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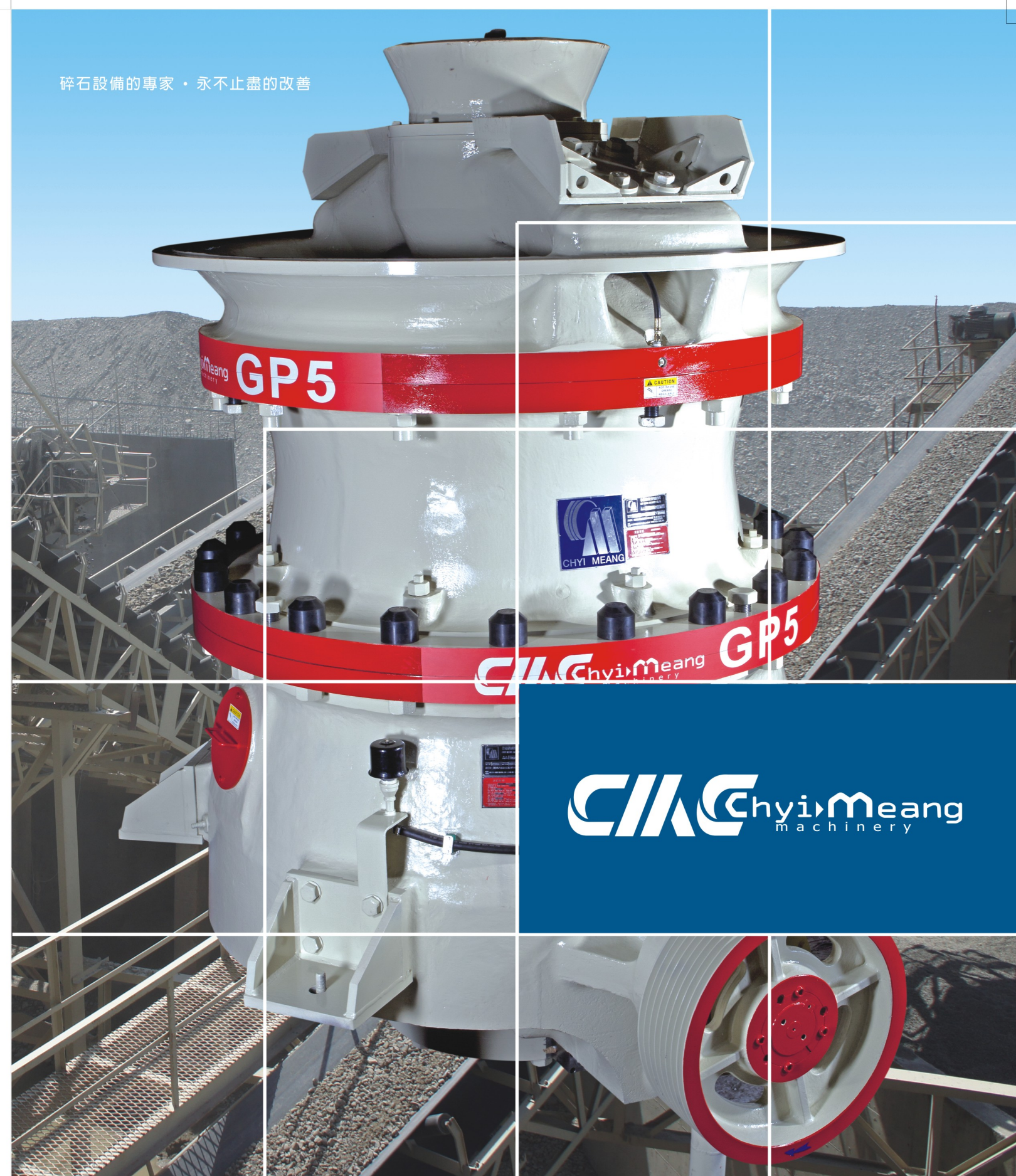
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碎石設備的專家 · 永不止盡的改善



