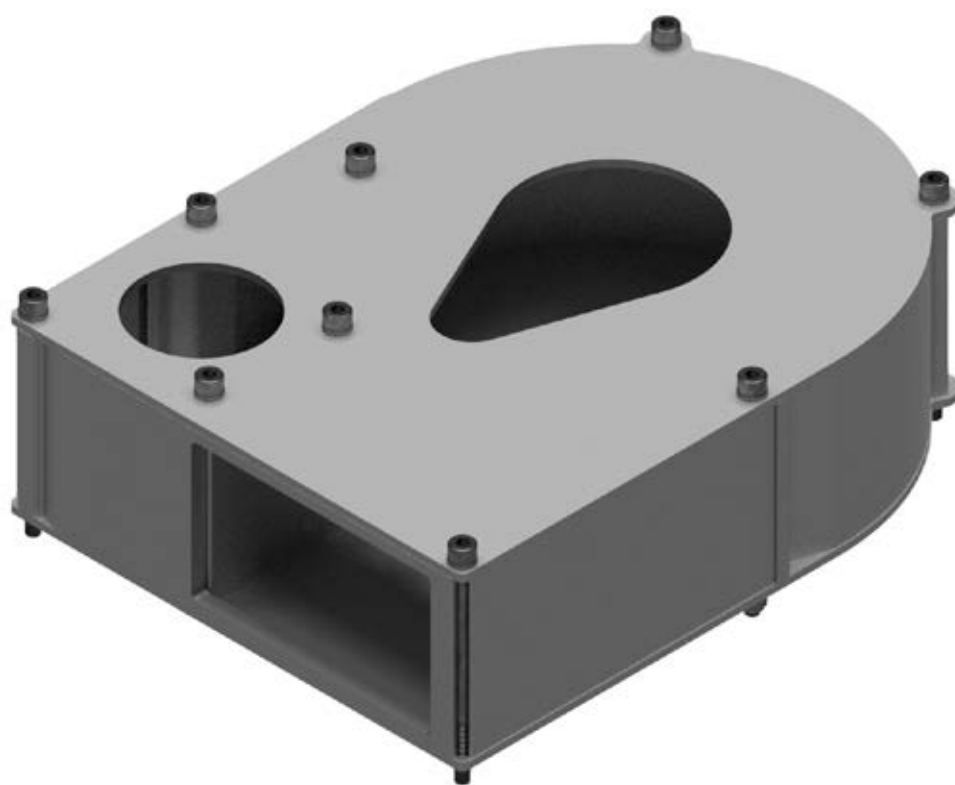


CycloneConcept

**pmc**hydraulics



The C350 and C650 Cyclone meet your need  
for compact hydraulic tanks

## The PMC Hydraulics C350 and C650 Cyclone meet your need for compact hydraulic tanks

A traditional hydraulic system has a large tank volume, allowing oil to pass through at a low speed and air to be vented. The PMC cyclone is based on a new technology which forces oil venting, making it possible to use a smaller tank.

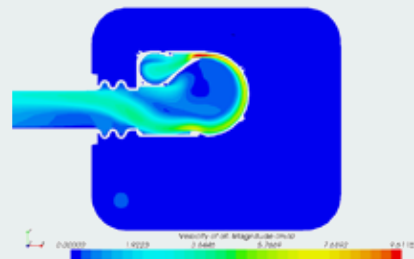
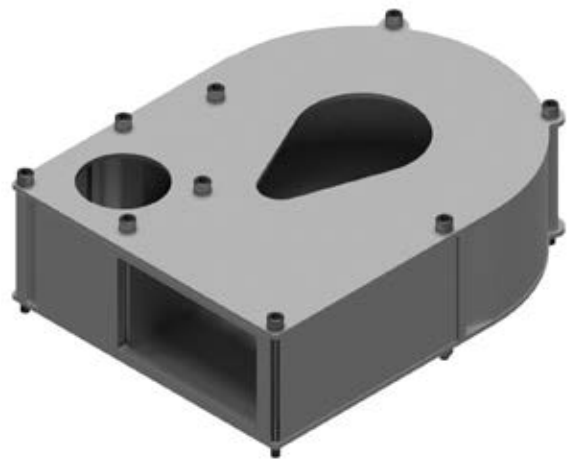
Usually **the tank volume and weight reduction lies between 67 % and 90 %**, depending on cylinder features and differential volumes. The top of the PMC cyclone only needs to be covered with oil at low oil level operations. The C350 and C650 Cyclones are patented products which can be configured with different inlet and outlet adapters. In most cases a return line filter is mounted on top of the inlet inside the tank.

### Active air separation

The **active air separation** works regardless of the return flow. This is made possible by the 0,5 bar cyclone spring that opens due to pressure created by the return flow. This in turn leads to a high velocity inside the cyclone, creating strong internal radial forces which separate air from oil, moving air to the center of the cyclone.

The cyclones are able to create a positive overpressure in suction ports up to 0,15 bar. They can also accelerate oil from the tank if the return flow is smaller than the pump flow.

The C350 Cyclone is designed for a flow up to 350 liters per minute and the C650 Cyclone is designed for a flow up to 650 liters per minute.



