

Components for PV Manufacturing Process

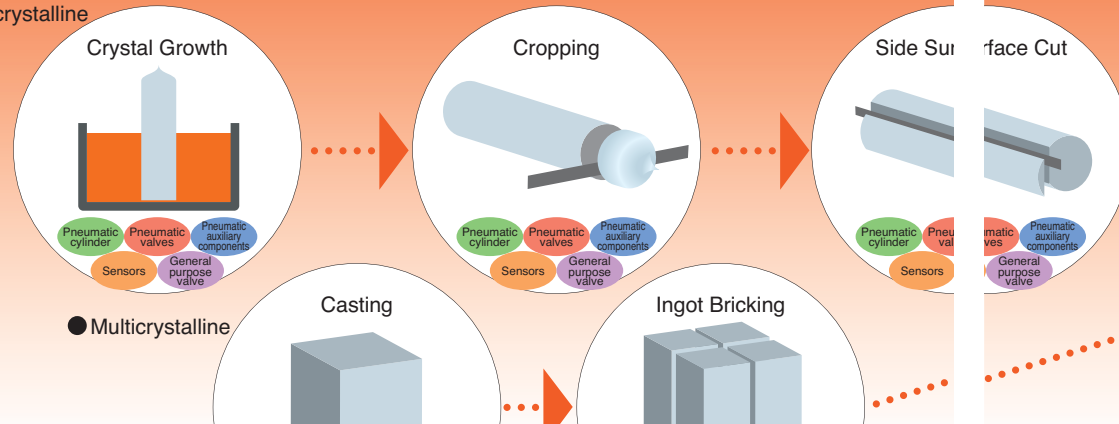


Our components meet each process requirement for PV manufacturing process.

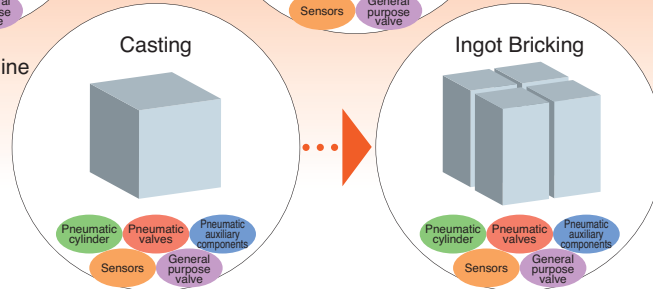
 <p>AMD Series</p>	 <p>LAD Series</p>	 <p>AVB Series</p>	 <p>4G Series</p>	 <p>LCR Series</p>	 <p>FSM2 Series</p>	 <p>AX Series</p>
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


PV Manufacturing Process (Ingot)