CMC GP-5 CONE CRUSHER

Specialist in Stone Crusher Never Ending Improvement

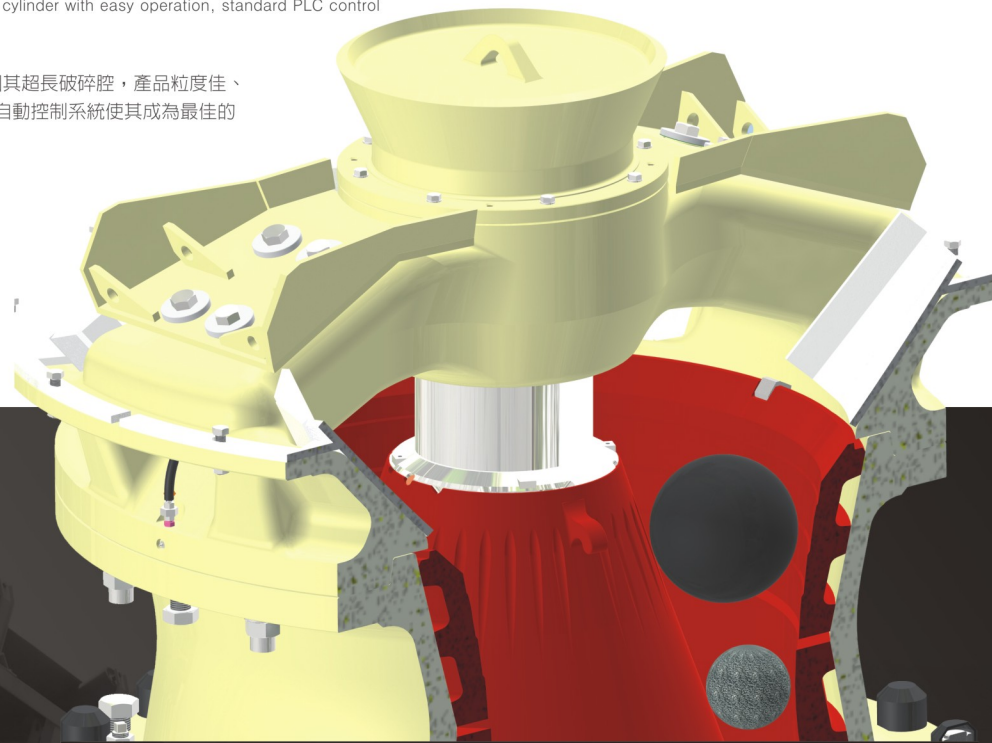
啓銘GP-5圓錐破碎機

GP-5 series cone crusher is excellent machine for secondary crushing

GP-5系列圓錐式破碎機是最佳的二次破碎機器

It has advantages of extra large feed opening, large crushing ratio, multiple stroke option, extra long crushing cavity to have cubic shape product, single cylinder with easy operation, standard PLC control system.

具有入口超大、破碎比大，多種沖程選擇，更因其超長破碎腔，產品粒度佳、單缸液壓操作方式，十分簡易，配備標準化PLC自動控制系統使其成為最佳的二次破碎機器。



CMC GP500S- Large feed opening

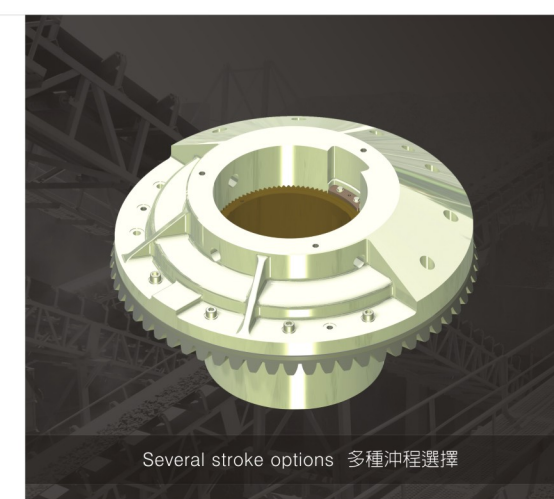
CMC GP500S- 給料口更大

The GP concept allows big feed openings with a fairly small cone diameter. This is especially important in secondary applications as it means you can open your primary jaw crusher wider, potentially increasing the capacity of your plant. GP crushers in the secondary line can also be used in gravel pits as primary crushers.

The steep head angle in secondary GP cone crushers guarantees trouble-free operation in varying feed conditions with a high reduction ratio.

