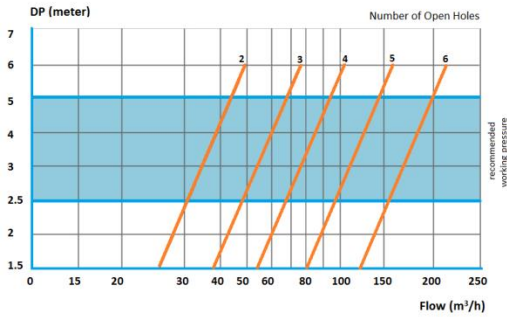
Model 430 – Pressure loss at 120 micron



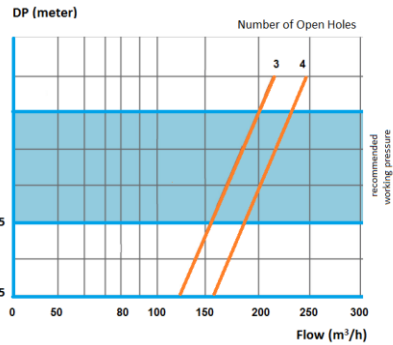
Model 440 – Pressure loss at 120 micron



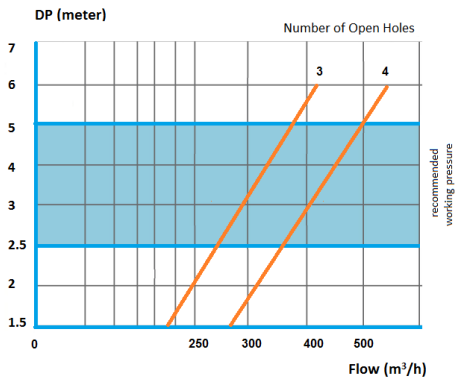
Model 460 – Pressure loss at 120 micron



Model 480 – Pressure loss at 120 micron

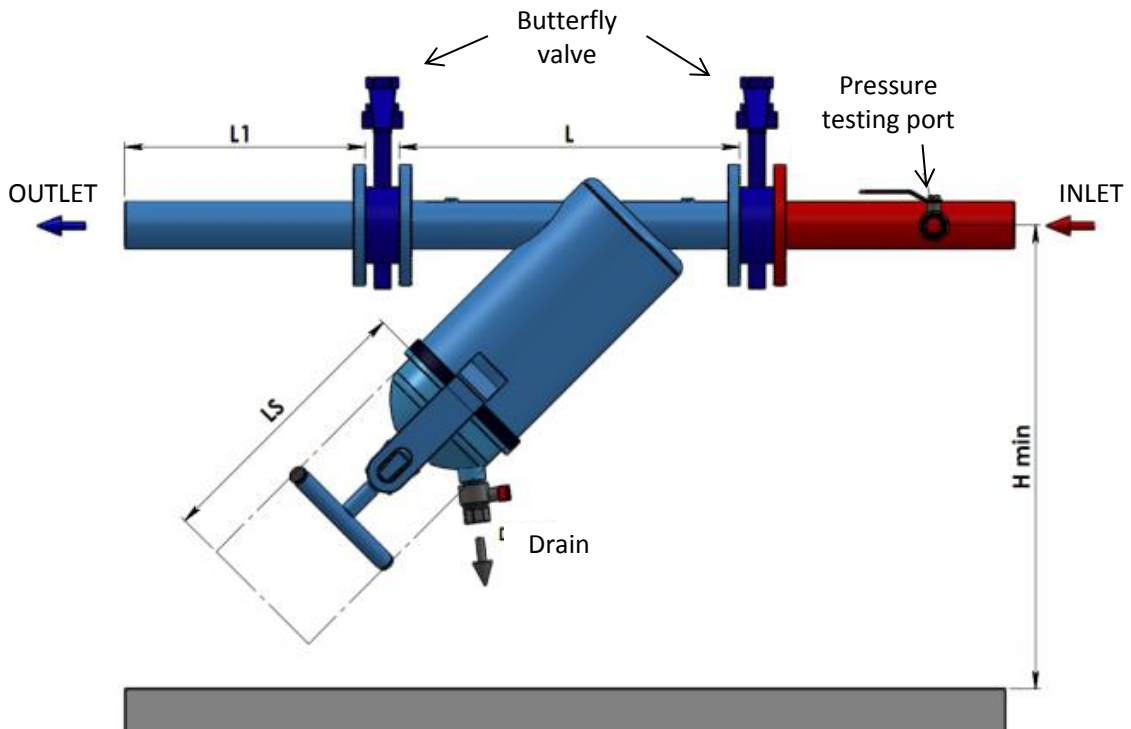


Model 410 – Pressure loss at 120 micron



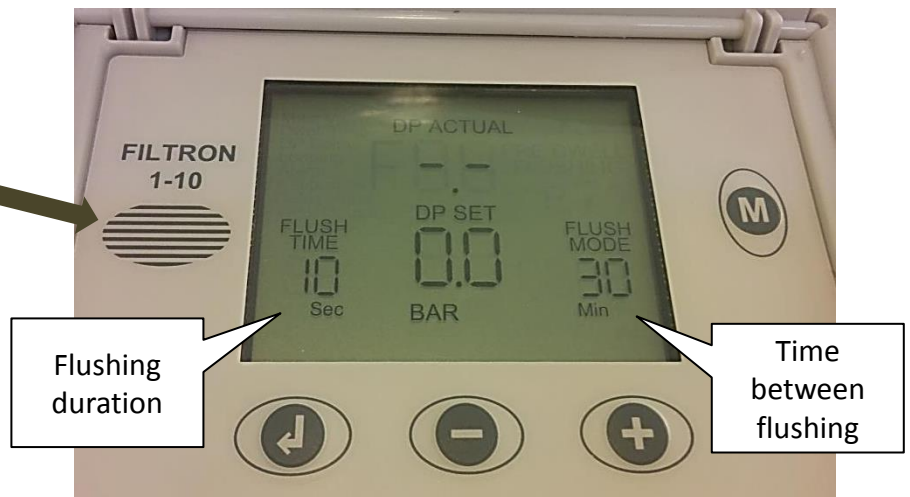
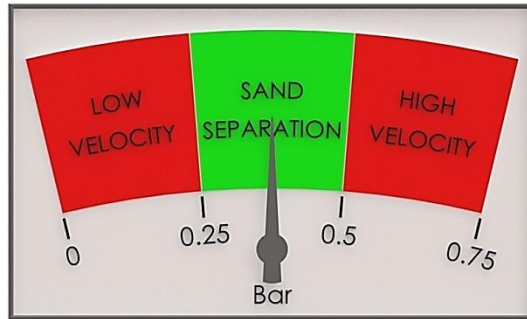
INSTALLATION:

- The filter body and the drain valve should face the ground.
- Install the filter in the correct direction according to the arrows.
- Install an air valve in front of the filter (optional)
- Install butterfly valves for easy maintenance (optional).
- In case of backflow (when the pump is stopped or the field altitude is higher than that of the filter), install a non-return valve or anticipatory wave valve.
- If more than one filter is installed, leave enough space between the units for ease of maintenance and use only a controller for the battery backwash.
- If the pressure rises above 8 bar, install a quick relief valve in front of the filter.