● Monocrystalline



● Multicrystalline

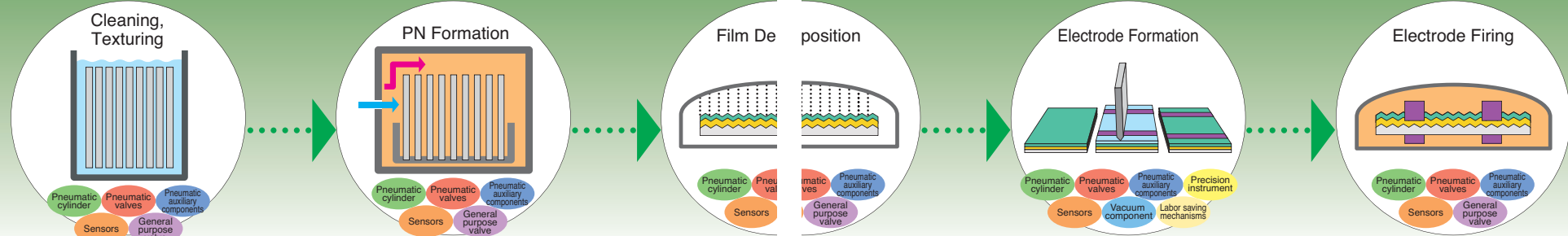













 Medium bore size cylinder CMK2 Series (Catalog No.CB-029SA-7)	 Linear slide cylinder Ultra high rigidity model LCG Series (Catalog No.CB-029SA-7)	 Pilot operated 3,5 port valve 4G Series (Catalog No.CB-023SA-7)
 Tie rod cylinder SCG Series (Catalog No.CB-029SA-7)	 Rodless cylinder SRL3 Series (Catalog No.CB-029SA-7)	 F.R.L. unit Standard white Series (Catalog No.CB-024SA-7)
 Medium bore size cylinder SCA2 Series (Catalog No.CB-029SA-7)	 Rodless cylinder with brake SRT3 Series (Catalog No.CB-029SA-7)	 Oil-prohibition/precision regulator RN/RP Series (Catalog No.CB-024SA-7)
 Compact cylinder SSD2 Series (Catalog No.CC-937A)	 Super fan rotary SFR/SFRT Series (Catalog No.CC-984 Jpn.)	 F.R.L. unit separate type Micro alescra (Catalog No.CB-024SA-7)
 Guided cylinder STG Series (Catalog No.CB-029SA-7)	 Table turning Rotary actuator GRC Series (Catalog No.CB-030SA-7)	 Clean air unit CAU30 Series (Catalog No.CC-872 Jpn.)
 Guided cylinder STS/STL Series (Catalog No.CB-029SA-7)	 Compact wide parallel hand HMF Series (Catalog No.CB-030SA-7)	 Inline clean filter FCS Series (Catalog No.CB-024SA-7)
 Linear slide cylinder Standard model LCR Series (Catalog No.CB-029SA-7)	 Solenoid valve for pneumatic MN3E/4E Series (Catalog No.CB-023SA-7)	 Clean exhaust filter FAC Series (Catalog No.CB-024SA-7)

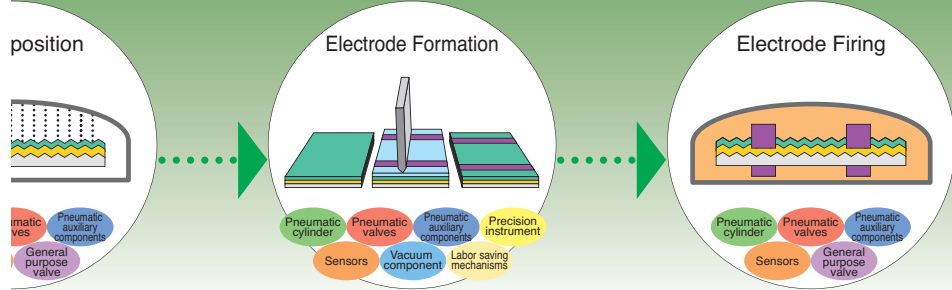
 Needle valve with adjusting dial DVL Series (Catalog No.CC-860A)	 Valve for fluorine resin chemical liquid AMD/MMD Series (Catalog No.CB-031A)	 General purpose 2, 3 port solenoid valve General purpose valve AB/AG/AP/AD/APK/ADK Series (Catalog No.CB-031SA)
 Speed control valve with adjusting dial DSC Series (Catalog No.CC-1021A)	 Clean cylinder valve LAD Series (Catalog No.CC-1017 *Jpn.)	 Solenoid valve for high vacuum HVB/HVL Series (Catalog No.CB-031SA)
 Small size flow sensor FSM2 Series (Catalog No.CC-886A)	 Vacuum control valve AVB/MVB Series (Catalog No.CC-1028(*Jpn.),CB-035A)	 Air operated 2 port valve Cylinder valve SAB/SVB Series (Catalog No.CB-031SA)
 Flow controller FCM Series (Catalog No.CB-024SA-7)	 Valve for process gas AGD*/R/MD*/R/OGD*/R Series (Catalog No.CC-1004 *Jpn.)	 Compact cylinder valve NAB/NAD Series (Catalog No.CB-031SA) (*Jpn.)
 Flow sensor (air/water) PFD/WFK Series (Catalog No.CB-024SA-7)	 Regulator for process gas PGM Series (Catalog No.CB-035A)	 Air operated 2, 3 port ball valve Compact rotary valve CHB/CHG Series (Catalog No.CB-031SA)
 Pneumatic pressure switch PPX Series (Catalog No.CB-024SA-7)	 Fine regulator PYM/PMM/PMP Series (Catalog No.CB-031A)	 2, 3 port electric driven ball valve Motor valve MXB/MXG Series (Catalog No.CB-031SA)
 Level switch KML Series (Catalog No.CB-031A)	 Direct acting 2, 3 port solenoid valve for dedicated fluid control Special purpose valve FAB/GFB/GFVB/FWB/GFHB/FLB Series (Catalog No.CB-031SA)	 Integrated water unit WXU Series (Catalog No.CC-1026 *Jpn.)
