GP破碎機的結構使小規格的圓錐破碎機具有較大進料口，這種特點對中碎作業尤其重要，即可將粗碎顎式破碎機的排料口調整至更大，從而提高破碎系統的處理能力。GP中圓錐破碎機在河卵石破碎作業中可直接作為粗級破碎機。

二級GP圓錐破碎機中較大的頭部角度可確保在有著高減速率的多種給料條件中無故障運行。



Several stroke options 多種沖程選擇

Several stroke options 多種沖程選擇

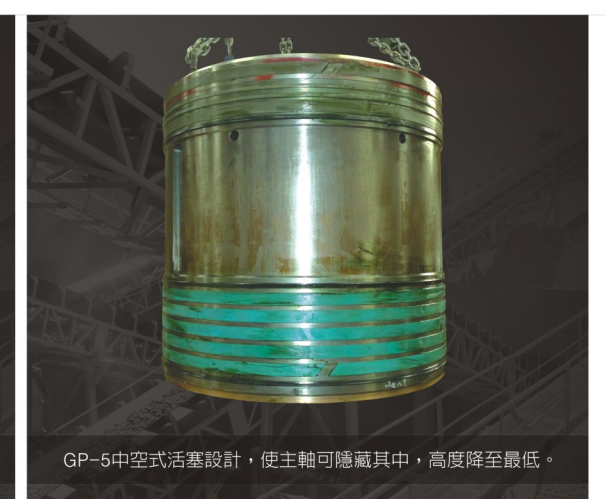
The stroke change feature allows crusher through-put to be easily adjusted to work in harmony with the rest of the crushing plant. The adjustable stroke also allows you to attain proper choke feed conditions and optimum crusher settings, ensuring the maximum yield of a required end product size.

通過沖程更換功能可以輕鬆地對破碎機物料通過量進行調整，以便與其他破碎設備的運轉相協調。可調節的沖程還可以讓您獲得正確的阻塞給料條件和最佳的破碎機設置，確保所需的最終產品產量最大化。

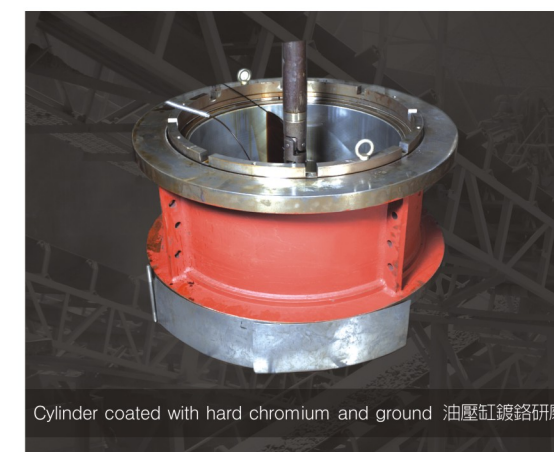
Low installation height 安裝高度低

The hollow piston design enable main shaft enters into piston and minimizes crusher height. No backing material needed for liner fixing GP-5 cone crushers do not require the use of backing material for liner fixing. This makes liner changes quick, easy, and cost effective.

GP-5中空式活塞設計，使主軸可隱藏其中，高度降至最低。這樣就縮減了安裝成本，所需的支撐結構較小、輸送器較短，從而使GP圓錐破碎機成為移動式應用的最佳解決方案。



GP-5中空式活塞設計，使主軸可隱藏其中，高度降至最低。

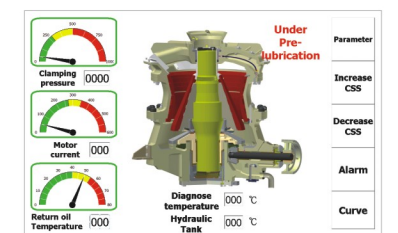


Cylinder coated with hard chromium and ground 油壓缸鍍鉻研磨

PLC automation system 配備PLC自動控制系統

The PLC automation system maximizes production, ensures trouble-free operation, and simplifies initial installation. The PLC controls all cone crusher related functions: crusher setting, load, feed capacity, lubrication oil heating and cooling, etc.

PLC自動控制系統可以使產量最大化，確保無故障運行，並簡化了初始安裝。PLC自動控制系統控制著所有圓錐破碎機相關的功能：破碎機的設置、負荷、給料能力、潤滑油、潤滑油的加熱和冷卻等。



Cylinder coated with hard chromium and ground 油壓缸鍍鉻研磨

In order to overcome Cylinder oil leakage durability issue, GP-5 cone crusher cylinder wall coated with hard chromium and then ground, therefore oil sealness is excellent and no wear on the wall.

