



**DISPOSICIÓN DE SEPARADORES (49.8.2 C.E.)**

Elemento Separador Horizontal	Elemento Separador Vertical	Distancia Máxima
Columna, Paredes, Zapatas	Empalmes Horizontales	500 x 100 Cm
Muros	Empalmes Verticales	300 x 50 Cm
	Codos y Empalmes	500 x 50 Cm
	Empalmes Entra y Salida	100 Cm
Vigas	A través de pilares de separación por vano	100 Cm
Soportes	A través de pilares de separación por vano	1000 x 200 Cm

El espesor de la armadura a ser el superior al superior.

**LONG. MÍN. DE ANCLAJE(Ld) DE BARRAS CORRUGADAS**

Varilla	Área de Corte (cm²)	Área de Corte (cm²)	Área de Corte (cm²)	Área de Corte (cm²)	Área de Corte (cm²)	Área de Corte (cm²)
Varilla	10	12	16	20	25	32
Varilla	10	12	16	20	25	32
Varilla	10	12	16	20	25	32
Varilla	10	12	16	20	25	32

Fig. 1. De adherencia pasiva, para las armaduras que forman con la hormigón un ángulo comprendido entre 45° y 90°. La longitud mínima de anclaje en el hormigón será el mayor de los valores de Ld y Ld' que se indican en la tabla siguiente.

**CUADRO DE DIÁMETRO MÍNIMO DE DOBLADO**

BARRAS CORRUGADAS	GANCHOS, PUNTAS Y GANCHOS EN 'V'	ÁNGULO Y TRAZADO DEL DOBLADO
Ø 8 Ø 8 S	Ø 8 S	Ø 8 S
Ø 10	Ø 10	Ø 10
Ø 12	Ø 12	Ø 12
Ø 16	Ø 16	Ø 16
Ø 20	Ø 20	Ø 20
Ø 25	Ø 25	Ø 25
Ø 32	Ø 32	Ø 32

Los radios y anchos de doblado que se refieren a 1 cm pueden diferir con diámetros inferiores a los anteriormente indicados, cuando que se origine en el caso contrario a principios de fondeo, que se puede referir con un diámetro no inferior a la menor dimensión de la barra a doblar. En caso de no tener anchos, cuando que el doblado se realice en un ángulo que supere a 45 grados, cuando se parte de un radio o cuando se parte de un radio, el ancho de doblado será el mismo que el ancho de la barra a doblar y no se deberá ser menor a 2 veces el diámetro de la armadura.

**CUADRO DE ARRANQUES**

Referencias	Armaduras Esquinas	Armaduras X
P1, P3, P9 y P14	4816 (30-41-78)	
P2, P4, P5, P6, P8, P11, P12, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24, P25, P26, P27, P28, P29, P30, P31, P32, P33, P34, P35, P36, P37, P38, P39, P40, P41, P42, P43, P44, P45, P46, P47, P48, P49, P50, P51, P52, P53, P54, P55, P56, P57, P58, P59, P60, P61, P62, P63, P64, P65, P66, P67, P68, P69, P70, P71, P72, P73, P74, P75, P76, P77, P78, P79, P80, P81, P82, P83, P84, P85, P86, P87, P88, P89, P90, P91, P92, P93, P94, P95, P96, P97, P98, P99, P100, P101, P102, P103, P104, P105, P106, P107, P108, P109, P110, P111, P112, P113, P114, P115, P116, P117, P118, P119, P120, P121, P122, P123, P124, P125, P126, P127, P128, P129, P130, P131, P132, P133, P134, P135, P136, P137, P138, P139, P140, P141, P142, P143, P144, P145, P146, P147, P148, P149, P150, P151, P152, P153, P154, P155, P156, P157, P158, P159, P160, P161, P162, P163, P164, P165, P166, P167, P168, P169, P170, P171, P172, P173, P174, P175, P176, P177, P178, P179, P180, P181, P182, P183, P184, P185, P186, P187, P188, P189, P190, 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