* Jpn. stands for only Japanese catalog is available as of April 2011.

PV Manufacturing Process (Crystalline Cells)

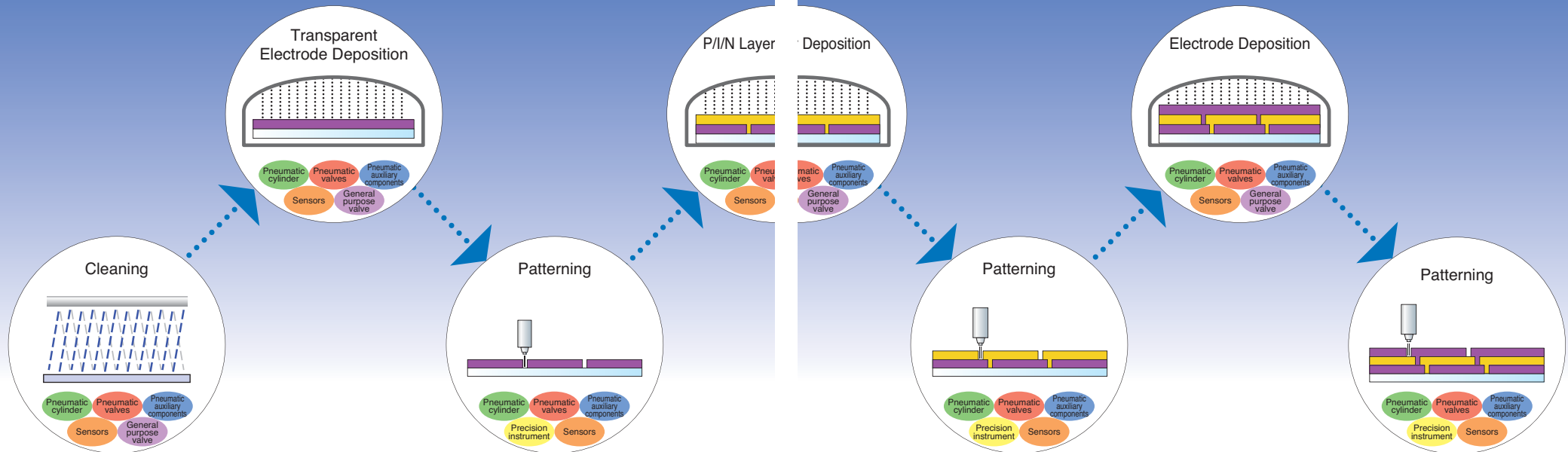


 Medium bore size cylinder CMK2 Series (Catalog No.CB-029SA-7)	 Linear slide cylinder Lightweight, thin and high rigidity LCX Series (Catalog No.CC-1001 *Jpn.)	 Direct acting 3 port valve 3QR Series (Catalog No.CC-1020 *Jpn.)
 Tie rod cylinder SCG Series (Catalog No.CB-029SA-7)	 Linear slide cylinder Miniature model LCM Series (Catalog No.CB-029SA-7)	 F R.L unit Standard white Series (Catalog No.CB-024SA-7)
 Medium bore size cylinder SCA2 Series (Catalog No.CB-029SA-7)	 Rodless cylinder SRL3 Series (Catalog No.CB-029SA-7)	 Oil-prohibition/precision regulator RN/RP Series (Catalog No.CB-024SA-7)
 Compact cylinder SSD2 Series (Catalog No.CC-937A)	 Rodless cylinder with brake SRT3 Series (Catalog No.CB-029SA-7)	 F R.L unit separate type Micro alescser (Catalog No.CB-024SA-7)
 Flat cylinder and compact demi FCD Series (Catalog No.CB-029SA-7)	 Heat resistance cylinder (Catalog No.CB-029SA-7)	 Clean air unit CAU30 Series (Catalog No.CC-872 *Jpn.)
 Guided cylinder STG Series (Catalog No.CB-029SA-7)	 Super fan rotary SFR/SFRT Series (Catalog No.CC-984 *Jpn.)	 Inline clean filter FCS Series (Catalog No.CB-024SA-7)
 Guided cylinder STS/STL Series (Catalog No.CB-029SA-7)	 Table turning Rotary actuator GRC Series (Catalog No.CB-030SA-7)	 Clean exhaust filter FAC Series (Catalog No.CB-024SA-7)
 Linear slide cylinder Standard model LCR Series (Catalog No.CC-996A)	 Solenoid valve for pneumatic MN3E/4E Series (Catalog No.CB-023SA-7)	 Needle valve with adjusting dial DVL Series (Catalog No.CC-860A)
 Linear slide cylinder Ultra high rigidity model LCG Series (Catalog No.CB-029SA-7)	 Pilot operated 3-5 port valve 4G Series (Catalog No.CB-023SA-7)	 Speed control valve with adjusting dial DSC Series (Catalog No.CC-1021A)