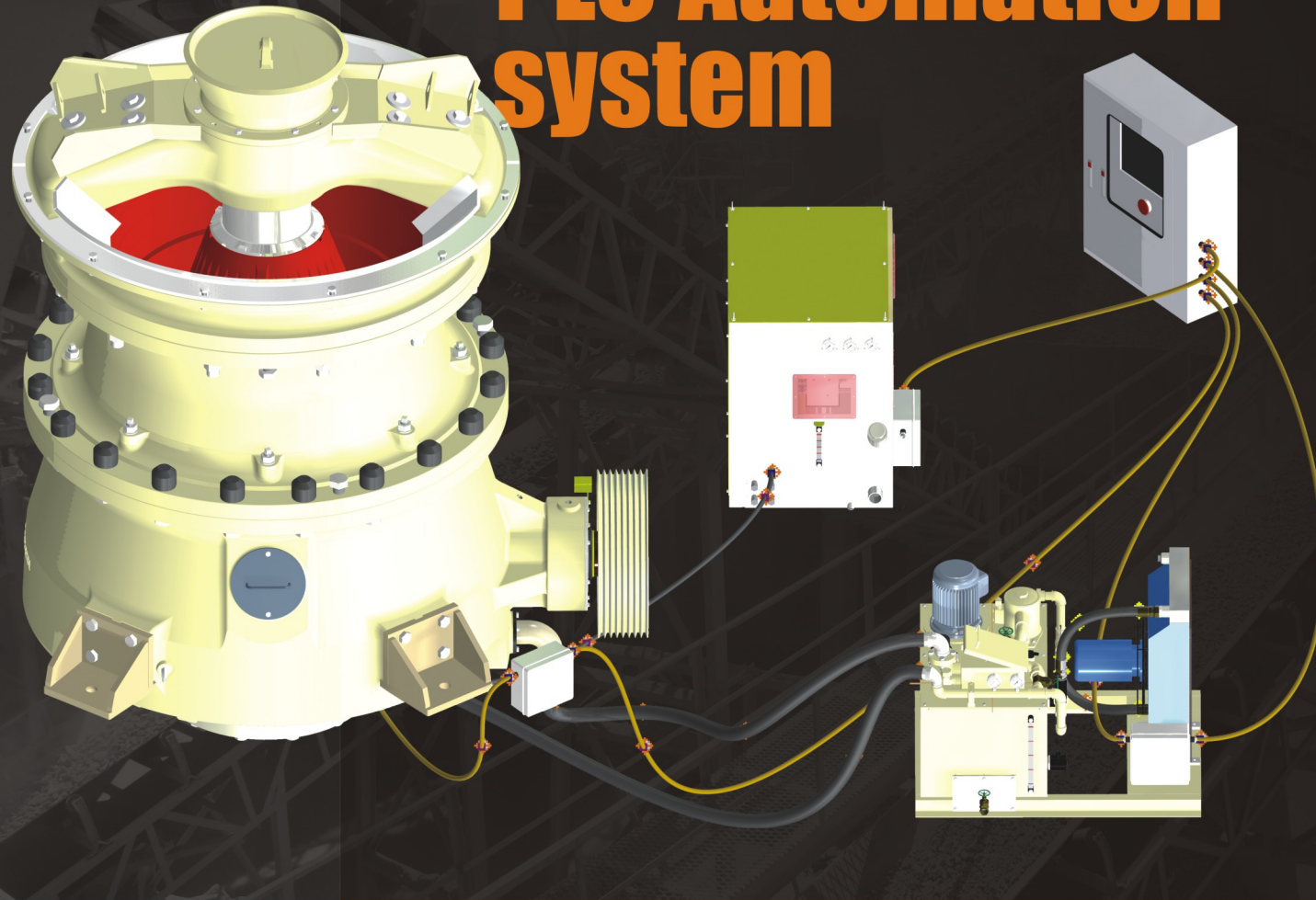
為克服單缸油壓缸漏油耐久性问题，GP-5錐碎機油壓缸經鍍鉻研磨，其耐久性特佳不會磨損。

Trelleborg Aero class oil seal 特瑞堡航空級油封

Considering the long trouble timing for repairing oil leakage of cylinder, CMC adopt world famous Trelleborg oil seal component into cylinder despite of high cost to ensure durability.