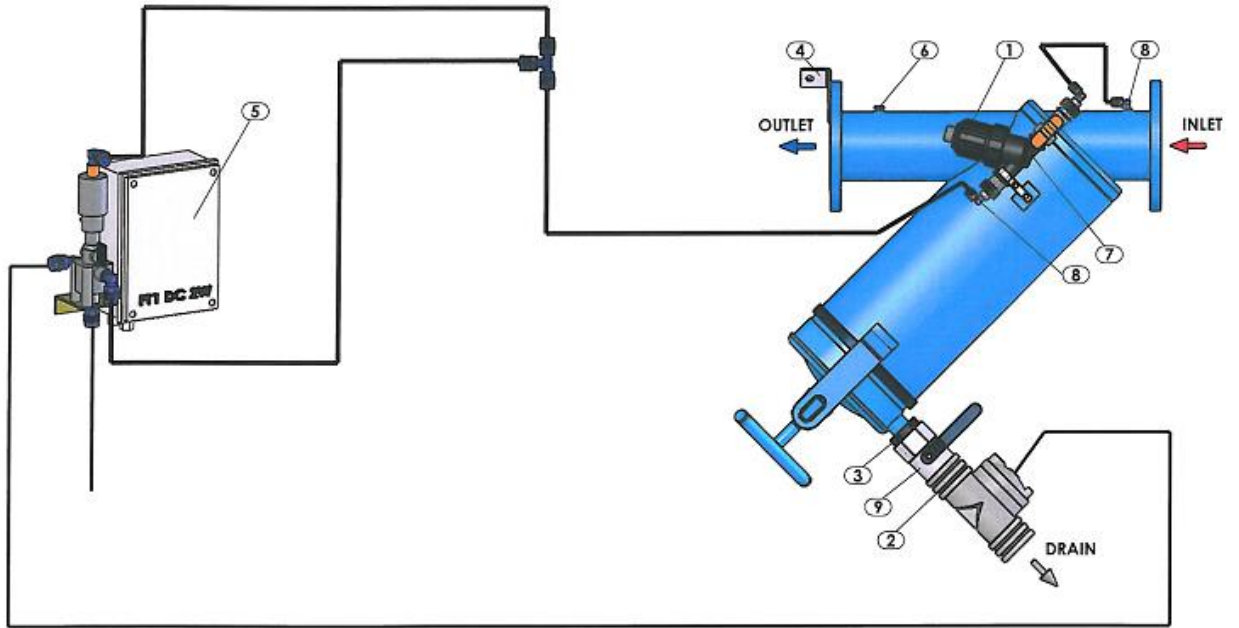


OPERATION:

- Optimal operation is when pressure difference between inlet and outlet is 2.5 to 5m
- Measure the filter pressure difference, during irrigation, using the pressure gauge
- If the pressure difference is not within the pressure range **limits**, add or remove plugs
- Adjust the flush controller according to the recommendations.
 - Backwash duration: 10 - 25 sec.
 - Time between flushing: 30-120 minutes
 - When the amount of solids is high, reduce the time between flushings.
 - Verify that the controller is running using manual activation



CONTROL CIRCUIT:



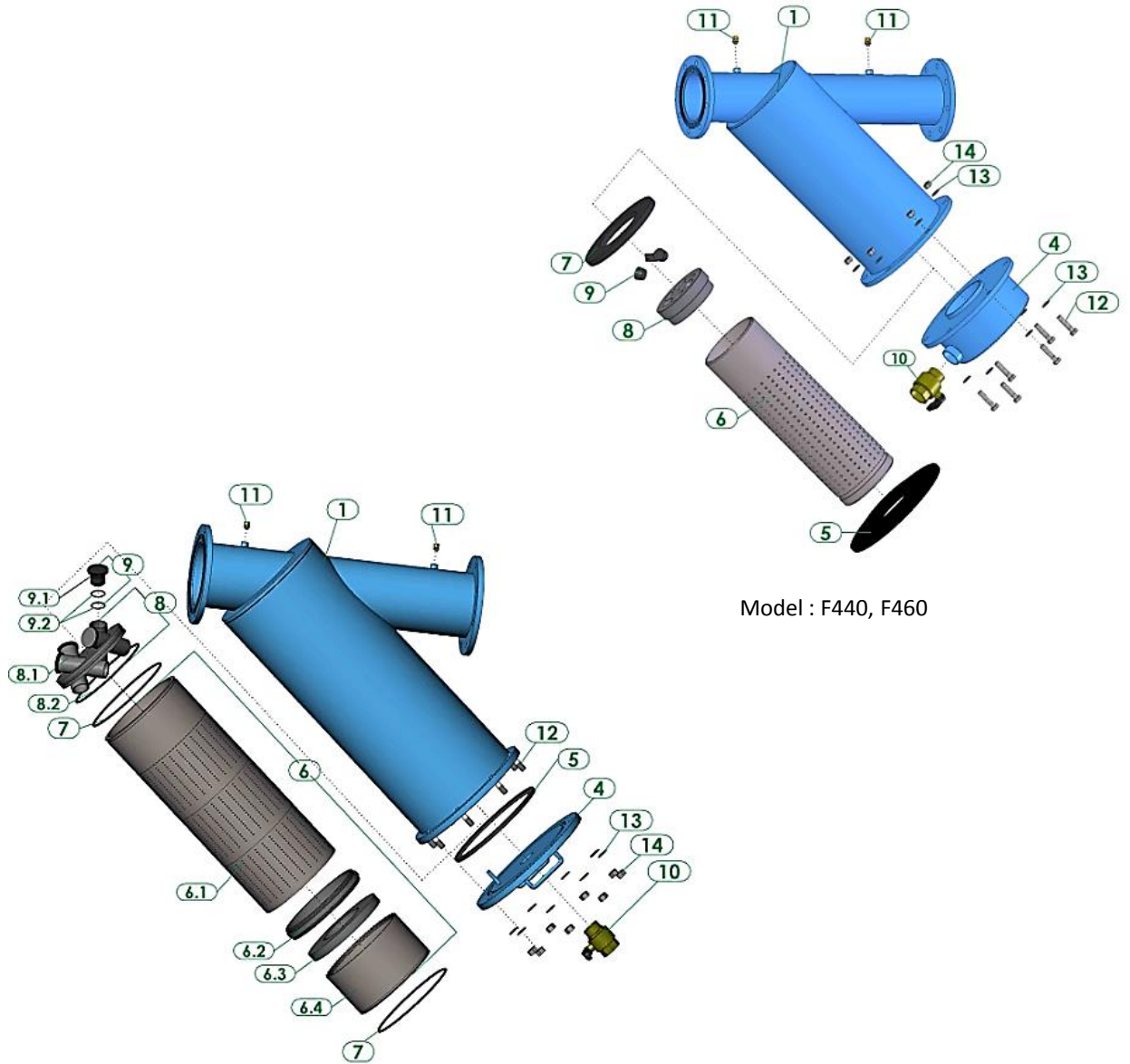
IPB & SPARE PARTS

Description		Filter Model		
		F415 (1.5")	F420 (2")	F430 (3")
FILTER				
1	Filter body	N/A	N/A	N/A
2	Tightening handle	E6020106000	E6020106000	E6020106000
3	Tightening bracket	6012006000-P	6012006000-P	6012006000-P
4	Cover	W5234202001-01P	W5234202001-01P	W5234202001-01P
5	Cover gasket	5312140600-180	5312140600-180	5312140600-180
6	Fine screen	W5002600402-01##	W5003600404-01##	W5003600405-01##
7	Screen gasket	5312140600-290	5312140600-190	5312140600-190
8	Circulating plate	5024610200	5024610300	5024610300
9	Rubber plug for circulating plate	5312010600-220	5312021600-230	5312021600-230
10	Ball valve	4504007100-01	4504007100-01	4504007100-01
11	Pressure testing port	E5412023901-01	E5412023901-01	E5412023901-01



Model: F415, F420, F430

IPB



Model : F440, F460

Model: F480

SPARE PARTS

Description		Filter Model		
		F440 (4")	F460 (6")	F480 (8")
FILTER				
2	Tightening handle	E6020106000	---	---
3	Tightening bracket	6012108000-P	---	---
4	Cover	W5320010800-01P	W5331011200-01P	W5331011603-01P
5	Cover gasket	5312160600-170	5312225600-433	5311450100
6	Fine screen	W5004600403-01##	W5005600402-01##	E7007603000-01##-01
6.1	Fine screen PVC	---	---	E5007600300-01##-01
6.2	Flushing chamber adaptor	---	---	5007601001
6.3	Flushing chamber plate	---	---	5023610700
6.4	Flushing chamber	---	---	E5007601100-01
7	Screen gasket	5312160600-160	5312225600-434	4081291100-452
8	Circulating plate	5024610400	5024610500	E5024610700-01
8.1	Circulating plate PVC	---	---	W5024610700-01
8.2	O-Ring	---	---	4081266100-450
9	Rubber plug for circulating plate	5312023600-240	5312000600-430	E6076204900-01
9.1	Plug for circulating plate	---	---	6076204900
9.2	O-Ring	---	---	4081040100-223
10	Ball valve	4504007100-01	4504020100-01	4504020100-01
11	Pressure testing port	E5412023901-01	E5412023901-01	E5412023901-01
12	Bolt	---	4102160301-070	5292183007-073
13	Washer	---	4122160301	4122180402
14	Nut	---	4112160301	4112180301

REFERENCES:

Project Name	
Name of the mine	
Country	
Flow rate	
Pressure	



YAMIT
FILTRATION

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