 Electric vacuum valve EVB Series (Catalog No.CC-1019 *Jpn.)	 Valve for fluorine resin chemical liquid AMD/MMD Series (Catalog No.CB-031A)	 Air operated 2 port valve Cylinder valve SAB/SVB Series (Catalog No.CB-03-1SA)
 Magnetic spring buffer FBU Series (Catalog No.CC-787 *Jpn.)	 Clean cylinder valve LAD Series (Catalog No.CC-1017 *Jpn.)	 Compact cylinder valve NAB/NAD Series (Catalog No.CB-03-1SA) (Catalog No.CC-918 *Jpn.)
 Precise suction plate PVP Series (Catalog No.CC-651 *Jpn.)	 Vacuum control valve AVB/MVB Series (Catalog No.CC-1028(*Jpn.),CB-035A)	 Air operated 2,3 port ball valve Compact rotary valve CHB/CHG Series (Catalog No.CB-03-1SA)
 Small size flow sensor FSM2 Series (Catalog No.CC-886A)	 Valve for process gas AGD*R/MGD*R/OGD*R Series (Catalog No.CC-1004 *Jpn.)	 For compressed air Pilot operated 2 port solenoid valve EXA Series (Catalog No.CC-1007A)
 Flow controller FCM Series (Catalog No.CB-024SA-7)	 Regulator for process gas PGM Series (Catalog No.CB-035A)	 Integrated water unit WXU Series (Catalog No.CC-1026 *Jpn.)
 Flow sensor (air/water) PFD/WFK Series (Catalog No.CB-024SA-7)	 Fine regulator PYM/PMM/PMF Series (Catalog No.CB-031A)	 Direct drive actuator AX Series (Catalog No.CB-032A)
 Pneumatic pressure switch PPX Series (Catalog No.CB-024SA-7)	 Direct acting 2, 3 port solenoid valve for dedicated fluid control Special purpose valve FAB/G/FGB/G/FVB/FWB/G/FHB/FLB Series (Catalog No.CB-03-1SA)	 CKD index units (mechanical index unit) RGIS/RGOS Series (Catalog No.CB-019SA)
 Level switch KML Series (Catalog No.CB-031A)	 General purpose 2, 3 port solenoid valve General purpose valve AB/AG/AP/AD/APK/ADK Series (Catalog No.CB-03-1SA)	 CKD index units (mechanical index unit) Oscillating type PP Series (Catalog No.CB-019SA)
 Components for vacuum Series (Catalog No.CC-796A)	 Solenoid valve for high vacuum HVB/HVL Series (Catalog No.CB-03-1SA)	