考慮油壓缸拆卸修理耗費時間，啓啓不惜重金採用馳名世界特瑞堡航太級油封元件使用於油壓缸，確保其耐久性。

All Aspect PLC Automation system



全方位 PLC 自動化系統

In order to keep the product size in specification, regular adjustment of discharge setting according to the wear condition of mantle and concave is required. However, in conventional way of manual adjustment, not only labor and timing cost, but also trouble occurs frequently due to improperly adjustment. Therefore, CMC developed PLC automation system to adjust the discharge setting in optimum condition automatically. By acknowledging of the importance of automation in crushing art nowadays, CMC develop the new generation control system, i.e. an all aspect automatic control system with function of adjustment, monitor and protection. With the finger touch monitor, all the monitored parameters and trouble-shooting information are simply shown on the monitor. Also through PLC system, all the setting and reading are digital, so easily to be adjusted and understood.

在破碎過程中，凹凸錐板會逐漸磨耗，為了保持產品粒度大小，必須定期調整破碎間隙。然而，傳統人工調整破碎間隙的方法不僅耗費時間、人力，且常因不正常的人為調整導致機械損壞。有鑑於此，本公司開發了PLC自動控制系統來自動調整破碎間隙，使其隨時保持最佳間隙，有感於自動化在破碎工藝的發展中發揮著日益重要的作用，CMC又開發了更新一代的PLC自動控制系統，即涵蓋調整、監控和保護功能的全方位PLC控制系統。由於本系統配備觸控式螢幕，所有被監控的參數及故障，警告信息均顯示於螢幕上。此外，由於PLC系統的關係，所有設定及顯示值均以數字表示，十分容易了解亦容易設定。

Features:

- Automatically adjusted discharge setting, so no need to stop machine to perform the complicated adjustment. Thus saving manpower and timing.
- Maximize capacity and optimize product shape sue to discharge setting is kept in optimum condition any time by automatically control system.
- Avoid trouble caused by improper manual adjustment of discharge setting. Multiple automatic safety function to stop machine automatically in case of abnormal cases happen, such as overload, high return oil temperature, insufficient lubrication oil etc.
- Clear display the cause of trouble on monitor in case of trouble occurred to save trouble shooting timing.
- Up to 24 hrs historical records are traceable.
- Material level control function. (Option.)

特性：

- 自動調整破碎間隙，故無須停機實施繁瑣調整，可節省人力及時間。
- 由於破碎間隙隨時保持最理想狀況，故可達到產能最大化且產品粒度最佳化。
- 避免因不當的人工調整間隙所造成機器損壞。
- 多重保護裝置，使得在不正常的狀況下，可自動停機以保護機器主體。
- 當故障或警告發生時，觸控螢幕上會顯示故障或警告原因。
- 自動打黃油監控。
- 開機後4小時內的歷史數據可被回溯。
- 可提供料位控制功能。〈選項〉

Technical Information 技術參數

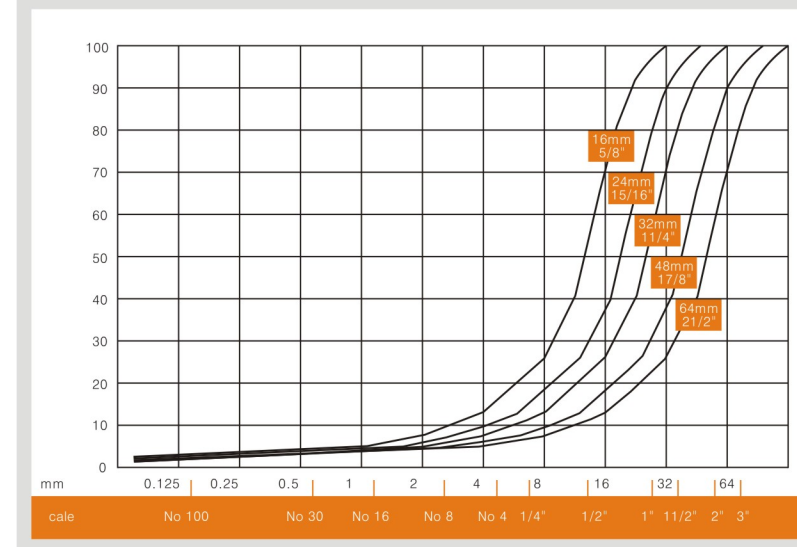
Indicative Crusher Capacities 破碎機生產能力

GP200S	Capacity(metric t/h) 產量							
	Setting(c.s.s.) 排料口	20 mm	25 mm	30 mm	40 mm	40 mm	45 mm	50mm
	Stroke 冲程	18 mm		105-133	133-162	152-181	171-200	190-219
	25 mm			162-209	181-228	200-247	219-266	
	32 mm				219-266	257-304	266-333	