This image shows a cyclone in the middle of a hydraulic tank, seen from above. The flow enters through the cyclone inlet in the upper left corner. The oil flows at a speed of >10 m/s as the return pressure forces the 0,5 bar cyclone spring to open. The flow then enters the cyclone (here colored red) with a high speed. In the tank outlet (pictured left) the speed is still high.

A fluid simulation analysis shows that after only one passage, 9 % free air is reduced to less than 1,5 %.

UP TO

**90%**

**WEIGHT REDUCTION**

**The patented CycloneConcept for hydraulic units saves space, energy and the environment.**

# C350

<b>MAX. FLOW</b>	350 l/min open spring	<b>SPRING PRESSURE</b>	0,5 bar
<b>MAX. DIFF FLOW</b>	100 l/min with tear drop air hole	<b>PRESSURE DROP</b>	0,5 bar up to 350 l/min
<b>MAX. DIFF FLOW</b>	60 l/min with 50 mm air hole	<b>LENGTH</b>	247 mm
<b>OUTLET</b>	Rectangular or circular	<b>WIDTH</b>	187 mm
<b>INLET</b>	48 mm port	<b>HEIGHT</b>	77 mm
<b>MAX. PRESSURE</b>	2 bar	<b>MATERIAL</b>	Aluminum



**C350 TRL**  
1205266 Cyclone with tear drop air hole and rectangular outlet, left inlet



**C350 TRR**  
1205267 Cyclone with tear drop air hole and rectangular outlet, right inlet



**1177186** Rectangular outlet bellow



**C350 CCL**  
1205268 Cyclone with circular air hole and circular outlet, left inlet



**C350 CCR**  
1205269 Cyclone with circular air hole and circular outlet, right inlet



**1177186** Round outlet bellow



**1205270** Rectangular outlet seal

## C650

<b>MAX. FLOW</b>	650 l/min open spring	<b>SPRING PRESSURE</b>	0,5 bar
<b>MAX. DIFF FLOW</b>	100 l/min with tear drop air hole	<b>PRESSURE DROP</b>	0,5 bar up to 650 l/min
<b>MAX. DIFF FLOW</b>	60 l/min with 50 mm air hole	<b>LENGTH</b>	247 mm
<b>OUTLET</b>	Rectangular or circular	<b>WIDTH</b>	187 mm
<b>INLET</b>	48 mm port	<b>HEIGHT</b>	127 mm
<b>MAX. PRESSURE</b>	2 bar	<b>MATERIAL</b>	Aluminum



**C650 TCL**  
1205271 Cyclone with tear drop air hole and circular outlet, left inlet



**C650 TCR**  
1205272 Cyclone with tear drop air hole and circular outlet, right inlet



**1205273** Round outlet bellow



**C650 CCL**  
1205274 Cyclone with circular air hole and circular outlet, left inlet

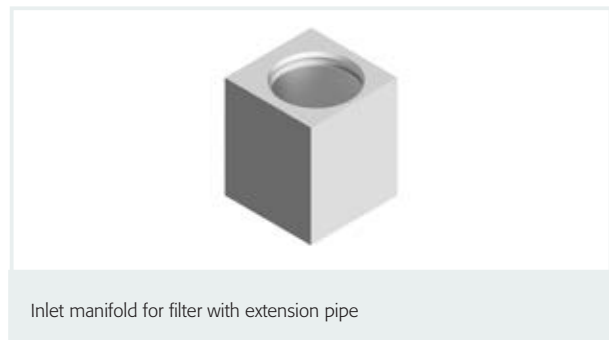
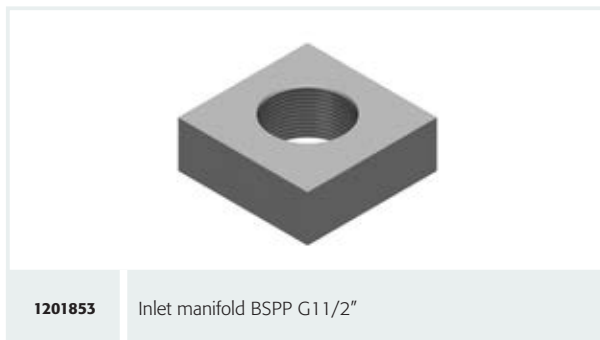


**C650 CCR**  
1205275 Cyclone with circular air hole and circular outlet, right inlet



**1205276** Round outlet seal

## Accessories for C350 and C650



<b>1205278</b>	MP Filtri MPFX 182
<b>1205279</b>	MP Filtri MPFX 450
<b>1205280</b>	MP Filtri MPT

CYCLONE CX50 XXX

<b>1. SIZE</b> C350 C650	<b>2. AIR HOLE TYPE</b> T = TEAR C = CIRCULAR	<b>3. OUTLET TYPE</b> R = Retangular C = Circular	<b>4. INLET HANDEDNESS</b> R = Right inlet L = Left Inlet
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**Example:** Cyclone C350 TRL → Cyclone for 350LPM with tear drop air hole, retangular outlet and left inlet

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