PV Manufacturing Process (Thin Film)

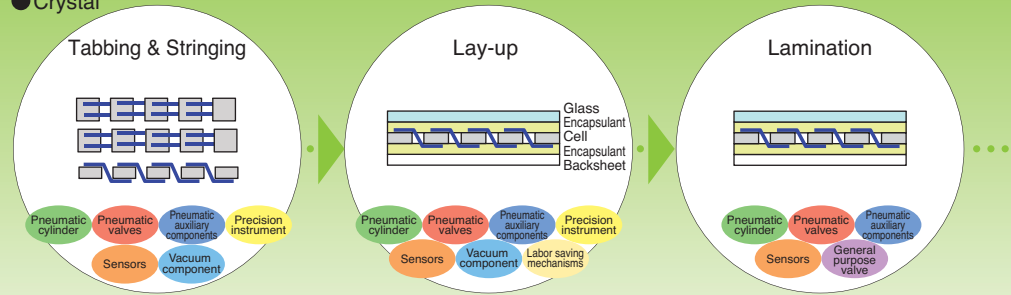


 Tie rod cylinder SCG Series (Catalog No.CB-029SA-7)	 Guided cylinder STS/STL Series (Catalog No.CB-029SA-7)	 F.R.L. unit Standard white Series (Catalog No.CB-024SA-7)
 Round shaped cylinder SCM Series (Catalog No.CB-029SA-7)	 Linear slide cylinder Standard model LCR Series (Catalog No.CC-996A)	 Oil-prohibition/precision regulator RN/RP Series (Catalog No.CB-024SA-7)
 Medium bore size cylinder SCA2 Series (Catalog No.CB-029SA-7)	 Linear slide cylinder Ultra high rigidity model LCG Series (Catalog No.CB-029SA-7)	 Clean air unit CAU30 Series (Catalog No.CC-872 *Jpn.)
 Compact cylinder SSD2 Series (Catalog No.CC-937A)	 Rodless cylinder SRL3 Series (Catalog No.CB-029SA-7)	 Inline clean filter FCS Series (Catalog No.CB-024SA-7)
 Flat cylinder and compact dem FCD Series (Catalog No.CB-029SA-7)	 Solenoid valve for pneumatic MN3E/4E Series (Catalog No.CB-029SA-7)	 Needle valve with adjusting dial DVL Series (Catalog No.CC-860A)
 Guided cylinder STG Series (Catalog No.CB-029SA-7)	 Pilot operated 3,5 port valve 4G Series (Catalog No.CB-029SA-7)	 Speed control valve with adjusting dial DSC Series (Catalog No.CC-1021A)