GP300S	Capacity(metric t/h) 產量							
	Setting(c.s.s.) 排料口	20 mm	25 mm	30 mm	35 mm	40 mm	45 mm	50mm
	Stroke 冲程	18 mm		162-181	162-200	181-219	200-242	223-261
	25 mm			209-257	242-299	276-328	304-333	314-333
	32 mm				342-380	361-399	380-418	
	40 mm					428-475	456-504	

GP500S	Capacity(metric t/h) 產量							
	Setting(c.s.s.) 排料口	45 mm	50 mm	55 mm	60 mm	65 mm	70 mm	75mm
	Stroke 冲程	18 mm	285-333	309-356	356-404	380-428	404-451	428-475
	25 mm		475-523	523-570	570-618	618-665	665-713	713-760
	32 mm		618-665	665-713	713-760	784-831	855-903	
	40 mm				855-903	926-998		

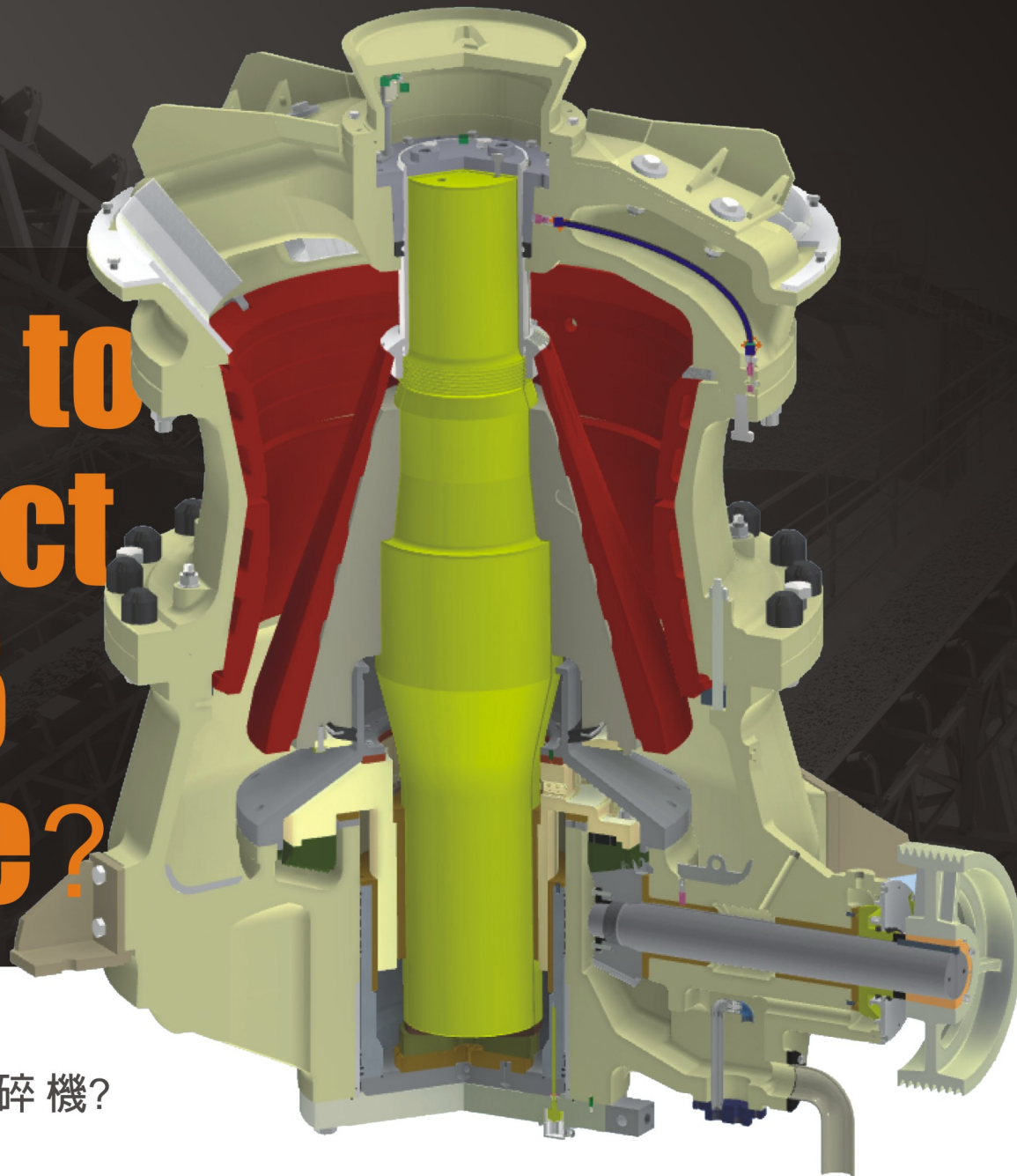
Indicative Gradation Curves 粒度特性曲線



Nominal Feed Opening 給料口尺寸

Model 腔型	GP200S	GP300S	GP500S
M			
C	250mm 10"	280mm 11"	380mm 15"
EC	330mm 13"	380mm 15"	500mm 20"

Why to select GP-5 cone?



為什麼選擇 GP-5圓錐破碎機?

The best secondary crusher 最佳的二次破碎機

Two section concave design with extra large feed opening and extra long cavity design. One crusher has simultaneously both secondary and tertiary advantage. Therefore, GP-5 has