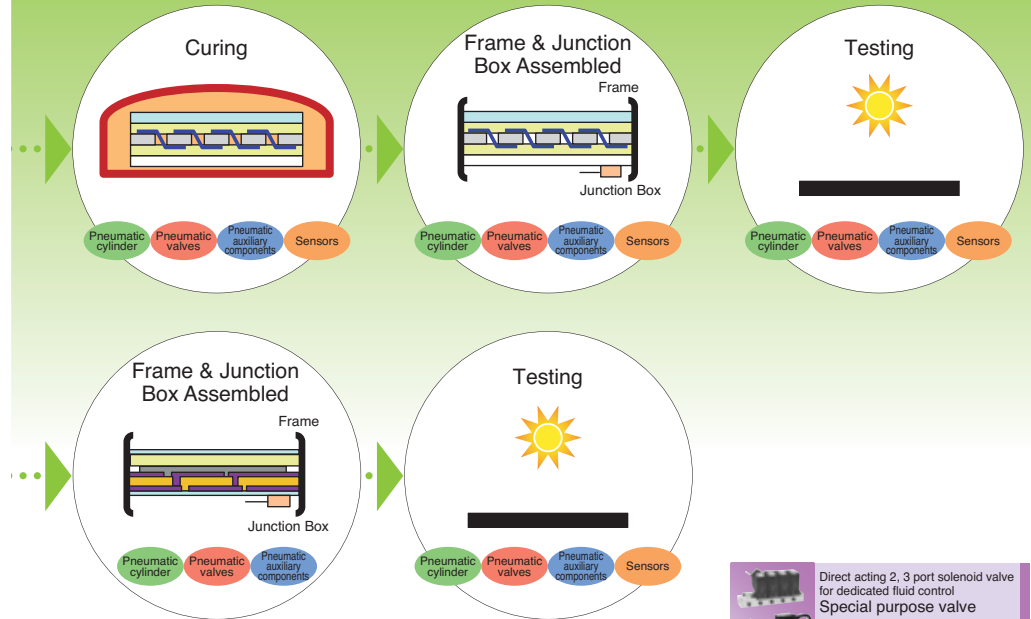
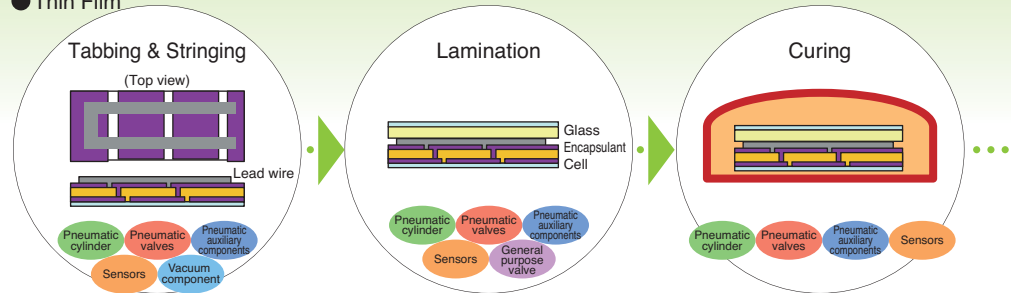
 Glass float module GFM Series (Catalog No.CC-883A)	 Clean cylinder valve LAD Series (Catalog No.CC-1017 *Jpn.)	 General purpose 2, 3 port solenoid valve AB/AG/AP/AD/APK/ADK Series (Catalog No.CB-03-1SA)
 Small size flow sensor FSM2 Series (Catalog No.CC-886A)	 Vacuum control valve AVB/MVB Series (Catalog No.CC-1028(*Jpn.), CB-035A)	 Solenoid valve for high vacuum HVB/HVL Series (Catalog No.CB-03-1SA)
 Flow controller FCM Series (Catalog No.CB-024SA-7)	 Valve for process gas AGD*/R/MD*/R/OGD*/R Series (Catalog No.CC-1004 *Jpn.)	 Air operated 2 port valve Cylinder valve SAB/SVB Series (Catalog No.CB-03-1SA)
 Flow sensor (air/water) PFD/WFK Series (Catalog No.CB-024SA-7)	 Regulator for process gas PGM Series (Catalog No.CB-035A)	 Compact cylinder valve NAB/NAD Series (Catalog No.CB-03-1SA) (Catalog No.CC-918 *Jpn.)
 Pneumatic pressure switch PPX Series (Catalog No.CB-024SA-7)	 Fine regulator PYM/PMM/PMF Series (Catalog No.CB-031A)	 Air operated 2,3 port ball valve Compact rotary valve CHB/CHG Series (Catalog No.CB-03-1SA)
 Valve for fluorine resin chemical liquid AMD/MMD Series (Catalog No.CB-031A)	 Direct acting 2, 3 port solenoid valve for dedicated fluid control Special purpose valve FAB/G/FGB/G/FVB/FWB/G/FHB/FLB Series (Catalog No.CB-03-1SA)	 Integrated water unit WXU Series (Catalog No.CC-1026 *Jpn.)

PV Manufacturing Process (Module)

● Crystal

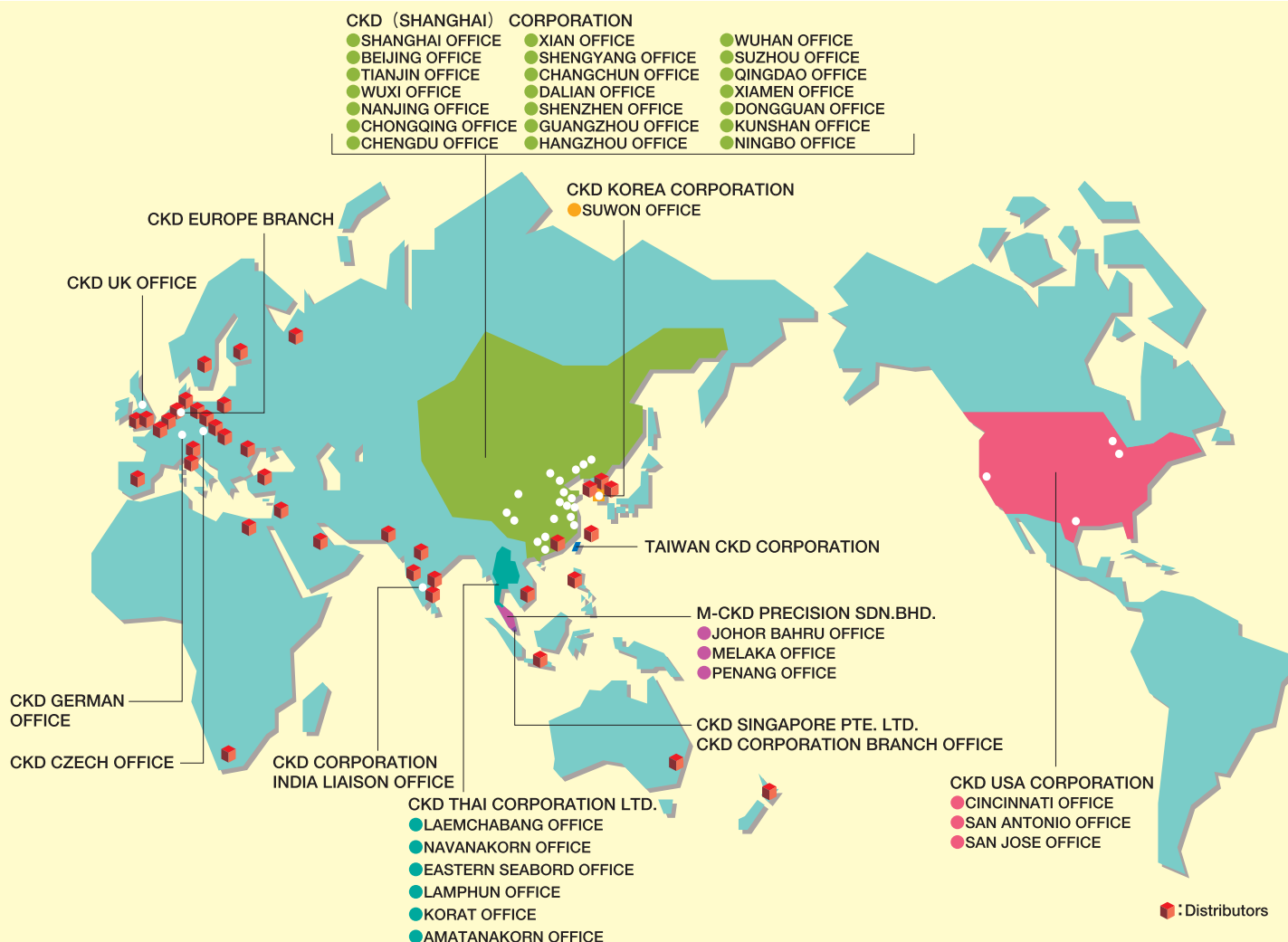


● Thin Film



	Medium bore size cylinder CMK2 Series (Catalog No.CB-029SA-7)		Guided cylinder STS/STL Series (Catalog No.CB-029SA-7)		Magnet type Rodless cylinder MRL2 Series (Catalog No.CB-029SA-7)
	Round shaped cylinder SCM Series (Catalog No.CB-029SA-7)		Linear slide cylinder Standard model LCR Series (Catalog No.CC-996A)		Rotary clamp cylinder RCC2 Series (Catalog No.CB-029SA-7)
	Tie rod cylinder SCG Series (Catalog No.CB-029SA-7)		Linear slide cylinder Ultra high rigidity model LCG Series (Catalog No.CB-029SA-7)		Lifter cylinder LFC-KL Series (Catalog No.CC-902 *Jpn.)
	Medium bore size cylinder SCA2 Series (Catalog No.CB-029SA-7)		Linear slide cylinder Light in weight thin type, high rigidity LCX Series (Catalog No.CC-1001 *Jpn.)		Compact wide parallel hand HMF Series (Catalog No.CB-030SA-7)
	Compact cylinder SSD2 Series (Catalog No.CC-937A)		Linear slide cylinder Miniature model LCM Series (Catalog No.CB-029SA-7)		Thin parallel hand HLB Series (Catalog No.CB-030SA-7)
	Guided cylinder STG Series (Catalog No.CB-029SA-7)		Rodless cylinder SRL3 Series (Catalog No.CB-029SA-7)		Pilot operated 3,5 port valve 4G Series (Catalog No.CB-023SA-7)