advantage of feedsize large, product size even and high under size product ratio. It is excellent combination by using GP-5 as secondary and PA high performance cone crusher as tertiary.

兩塊固定牙板的設計，擁有極大化的開口，超長破碎腔設計，一台機器同時具備二次破碎及三次破碎的優點，故入料尺寸大，出料均勻成比率高，搭配細碎高性能錐碎機 (PA) 乃極佳組合。

Can be operated with on/off feed 可以在斷續入料下操作

The spinning of the crusher head has been minimized, enabling GP-5 to run with an empty cavity. GP-5 cone crushers are an excellent choice for applications where choke feed conditions cannot be ensured—e.g. mobile crushing plants lacking a surge pile between the primary and secondary crushers.

錐體空轉轉速很低，故GP-5可在破碎腔無料狀況下運轉，GP-5錐碎機是無法保證滿料狀況下的最佳選擇，如移動式及無料庫或儲料斗的破碎廠。

No backing material needed for liner fixing 牙板不需背膠

GP-5 cone crushers do not require the use of backing material for liner fixing. This makes liner changes quick, easy, and cost effective.

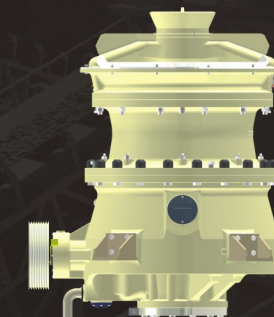
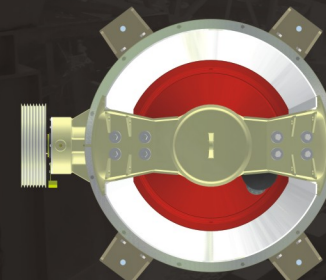
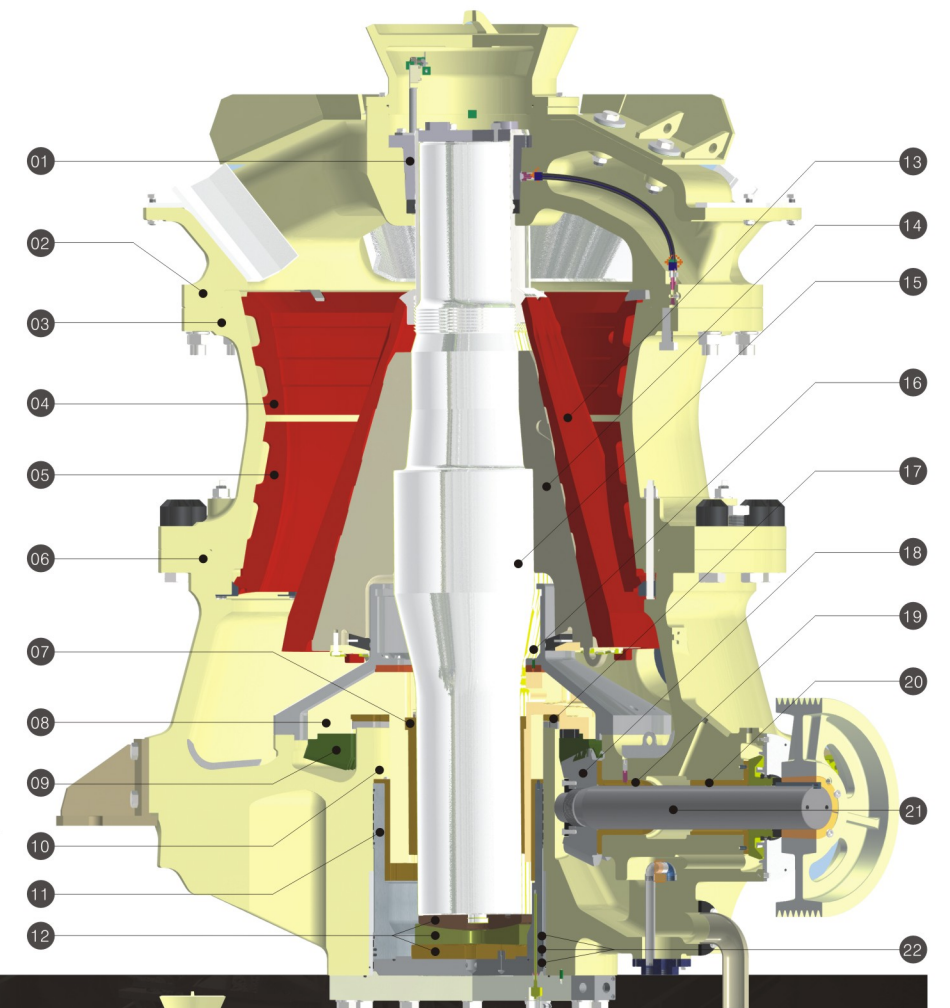
GP-5錐碎機牙板安裝不需使用背膠，故牙板更換更快速、容易節省成本。