	F R.L unit Standard white Series (Catalog No.CB-024SA-7)		Rotary joint RJF Series (Catalog No.CC-963 *Jpn.)		Direct acting 2, 3 port solenoid valve for dedicated fluid control Special purpose valve FAB/G/FGB/G/FB/FWB/G/FHB/FLB Series (Catalog No.CB-031SA)
	Oil-prohibition/precision regulator RN/RP Series (Catalog No.CB-024SA-7)		Magnetic spring buffer FBU Series (Catalog No.CC-787 *Jpn.)		General purpose 2, 3 port solenoid valve AB/AG/AP/AD/APK/ADK Series (Catalog No.CB-031SA)
	Inline clean filter FCS Series (Catalog No.CB-024SA-7)		Small size flow sensor FSM2 Series (Catalog No.CC-886A)		Solenoid valve for high vacuum HVB/HVL Series (Catalog No.CB-031SA)
	Clean exhaust filter FVC Series (Catalog No.CB-024SA-7)		Pneumatic pressure switch PPX Series (Catalog No.CB-024SA-7)		Air operated 2 port valve Cylinder valve SAB/SVB Series (Catalog No.CB-031SA)
	Needle valve with adjusting dial DVL Series (Catalog No.CC-860A)		Components for vacuum Series (Catalog No.CC-796A)		Compact cylinder valve NAB/NAD Series (Catalog No.CB-031SA) (Catalog No.CC-918 *Jpn.)
	Speed control valve with adjusting dial DSC Series (Catalog No.CC-1021A)		Vacuum control valve AVB/MVB Series (Catalog No.CC-1028(*Jpn.), CB-035A)		Direct drive actuator AX Series (Catalog No.CB-032A)
			CKD index units (mechanical index unit) RGIS/RGOS Series (Catalog No.CB-019SA)		



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