Easy maintenance 易於維護

GP-5 cone crushers can be disassembled from above. All heavy components can be lifted upwards, making maintenance and service of the crusher easy and safe.

GP-5錐碎機可以從上方拆卸。所有重型部件都可以向上方提升，從而使破碎機的維護和維修變得容易又安全。

1. SPIDER BEARING 上機體襯套
2. UPPER FRAME 上機體
3. INTERMEDIATE FRAME 中機體
4. CONCAVE (UPPER) 上固定牙板
5. CONCAVE (LOWER) 下固定牙板
6. LOWER FRAME 下機體
7. INNER BUSH 內鋼
8. ECCENTRIC 偏心體
9. GEAR 從動大齒輪
10. OUTER BUSH 外鋼
11. PISTON 活塞
12. UPPER/MIDDLE/LOWER STEP BEARING PLATE 上中下止推板
13. MANTLE 活動牙板
14. MANTLE CORE 錐體
15. MAIN SHAFT 主軸
16. UPPER THRUST LINEAR 防塵導筒鋼片
17. LOWER THRUST LINEAR 銅片
18. PINION 傳動小齒輪
19. COUNTERSHAFT INNER BUSHING 傳動內軸套
20. COUNTER SHAFT 傳動軸
21. COUNTERSHAFT OUTER BUSHING 傳動外軸套
22. OIL SEAL-AERO CLASS 油封-航太用材質〈波音747〉



Main Components

立體圖

MODEL 型號		GP200S	GP300S	GP500S
Total weight, kg *) 總重		10900	16200	33300
Max lift during maintenance, kg 維護期間的最大起重量		3500	5200	11000
Dimensions 尺寸	A	2461	2456	3227
	B	Ø 1735	Ø 1860	Ø 2300
	C	1165	1401	1587
	D	Ø 1540	Ø 1820	Ø 2280
	E	Ø 1475	Ø 1686	Ø 2372
	F	454	499	655
	G	1527	1582	2100
	H	1448	1700	2108
	I	1312	1400	1589
J**) J***)	2487	2550	3756	
	2990	3230	4420	
Motor size, kW 電動機功率		110-160	132-250	200-355
Stroke options 衝程選項		18, 25, 28, 32, 36	18, 25, 28, 32, 36, 40	18, 25, 28, 32, 36, 40

*) Basic machine without options. Weights given with heaviest cavity. 不帶配件的基本機器。給出的重量帶有最重的破碎腔。

**) From dampers to top of feed hopper. 從減震塊到給料斗頂部。

***) From dampers to top of feed hopper with sub frame. 從減震塊到帶有副機架的給料斗頂部。